

Notice of Determination

To:

[X] Office of Planning and Research
For U.S. Mail: P.O. Box 3044 Sacramento, CA 95812-3044
Street Address: 1400 Tenth St. Sacramento, CA 95814

[] County Clerk

County of:
Address:

From:

Public Agency: Department of Fish and Game
Address: 830 S Street, Sacramento, CA 95814
Contact: Holly Sheradin
Phone: (916) 327-8658

Lead Agency (if different from above):
Address:
Contact:
Phone:

SUBJECT: Filing of Notice of Determination in compliance with Section 21108 or 21152 of the Public Resources Code.

State Clearinghouse Number (if submitted to State Clearinghouse): 2008052026

Project Title: Department of Fish & Game - Year 2008 - Fisheries Restoration Grant Program Project

Project Location (include county): Del Norte, Humboldt, Los Angeles, Mendocino, Marin, Monterey, San Luis Obispo, San Mateo, Santa Barbara, Sonoma, Siskiyou, Trinity, Napa, Ventura

Project Description:

This is to advise that the Department of Fish and Game has approved the above described project on June 12, 2008 and has made the following determinations regarding the above described project:
[] Lead Agency or [X] Responsible Agency
(Date)

- 1. The project [] will [X] will not have a significant effect on the environment.
2. [] An Environmental Impact Report was prepared for this project pursuant to the provisions of CEQA. [X] A Negative Declaration was prepared for this project pursuant to the provisions of CEQA.
3. Mitigation measures [X] were [] were not made a condition of the approval of the project.
4. A mitigation reporting or monitoring plan [X] was [] was not adopted for this project.
5. A statement of Overriding Considerations [] was [X] was not adopted for this project.
6. Findings [X] were [] were not made pursuant to the provisions of CEQA.

This is to certify that the final EIR with comments and responses and record of project approval, or the negative Declaration, is available to the General Public at: 830 S Street, Sacramento, CA 95811

Signature (Public Agency) [Handwritten Signature] Title Chief, Fisheries Branch

Date June 12, 2008 Date Received for filing at OPR



Authority cited: Sections 21083, Public Resources Code. Reference Section 21000-21174, Public Resources Code.

STATE OF CALIFORNIA
THE RESOURCES AGENCY
DEPARTMENT OF FISH AND GAME
MITIGATED NEGATIVE DECLARATION

FOR

THE 2008 FISHERIES RESTORATION GRANT PROGRAM
IN
DEL NORTE, HUMBOLDT, LOS ANGELES, MENDOCINO, MARIN, MONTEREY,
NAPA,
SAN LUIS OBISPO, SAN MATEO, SANTA BARBARA, SISKIYOU, SONOMA,
TRINITY, AND VENTURA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE
ALTERATION

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Environmental Scientist
Fisheries Restoration Grant Program

This Report Has Been Prepared Pursuant to the
California Environmental Quality Act of 1970
State of California
The Resources Agency
Department of Fish and Game

INITIAL STUDY
AND
MITIGATED NEGATIVE DECLARATION
FOR
THE 2008 FISHERIES RESTORATION GRANT PROGRAM
IN
DEL NORTE, HUMBOLDT, LOS ANGELES, MENDOCINO, MARIN, MONTEREY,
NAPA,
SAN LUIS OBISPO, SAN MATEO, SANTA BARBARA, SISKIYOU, SONOMA,
TRINITY, AND VENTURA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE
ALTERATION

The Project: This project will use grant funds approved by the California Legislature to initiate activities that are designed to restore salmon and steelhead habitat in coastal streams and watersheds. Years of poor land management within California's watersheds which combined with natural events has altered native habitats. This has limited the ability of fish to survive and successfully reproduce in coastal streams that historically produced large populations of salmon and steelhead. This proposed project is designed to increase populations of wild anadromous fish in coastal streams by restoring their habitat.

The project objective is to improve spawning success for adult salmon and steelhead as well as to increase survival for eggs, embryos, rearing juveniles, and downstream migrants. Bank erosion and riparian enhancement treatments will improve spawning conditions and embryo survival by reducing sediment yield to streams. Upslope road decommissioning or repair will also help address these widespread problems. The replacement of migration barriers at stream crossings with bridges or natural stream bottom culverts will allow adult and juvenile salmonids access to additional spawning and rearing habitat. The installation of the instream habitat improvement structures will recruit and sort spawning gravel for adult salmon and steelhead, and create summer rearing pool and over-wintering habitat for juveniles.

The Finding: Although the project may have the potential to cause minor short-term impacts on soil, vegetation, wildlife, water quality, and aquatic life, the measures that will be incorporated into the project will lessen such impacts to an insignificant level (see initial study and environmental checklist).

Basis for the Finding: Based on the initial study, it was determined that there would not be significant adverse environmental effects resulting from implementing the proposed project. In addition, the project is expected to achieve a net benefit to the environment by enhancing and maintaining quality salmonid spawning and rearing habitat in the fourteen-county project area.

The Department of Fish and Game finds that implementing the proposed project will have no significant environmental impact.

Therefore, this mitigated negative declaration is filed pursuant to the California Environmental Quality Act (CEQA), Public Resources Code Section 21080 (c2). This proposed mitigated negative declaration consists of all of the following:

- Detailed Project Description and Background Information
- Initial Study Environmental Checklist Form
- Explanation of Response to Initial Study Environmental Checklist Form
- Appendix A. Project Action Items
- Appendix B. Mitigation Measures, Monitoring and Reporting Program For the 2008 Fisheries Restoration Grant Program
- Appendix C. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities
- Appendix D. Procedure for the Programmatic Evaluation of Paleontological Resources
- Appendix E. Procedure for the Programmatic Evaluation of Archeology Resources

DETAILED PROJECT DESCRIPTION AND BACKGROUND INFORMATION
FOR
THE 2008 FISHERIES RESTORATION GRANT PROGRAM
IN
DEL NORTE, HUMBOLDT, LOS ANGELES, MARIN, MENDOCINO, MONTEREY, NAPA,
SAN LUIS OBISPO, SAN MATEO, SANTA BARBARA, SISKIYOU, SONOMA, TRINITY,
AND VENTURA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

INTRODUCTION

The 2008 Fisheries Restoration Grant Program, formally known as "The 2008 Fisheries Restoration Grant Program in Del Norte, Humboldt, Los Angeles, Marin, Mendocino, Monterey, Napa, San Luis Obispo, San Mateo, Santa Barbara, Siskiyou, Sonoma, Trinity, and Ventura counties" (Restoration Program), is a "project" subject to review under the California Environmental Quality Act (CEQA) (Pub. Resources Code, § 21000 et seq.). The Restoration Program involves funding, in whole or in part, 113 habitat restoration action items (68 major, 3 minor, and 42 exempt items) in the fourteen identified counties. The 68 major action items, which are discussed in detail in the environmental analysis that follows, and are listed in Appendix A, are the principal focus of the environmental analysis set forth below.

The Restoration Program also involves 42 non-physical habitat restoration-related activities, all of which are exempt from CEQA. These action items have no prospect of direct or indirect physical changes to the existing environment, and involve the award of grants for watershed evaluation, assessment, planning, technical training, and public education. (See generally *Id.*, § 21102; Cal. Code Regs., title 14, § 15262.) Each of these action items are identified in Appendix A, Table A-1.

The Restoration Program also involves three minor-action items identified in Appendix A, Table A-2, which have no potential to adversely affect existing environmental conditions. These three minor-action items, which are not discussed in detail in the environmental analysis that follows, involve small-scale salmonid habitat improvement projects implemented solely with hand labor, the actions, in turn, fall within a class of activities that are exempt from CEQA pursuant to a finding by the Secretary of the Resources Agency that the activities pose no risk of potentially significant environmental impacts. (Pub. Resources code, § 21084; Cal. Code Regs., title 14, §§ 15300, 15306, 15307.)

This initial study and the proposed mitigated negative declaration (MND) analyze the environmental impacts that might result from implementation of the proposed Restoration Program. The initial study and MND also serve to address potential environmental impacts that may occur to the extent an individual restoration activity requires a Streambed Alteration Agreement (SAA) from the DFG (See Fish and Game Code, § 1600 et seq.). Construction of all or a portion of some of the individual restoration activities may actually occur in subsequent years, depending on the terms and contract for each respective individual grant provided by the DFG.

PROJECT
GOAL AND OBJECTIVES

The primary goal of this restoration program is to maintain and restore natural watershed processes that create habitat characteristics favorable to salmonids.

The objectives of the restoration program action items are to enhance the capability of streams to produce wild anadromous salmonids by maintaining, restoring, and improving stream habitat essential to salmonid production.

Finally, it is the DFG's objective to implement this project while not causing a significant adverse effect on the environment, or reducing the number or restricting the range of an endangered, rare or threatened species.

BACKGROUND

The DFG may grant funds for habitat restoration to public and private entities, nonprofit organizations, and native american tribes. Sections 1501 and 1501.5 of the Fish and Game Code pertain to activities funded by the DFG.

This restoration program was established in 1981 and is administered by the DFG. This program was initiated because of the precipitous drop in the population of fish in coastal streams, mainly salmon and steelhead. This program was developed as a mechanism to administer grant funds designated for the restoration of fish populations. Through the past several decades to the present time, funds allocated by the California Legislature have been used in this grant program in an effort to rebuild fish populations (see Fish and Game Code Section 6900 et seq.). Initially, grants were awarded in three categories: stream restoration, fish rearing, and education. Since 1997, a more holistic restoration approach has been emphasized that facilitates habitat enhancement throughout the watershed.

There are many factors responsible for the decline of California coastal salmon and steelhead stocks. One important factor is the degradation of stream habitats. Activities in watersheds including logging, mining, road building, livestock grazing, water diversions, and dam construction have seriously impacted the ability of fish to survive and reproduce. For example, excessive fine-sediment has reduced egg and fry survival, removal of riparian vegetation has contributed to increased water temperatures, habitat has been impaired by water diversions, and culverts and dams have blocked fish passage. Habitat destruction has been instrumental in drastically reducing native anadromous fish populations. Natural events such as wildfire, drought, and floods have exacerbated these problems and accelerated the alteration of habitat further. The resulting decline in fish populations has caused extreme financial hardship to a once thriving commercial fishery and drastically reduced, or in some cases eliminated, a very popular sport fishery. Most stocks have been reduced to the point where listing under the Federal and State Endangered Species Acts has become necessary.

The Restoration Program was instituted as the critical need to restore salmon, and steelhead habitat was recognized. Guided by the *California Salmonid Stream Habitat Restoration Manual* (Flosi et al., 1998, 2003 and 2006), hundreds of habitat restoration actions in this Restoration Program have been completed by government agencies and nonprofit groups. Activities have included revegetation with livestock exclusion fencing, riparian planting, barrier removal, bank stabilization and other bank protection structures, and decommissioning of roads and improving drainage systems on existing roads. Instream structures such as boulder clusters, wing deflectors, and log cover have also been used. Road crossings that have impeded fish migration have been replaced with bridges or culverts with natural stream bottoms allowing fish access to additional stream reaches. Finally, other watershed improvement activities include installation of fish screens to prevent entrainment of juvenile salmon and steelhead. These actions create spawning and nursery habitat, provide escape cover and prevent fine sediments from entering streams. Project monitoring has shown significant habitat improvements in streams where this work has taken place. A gradual rebuilding of salmon and steelhead populations is expected as this program continues.

PROJECT LOCATION

Activities performed in the Restoration Program typically occur in watersheds that have been subjected to significant levels of logging, road building, mining, grazing, and other activities that have reduced the quality and quantity of stream habitat available for native anadromous fish.

Coastal watersheds previously dominated by mature redwood and Douglas fir forest, contain extensive road and skid trail systems from tractor logging. These previous mature, forested areas can now be found in various seral stages of vegetative recovery and are predominate in the coastal Restoration Program region. Action items are implemented within the stream course to improve fish habitat. Upslope restoration actions improve fish habitat by reducing the input of fine sediment to the stream environment.

Inland locations are usually in watersheds dominated by pine and fir forests, often with steep unstable terrain; some inland locations are in valley areas in agricultural use. Most restoration activities are intended to reduce sediment delivery to streams, and provide spawning and rearing habitat in the streams. Streams flowing through valley areas will be treated to stabilize stream banks and increase riparian vegetation.

SCHEDULE

The activities carried out in the Restoration Program typically occur during the annual period of dry weather. Stream work is normally confined to the period of June 15 to November 1 (or the first significant fall rainfall). This is to take advantage of low stream flows and is outside the spawning and egg/alevin incubation period of salmon and steelhead.

Generally, upslope work occurs during the same approximate period. Road decommissioning and other sediment reduction activities are dependent on soil moisture content. Equipment access on dirt roads, and the ability of equipment to move soil, is inhibited by wet conditions. The scheduling of upslope work may also be affected by the avoidance of nesting or breeding seasons of birds and terrestrial animals.

Some activities may continue after November 1, but only where no impact, or less than significant impacts, will result. This will primarily involve hand-planting of tree seedlings, which typically does not begin until December 1, and may continue until the end of March. Planting during the wet season is necessary to ensure the best survival of seedlings.

PROJECT DESCRIPTION

The DFG releases an annual Proposal Solicitation Notice (Solicitation) for proposals for fishery restoration, conservation education, and watershed assessment and planning work throughout California. Following initial review by the DFG Technical Review Team (TRT), proposals are sent to appropriate fishery staff for field review, comment, and scoring, using standardized evaluation criteria. The evaluation process requires consideration of benefits to the fishery resources, the benefit for targeted species, project costs, and positive or negative impacts to the environment. The need for work in particular drainages or sites is evaluated and reviewed by the TRT utilizing the watershed assessment and planning work funded through the program, and from other DFG and agency programs at work in California. The proposals, technical scores, and comments are forwarded to the California Coastal Salmonid Restoration Grants Peer Review Committee (PRC). The PRC also evaluates and scores each proposal, and makes the final recommendations for funding priorities. The Director of Fish and Game reviews the recommendations of the PRC, and makes the final funding decision. Grants and contracts are written for the approved action items and environmental documents are completed.

The Fisheries Restoration Grant Program operates Regional General Permit Number 12 (Corps File Number: 27922N) issued by San Francisco District of the U. S. Army Corps of Engineers (USACE). This permit allows the DFG, grantees, and other individuals and groups to conduct fishery habitat restoration activities using methods described in the *California Salmonid Stream Habitat Restoration Manual* (Flosi et al 1998, 2003 and 2006) that have been evaluated by DFG biologists. NOAA Fisheries (formerly NMFS) and the US Fish and Wildlife Service have issued biological opinions, which are incorporated into the RGP, that address the impacts of the DFG's Restoration Program.

All projects listed in this document will operate under the current RGP except for the dam removal portions of major action items Project ID# 722794 Glenbrook Gulch Anadromous Fish Habitat Restoration and Project ID# 722715 East Mill Creek Barrier Removal Downstream. Therefore the grantee will be responsible for securing all required permits for the dam removal portion of these two major action items including but not limited to ACOE 404, North Coast Regional Water Quality Control Board 401 and DFG 1600. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.

Grantee's implementing action items requiring USACE Section 404 certification from the Los Angeles District will be responsible for obtaining separate approvals for each action item. Most restoration action items needing USACE approval may qualify under Nationwide Permits #3 (Maintenance), #13 (Bank Stabilization), #14 (Linear Transportation), or #27 (Stream and Wetland Restoration Activities).

The Fisheries Restoration Grant Program will submit an annual application for a programmatic Section 401 Certificate to the State Water Resources Control Board. A description of project work and methods to prevent impacts on water quality will be provided annually to the State Water Resources Control Board, and to the appropriate regional boards.

The DFG's lake and stream alteration agreement process (Fish and Game Code Section 1600 et seq.) is an integral part of stream restoration planning and implementation. An agreement is developed for each action item which defines required measures to minimize disturbance to the stream environment. Procedures to accomplish this task are contained in the DFG Lake and Streambed Alteration Program (1600) webpage <http://www.dfg.ca.gov/habcon/1600/>. Activities such as installing replacement culverts to provide fish passage, operating equipment in or near streams, and installing bank stabilizing structures are all discussed in the context of minimizing impacts, and all required measures for species protection discussed in this document are incorporated into the agreement for each project.

All features of this project requiring CEQA review are being provided in sufficient detail to facilitate public review and clearly define the environmental evaluation. In order to achieve this goal, the Restoration Program action items are considered to fall into three categories corresponding to similar activities and requirements for CEQA review. These three categories of action items are as follows:

Public Involvement, Planning, Research, Monitoring, Education and Habitat Acquisition Action Items

Action items in this category will include watershed evaluation, assessment, planning, technical training, public education, and habitat acquisition projects. The names of 42 action items in this category are presented in a list in Appendix A, Table A-1. These action items all qualify as either statutory or categorical exemptions under CEQA Guidelines sections 15262 (Feasibility and Planning Studies), 15306 (Information Collection), 15313 (Acquisition of Lands for Wildlife Conservation Purposes), and 15322 (Educational or Training Programs Involving No Physical Changes). These

action items have no potential to change any physical conditions including land, air, water, minerals, plants, animals, ambient noise, historic sites, or aesthetics. Based upon these facts, these types of action items will not be discussed further in this document.

Restoration Element - Minor Action Items

Action items under this category only include small stream habitat restoration activities that improve spawning and rearing habitat for salmon and steelhead trout, without impacting other species. The names of three action items in this category are presented in a list in Appendix A, Table A-2. The designs of the action items have been reviewed by the Department and will be implemented by hand labor crews. These crews and their crew supervisors are trained by Department personnel on life cycle and habitat needs of salmon and steelhead trout, as well as other listed species within the geographic scope of the activity. The crews and their supervisors also attend workshops and technical training on salmonid stream habitat restoration techniques. Department personnel closely supervise all stream restoration actions implemented under this restoration element. Department personnel inspect each action item site for compliance at least once before work begins, once during implementation, and once at the end of a restoration activity.

The habitat restoration actions include: installation of digger logs, spider logs, boulder or log weirs, and boulder or log wing deflectors. Stream bank stabilization may include the use of boulder and cobble armoring of eroding banks, log cribbing, willow mattresses, or willow siltation baffles. Revegetation of riparian habitat normally involves the use of willow sprigs or willow or alder seedlings or transplants. Indigenous stocks (when available) will be used for all planting projects. Several of the action items will only involve maintenance of existing instream structures. The techniques that will be used for these action items have proven successful on many north coast streams and are detailed in the current version of the *California Salmonid Stream Habitat Restoration Manual*. This manual describes in detail how the work will be performed in the field.

Heavy equipment will not be used for any of the actions listed under this category. California Conservation Corps (CCC) and other labor crews will be utilized to implement the proposed actions. Disturbance of the stream banks will be kept to an absolute minimum. All work will be done with hand tools and riparian vegetation will not be removed. No roads will be constructed to complete action items. All sites are accessible by existing dirt or gravel roads or established trails. Access to restoration activity sites has been identified and will not create bank erosion or cause the removal of riparian trees. Staging areas at the activity sites will be set up on dry stream banks where there will be a minimum, and less than significant, impact to vegetation. Disturbed or bare mineral soils resulting from work activities, which are subject to surface erosion, will be seeded and straw mulched.

These activities are normally classified as categorically exempt according to CEQA Guidelines Sections 15301, Class 1(i), and Section 15304, Class 4(d) or Section 15333, Class 33 "Small Habitat Restoration Projects". Because these types of action items have no potential for causing significant negative impacts they will not be discussed further in this document.

Restoration Element - Major Action Items

There is a notable difference in the level of activity found under this category. The names of the 68 action items in this category are presented in a list in Appendix A, Table A-3. A detailed description of each action item in this element is also located in Appendix A, sorted by county.

These items require larger size material and increased volumes to be moved by heavy equipment and, in so, doing involve certain limited construction activities. This category uses many of the same instream habitat restoration techniques discussed in the previous element. In addition, upslope earthmoving and culvert replacement activities are also included.

Typically, these stream habitat restoration activities use dump trucks to deliver logs, root wads, or quarry rock to staging areas, and front-end loaders to deliver material to restoration sites. Existing stream crossings will be used to access the stream in most cases. If stream crossings do not exist, the least damaging access point will be selected based upon the size, type, and density of riparian vegetation. Where use of such access points is necessary, riparian vegetation can be affected, particularly the upper part of plants may be damaged, with the roots and lower parts receiving minimal damage. Plants damaged in this way will usually re-sprout and recover.

Hydraulic excavators or backhoes may be used to excavate trenches or keyways in stream banks to anchor logs or boulder structures. Excavators are used to place materials, construct instream structures, and stabilize stream banks with boulders and logs. Willow cuttings are usually placed into the keyway trenches around the logs or boulders and then the trench is backfilled with cobble and native soil. This procedure anchors the structure into the stream bank, accelerates the establishment of willows around the structure, and prevents the stream from scouring around the newly placed structure.

Some major action items will stabilize stream banks or small stream-side landslides. These action items will armor and buttress the landslide or stream bank using boulders, logs, root wads, and loose rock revetment. Revetments are designed with logs, root wads, and boulders that extend into the stream to provide instream cover and velocity breaks for salmonids. Smooth riprap, however, which accelerates water velocities along the stream bank, is not permitted under this program. When practical, the bank will be sloped back to a minimum 1.5 to 1 slope. A toe trench will be excavated at the toe of the landslide or eroding bank. The excavated trench will be backfilled with boulders at least three feet in diameter and will extend up to the high-water mark. Rock from the toe trench, up to the high-water mark, will be of a size that will withstand normal high flows. Revetment will extend upstream and downstream of the unstable reach and will be keyed into the stable banks.

Runoff from above the slide or eroding banks will be diverted away from the area being stabilized. The slide face will be revegetated using indigenous plants. Willow cuttings will be placed in the toe trenches. Browse protectors will be used on seedlings to prevent predation by browsing animals.

All work, except for the revegetation, will take place during the summer and fall (low flow period) and shall be completed before the first significant seasonal rainfall. Planting of seedlings will take place after December 1, or when sufficient rainfall has occurred, to ensure the best chance of survival of the seedlings, but in no case later than April 1. All habitat improvements will be done in accordance with techniques described in the *California Salmonid Stream Habitat Restoration Manual*.

Upslope action items in this section will upgrade or decommission roads by implementing all or part of the following tasks: road ripping or decompacting; installing or maintaining rolling dips (critical dips); installing or maintaining waterbars and crossroad drains; replacing, maintaining or cleaning culverts; out-sloping roadbeds; revegetating work sites; and excavating stream crossings with spoils stored on site or end-hauled.

Sites which are expected to erode and deliver sediment to the stream are the only locations where work will be authorized under this category. Work will not be authorized to improve aesthetic values only.

Removal of road and skid trails will include retrieving unstable material sidecast during original road construction and excavation of stream crossings and other watercourse fill. Stream crossings will be excavated to original width, depth, and slope to expose natural channel morphology and armor. Side slopes will generally match original contours above and below the road. Culverts that are replaced in fish bearing reaches of streams will be done in a manner to allow for unimpeded upstream and downstream fish passage.

When fill material is placed on road benches for permanent storage, the roadbench will be ripped or decompacted first. The fill will then be placed against the cutbank and shaped to blend with the surrounding topography that existed prior to road construction. Outsloping of the roadbed will occur as needed, to reduce potential sediment delivery to the stream where there is insufficient fill available to recontour the site, or where there is evidence that the overall long-term stability of the site does not justify a full recontour treatment. Where practical, fill will be compacted to the top of the filled cut to reduce the potential for fill cut failure. Spoil material will be stored in stable locations where it will not erode. If stable spoils storage sites are not available within the project area, they will be end-hauled to a stable storage site outside of the project area. Areas chosen for this purpose will be devoid of tree and shrub vegetation. Upon completion of each site, woody debris will be scattered over the surface of the restored area as mulch.

Road crossing removal may involve some removal of vegetation that has grown in sediment that has been deposited upslope of road prisms. Most of this vegetation will be used as coarse wood mulch on bare soils to reduce surface erosion. Some of the material will be transplanted on-site as one component of the restoration action items. In all cases, disruption of existing vegetation will be minimized.

Culvert replacement requires diverting stream flow around the project site and excavating the existing culvert with heavy equipment. Normally concrete footings are constructed to support a new bottomless culvert or bridge. If appropriate, grade control structures are incorporated into the project area to prevent excessive down-cutting of the stream. All work concerning culvert replacement will be consistent with current DFG and NOAA criteria concerning fish passage. Current NOAA fish passage guidelines can be found on the web at: <http://swr.nmfs.noaa.gov/hcd/NMFSSCG.PDF>. DFG fish passage guidelines can be found in Part IX of the *California Salmonid Stream Habitat Restoration Manual*, available at <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>.

Fish screens are constructed within existing irrigation diversions to prevent entrainment of juvenile salmon and steelhead. Fish screens are composed of a concrete foundation and walls. A steel framework supports perforated screen panels with a mechanical cleaning system. A bypass carries the fish back to the stream. Current NOAA and DFG fish screen criteria can be found in Appendix S of the *California Salmonid Stream Habitat Restoration Manual*.

Small dam removal requires plan details regarding location of stream and channel armor, stream channel cross sections and a longitudinal profile, as well as specifics on sediment control, water diversion and fish relocation. Appropriately sized boulders are used when necessary to stabilize disturbed and /or erodible stream banks. Excess fill materials will be hauled to a site from which they will not reenter the stream channel and all anthropogenic trash is hauled offsite to an appropriate disposal site. Any additional disturbed soils will be seeded, mulched and planted with native plants. The goal is to reestablish the stream morphology through the project reach.

Appendix A contains a list of major action item titles, locations, and descriptions of work that will be implemented at each site. The action item designs are reviewed by the DFG and are implemented by grantees utilizing heavy equipment and some hand labor crews. During a pre-project inspection, the grantee and the DFG will tour the entire activity area and identify the sites and techniques necessary to carry out the recommendations. The site-specific recommendations will be listed in an inspection report which will be acknowledged by the grantee's signature, as a required element of the activity. The DFG will continue to inspect the work site during and after completion of the action item. All road upgrading or decommissioning will be done in accordance with techniques described in Part X of the *California Salmonid Stream Habitat Restoration Manual*, available at <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>. All culvert replacement projects shall be done in accordance with techniques and criteria consistent with current Department and NMFS

guidelines concerning fish passage. Implementation of each major action item will be conditioned and controlled to prevent any potentially significant impacts under CEQA.

Complete site plans and prescriptions for action items located in Del Norte, Humboldt, Siskiyou, Trinity, and Mendocino counties are available for review at the Department of Fish and Game, Northern Regional Office at 1455 Sandy Prairie Court, Suite J, Fortuna, California 95540. For an appointment to view this information, contact Gary Flosi at (707) 725-1072, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Complete site plans and prescriptions for action items located in San Mateo, Sonoma, Marin, and Napa counties are available for review at the Department of Fish and Game, Bay Delta Region, office of Senior Biologist Supervisor, Bob Coey, 7329 Silverado Trail, Yountville, California 94559. Appointments may be made by telephoning (707) 944-5572, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Complete site plans and prescriptions for action items located in Monterey and San Luis Obispo counties are available for review at the Department of Fish and Game, Central Region, office of Senior Biologist Supervisor, Margaret Paul, 3196 S. Higuera Street, Suite A, San Luis Obispo, California 93401. Appointments may be made by telephoning (805) 594-6175, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Complete site plans and prescriptions for the action item located in Los Angeles, Santa Barbara, and Ventura counties, are available for review at the Department of Fish and Game, South Coast Region, office of Senior Fishery Biologist Specialist, Mary Larson, 4665 Lampson Ave, Suite C, Los Alamitos, California 90720 and 1933 Cliff Drive, Suite 9, Santa Barbara, CA 93109. Appointments may be made by telephoning (562) 342-7186, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Environmental Assessment of Each Major Action Item

Each action item is assigned to the appropriate category using the established criteria for each category. The work to be completed for each action item is carefully evaluated to make this determination. Once this evaluation process is completed, the action items described under the Restoration Element - Major Action Items section, are subjected to a systematic environmental analysis. This analysis ultimately prescribes site-specific conditions which must be applied in order to avoid potentially significant negative effects on the environment, including such effects on endangered, rare, or threatened species and their habitat.

First, all major action items listed in Appendix A will comply with DFG policies to conduct archaeological and rare plant surveys. A qualified archaeologist(s) will be contracted to complete the surveys using standard protocols. Rare plant surveys will be conducted following the Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities (Department of Fish and Game, 2000). A review of the DFG's current Natural Diversity Data Base (NDDDB) for each project located in the entire fourteen-county programmatic project area is attached to the statement of work for each major action item listed in Appendix A and indicates which plant species found on a State or Federal special status list that could potentially be affected at the work sites. Archaeology and rare plant surveys will be completed prior to any ground disturbing activities. If any potentially significant impact cannot be avoided, the action item will not be implemented. Any site specific recommendations made by a DFG biologist, or other qualified biological consultant, to avoid any potentially significant impacts shall become part of the work plan and incorporated into the measures required in the issued streambed alteration agreement (Fish and Game Code Section 1600 et seq.). The DFG's grant managers will ensure that the grantee or responsible party is aware of, and implements, these site specific conditions during routine inspections. The DFG will inspect the work site before, during, and after completion of the action item. Any violation of the specific recommendations will be immediately rectified. Failure, or inability, to rectify a particular

recommendation will cause all work to cease until a remediation plan is developed that avoids the potentially significant impact.

Second, a review of the DFG's NDDDB for the entire fourteen-county project location indicated which animal species found on a State or Federal special status list may be present at the work sites. This site specific information is also attached to each statement of work in Appendix A. Mitigation measures to avoid impacts to these species are presented along with other mitigation measures in Appendix B, Mitigation Measures, Monitoring and Reporting Program. In the absence of site-specific information, species identified as having potential to be affected at a work site will be presumed to be present and mitigation measures to avoid impact to that species will be implemented. Any site-specific surveys to confirm the presence, or absence, of a species at a work site will follow the Guidelines for Conducting Project Specific Endangered, Rare, and Threatened Species Surveys (Appendix C). Streambed Alteration Agreements and grants for each site will be conditioned to avoid impacts to any special status species that could potentially be affected at that site. The DFG will ensure that the grantee or responsible party is aware of all specific conditions that apply to their work site. Also, the DFG will inspect the work site before, during, and after completion of the action item to ensure compliance with mitigation measures to avoid potential impacts to endangered, rare, or threatened species. Any violation of the specific recommendations will be immediately rectified. Failure or inability to rectify a particular recommendation will cause all work to cease at that site until a remediation plan is developed.

Third, all major action items listed in Appendix A will comply with DFG policies to conduct a paleontological survey. A qualified paleontologist(s) will be contracted to complete the surveys using current accepted protocols. Research will be done on available paleontological data repositories, review fossil resources with regional experts to identify possible areas of importance within the fourteen-county programmatic project area. Site specific detailed research will be done for projects sites deemed likely to encounter paleontological resources (Appendix D). There will be communication links between DFG grant managers and review of evaluation surveys will be completed prior to any ground disturbing activities. If any potentially significant impact cannot be avoided, the action item will not be implemented. Any site specific recommendations made by a qualified paleontologist(s), or other qualified consultant, to avoid any potentially significant impacts shall become part of the work plan and incorporated into the measures required in the issued streambed alteration agreement (Fish and Game Code Section 1600 et seq.). The DFGs grant managers will ensure that the grantee or responsible party is aware of, and implements, these site specific conditions during routine inspections. The DFG will inspect the work site before, during, and after completion of the action item. Any violation of the specific recommendations will be immediately rectified. Failure, or inability, to rectify a particular recommendation will cause all work to cease until a remediation plan is developed that avoids the potentially significant impact.

Through careful design, scheduling, and monitoring, any and all potentially significant impacts associated with the major action items will be avoided or mitigated to below a level of significance under CEQA. Additional details regarding implementation of major action items, including required mitigation measures, are detailed in the environmental checklist section below.

Monitoring

Project monitoring is considered an important element in the activity development and implementation process. The monitoring process provides performance control during the activity and also helps provide a measure of the benefits, insight, and guidance for future projects.

Activity during implementation is overseen by a DFG grant manager and is geared to ensure that all regulatory environmental issues are strictly addressed including air, water, and avoiding impacts to sensitive plant and animal species. During implementation, activities are carefully monitored to make sure plans are followed and that the correct materials and techniques are used so

that the objectives of the activities are met while protecting the environment.

Post-activity monitoring begins with information collected immediately after the activity is completed and documents whether the project was completed as designed and according to the contract specifications. This information includes documenting the exact location where the activity has occurred with reference points and survey marks. Final project reports should contain "as-built" descriptions with design drawings and photographs (both before and after the activity) are collected. A complete activity description including the objectives of the activity must be retained.

The next phase of post-activity monitoring is designed to assess the effectiveness of project work types and should occur within one to three years after an action item is complete. The DFG will randomly select ten percent of the action items within each project work type for evaluation. This evaluation shall be recorded on standard project evaluation forms developed by California Department of Fish and Game as described in the *California Salmonid Stream Habitat Restoration Manual*, Part VIII, Project Monitoring and Evaluation, or using new monitoring procedures developed under a DFG grant. Effectiveness monitoring addresses the physical response associated with an activity, such responses are generally more easily measured and interpreted. Biological response data especially that for anadromous fish, is more difficult to collect and interpret. Reliable assessment of anadromous salmonid response to habitat improvement prescriptions generally require many years of trend data. The DFG intends to address the biological response to habitat improvement through a coastal salmonid population monitoring plan which is currently under development in association with the National Oceanic and Atmospheric Administration.

Complete monitoring specifications are included in the *California Salmonid Stream Habitat Restoration Manual* and on the DFG's web site, <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>. Additional details on monitoring and reporting requirements are presented in Appendix B.

REFERENCES:

California Department of Fish and Game. Lake and Streambed Alteration Program (1600) webpage <http://www.dfg.ca.gov/habcon/1600/>

California Department of Fish and Game. 2000. Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities. The Resources Agency, State of California, Sacramento, CA.

Flosi, G, S. Downie, J. Hopelain, M. Bird, R. Coey, and B. Collins. 1998. *California Salmonid Stream Habitat Restoration Manual*. Third Edition. Calif. Fish and Game. The most current version of the manual is available at: <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>.

Flosi, G, S. Downie, M. Bird, R. Coey, and B. Collins. 2003, 2006. *California Salmonid Stream Habitat Restoration Manual*. Volume II, Third Edition. Calif. Fish and Game. The most current version of the manual is available at: <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>.

Hagans and Weaver. 1994. Handbook for Forest and Ranch Roads. 161 p. Prepared by William E. Weaver, Ph.D. and Danny K. Hagans, Pacific Watershed Associates for the Mendocino County Resource Conservation District, 405 Orchard Ave., Ukiah, CA 95482.

ENVIRONMENTAL CHECKLIST FORM

1. Project Title: Department of Fish and Game - Year 2008 - Fishery Restoration Grants Program in Del Norte, Humboldt, Los Angeles, Marin, Mendocino, Monterey, Napa, San Luis Obispo, San Mateo, Santa Barbara, Siskiyou, Sonoma, Trinity, and Ventura counties

2. Lead Agency Name and Address:

California Department of Fish and Game
Fisheries Branch
830 S Street
Sacramento, CA 95811

3. Contact Person and Phone Number:

Holly Sheradin (916) 327-8658 Fisheries Branch 830 S Street Sacramento, CA 95814 90720	Gary Flosi (707) 725-1072 Northern Region 1455 Sandy Prairie Ct. Fortuna, CA 95540	Bob Coey (707) 944-5582 Bay Delta Region 7329 Silverado Trail Yountville, CA 94599	Margaret A. Paul (805) 594-6168 Central Region 3196 S. Higuera St. San Luis Obispo, CA 93401	Mary Larson (562) 342-7186 South Coast Region 4665 Lampson Ave Los Alamitos, CA
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Project Location: Various sites in Del Norte, Humboldt, Los Angeles, Marin, Mendocino, Monterey, Napa, San Luis Obispo, San Mateo, Santa Barbara, Siskiyou, Sonoma, Trinity, and Ventura counties (Appendix A).

5. Project Sponsor's Name and Address:

California Department of Fish and Game
Fisheries Branch
830 S Street
Sacramento, CA 95811

6. General Plan Designation: Various

7. Zoning: Various

8. Description of Project: Implementation of 68 major action items for restoration of anadromous salmonid habitat (Appendix A). These action items include measures to improve anadromous fish passage, reduce erosion and sedimentation, enhance instream habitat, improve water quality and improve juvenile survival.

9. Surrounding Land Uses and Setting: Briefly describe the project's surroundings: Primarily forest lands used for timber production. Some action items will be located in agricultural lands.

10. Other Public Agencies Whose Approval Is Required: U.S Army Corps of Engineers, North Coast Regional Water Quality Control Board, Bay Area Regional Water Quality Control Board, Central Coast Regional Water Quality Control Board, Los Angeles Regional Water Quality Control Board.

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

	Aesthetics		Agriculture Resources		Air Quality
	Biological Resources		Cultural Resources		Geology /Soils
	Hazards & Hazardous Materials		Hydrology / Water Quality		Land Use / Planning
	Mineral Resources		Noise		Population / Housing
	Public Services		Recreation		Transportation/Traffic
	Utilities / Service Systems		Mandatory Findings of Significance		

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

	I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
X	I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
	I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
	I find that the proposed project MAY have a A potentially significant impact@ or A potentially significant unless mitigated@ impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
	I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION , including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Neil Manji

 Neil Manji, Chief, Fisheries Branch

5/8/2008

 Date

Kevin Shaffer

 Printed Name

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporation	Less Than Significant Impact	No Impact
I. AESTHETICS – Would the project:				
a) Have a substantial adverse effect on a scenic vista?				X
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?				X
c) Substantially degrade the existing visual character or quality of the site and its surroundings?				X
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?				X
See attached explanations.				
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?				X
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?				X
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?			X	
See attached explanations.				

III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?				X
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?			X	
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?			X	
d) Expose sensitive receptors to substantial pollutant concentrations?				X
e) Create objectionable odors affecting a substantial number of people?				X
See attached explanations.				

IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?		X		
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?				X

IV. BIOLOGICAL RESOURCES (continued):				
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?			X	
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?				X
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?				X
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?				X

See attached explanations.

V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in '15064.5?		X		
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to '15064.5?		X		
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?		X		
d) Disturb any human remains, including those interred outside of formal cemeteries?		X		

See attached explanations.

VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				X
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.				X
ii) Strong seismic ground shaking?				X
iii) Seismic-related ground failure, including liquefaction?				X
iv) Landslides?				X
b) Result in substantial soil erosion or the loss of topsoil?		X		
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?			X	
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?				X
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?				X

See attached explanations.

VII. HAZARDS AND HAZARDOUS MATERIALS B Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?		X		
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?		X		
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?				X
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?				X
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?				X
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?				X
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?			X	
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?			X	
See attached explanations.				

VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				

a) Violate any water quality standards or waste discharge requirements?			X	
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?			X	
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?				X
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?				X
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?				X
f) Otherwise substantially degrade water quality?			X	
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?				X
h) Place within a 100-year flood hazard area structures that would impede or redirect flood flows?				X
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?				X
j) Inundation by seiche, tsunami, or mudflow?				X

See attached explanations.

IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?				X
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?				X
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?				X

See attached explanations.

X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?				X
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?				X

See attached explanations.

XI. NOISE B Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?			X	
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?				X
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?			X	
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?		X		
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use				X

airport, would the project expose people residing or working in the project area to excessive noise levels?				
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?				X

See attached explanations.

XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?				X
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?				X
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?				X

See attached explanations.

XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?			X	
Police protection?			X	
Schools?			X	
Parks?			X	
Other public facilities?			X	

See attached explanations.

XIV. RECREATION --				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?				X
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?				X
See attached explanations.				
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?				X
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?				X
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?				X
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?				X
e) Result in inadequate emergency access?				X
f) Result in inadequate parking capacity?				X
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?				X
See attached explanations.				

XVI. UTILITIES AND SERVICE SYSTEMS Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?				X
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?				X
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?				X
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project=s projected demand in addition to the provider=s existing commitments?				X
f) Be served by a landfill with sufficient permitted capacity to accommodate the project=s solid waste disposal needs?				X
g) Comply with federal, state, and local statutes and regulations related to solid waste?				X
See attached explanations.				

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

EXPLANATION OF RESPONSES TO
INITIAL STUDY ENVIRONMENTAL CHECKLIST

I. AESTHETICS

- a) The project will not have an adverse effect on a scenic vista. Such an impact will not occur because the project will stabilize, restore, and revegetate damaged and eroded sites to produce a more natural and esthetically pleasing appearance.
- b) The project will not damage scenic resources such as trees, rock outcroppings, and historic buildings. Such an impact will not occur because the project will not disturb large trees or other scenic features in the process of restoring damaged sites.
- c) The project will not substantially degrade the existing visual character or quality of the work sites and their surroundings. Such an impact will not occur because in most cases the restoration project will restore the natural character of disturbed sites. Where non-natural structures (such as fish screens) are constructed, they will be of small size and compatible with the appearance of with their surroundings.
- d) The project will not create a new source of substantial light or glare which would adversely affect day or nighttime views in the area of the worksites. Such an impact will not occur because none of the restoration project action items require installation of artificial lighting.

II. AGRICULTURE RESOURCES

- a) The project will not convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use. Such an impact will not occur because most project worksites are located away from FMMP designated farmland. Project actions associated with farmland (such as fish screens) are designed to allow continued use of farmland with reduced impacts to anadromous salmonids.
- b) The project will not conflict with existing zoning for agricultural use or a Williamson Act contract. Fish habitat restoration actions will not change existing land use.
- c) The project will not involve other changes in the existing environment, which due to their location or nature, could result in conversion of Farmland to non-agricultural use. Fish habitat restoration actions are either away from, or are compatible with, existing agricultural uses.

III. AIR QUALITY

- a) The project will not conflict with or obstruct implementation of the applicable air quality plan. Such an impact will not occur because implementation of the project does not create any features that would be a source of air pollution. Use of vehicles and heavy equipment during construction will be on a limited scope and a short duration and is not expected to adversely affect air quality.
- b) The project will not violate any air quality standard or contribute substantially to an existing or projected air quality violation. Such an impact will not occur because of the limited scope of construction activities and the fact that work sites are located in rural areas that are in overall attainment of air quality standards.
- c) The project will not result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable Federal or State ambient air quality standard (including releasing emissions that exceed quantitative thresholds for

ozone precursors). Such an impact will not occur because the project involves no ongoing sources of air pollution.

- d) The project will not expose sensitive receptors to substantial pollutant concentrations. Such an impact will not occur because the project will not significantly increase pollutant concentrations.
- e) The project will not create objectionable odors affecting a substantial number of people. Project actions are designed to restore natural habitat conditions for salmonids, and will not create any stagnant water that might produce objectionable odors.

IV. BIOLOGICAL RESOURCES

- a) The project will not have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status in local or regional plans, policies, or regulations, or by the California Department of Fish and Game, National Marine Fisheries Service or U. S. Fish and Wildlife Service. Such an impact will not occur because project activities are designed to improve and restore stream habitat, to provide a long-term benefit to both anadromous salmonids and other fish and wildlife. The project will be implemented in a manner that will avoid short-term adverse impacts to rare plants and animals and cultural resources during construction; the mitigation measures that will be implemented to avoid short-term impacts to rare plants and animals and cultural resources are described in Appendices B, C, D, and E. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- b) The project will not have a substantial adverse effect on any riparian habitat or other sensitive natural communities identified in local or regional plans, policies and regulations, or by the California Department of Fish and Game or U. S. Fish and Wildlife Service. Such an impact will not occur because the project actions are designed to correct past habitat degradation and restore and enhance riparian habitat and associated upland habitats.
- c) The project will not have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means. The project actions will have either no effect on wetlands or will be beneficial to wetlands.
- d) The project will not substantially interfere with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites. The project will enhance the movement of anadromous fish by the replacement or removal of culverts and bridges that are barriers to fish migration.
- e) The project will not conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance. Such an impact will not occur because project actions are designed to restore and enhance biological resources. Some minor disturbance of grasses and shrubs will occur where stream structures are keyed into the stream banks. Care will be taken not to disturb any mature trees. Riparian vegetation will be reestablished where construction activities disturb existing plants, and additional native plants will be planted to enhance the riparian vegetation.
- f) The project will not conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or State habitat conservation plan. Such a conflict will not occur because the project restoration actions will not have a significant adverse impact on any species or habitat. Project actions are designed to restore the natural character of the fish and wildlife habitat at the project work sites. The

project specifically supports the California Salmon, Steelhead Trout and Anadromous Fisheries Program Act (Fish and Game Code Section 6900 et. seq.)

- g) Species Impacts for the following species include (mitigation measures are included in Appendix B):

g.i) Point Arena mountain beaver (*Aplodontia rufa nigra*). The Point Arena mountain beaver (PAMB) is a burrowing rodent found in coastal Mendocino County, in an area of approximately 24 square miles (from about 2 miles north of Bridgeport Landing south to about 5 miles south of the town of Point Arena, and from the coast to about 5 miles inland). Mountain beaver inhabit underground burrow systems, associated with moist areas with well drained soils and lush herbaceous vegetation. PAMB populations are typically found in riparian, coastal scrub, or dune scrub habitats; however they may occur in any habitat with brushy or herbaceous cover. PAMB presence is evaluated by surveying for burrows of characteristic size and shape, with signs of recent activity.

Potential impacts to PAMB from salmonid habitat improvement projects include disruption of nesting or other activities due to equipment noise; collapse or damage to burrows from heavy equipment, riparian planting, or foot traffic; and removal of vegetation (such removal is usually temporary, but may nonetheless impact PAMB).

g ii) California freshwater shrimp (*Syncaris pacifica*). As an aquatic species California freshwater shrimp (CAFS) depend on the availability of slow moving perennial water and suitable habitat to survive. Habitat for CAFS as described in the Recovery Plan consists of:

- -Slow moving streams 12-36 inches in depth
- -Exposed live roots of trees such as willow or alder
- -Undercut banks greater than 6 inches
- -Overhanging woody debris or stream vegetation and vines including stinging nettles, grasses, vine maple and mint.

Migration of CAFS is not well understood, however it is speculated that CAFS require access to slow moving waters adjacent to continuous, stable, well vegetated stream banks, or deep stable undercut banks during winter high flows.

Salmonid restoration projects typically enhance or create habitat that is also suitable for CAFS. Stable undercut banks, well vegetated with a variety of native plant species, alongside deep perennial pools, are components of healthy riparian ecology and the end result of many restoration projects. In addition, salmonid restoration projects can remove existing threats to CAFS by:

- Eliminating grazing in the riparian corridor
- Reclaiming riparian vegetation through plantings and increased setbacks in agricultural settings
- Removing summer dams (and culverts) and replacing summer crossings with bridges
- Improving road drainage and maintenance that reduces water and sediment delivery to streams
- Reversing the impacts of flood control practices by replacing vegetation and large woody debris, and by helping restore flood plains and reducing channeling
- Stabilizing banks with vegetation that promotes CAFS habitat
- Removing migration barriers

While salmonid restoration projects typically enhance or create these habitat and instream conditions that are favorable for CAFS and associated native aquatic species, project activities in wetted stream habitats may directly impact individuals when present. Whereas project activities in dry stream habitats, will not have a direct impact on individuals. Where habitat exists, instream project activities may indirectly impact the species through the loss

of habitat. Mitigation measures are implemented to avoid directly impacting individuals when present however, some short term direct and indirect impacts can occur.

Direct impacts may include

- Short term degradation of water quality at project site resulting in reduction in feeding temporarily
- Addition of instream complex shelter (large and small woody debris, boulders, aquatic vegetation) resulting in temporary dislodgement from undercut banks and vegetation
- Dewatering of project site and movement of animals from preferred habitat to nearby suitable habitat during the project

Indirect impacts may include:

- Short term loss of habitat until riparian responds
- Short term degradation of habitat
 - √ loss of unstable undercut banks
 - √ short term loss or degradation of overhanging riparian vegetation
- Introduction of migration barriers on one side of the stream

g iii) California red-legged frog (*Rana aurora draytonii*). As an aquatic species, frogs are generally present in the riparian corridor year-round, utilizing both stream and bank habitat. Impacts to the species have the potential to occur during project implementation activities such as (but not limited to) channel dewatering, unscreened pumping, heavy equipment usage, work with hand tools, removal of riparian vegetation, spills from refueling vehicles, and reintroduction of non-native species into stream. Habitat removal and/or degradation are not the result of restoration projects. Typically, removal of riparian vegetation for the purpose of implementing a project does not occur, but is minimal when it does. Many projects involve restoring the riparian corridor that is absent. More often, dewatering, heavy equipment usage, and work with hand tools occurs during project implementation. All impacts are temporary and can be minimized to avoid take of the species.

g iv) Least Bell's vireo (*Vireo bellii pusillus*). Impacts to the species have the potential to occur when as a result of removal of riparian vegetation (willows and low shrubs) during the spring and summer or from disturbance within a 0.25 mile radius of next sites. Typically removal of riparian vegetation for the purpose of implementing a project does not occur, but is minimal when it does. Many projects involve restoring the riparian corridor that is absent. Removal of willow branches for revegetation at restoration sites has the potential to degrade existing vireo habitat. Noise from heavy equipment has the potential to cause nesting birds to abandon nests. All impacts are temporary and can be minimized to avoid take of the species.

g v) Tiger salamander (*Ambystoma tigrinum*). Impacts to the species are highly unlikely as most implementation projects occur in or near the stream and riparian corridor. Upslope projects are typically limited to road upgrading and decommissioning in areas that are steep, eroding, and often in areas vegetated with trees and shrubs. The species uses ponds and vernal pools for breeding and grassland habitat for estivation, both of which are usually not in proximity to anadromous fish-bearing streams.

g vi) Coho salmon, Chinook salmon, Steelhead, and Coast cutthroat trout. Habitat loss and modification are believed to be the major factors determining the current status of salmonid populations. Conservation and recovery of salmonid depend on having diverse habitats with connections among those habitats. The salmonid lifecycle involves adults maturing in the ocean, migrating back to their home streams and spawning, embryos incubating, fry emerging, juveniles growing, and smolts migrating to the estuary to acclimate to saltwater and moving out into the ocean. While all of the work proposed under this program will enhance habitat for one or more of these species impacts to the species

have the potential to occur during project implementation activities such as (but not limited to) channel dewatering, disturbance of banks, and fish relocation. All impacts are temporary and can be minimized to avoid take of the species.

G vii) Arroyo Toad (*Bufo microscaphus californicus*). The Arroyo Toad inhabits coastal southern California from Salinas River Basin in Monterey and San Luis Obispo Counties to Arroyo San Simón in northern Baja California, México. This toad prefers riparian habitats with sandy streambeds with cottonwood, sycamore, and willow trees. Some populations occur in streams within coniferous forests. The stream setting usually has adjacent shallow pools where the toad may sit in the water while partially exposed above. These toads are most active during late winter and early spring after seasonal rains. Early in their activity season, toads forage to prepare for breeding. Impacts to the species have the potential to occur during project implementation activities such as (but not limited to) channel dewatering, unscreened pumping, heavy equipment usage, work with hand tools, removal of riparian vegetation, spills from refueling vehicles, and reintroduction of non-native species into stream. Habitat removal and/or degradation is not the result of restoration projects. Typically, removal of riparian vegetation for the purpose of implementing a project does not occur, but is minimal when it does. Projects can involve restoring the riparian corridor that is absent. More often, dewatering, heavy equipment usage, and work with hand tools occurs during project implementation. All impacts are temporary and can be minimized to avoid take of the species.

G viii) Tidewater Goby (*Eucyclogobius newberryi*) The tidewater goby is a small, elongate, grey-brown fish with dusky fins not exceeding 50 millimeters standard length (mm SL). The species, which is endemic to California, is typically found in coastal lagoons, estuaries, and marshes with relatively low salinities. Its habitat is characterized by brackish shallow lagoons and lower stream reaches where the water is fairly still but not stagnant. However, tidewater gobies can withstand a range of habitat conditions: they have been documented in waters with salinity levels from 0 to 42 parts per thousand, temperatures from 8 to 25o Celsius, depths from 25 to 200 centimeters, and dissolved oxygen levels of less than one milligram per liter.

Tidewater gobies may range upstream into fresh water, up to two kilometers from the estuary. In San Antonio Creek and the Santa Ynez River, Santa Barbara County, tidewater gobies are often collected five to eight km upstream of the tidal or lagoonal areas, sometimes in beaver impounded sections of streams. Conversely, tidewater gobies enter marine environments if sandbars are breached during storm events. The species' tolerance of high salinities likely enables it to withstand the marine environment, allowing it to colonize or re-establish in lagoons and estuaries following flood events.

Reproduction peaks from late April or May to July and can continue into November or December depending on the seasonal temperature and rainfall. Males begin the breeding ritual by digging burrows (75 to 100 mm deep) in clean coarse sand. Females then deposit eggs into the burrows, an average of 400 eggs per spawning effort (Swenson 1998 in press). Males remain in the burrows to guard the eggs. Males frequently forgo feeding during this period, possibly contributing to the mid-summer mortality noted in some populations. Within nine to ten days larvae emerge at approximately five to seven mm SL. The larvae live in vegetated areas within the lagoon until they are 15 to 18 mm SL, when they become substrate oriented, spending the majority of time on the bottom rather than in the water column. Both males and females can breed more than once in a season, with a lifetime reproductive potential of 3 to 12 spawning events.

The decline of the tidewater goby can be attributed primarily to urban, agricultural and industrial development in and surrounding the coastal wetlands and alteration of habitats from seasonally closed lagoons to tidal bays and harbors. Some extirpations are believed

to be related to pollution, upstream water diversions, and the introduction of exotic fish species (most notably sunfishes and black basses [Centrarchidae]). These threats continue to affect some of the remaining populations of tidewater gobies. Tidewater gobies have been extirpated from several water bodies that are impaired by degraded water quality (e.g., Mugu Lagoon, Ventura County), but still occur in others (e.g., Santa Clara River, Ventura County).

Measures to reduce impacts to tidewater goby habitat will include adjusting the timing of projects to avoid disruption to breeding activities, the use of silt fencing to reduce sediment loads and as barricades around project sites, installing coffer dams above and below project sites and translocating individual tidewater gobies found within the exclosures prior to dewatering, minimization of project areas, and requiring qualified biologists to oversee project activities.

V. CULTURAL RESOURCES

- a) The project will not cause a substantial adverse change in the significance of a historical resource as defined in CEQA Guidelines Section 15064.5. While ground disturbance will be required to implement the project at some work sites that have the potential to affect historical resources, this potential impact will be avoided through implementation of the protective measures presented in Appendix B and E. Resources identified during site-specific surveys will be protected before ground-disturbing activities are permitted at a site. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- b) The project will not cause a substantial adverse change in the significance of an archaeological resource pursuant to CEQA Guidelines Section 15064.5. While ground disturbance will be required to implement the project at some work sites that have the potential to affect archaeological resources, this potential impact will be avoided through implementation of the protective measures presented in Appendix B. Resources identified during site-specific surveys will be protected before ground-disturbing activities are permitted at a site. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- c) The project will not directly or indirectly destroy any unique paleontological resources or sites, or unique geologic features. While ground disturbance to implement the project at some work sites has the potential to affect these resources, this potential impact will be avoided through implementation of the protective measures presented in Appendix B and D. Resources identified during site-specific surveys will be protected before ground-disturbing activities are permitted at a site. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- d) The project will not disturb any human remains, including those interred outside of formal cemeteries. While ground disturbance will be required to implement the project at some work sites that have the potential to affect these resources, this potential impact will be avoided through implementation of the protective measures presented in Appendix B. Resources identified during site-specific surveys will be protected before ground-disturbing activities are permitted at a site. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.

VI. GEOLOGY AND SOILS

- a i) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the

State Geologist for the area, or based on other substantial evidence of a known fault. Such an impact will not occur because the project does not create any structures for human habitation.

- a ii) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving strong seismic ground shaking. Such an impact will not occur because the project does not create any structures for human habitation.
- a iii) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving seismic-related ground failure, including liquefaction. Such an impact will not occur because the project does not create any structures for human habitation.
- a iv) The project will not expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving landslides. Such an impact will not occur because the project does not create any structures for human habitation.
- b) The project will not result in substantial soil erosion or the loss of topsoil. Such an impact will not occur because implementation of the restoration project is designed to contribute to an overall reduction in erosion and sedimentation. Existing roads will be used to access work sites. Ground disturbance at most work sites will be minimal, except for road improvements or decommissioning. Road improvements and decommissioning will involve moving large quantities of soil from road fills and stream crossings to restore historic land surface profiles and prevent chronic erosion and sediment delivery to streams. The potential for substantial soil loss associated with road improvement and decommissioning will be avoided through implementation of the mitigation measures presented in Appendix B, Mitigation Measures, Monitoring and Reporting Program. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- c) Some project worksites are on unstable soils; however, the project will not increase the risk of landslides, lateral spreading, subsidence, liquefaction, or collapse. The project actions are designed to stabilize conditions at these sites in order to reduce sediment delivery to salmonid habitat. Actions implemented to stabilize sites may not be successful in all cases, but site instability will not be increased when compared to existing conditions.
- d) Some project work sites will be located on expansive soil; however, the project will not create substantial risks to life or property. Such an impact will not occur because the project will create no habitations, and the majority of the restoration actions will not create rigid structures that could be damaged by expansive soils. The few rigid structures to be created by the project (such as fish screens) will be engineered to withstand expansive soils, if they are present.
- e) The project will not create any sources of waste water requiring a septic system.

VII. HAZARDS AND HAZARDOUS MATERIALS

- a) The project will not create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Any potential significant hazard associated with the accidental release of coolant and petroleum products used with equipment during construction will be avoided through implementation of the mitigation measures presented in Appendix B. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.
- b) The project will not create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous

materials into the environment. At work sites requiring the use of heavy equipment, there is a small risk of an accident upsetting the machine and releasing fuel, oil, and coolant. The potential for accidental release will be reduced to a less than significant level through implementation of the mitigation measures presented in Appendix B. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.

- c) The project will not emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school. Such impact is avoided because the project will not create any feature that will emit hazardous substances.
- d) The project worksites are not located on any site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5.
- e) No project work site is located within an airport land use plan or within two miles of a public airport or public use airport.
- f) No project work site is located within the vicinity of a private airstrip.
- g) The project will not impair implementation of, or physically interfere with, an adopted emergency response plan or emergency evacuation plan. Except for the case of road decommissioning, the project has no effect on access. The planned decommissioning of selected unused wild land roads will not have a significant impact on emergency vehicle access.
- h) The project will not expose people or structures to a significant risk of loss, injury, or death involving wild land fires. At work sites requiring the use of heavy equipment, there is a small risk of an accidental spark from equipment igniting a fire. The potential for accidental fire will be reduced to a less than significant level through implementation of the mitigation measures presented in Appendix B, Mitigation Measures, Monitoring and Reporting Program. As a result, mitigation measures will ensure that any potentially significant impacts are avoided or mitigated to below a level of significance.

VIII. HYDROLOGY AND WATER QUALITY

- a) The project will not violate any water quality standards or waste discharge requirements. There is the potential for minor short-term increase in turbidity during installation of instream structures or culvert removal, however the mitigation measures described in Appendix B Mitigation, Monitoring and Reporting will assure that the project actions are in compliance with water quality standards. As a result, mitigation measures will ensure that any potentially significant short-term impacts are avoided or mitigated to below a level of significance.
- b) The project will not substantially deplete groundwater supplies or interfere substantially with groundwater recharge. Upslope restoration activities will return drainage to historic patterns thereby decreasing surface runoff and increasing infiltration to the ground water.
- c) The project will not substantially alter the existing drainage pattern of the work sites in a manner that would result in substantial erosion or siltation on- or off-site. Such an impact will not occur because the project actions are designed to produce decreased erosion overall. Instream habitat structures, such as boulder weirs or flow deflectors, will produce local redistribution of sediments. These structures will produce a local redistribution of bed load, facilitating the deposition of spawning gravel in riffles, and improving scour to maintain pools for juvenile fish habitat. This local redistribution of bed load will not produce a net increase of erosion.

- d) The project will not substantially alter the existing drainage pattern of the work sites, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on- or off-site. The project will decrease the risk of flooding through upslope restoration activities that will return drainage to historic patterns, thereby increasing infiltration and decreasing surface runoff.
- e) The project will not create or contribute runoff water that would exceed the capacity of existing or planned storm-water drainage systems, or provide substantial additional sources of polluted runoff. Such an impact will not occur because upslope restoration activities will stabilize slopes and return drainage to historic patterns, thereby decreasing surface runoff and decreasing the silt load delivered to streams in the area of the project.
- f) The project will not substantially degrade water quality. During placement of stream habitat structures and culvert replacement, some minor turbidity may be generated. The potential for degradation of water quality will be reduced to a less than significant level through implementation of the mitigation measures presented in Appendix B, Mitigation Measures, Monitoring and Reporting Program. Some short-term minor increase in turbidity may also occur as the streambed around instream structures adjusts during the first high stream flow following activity completion. However, this is not expected to produce a significant increase over background turbidity. As a result, mitigation measures will ensure that any potentially significant short-term impacts to water quality are avoided or mitigated to below a level of significance.
- g) The project will not place housing within a 100-year flood hazard area as mapped on any flood hazard delineation map. No housing will be created as part of this project.
- h) The project will not place within a 100-year flood hazard area structures which would significantly impede or redirect flood flows. Culvert removal and replacement to be done as part of the project will remove existing impediments to flood flows. Instream habitat structures, such as boulder weirs, deflectors, and bank armor, are built to change the direction and velocity of stream flow. However, these structures are small (sized to affect conditions in the low flow channel) and will not impede flood flows.
- i) The project will not expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam. Such an impact will be avoided because all instream structures to be created are small and will not significantly impede flood flows.
- j) The project will not expose people or structures to a significant risk of inundation by seiche, tsunami, or mudflow. Such an impact will not occur because project actions are designed to improve or stabilize conditions at the work sites. Upslope restoration actions will reduce the chance of mudflow by stabilizing disturbed areas, and restoring natural drainage patterns. Project work sites are not located in areas at risk to inundation by seiche or tsunami.

IX. LAND USE AND PLANNING

- a) The project will not physically divide an established community. This impact will not occur because no culvert removal or road decommissioning is proposed in any established community.
- b) The restoration activities that comprise this project do not conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect. Such an impact will not occur because the project's restoration activities are designed to be compatible with local land use plans and ordinances.

- c) The project will not conflict with any applicable habitat conservation plan or natural community conservation plan. Such an impact will not occur because project actions are designed to improve aquatic habitat conditions without adversely affecting any other species or their habitats.

X. MINERAL RESOURCES

- a) The project will not result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state. Such an impact will not occur because project actions are only designed to stabilize and restore habitat and soils within the actions area.
- b) The project will not result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan. Such an impact will not occur because no mineral resource recovery sites occur at the project work sites.

XI. NOISE

- a) The project will not result in exposure of persons to, or generation of noise levels in excess of, standards established in the local general plan or noise ordinance, or applicable standards of other agencies. There may be a minor temporary increase in noise levels at those work sites requiring the use of heavy equipment. While such short-term increase in noise will not produce a significant increase in the noise level in the general environment, there is a potential for equipment noise to affect workers in close proximity to equipment producing noise levels ≥ 85 db, such as chainsaws or backhoes. However, such an impact will not occur because personnel operating noisy equipment will be required to wear hearing protection. As a result, mitigation measures will ensure that any potentially significant noise impacts are avoided or mitigated to below a level of significance.
- b) The project will not result in exposure of persons to, or generation of, excessive ground-borne vibration or ground-borne noise levels. Such an impact will not occur because only minor amounts of ground-borne vibration or noise will be generated short-term at those work sites requiring the use of heavy equipment.
- c) The project will not result in a substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project. Such an impact will not occur because most project structures are passive (i.e., contain no moving parts). The only exceptions are the proposed fish screens, which will contain moving brushes to clean the screens. These brushes are driven by slow speed (10-15 RPM) water wheels and will not substantially increase ambient noise levels where installed.
- d) The project will not result in a substantial temporary, or periodic, increase in ambient noise levels in the project vicinity above levels existing without the project. Such an impact will not occur because only minor amounts of noise will be generated temporarily at those work sites requiring the use of heavy equipment. At those sites near nesting or breeding sites for listed species, heavy equipment will only be used outside the sensitive periods for nesting or breeding, as described in Appendix B, Mitigation Measures, Monitoring and Reporting Program. As a result, mitigation measures will ensure that any potentially significant noise impacts are avoided or mitigated to below a level of significance.
- e) None of the project work sites are located within two miles of a public airport or public use airport.

- f) None of the project work sites are located within the vicinity of a private airstrip.

XII. POPULATION AND HOUSING

- a) The project will not induce substantial population growth in an area, either directly or indirectly. Such an impact will not occur because the project will not construct any new homes, businesses, roads, or other human infrastructure.
- b) The project will not displace any existing housing and will not necessitate the construction of replacement housing elsewhere.
- c) The project will not displace any people and will not necessitate the construction of replacement housing elsewhere.

XIII. PUBLIC SERVICES

- a) The project will not have any significant environmental impacts associated with new or physically altered governmental facilities. Issuance of restoration grants to government agencies could, in some cases, lead to minor increases in staffing to complete projects. Such increases will not lead to any significant adverse impacts, because the increases are short term, and no significant construction will be required to accommodate additional staff.

XIV. RECREATION

- a) The project would not increase the use of existing neighborhood and regional parks, or other recreational facilities. Such an impact will not occur because the project actions will restore anadromous fish habitat and do not significantly alter human use or facilities at existing parks or recreational facilities. Overall, the Restoration Program is expected to increase recreation opportunities by assisting in restoring populations of anadromous fish.
- b) The project does not include recreational facilities and does not require the construction or expansion of recreational facilities.

XV. TRANSPORTATION/TRAFFIC

- a) The project will not cause a substantial increase of traffic, in relation to the existing traffic load and capacity of the street system. Such an impact will not occur because the project will result in only minor temporary increases in traffic to primarily wild land sites during implementation of habitat improvement measures.
- b) The project will not exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways. Such an impact will not occur because the habitat improvement actions will not generate a significant amount of traffic at each individual work site and because the work sites are dispersed throughout the coastal counties.
- c) The project will not result in any change in air traffic patterns.
- d) The project will not alter roads in any way that will substantially increase hazards to transportation. The proposed project will reduce hazards to transportation, because the proposed project will correct and reduce landslide and erosion damage on the selected rural roads.

- e) The project will not result in inadequate emergency access. Such an impact will not occur because during replacement of small road crossings, an alternate route for traffic will be provided around the construction.
- f) The project will not significantly affect parking capacity or demand for parking.
- g) The project will not conflict with adopted policies, plans, or programs supporting alternative transportation.

XVI. UTILITIES AND SERVICE SYSTEMS

- a) The project will not produce wastewater.
- b) The project will not require, or result in the construction of, new water or wastewater treatment facilities or expansion of existing facilities. Such an impact will not occur because the project will not produce wastewater.
- c) The project will not cause significant adverse environmental effects associated with the construction of new storm water drainage facilities or expansion of existing facilities.
- d) The project will have sufficient water supplies available to serve the project from existing entitlements and resources.
- e) The project will not produce wastewater.
- f) The project will not generate solid waste requiring disposal in a landfill.

XVII. MANDATORY FINDINGS OF SIGNIFICANCE

- a) The project does not have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory. Such a potential does not exist because the project will be implemented in a manner that will avoid short-term adverse impacts to rare plants and animals, and cultural resources during construction; the mitigation measures that will be implemented to avoid short-term impacts to rare plants and animals, and cultural resources are described in Appendix B, Mitigation Measures, Monitoring and Reporting Program. The Project activities will provide a long-term benefit to both anadromous salmonids and other fish and wildlife.
- b) The project does not have adverse impacts that are individually limited, but cumulatively considerable. Cumulative adverse impacts will not occur because potential adverse impacts of the project are only minor and temporary in nature. It is the goal of the project that the beneficial effects of habitat enhancement actions will be cumulative over time and contribute to the recovery of listed anadromous salmonids.
- c) The project does not have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly. The habitat enhancement measures implemented as part of this project will contribute to improved water quality, increased soil stability, and the recovery of listed salmonids, all of which will be beneficial to human beings.

APPENDIX A, Table A-1. Exempt Items

Public Involvement, Planning, Research, Monitoring, Education, Technical Training, and Organization Support Action Items

Project ID#	Project Type	Project Title	Agency
722737	TE	2009 Coho Confab	Salmonid Restoration Federation
722742	MD	Russian River Coho Release Monitoring Program-July 2008 to June 2011	Regents of the University of California - Division of Agriculture and Natural Resources
722756	PL	Archeological, Paleontological and Rare Plant Surveys	Humboldt State University Sponsored Programs Foundation
722761	ALL	Adaptive Watershed Improvement Projects 2007	Pacific States Marine Fisheries Commission
722717	ED	Multicultural Watershed Science - Amamos Los Salmones K-12 Education for Sonoma's Diverse Students	Sonoma Ecology Center
722718	TE	2009 Salmonid Restoration Annual Conference	Salmonid Restoration Federation
722720	PL	Fish Habitat Specialist	California Conservation Corps
722721	AC	AmeriCorps Watershed Stewards Project - Service Year 15	California Conservation Corps
722727	MD	Lifecycle Monitoring of Topanga Creek Southern Steelhead Trout	Resource Conservation District of the Santa Monica Mountains
722728	PI	FishNet 4C-Fishery Network of Central California Coastal Counties	Marin County
722736	MD	Upper Redwood Creek Juvenile Salmonid (Smolt) Abundance Project	Humboldt State University Sponsored Programs Foundation
722196	MD	Lower Redwood Creek Juvenile Salmonid (Smolt) Abundance Project	Humboldt State University Sponsored Programs Foundation
722766	MD	Shasta and Scott River Salmonid Outmigrant Monitoring	Shasta Valley Resource Conservation District

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722768	OR	CA Habitat Restoration Project Database 2008-2009, Development of Online Proposal Submission, & FRGP Document Scanning	Pacific States Marine Fisheries Commission
722769	MD	Coastal Mendocino County Salmonid Life Cycle & Regional Monitoring	Pacific States Marine Fisheries Commission
722770	OR	PAD: Map-based Barrier Inventory for Anadromous Passage Restoration 2008-2009	Pacific States Marine Fisheries Commission
722771	MO	North Coast Restoration Monitoring & Evaluation Program, 2008-2010	Pacific States Marine Fisheries Commission
722775	PL	Coastal Watershed Planning & Assessment Program Scientific and Technical Support	Pacific States Marine Fisheries Commission
722778	RE	Coho Salmon Restoration & Conservation Program	Monterey Bay Salmon and Trout Project
722209	PL	Beith/Grotzman Creek Watershed Assessment	City of Arcata
722795	PL	Mission Creek Fish Passage Project at Highway 192 Bridge	City of Santa Barbara
722796	PL	Mission Creek Fish Passage Project at Tallant Road Bridge	City of Santa Barbara
722817	ED	Watershed Riparian Education Program	Jacoby Creek Land Trust
722819	ED	Salmon River Restoration Council Watershed Education Program	Salmon River Restoration Council
722904	MD	Mad-Redwood Hydrologic Unit Regional Adult Salmonid Monitoring	Humboldt State University Sponsored Programs Foundation
722850	PL	Big Salmon Creek Sediment Source Assessment Project	The Conservation Fund
722866	ED	Mattole Ecological Education Program: Salmonid Sustainability	Mattole Restoration Council

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722881	MD	Coastal Marin Long-Term Coho Salmon and Steelhead Monitoring Program	Point Reyes National Seashore Association
722846	OR	Smith River Watershed Coordinator	Del Norte County
722876	PL	West Corral de Piedra Bank Stabilization	Central Coast Salmon Enhancement
722905	MD	Freshwater Creek Salmonid Life Cycle Monitoring Station	Humboldt State University Sponsored Programs Foundation
722853	PL	Salmon Creek Delta, Phase II Planning	Pacific Coast Fish Wildlife and Wetlands Restoration Association
722909	MD	Scott River Tributary Flow Gauging and Precipitation Monitoring - Scott River Water Balance	Siskiyou Resource Conservation District
722839	MD	Ventura River Steelhead/Rainbow Trout Spawning Survey and Population Estimate	Casitas Municipal Water District
722855	PL	Lindsay Creek Watershed Inventory & Restoration Planning Project	Pacific Coast Fish Wildlife and Wetlands Restoration Association
722837	PI	South Coast Streams - Community Based Fisheries Restoration	Community Environmental Council
722917	MD	Salmon River Weak Stocks Assessment	Salmon River Restoration Council
722922	PL	Santa Rosa Creek Watershed Management Plan	Greenspace, The Cambria Land Trust
722870	ED	Central Coast Salmon Enhancement Education Program	Central Coast Salmon Enhancement
722926	MD	Prairie Creek Sub-Basin Life Cycle Monitoring	Humboldt State University Sponsored Programs Foundation
722864	TE	SRF Field School: Road Assessments, Treatments and Sediment Control Practices for Salmonid Watershed in the North Coast Region	Salmonid Restoration Federation

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722930	PI	Five Counties Salmonid Conservation Program (5C Program)	Trinity County Planning Department
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(42)

- AC – AmeriCorps Program only
- ED – Education
- TE – Technical Training
- PL – Watershed Evaluation, Assessment, and Planning
- MD – Monitoring Projects (data)
- MO – Project Monitoring following Project Completion
- PI – Public Involvement
- OR – Watershed Organization Support
- RE – Cooperative Rearing

APPENDIX A, Table A-2. Minor Action Items

Riparian Restoration Action Items

Project ID#	ProjectType	Project Title	Agency
722890	HI	Klamath River Off-Channel Coho Habitat Enhancement Project	Karuk Tribe of California
722813	HR	Shackleford Creek Riparian Restoration Project	Quartz Valley Indian Reservation
722177	HB	Freshwater Creek Barrier Modification	Humboldt Fish Action Council

HI – Instream Habitat Restoration

HR – Riparian Restoration

HB – Instream Barrier Modification

APPENDIX A, Table A-3. Major Action Items

County	Project ID#	Project Type	Project Title	Agency
Del Norte	722824	HI	Sultan Creek Habitat Improvement	Rural Human Services
Del Norte	722825	HU	Terwer Creek Training and Sediment Control Project	Yurok Tribe Watershed Restoration Department
Del Norte	722885	HI	Wilson Creek Instream Habitat Enhancement	California Conservation Corps, Northern Service District, Fortuna Center
Del Norte	723013	HU	Terwer USFWS	Yurok Tribe
Del Norte	723038	HU	Wilson Creek Phase 2 Additional Sites	Pacific Coast Fish Wildlife and Wetlands Restoration Association
Humboldt	722715	HB	East Mill Creek Barrier Removal Downstream	Mattole Salmon Group
Humboldt	722716	HB	East Mill Creek Barrier Removal Upstream (was FRGP FP028)	Mattole Salmon Group
Humboldt	722730	HU	Francis Creek	Eel River Watershed Improvement Group
Humboldt	722735	HI	Redwood Creek Salmonid Habitat Improvement Project	Eel River Watershed Improvement Group
Humboldt	722738	HU	Road Decommissioning- Bluff Creek Watershed at Fish Lake	U.S. Forest Service Six Rivers National Forest
Humboldt	722808	HU	Middle VDR Phase 3 Upslope	Yager Environmental Stewards
Humboldt	722814	FP	North Fork Lost Man Creek Fish Passage Project	Redwood National Park
Humboldt	722840	HU	The 2007 Blue Goo Slide Stabilization Project	Eel River Salmon Restoration Project, PCFFA

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Humboldt	722841	HS	The 2007 Leggett Creek Bank Stabilization & Fish Habitat Project	Eel River Salmon Restoration Project, PCFFA
Humboldt	722871	FP	Mill (Watek) Creek Culvert Replacement	Humboldt County Public Works Department
Humboldt	722872	FP	South Fork Bear Creek Culvert Removal for Fish Passage	Mattole Restoration Council
Humboldt	722887	HR	Eel River Arundo Eradication	Eel River Watershed Improvement Group
Humboldt	722888	HR	Lower Maple Creek Riparian Corridor Enhancement	Humboldt Fish Action Council
Humboldt	722889	HU	Ettersburg Area Sediment Reduction Project for Coho Recovery (FRGP HU130 Blue Slide)	Mattole Restoration Council
Humboldt	722897	HU	Iaqua Ranch Roads Sediment Reduction	Humboldt County Resource Conservation District
Humboldt	722899	HU	Rocky Gulch Road Decommissioning	Pacific Coast Fish Wildlife and Wetlands Restoration Association
Humboldt	722900	HU	Mattole Estuary Area Sediment Reduction (FRGP HU170 lower Mattole)	Mattole Restoration Council
Humboldt	722901	HU	Freshwater Creek Road Decommissioning, Phase III	Humboldt County Resource Conservation District
Humboldt	722902	HU	Elk River Road Decommissioning and Sediment Control, Phase II	Humboldt County Resource Conservation District
Humboldt	722903	HU	2008 Salmon Creek Road Decommissioning	Pacific Coast Fish Wildlife and Wetlands Restoration Association
Humboldt	723006	HB	Hall Creek Fish Passage	Caltrans

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Humboldt	723007	HB	Lindsey Creek Fish Passage	Caltrans
Humboldt	723010	HU	Mattole Bear Creek	Mattole Restoration Council
Humboldt	723011	HU	Coyote Creek Watershed Improvement additional Sites Project	Pacific Coast Fish Wildlife and Wetlands Restoration Association
Humboldt	723012	HU	Upper Redwood Lacks Creek Erosion Control additional sites	Pacific Coast Fish Wildlife and Wetlands Restoration Association
Humboldt	723014	HU	Upper Mattole Stream Crossing Decommissioning Project	Restoration Forestry
Humboldt	723015	HU	YES Sediment Reduction Project	Yager Environmental Stewards
Los Angeles	722834	HI	Solstice Creek Habitat Enhancement Project	California Conservation Corps
Marin	722772	HU	San Geronimo Creek Upland Habitat Restoration Project	Marin Open Space District
Mendocino	722767	HS	Lower Forsythe Creek Restoration Project	Bioengineering Institute
Mendocino	722781	HI	Upper Noyo River Wood Project	CCC Ukiah
Mendocino	722783	HI	Albion River Spawning Habitat Enhancement	California Conservation Corps
Mendocino	722794	HB	Glenbrook Gulch Anadromous Fish Habitat Restoration	California Department of Parks and Recreation
Mendocino	722831	HU	Kenny Creek and Mud Creek Sediment Reduction	Mendocino County RCD
Mendocino	722883	HI	Kenny Creek Habitat Improvement	Eel River Watershed Improvement Group
Mendocino	722894	HU	2008 Standley Creek Watershed Implementation Phase I, SF Eel River	Trout Unlimited

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Mendocino	722896	HU	Garcia Forest Signal Creek Watershed Implementation Project, Phase 1	The Conservation Fund
Mendocino	722927	FP	2008 Little Jack Creek Fish Passage	Trout Unlimited
Mendocino	722928	FP	Ancestor Creek Migration Barrier Removal Project	Mendocino County Department of Transportation
Mendocino	723009	HU	Hollow Tree Additional Sites	Trout Unlimited
Monterey	722803	HU	Williams Creek Erosion Prevention Implementation Project	Big Sur Land Trust
Napa	723017	HU	Demonstration Roads Improvements in the Napa River Watershed (includes Garden-Heath Canyon Roads 722826)	Napa Co. RCD/PWA
San Luis Obispo	722875	HR	San Luis Obispo Creek Watershed Arundo Management Program	Land Conservancy of San Luis Obispo County
San Mateo	722740	HB	Pescadero Creek Riparian Habitat Improvement Project	San Mateo County Parks and Recreation Division
San Mateo	722807	HU	Big Dipper Ranch Road Project	Midpeninsula Regional Open Space District
Santa Barbara	722838	HB	Gobernador Creek - Widdoes Fish Passage Enhancement Project	Community Environmental Council
Siskiyou	722806	SC	Little Shasta Fish Passage and Screening Project	Shasta Valley Resource Conservation District
Siskiyou	722886	HI	Scott River Off-Channel Habitat Enhancement	Siskiyou Resource Conservation District
Siskiyou	723004	WC	Shackleford Measuring Weir	DWR

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Siskiyou	723005	WD	Montague Measuring Weir	DWR
Siskiyou	723008	PM	Youngs' Fish Passage Project	Siskiyou RCD
Siskiyou	723016	SC	Jenner Lower Pump Fish Screen	Siskiyou RCD
Sonoma	722725	FP	Dutch Bill Creek Fish Passage Barrier Elimination	Gold Ridge Resource Conservation District
Sonoma	722731	HI	Fay Creek Pool Habitat Project	Gold Ridge Resource Conservation District
Sonoma	722788	HS	Green Valley Coho Enhancement IV	Gold Ridge Resource Conservation District
Sonoma	722789	HR	Riparian Restoration for Salmonid Recovery, Sonoma Creek	Sonoma Ecology Center
Sonoma	722882	HI	Salmon Creek Estuary Habitat Structures	Occidental Arts and Ecology Center
Trinity	722205	HU	Upper South Fork Road Decommissioning	Trinity County RCD
Trinity	722804	FP	Conner Creek Fish Passage Improvement Project	Trinity County Planning Department
Trinity	722816	FP	Packers Creek Bridge Fish Passage	USFS Shasta-Trinity NF
Trinity	723024	FP	Hall City Creek	Trinity County Public Works Department
Trinity/Humboldt	722199	HU	Monroe and Big slide creek Road Decommissioning Project	Trinity County RCD
Ventura	722764	FP	Lion Creek Bridge Replacement Project	Ventura County Resource Conservation District

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FP – Fish Passage at Stream Crossings
HB – Instream Barrier Modification
HI – Instream Habitat Restoration
HR – Riparian Restoration
HS – Bank stabilization
HU – Upslope Watershed Restoration
PM – Maintenance
SC – Fish Screening
WC – Water Conservation Measures
WD – Water Measuring Devices

APPENDIX B
MITIGATION MEASURES, MONITORING AND REPORTING PROGRAM FOR THE
2008 FISHERIES RESTORATION GRANT PROGRAM

MITIGATION

I. AESTHETICS

No specific mitigation measures are required to protect aesthetics.

II. AGRICULTURE RESOURCES

No specific mitigation measures are required to protect agricultural resources.

III. AIR QUALITY

No specific mitigation measures are required to protect air quality.

IV. BIOLOGICAL RESOURCES

General Measures for Protection of Biological Resources

- 1) Timing. To avoid impacts to aquatic habitat the activities carried out in the restoration program typically occur during the summer dry season.
 - a) Work around streams is restricted to the period of June 15 through November 1 or the first rainfall. This is to take advantage of low stream flow and avoid the spawning and egg/alevin incubation period of salmon and steelhead.
 - b) Upslope work generally occurs during the same period as stream work. Road decommissioning and other sediment reduction activities are dependent on soil moisture content. Upslope projects do not have seasonal restrictions in the Incidental Take Statement but work may be restricted at some sites to allow soils to dry out adequately. In some areas equipment access and effectiveness is constrained by wet conditions.
 - c) The permissible work window for individual work sites will be further constrained as necessary to avoid the nesting or breeding seasons of birds and terrestrial animals. At most sites with potential for raptor (including northern spotted owls) and migratory bird nesting, if work is conditioned to start after July 31, potential impacts will be avoided and no surveys will be required. For work sites that might contain nesting marbled murrelets, the starting date will be September 15 in the absence of surveys. The work window at individual work sites could be advanced if surveys determine that nesting birds will not be impacted.
 - d) For restoration work that could affect swallow nesting habitat (such as removal of culverts showing evidence of past swallow nesting), construction will occur after August 31 to avoid the swallow nesting period. Alternatively, the suitable bridge nesting habitat will be netted before initiation of the breeding season to prevent nesting. Netting must be installed before any nesting activity begins, generally prior to March 1. Swallows must be excluded from areas where construction activities cause nest damage or abandonment.

- e) Planting of seedlings shall begin after December 1, or when sufficient rainfall has occurred to ensure the best chance of survival of the seedlings, but in no case after April 1.
- 2) During all activities at project work sites, all trash that may attract predators shall be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris shall be removed from work areas.
- 3) Staging/storage areas for equipment, materials, fuels, lubricants, and solvents, will be located outside of the stream's high water channel and associated riparian area. Stationary equipment such as motors, pumps, generators, compressors, and welders located within the dry portion of the stream channel or adjacent to the stream, will be positioned over drip-pans. Vehicles will be moved out of the normal high water area of the stream prior to refueling and lubricating. The grantee shall ensure that contamination of habitat does not occur during such operations. Prior to the onset of work, DFG shall ensure that the grantee has prepared a plan to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- 4) The grantee shall ensure that the spread or introduction of invasive exotic plants shall be avoided to the maximum extent possible. Equipment shall be cleaned of all dirt, mud, and plant material prior to entering a work site. When practicable, invasive exotic plants at the work site shall be removed.
- 5) The number of access routes, number and size of staging areas, and the total area of the work site activity shall be limited to the minimum necessary to complete the restoration action.
- 6) Any equipment work within the stream channel shall be performed in isolation from the flowing stream. If there is any flow when the work is done, the grantee shall construct coffer dams upstream and downstream of the excavation site and divert all flow from upstream of the upstream dam to downstream of the downstream dam. The coffer dams may be constructed with clean river gravel or sand bags, and may be sealed with sheet plastic. Sand bags and any sheet plastic shall be removed from the stream upon project completion. Clean river gravel may be left in the stream, but the coffer dams must be breached to return the stream flow to its natural channel.
- 7) For minor actions, where the disturbance to construct coffer dams to isolate the work site would be greater than to complete the action (for example, placement of a single boulder cluster), then measures will be put in place immediately downstream of the work site to capture suspended sediment. This may include installation of silt catchment fences across the stream, or placement of a filter berm of clean river gravel. Silt fences and other non-native materials will be removed from the stream following completion of the activity. Gravel berms may be left in place after breaching, provided they do not impede the stream flow.
- 8) Any equipment entering the active stream (for example, in the process of installing a coffer dam) shall be preceded by an individual on foot to displace wildlife and prevent them from being crushed.
- 9) If any non-special status wildlife are encountered during the course of construction, said wildlife shall be allowed to leave the construction area unharmed, and shall be flushed, hazed, or herded in a safe direction away from the project site. "Special status wildlife" is defined as any species that meets the definition of "endangered, rare, or threatened species" in section 15380 in Title 14 of the California Code of Regulations, also known as the "CEQA Guidelines".

- 10) Any red tree vole nests encountered at a work site will be flagged and avoided during construction.
- 11) For any work sites containing western pond turtles, salamander, foothill yellow-legged frogs or tailed frogs, the grantee shall provide to the DFG grant manager for review and approval, a list of the exclusion measures that will be used at their work site to prevent take or injury to any individual pond turtles, salamanders, or frogs that could occur on the site. The grantee shall ensure that the approved exclusion measures are in place prior to construction. Any turtles or frogs found within the exclusion zone shall be moved to a safe location upstream or downstream of the work site, prior to construction.
- 12) All habitat improvements shall be done in accordance with techniques in the *California Salmonid Stream Habitat Restoration Manual*. The most current version of the manual is available at: <http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp>

Specific Measures for Endangered, Rare, or Threatened Species That Could Occur at Specific Work Sites

Rare Plants

The work sites for the 2008 grants projects are within the range of a variety of rare plant species. The plant species found on a State or Federal special status list that might be associated with the 2008 grants projects, was determined from a search of DFG's Natural Diversity Database. Because of the large number of widely scattered work sites proposed, it is not feasible to survey individual work sites in advance and still be able to implement the restoration projects, due to time limits on the availability of restoration funds. Lists of special status plant species that might occur at individual work sites are presented in Appendix A. Past experience with grants projects from previous years has shown that the potential for adverse impacts on rare plants at salmonid restoration work sites is very low. Few sites surveyed for rare plants between 1999 and 2007 were found to have rare plant colonies; disturbance of rare plants was avoided in all cases. In order to avoid impacts to rare plants during the 2008 grants projects, the following mitigation measures will be implemented:

- 1) DFG will survey all work sites for rare plants prior to any ground disturbing activities. Rare plant surveys will be conducted following the "Guidelines for Assessing the Effects of Proposed Developments on Rare and Endangered Plants and Plant Communities" (DFG, 2000). These guidelines are available on the web at: <http://www.dfg.ca.gov/habcon/>.
- 2) If any special status plant species are identified at a work site, DFG will require one or more of the following protective measures to be implemented before work can proceed:
 - a) Fencing to prevent accidental disturbance of rare plants during construction,
 - b) On-site monitoring by a qualified biologist during construction to assure that rare plants are not disturbed, and
 - c) Redesign of proposed work to avoid disturbance of rare plants.
- 3) If it becomes impossible to implement the project at a work site without potentially significant impacts to rare plants, then activity at that work site will be discontinued.
- 4) DFG shall ensure that the grantee or responsible party is aware of these site-specific conditions, and will inspect the work site before, during, and after completion of the action item.

California freshwater shrimp (*Syncaris pacifica*)

Of the 68 work sites proposed as part of the 2008 grants program, five occurs within the range of California freshwater shrimp (CFS) (San Geronimo Creek Upland Habitat Restoration, Fay Creek Pool Habitat Project, Salmon Creek Estuary Habitat Structures, Riparian Restoration for Salmonid Recovery Sonoma Creek, Green Valley Coho Enhancement IV) (Appendix A). The range of the CFS includes Marin, Napa, and Sonoma counties, excluding the Gualala River watershed. Therefore, the potential for impacts to CFS will be mitigated by complying with all of the mandatory terms and conditions associated with incidental take authorized by the U. S. Fish and Wildlife Service, Biological Opinion dated August 17, 2004. DFG proposes to implement the following measures to minimize adverse effects to the CFS and its habitat:

Where appropriate, a Service-approved DFG biologist will survey each site for shrimp before allowing work to proceed and prior to issuance of a Streambed Alteration Agreement. All overhanging vegetation, undercut banks, and tree roots will be surveyed with a butterfly net or fish net. In site locations where shrimp are present, DFG will require the grantee to implement the mitigation measures listed:

- 1) Equipment work will be performed only in riffle, shallow run, or dry habitats, avoiding low velocity pool and run habitats occupied by shrimp, unless shrimp are relocated according to the protocol described below. "Shallow" run habitat is defined as a run with a maximum water depth, at any point, less than 12 inches, and without undercut banks or vegetation overhanging into the water.
- 2) Hand placement of logs or rocks will be permitted in pool or run habitat in stream reaches where shrimp are known to be present only if the placement will not adversely affect shrimp or their habitat.
- 3) Care shall be taken during placement or movement of materials in the stream to prevent any damage to undercut stream banks and to minimize damage to any streamside vegetation. Streamside vegetation overhanging into pools or runs shall not be modified.
- 4) No log or rock weirs (including vortex rock weirs), or check dams shall be constructed that would span the full width of the low flow stream channel. Vegetation shall be incorporated with any structures involving rocks or logs to enhance migration potential for shrimp.
- 5) DFG must be notified at least one week in advance of the date on which work will start in the stream, so that a qualified DFG biologist can monitor activities at the work site. All work in the stream shall be stopped immediately if it is determined by DFG that the work has the potential to adversely impact on the shrimp or its habitat. Work shall not recommence until DFG is satisfied that there will be no impact on the shrimp.
- 6) At least 15 days prior to the onset of activities, DFG will submit the name(s) and credentials of biologists who will conduct activities specified in the following measures. The grantee will implement any additional conservation measures requested by DFG and/or the Service.
- 7) If in the opinion of the Service-approved biologist, adverse affects to shrimp would be further minimized by moving shrimp away from the project site, the following procedure shall be used:
 - a) A second survey will be conducted within 24 hours of any construction activity and relocated. Shrimp will be moved while in the net, or placed in buckets containing stream water and then moved directly to the nearest suitable habitat. Stress and temperature monitoring of shrimp shall be performed by the Service-approved biologist. Numbers of shrimp and any mortalities or injuries must be identified and recorded. Shrimp habitat is

defined as reaches in low elevation (less than 116m) and low gradient (less than 1 percent) streams where banks are structurally diverse with undercut banks, exposed fine root systems, overhanging woody debris or overhanging vegetation.

- b) When no other habitat exists on a landowner's property, the shrimp shall be held in suitable containers with site water and released at the end of the day. Containers shall be placed in the shade.
 - c) Only Service-approved biologists shall participate in the capture, handling, and monitoring of shrimp. DFG will report annually on the number of capture, release and injuries/mortality and agrees to modify capture/release strategy with Service staff as needed to prevent adverse effects.
 - d) If moving the shrimp out of the work area cannot be accomplished, and other avoidance measures have been deemed inappropriate, the DFG will drop activities at the work site from the project.
 - e) Before any construction activities begin at a work site that may contain shrimp, the Service-approved DFG biologist shall conduct a training session for all construction personnel. At a minimum the training shall include a description of the shrimp and its habitat, the importance of the shrimp and its habitat, the general measures that are being implemented to conserve the shrimp as they relate to the work site, and the work site boundaries where construction may occur.
- 8) At any work site that may contain shrimp, all fueling and maintenance of vehicles, other equipment and staging areas shall occur at least 65 feet from any riparian habitat or water body. The grantee shall ensure contamination of habitat does not occur during such operations. Prior to the onset of work, DFG shall ensure that the grantee has prepared a plan to allow a prompt and effective response to any accidental spills. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- 9) A Service-approved DFG biologist shall be present at the work site until such time as all removal of shrimp, instruction of workers, and habitat disturbance associated with the restoration project have been completed. The Service-approved biologist shall have the authority to halt any action that might result in the loss of any shrimp or its habitat. If work is stopped, the Service-approved biologist shall immediately notify DFG and the Service.
- 10) Ground disturbing activities in potential shrimp habitat shall be restricted to the period between July 1 and November 1.
- 11) If a work site is temporarily dewatered by pumping, intakes shall be completely screened with wire mesh no larger than 0.2 inch to prevent shrimp from entering the pump system. Water shall be released or pumped downstream, at an appropriate rate, to maintain downstream flows during construction. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow with the least disturbance to the substrate.
- 12) Service-approved biologist shall permanently remove from within the project work site, any individuals of exotic species, such as bullfrogs, centrarchid fishes, and non-native crayfish, to the maximum extent possible. The grantee shall have the responsibility that such removals are done in compliance with the California Department of Fish and Game Code.
- 13) Invasive non-native vegetation that provides shrimp habitat and is removed as a result of Program activities shall be replaced with native vegetation that provides comparable habitat for the shrimp. Revegetated sites shall be irrigated as necessary until vegetation is

established. Revegetated sites shall be monitored until shading and cover achieves 80% of pre-project shading and cover and for a minimum of 5 years.

- 14) No dumping of dead trees, yard waste or brush shall occur in shrimp streams, which may result in oxygen depletion of aquatic systems.

Coho salmon (*Oncorhynchus kisutch*), Chinook salmon (*Oncorhynchus tshawytscha*), Steelhead (*Oncorhynchus mykiss*), and Coast cutthroat trout (*Oncorhynchus clarki clarki*)

While all of the work proposed under this program will enhance habitat for one or more of these species, forty-one of the 68 work sites proposed as part of the 2008 grants program could involve instream work in their habitat (Appendix A). In order to avoid any potential for negative impacts to these species the following measures will be implemented:

- 1) Project work within the wetted stream shall be limited to the period between June 15 and November 1, or the first significant fall rainfall. This is to take advantage of low stream flows and to avoid the spawning and egg/alevin incubation period of salmon and steelhead. Whenever possible, the work period at individual sites shall be further limited to entirely avoid periods when salmonids are present (for example, in a seasonal creek, work will be confined to the period when the stream is dry).
- 2) No heavy equipment shall operate in the live stream, except as may be necessary to construct coffer dams to divert stream flow and isolate the work site.
- 3) Work must be performed in isolation from the flowing stream. If there is any flow when the work is done, the operator shall construct coffer dams upstream and downstream of the excavation site and divert all flow from upstream of the upstream dam to downstream of the downstream dam. The coffer dams may be constructed with clean river gravel or sand bags, and may be sealed with sheet plastic. Sand bags and any sheet plastic shall be removed from the stream upon project completion. Clean river gravel may be left in the stream, but the coffer dams must be breached to return the stream flow to its natural channel.
- 4) For minor actions, where the disturbance to construct coffer dams to isolate the work site would be greater than to complete the action (for example, placement of a single boulder cluster), measures will be put in place immediately downstream of the work site to capture suspended sediment. This may include installation of silt catchment fences across the stream, or placement of a filter berm of clean river gravel. Silt fences and other non-native materials will be removed from the stream following completion of the activity. Gravel berms may be left in place after breaching, provided they do not impede the stream flow.
- 5) If it is necessary to divert flow around the work site, either by pump or by gravity flow, the suction end of the intake pipe shall be fitted with fish screens meeting DFG and NMFS criteria to prevent entrainment or impingement of small fish. Any turbid water pumped from the work site itself to maintain it in a dewatered state shall be disposed of in an upland location where it will not drain directly into any stream channel.
- 6) Any disturbed banks shall be fully restored upon completion of construction. Revegetation shall be done using native species. Planting techniques can include seed casting, hydroseeding, or live planting methods using the techniques in Part XI of the *California Salmonid Stream Habitat Restoration Manual*.
- 7) Suitable large woody debris removed from fish passage barriers that is not used for habitat enhancement, shall be left within the riparian zone so as to provide a source for future recruitment of wood into the stream.

- 8) Measures shall be taken to minimize harm and mortality to listed salmonids resulting from fish relocation and dewatering activities:
 - a) Fish relocation and dewatering activities shall only occur between June 15 and November 1 of each year.
 - b) DFG shall minimize the amount of wetted stream channel that is dewatered at each individual project site to the fullest extent possible.
 - c) All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service *Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act*, June 2000.
- 9) If for some reason these mitigation measures cannot be implemented, or the project actions proposed at a specific work site cannot be modified to prevent or avoid potential impacts to anadromous salmonids or their habitat, then activity at that work site will be discontinued.

Tidewater Goby (*Eucyclogobius newberryi*)

Of the 68 work sites proposed as part of the 2008 grants program, twenty-three sites show the tidewater goby listed on the corresponding species lists in Appendix A. Of the twenty-three sites, twenty-one sites are not within the tidal zone and will not affect suitable habitat for the tidewater goby (Albion River Spawning Habitat Enhancement, Lower Maple Creek Riparian Enhancement San Geronimo Creek Upland Habitat Restoration, Garcia Forest Signal Creek Watershed Implementation, San Luis Obispo Creek Watershed Arundo Management Program, Francis Creek, North Fork Lost Man Creek Fish Passage Project, Mill (Watek) Creek Culvert Replacement, Rocky Gulch Road Decommissioning, Freshwater Creek Road Decommissioning Phase III, Elk River Road Decommissioning and Sediment Control Phase II, 2008 Salmon Creek Road Decommissioning, Hall Creek Fish Passage, Lindsey Creek Fish Passage, Coyote Creek Watershed Improvement Additional Sites Project, Glenbrook Gulch Anadromous Fish Habitat Restoration, Kenny Creek and Mud Creek Sediment Reduction, Kenny Creek Habitat Improvement, Fay Creek Pool Habitat Project, Gobernador Creek - Widdoes Fish Passage Enhancement Project, Lion Creek Bridge Replacement) (Appendix A).

Of the twenty-three sites, two sites could potentially affect suitable habitat for the tidewater goby (Salmon Creek Estuary Habitat Structures and Solstice Creek Habitat Enhancement Project) (Appendix A). None of the activities proposed for these sites will significantly degrade existing habitat. If tidewater goby or tidewater goby habitat is encountered the following mitigation measures will be implemented to avoid potential impacts:

- 1) The proponent shall retain a biologist(s) experienced with tidewater goby monitoring, handling and appropriate permits. The biologist will monitor all construction activities and assist the proponent in the implementation of the monitoring program. This person(s) will be approved by the USFWS prior to the onset of ground-disturbing activities. The authorized biologist(s) will be present during all activities immediately adjacent to or within the project site.
- 2) Prior to the onset of any construction activities, the proponent shall request a formal consultation with the USFWS. The proponent shall meet on-site with staff from the USFWS and the authorized biologist(s). The proponent shall provide information on the general location of construction activities within habitat of the tidewater goby and the actions taken to reduce impacts to this species. The proponent, the USFWS, and biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on tidewater goby. The goal of this effort is to reduce the level of mortality of tidewater goby during construction.

- 3) Prior to the onset of construction activities, the proponent shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:
 - a. A detailed description of the tidewater goby including color photographs;
 - b. The protection the tidewater goby receives under the Endangered Species Act and possible legal action or that may be incurred for violation of the Act;
 - c. The protective measures being implemented to conserve the tidewater goby and other species during construction activities associated with the proposed project; and
 - d. A point of contact if tidewater goby are observed.
- 4) The USFWS approved biologist(s) must have the authority to stop specific work activities until appropriate corrective measures are taken when unintended effects to tidewater gobies occur. If tidewater gobies are observed within a designated work area and cannot be avoided, all work must stop until the animal leaves the work area or until it is captured and relocated by the USFWS approved biologist(s) to outside of the work area to avoid injury or mortality.
- 5) When tidewater gobies must be captured and removed from the project area the USFWS approved biologist(s) must minimize the amount of time the animal is held in captivity. The animal must not be exposed to temperatures or any other environmental conditions that could cause injury or undue stress. Relocated tidewater gobies must stay within the same watercourse from where they were removed.

California red-legged frog (*Rana aurora draytonii*)

Thirteen of the work sites proposed as part of the 2008 grants program are within potential habitat for the California red-legged frogs (CRLF) (Appendix A). Activities proposed for the thirteen sites (San Geronimo Creek Upland Habitat Restoration, Demonstration Roads Improvements in the Napa River Watershed, Pescadero Creek Riparian Habitat Improvement Project, Big Dipper Ranch Road Project, Fay Creek Pool Habitat Project, Green Valley Coho Enhancement IV, Riparian Restoration for Salmonid Recovery - Sonoma Creek, Salmon Creek Estuary Habitat Structures, Williams Creek Erosion Prevention Implementation Project, San Luis Obispo Creek Watershed Arundo Management Program, Solstice Creek Habitat Enhancement Project, Gobernador Creek - Widdoes Fish Passage Enhancement Project, Lion Creek Bridge Replacement Project) will not remove or degrade CRLF habitat; however, precautions will be required at this site to avoid the potential for take of CRLF while using heavy equipment at these sites. The potential for impacts to CRLF will be mitigated by complying with all of the mandatory terms and conditions associated with incidental take authorized by the U. S. Fish and Wildlife Service, Biological Opinion dated August 17, 2004 and August 13, 2004. DFG proposes to implement the following measures to minimize adverse effects to the CRLF and its habitat:

- 1) At least 15 days prior to the onset of activities, the DFG will submit the names(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities will begin until the DFG has received written approval from the Service that the biologist(s) is qualified to conduct the work.
- 2) A Service-approved biologist will survey the work site at least two weeks before the onset of activities. If red-legged frogs are found in the project area and these individuals are likely to be killed or injured by work activities, the Service-approved biologist will allow sufficient time to move them from the site before work activities resume. Only Service-approved biologists will participate in activities with the capture, handling, and monitoring of red-legged frogs.
- 3) Before any construction activities begin on a project, a Service-approved biologist will conduct a training session for all construction personnel. At a minimum, the training shall include a description of the red-legged frog and its habitat, the importance of the red-legged frog and its habitat, the general measures that are being implemented to conserve the red-

legged frog as they relate to the project, and the boundaries within which the project may be accomplished. Brochures, books and briefings may be used in the training session, provided that a qualified person is on hand to answer any questions.

- 4) A Service-approved biologist shall be present at the work site until such time as removal of red-legged frogs, instruction of workers, and habitat disturbance has been completed. The Service-approved biologist shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the Corps and Service during review of the proposed action. If work is stopped, the Corps and the Service shall be notified immediately by the Service-approved biologist or on-site biological monitor.
- 5) During project activities, all trash that may attract predators will be properly contained, removed from the work site, and disposed of regularly. Following construction, all trash and construction debris will be removed from work areas.
- 6) All fueling and maintenance of vehicles and other equipment and staging areas will occur at least 65 feet from any riparian habitat or water body. The Corps and the DFG will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the DFG will ensure that the grantee has prepared a plan to allow a prompt and effective response to any accidental spills. All workers will be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- 7) A Service-approved biologist will ensure that the spread or introduction of invasive exotic plant species is avoided to the maximum extent possible. Areas disturbed by project activities will be restored and planted with native plants.
- 8) The number of access routes, number and size of staging areas, and the total area of the activity will be limited to the minimum necessary to achieve the project goal. Routes and boundaries will be clearly demarcated.
- 9) Ground disturbing activities in potential red-legged frog habitat will be restricted to the period between July 1 and October 15.
- 10) To control erosion during and after project implementation, DFG will implement best management practices, as identified by the appropriate Regional Water Quality Control Board.
- 11) If a work site is to be temporarily dewatered by pumping, intakes will be completely screened with wire mesh not larger than 0.2 inch to prevent red-legged frogs from entering the pump system. Water will be released or pumped downstream at an appropriate rate to maintain down stream flows during construction activities and reduce the creation of ponded water. Upon completion of construction activities, any barriers to flow will be removed in a manner that would allow flow to resume with the least disturbance to the substrate.
- 12) A Service-approved biologist will permanently remove from the project area, any individuals of exotic species, such as bullfrogs (*Rana catesbiana*), centrarchid fishes, and non-native crayfish to the maximum extent possible. The biologist will have the responsibility to ensure that their activities are in compliance with the Fish and Game Code.
- 13) Prior to the onset of any project-related activities, the approved biologist must identify appropriate areas to receive red-legged frog adults and tadpoles from the project areas. These areas must be in proximity to the capture site, contain suitable habitat, not be affected by project activities, and be free of exotic predatory species (ie. bullfrogs, crayfish) to the best of the approved biologist's knowledge.

- 14) If red-legged frogs are found and these individuals are likely to be killed or injured by work activities, the Service-approved biologists must be allowed sufficient time to move them from the site before work activities resume. The Service-approved biologist must relocate the red-legged frogs the shortest distance possible to one of the predetermined areas. The Service-approved biologist must maintain detailed records of any individuals that are moved (eg., size, coloration, any distinguishing features, photographs (digital preferred) to assist in determining whether translocated animals are returning to the point of capture. Only red-legged frogs that are at risk of injury or death by project activities may be moved.
- 15) Biologists who handle red-legged frogs must ensure that their activities do not transmit diseases. To ensure that diseases are not conveyed between work sites by the Service-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force must be followed at all times.

Arroyo Toad (*Bufo microscaphus californicus*)

Of the 68 work sites proposed as part of the 2008 grants program, three sites (Solstice Creek Habitat Enhancement Project, Gobernador Creek - Widdoes Fish Passage Enhancement Project, Lion Creek Bridge Replacement Project) could potentially affect suitable habitat for the Arroyo Toad (Appendix A). None of the activities proposed for these sites will significantly degrade existing habitat. To avoid potential impact, the following mitigation measures will be implemented:

- 1) The proponent shall retain a biologist who is familiar with arroyo toads to monitor all construction activities and assist the proponent in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. Prior to the onset of any construction activities, the proponent shall request a formal consultation with the USFWS. The proponent shall meet on-site with staff from the USFWS and the authorized biologist. The proponent shall provide information on the general location of construction activities within habitat of the arroyo toad and the actions taken to reduce impacts to this species. Because arroyo toads may occur in various locations during different seasons of the year, the proponent, the Service, and biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on arroyo toads. The goal of this effort is to reduce the level of mortality of arroyo toads during construction. The authorized biologist will be present during all activities immediately adjacent to or within the project site.
- 2) Prior to the onset of construction activities, the proponent shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:
 - a. A detailed description of the arroyo toad including color photographs;
 - b. The protection the arroyo toad receives under the Endangered Species Act and possible legal action or that may be incurred for violation of the Act;
 - c. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and
 - d. A point of contact if arroyo toads are observed.
- 3) All trash that may attract predators of the arroyo toad will be removed from work sites or completely secured at the end of each work day.
- 4) Where construction can occur in habitat where arroyo toads are widely distributed, work areas will be fenced in a manner that prevents equipment and vehicles from straying from the designated work area into adjacent habitat. The authorized biologist will assist in determining the boundaries of the area to be fenced. All workers will be advised that equipment and vehicles must remain within the fenced work areas.

- 5) If the authorized biologist determines that fencing to exclude arroyo toads should be installed, he or she will direct the installation of the fence and conduct a minimum of three nocturnal surveys to move any arroyo toads from within the fenced area to suitable habitat outside of the fence. If arroyo toads are observed on the final survey or during subsequent checks, the authorized biologist will conduct additional nocturnal surveys if he or she determines that they are necessary.
- 6) Fencing to exclude arroyo toads will be at least 24 inches in height. The type of fencing must be approved by the authorized biologist.
- 7) Construction activities that may occur immediately adjacent to breeding pools or other areas where large numbers of arroyo toads may congregate will be conducted during times of the year when individuals have dispersed from these areas. The authorized biologist will assist the proponent in scheduling its work activities accordingly.
- 8) If arroyo toads are found within an area that has been fenced to exclude arroyo toads, activities will cease until the authorized biologist moves the arroyo toads.
- 9) If arroyo toads are found in a construction area where fencing was deemed unnecessary, work will cease until the authorized biologist moves the arroyo toads. The authorized biologist will then determine whether additional surveys or fencing are needed. Work may resume while this determination is being made, if deemed appropriate by the authorized biologist.
- 10) Any arroyo toads found during clearance surveys or otherwise removed from work areas will be placed in nearby suitable, undisturbed habitat. The authorized biologist will determine the best location for their release, based on the condition of the vegetation, soil, and other habitat features and the proximity to human activities. Clearance surveys shall occur on a daily basis in the work area.
- 11) The authorized biologist will have the authority to stop all activities until appropriate corrective measures have been completed.
- 12) Staging areas for all construction activities will be located outside of stream channel in upland areas designated for this purpose. All staging areas will be fenced.
- 13) To ensure that diseases are not conveyed between work sites by the authorized biologist or his or her assistants, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force will be followed at all times.
- 14) Drift fence/pitfall trap surveys will be implemented prior to construction in an effort to reduce potential mortality to this species. Prior to any construction activities in the project area, silt fence shall be installed completely around the proposed work area and a qualified biologist should conduct a preconstruction/ clearance survey of the work area for arroyo toads. Any toads found in the work area should be relocated to suitable habitat within the watershed. The silt fence shall be maintained for the duration of the work activity.
- 15) The proponent shall conduct repair activities after 15 August and before the commencement of the breeding season (February) in riparian areas, except during an emergency, to reduce potential impacts to the arroyo toad. Ongoing maintenance to raised portions of the bridge would not be restricted.
- 16) The proponent shall restrict work to daylight hours, except during an emergency, in order to avoid nighttime activities when arroyo toads may be present on the access road. Construction vehicle traffic during the day is not expected to pose a serious mortality threat to arroyo toads. Traffic speed should be maintained at 20 mph or less in the work area.

San Francisco Garter Snake (*Thamnophis sirtalis tetrataenia*)

Of the 68 work sites proposed as part of the 2008 grants program, two sites (Big Dipper Ranch Road Project and Pescadero Creek Riparian Habitat Improvement Project) could potentially affect suitable habitat for the San Francisco garter snake (Appendix A). None of the activities proposed for these sites will significantly degrade existing habitat. To avoid potential impact, the following mitigation measures will be implemented:

- 1) Prior to the onset of any construction activities, the proponent shall request a formal consultation with the USFWS and obtain all required permits. The proponent shall meet on-site with staff from the USFWS and the authorized biologist. The proponent shall provide information on the general location of construction activities within habitat of the San Francisco garter snake and the actions taken to reduce impacts to this species. Because San Francisco garter snakes may occur in various locations during different seasons of the year, the proponent, the USFWS, and biologist will, at this preliminary meeting, determine the seasons when specific construction activities would have the least adverse effect on San Francisco garter snake. The goal of this effort is to reduce the level of mortality of San Francisco garter snake during construction.
- 2) The proponent shall retain a biologist who is familiar with the San Francisco garter snake and will monitor all construction activities and assist the proponent in the implementation of the monitoring program. This person will be approved by the USFWS prior to the onset of ground-disturbing activities. This biologist will be referred to as the authorized biologist hereafter in this document. The authorized biologist will be present during all activities immediately adjacent to or within the project site.
- 3) Prior to the onset of construction activities, the proponent shall provide all personnel who will be present on work areas within or adjacent to the project area the following information:
 - a. A detailed description of the San Francisco garter snake including color photographs;
 - b. The protection the San Francisco garter snake receives under the Endangered Species Act and possible legal action or that may be incurred for violation of the Act;
 - c. The protective measures being implemented to conserve the San Francisco garter snake and other species during construction activities associated with the proposed project; and
 - d. A point of contact if San Francisco garter snake are observed.
- 4) All trash that may attract predators of the San Francisco garter snake will be removed from work sites or completely secured at the end of each work day.

Least Bell's Vireo (*Vireo bellii pusillus*)

Of the 68 work sites proposed as part of the 2008 grants program, two site (Gobernador Creek - Widdoes Fish Passage Enhancement Project, Lion Creek Bridge Replacement Project) could potentially affect suitable habitat for the Least Bell's Vireo (Appendix A). None of the activities proposed for these sites will significantly degrade existing vireo habitat, but the potential exists for the noise from heavy equipment work and the harvesting of willow branches for revegetation at these sites to disrupt vireo nesting. To avoid this potential impact, the following mitigation measures will be implemented:

- 1) Work shall not begin within one quarter mile of any site with known or potential habitat for the Least Bell's Vireo until after September 15.
- 2) Harvest of willow branches at any site with potential habitat for the Least Bell's Vireo will not occur between March 1 and September 15.

- 3) The work window at individual work sites may be modified, if protocol surveys determine that nesting birds do not occur within 0.25 miles of the site during the breeding season.
- 4) The DFG shall ensure that the grantee or responsible party is aware of this site-specific condition, and will inspect the work site before, during, and after completion of the action item.
- 5) If for some reason these mitigation measures cannot be implemented or the project actions proposed at a specific work site cannot be modified to prevent or avoid potential impacts to Least Bell's Vireo or their habitat, then activity at that work site will be discontinued.

Marbled murrelet (*Brachyrampus marmoratus*)

The marbled murrelet is listed as endangered under CESA and threatened under ESA. Activities to protect and restore habitat will not remove or degrade suitable habitat for marbled murrelets, however nesting birds could be disturbed by the noise from heavy equipment required for projects such as culvert removal or placement of large woody debris.

Of the 68 work sites proposed as part of the 2008 grants program, nine are in potentially suitable habitat for the marbled murrelet (Wilson Creek Instream Habitat Enhancement, Wilson Creek Phase 2 Additional Sites, Francis Creek, North Fork Lost Man Creek Fish Passage Project, Eel River Arundo Eradication, Mattole Estuary Area Sediment Reduction (FRGP HU170 lower Mattole), 2008 Salmon Creek Road Decommissioning, Pescadero Creek Riparian Habitat Improvement Project, Big Dipper Ranch Road Project) (Appendix A). None of the activities proposed for these sites will remove, degrade, or downgrade suitable marbled murrelet habitat. Direct injury or mortality is not an issue. The potential exists for noise from heavy equipment work at these sites to disrupt marbled murrelet nesting. To avoid this potential impact, the following mitigation measures will be implemented:

- 1) Adverse effects can be avoided by limiting heavy equipment work within 0.25 mile of marbled murrelet habitat to the period between September 16 and March 23.
- 2) Work shall not begin within 0.25 mile of any site with occupied or un-surveyed suitable marbled murrelet habitat between March 24 and September 15.
- 3) The work window at individual work sites near suitable habitat may be modified, if protocol surveys determine that habitat quality is low and occupancy is very unlikely.
- 4) If for some reason these mitigation measures cannot be implemented or the project actions proposed at a specific work site cannot be modified to prevent or avoid potential adverse effects to marbled murrelet or their habitat, then activity at that work site will be discontinued.

Northern spotted owl (*Strix occidentalis caurina*)

The northern spotted owl is listed as threatened under ESA. Restoration activities should not alter habitat for northern spotted owls, however nesting birds could be disturbed by the noise from heavy equipment during projects such as culvert removal or placement of large woody debris. Disturbance can be avoided by limiting heavy equipment work within 0.25 miles of suitable spotted owl habitat to the period between August 1 and January 31.

Of the 68 work sites proposed as part of the 2008 grants program, fourteen are in potentially suitable habitat for the northern spotted owl (Road Decommissioning-Bluff Creek Watershed at Fish Lake, North Fork Lost Man Creek Fish Passage Project, South Fork Bear Creek Culvert Removal for Fish Passage, Iaqu Ranch Roads Sediment Reduction, Rocky Gulch Road

Decommissioning, Freshwater Creek Road Decommissioning Phase III, 2008 Salmon Creek Road Decommissioning, Mattole Bear Creek, Upper Redwood Lacks Creek Erosion Control Additional Sites, Kenny Creek Habitat Improvement, 2008 Standley Creek Watershed Implementation Phase I - SF Eel River, Upper South Fork Road Decommissioning, Hall City Creek, Monroe and Big Slide Creek Road Decommissioning Project) (Appendix A). None of the activities will remove, degrade or downgrade spotted owl habitat. Direct injury or mortality of owls is not an issue. The potential exists for heavy equipment work at these sites to disturb spotted owl nesting. To avoid this potential effect, the following mitigation measures will be implemented:

- 1) Work at any site within 0.25 miles of suitable habitat for the northern spotted owl will not occur from February 1 to July 31.
- 2) The work window at individual work sites may be advanced prior to July 31, if protocol surveys determine that suitable habitat is unoccupied.
- 3) If for some reason these mitigation measures cannot be implemented or the project actions proposed at a specific work site cannot be modified to prevent or avoid potential impacts to northern spotted owls or their habitat, then activity at that work site will be discontinued and DFG will reinitiate consultation with FWS.

Willow flycatcher (*Empidonax traillii*).

Of the 68 work sites proposed as part of the 2008 grants program, nine are in potentially suitable habitat for the Willow flycatcher (Redwood Creek Salmonid Habitat Improvement Project, 2007 Blue Goo Slide Stabilization Project, 2007 Leggett Creek Bank Stabilization & Fish Habitat Project, Eel River Arundo Eradication, Ettersburg Area Sediment Reduction Project for Coho Recovery (FRGP HU130 Blue Slide), Mattole Bear Creek, Upper Mattole Stream Crossing Decommissioning Project, Jenner Lower Pump Fish Screen, Gobernador Creek - Widdoes Fish Passage Enhancement Project) (Appendix A). None of the activities proposed for these sites will significantly degrade existing willow flycatcher habitat, but the potential exists for the noise from heavy equipment work or harvesting of revegetation material at these sites to disrupt willow flycatcher nesting. To avoid this potential impact, the following mitigation measures will be implemented:

- 1) Heavy equipment work shall not begin within one quarter mile of any site with known or potential habitat for the willow flycatcher until after August 31. Heavy equipment work shall not begin within one quarter mile of any site with known or potential habitat for the southwestern willow flycatcher until after September 15.
- 2) Harvest of willow branches at any site with potential habitat for the willow flycatcher will not occur between May 1 and August 31. Harvest of willow branches at any site with potential habitat for the southwestern willow flycatcher will not occur between May 1 and September 15.
- 3) The work window at individual work sites may be modified, if protocol surveys determine that nesting birds do not occur within 0.25 miles of the site during the breeding season.
- 4) No more than 1/3 of any willow plant shall be harvested annually. Care shall be taken during harvest not to trample or over harvest the willow sources.
- 5) DFG shall ensure that the grantee or responsible party is aware of this site-specific condition, and will inspect the work site before, during, and after completion of the action item.
- 6) If for some reason these mitigation measures cannot be implemented or the project actions proposed at a specific work site cannot be modified to prevent or avoid potential impacts to willow flycatcher or their habitat, then activity at that work site will be discontinued.

Point Arena mountain beaver (*Aplodontia rufa nigra*)

The Point Arena subspecies is only found within a disjunct, 24-square mile area in western Mendocino County, California. The U.S. Fish and Wildlife Service considers the range of the Point Arena mountain beaver to include areas five miles inland from the Pacific Ocean extending from a point two miles north of Bridgeport Landing south to a point five miles south of the town of Point Arena. Point Arena mountain beavers can be found along Nulls Creek, Mallo Pass Creek, Irish Gulch, Alder Creek, Manchester State Park, Lagoon Lake, Lower Hathaway Creek, City of Point Arena, Lower and Middle Brush Creek, and Hathaway Creek.

Of the 68 projects proposed as part of the 2008 grants program, two are within the range of the Point Arena mountain beaver (Garcia Forest Signal Creek Watershed Implementation Phase 1, and 2008 Little Jack Creek Fish Passage) (Appendix A). If PAMB or PAMB habitat is encountered during implementation of the projects, the following mitigation measures will be implemented to avoid potential impacts:

- 1) Qualified DFG personnel will survey each work site for PAMB. Qualification of surveyors, survey protocols, and reporting will conform to USFWS's *Guidelines for Project-Related Habitat Assessments and Surveys for Point Arena Mountain Beaver*. Per the *Guidelines*, if the activity status of a burrow is in doubt, or if there is un-surveyed potential habitat, PAMB active presence will be assumed.
- 2) For work sites where PAMB active presence is confirmed or assumed, all protective measures prescribed by USFWS's *Draft Point Arena Mountain Beaver Standard Protection Measures for No-Take Determinations* will be followed, through issuance of a Streambed Alteration Agreement and/or directives to the grantee by the DFG Grant Manager. The protective measures most pertinent to DFG salmonid habitat improvement projects include:
 - a) No operation of noise generating equipment (e.g. chainsaws) within 100 feet of active burrows during the breeding season (December 15 – June 30).
 - b) No operation of mechanical equipment (e.g. backhoes, excavators) within 100 feet of active burrows during the breeding season (December 15 – June 30), and within 50 feet the remainder of the year.
 - c) No ground disturbance (e.g. dumping of boulders) within 500 feet of active burrows during breeding season, and within 100 feet the remainder of the year. No severe ground disturbance (e.g. driving of bridge piles, blasting) within 500 feet of active burrows at any time.
 - d) No habitat modification (e.g. vegetation removal) within 400 feet of active burrows.
 - e) No vegetation modification or removal, or construction of permanent barriers (e.g. fences) at any location or time that may disrupt dispersal or movement of PAMB.
 - f) No vehicular or foot traffic within 25 feet of active burrows, and no alteration of water drainage or hydrology in active burrow areas.
- 3) DFG will require that the Grant Manager must be notified at least one week in advance of the date on which work will start, so that a qualified DFG biologist can monitor activities at the work site. If the necessary protective measures cannot be implemented at a work site, then no work at the site will occur.

V. CULTURAL RESOURCES

Ground-disturbance will be required to implement the project at some work sites that have the potential to affect cultural resources. This potential impact will be avoided through implementation of the following mitigation measures:

- 1) DFG will contract with a qualified archaeologist(s) and paleontologist(s) to complete cultural and paleontological resource surveys at any sites with the potential to be impacted prior to any ground disturbing activities. Cultural and paleontological resource surveys will be conducted using standard protocols to meet the 2008 CEQA Guideline requirements. Paleontological survey protocols are listed in Appendix D. The procedure for a programmatic evaluation of archeological resources is provided in Appendix E.
- 2) If cultural and or paleontological resource sites are identified at a site, DFG will require one or more of the following protective measures to be implemented before work can proceed: a) Fencing to prevent accidental disturbance of cultural resources during construction, b) on-site monitoring by a cultural and or paleontological resource professional during construction to assure that cultural resources are not disturbed, c) redesign of proposed work to avoid disturbance of cultural resources.
- 3) DFG shall report any previously unknown historic, archeological and paleontological remains discovered at a site to the U. S. Army Corps of Engineers as required in the Regional General Permit.
- 4) If it becomes impossible to implement the project at a work site without disturbing cultural or paleontological resources, then activity at that work site will be discontinued.
- 5) DFG shall ensure that the grantee or responsible party is aware of these site-specific conditions, and will inspect the work site before, during, and after completion of the action item.
- 6) Inadvertent Discovery of Cultural Resources - If cultural resources, such as lithic debitage, ground stone, historic debris, building foundations, or bone are discovered during ground-disturbance activities, work shall be stopped within 20 meters (66 feet) of the discovery, per the requirements of CEQA (January 1999 Revised Guidelines, Title 14 CCR 15064.5 (f)). Work near the archaeological finds shall not resume until a professional archaeologist, who meets the Secretary of the Interior's Standards and Guidelines, has evaluated the materials and offered recommendations for further action.

Prehistoric materials which could be encountered include: obsidian and chert flakes or chipped stone tools, grinding implements, (e.g., pestles, handstones, mortars, slabs), bedrock outcrops and boulders with mortar cups, locally darkened midden, deposits of shell, dietary bone, and human burials. Historic materials which could be encountered include: ceramics/pottery, glass, metal, can and bottle dumps, cut bone, barbed wire fences, building pads, structures, trails/roads, railroad rails and ties, trestles, etc.

- 7) Inadvertent Discovery of Human Remains - If human remains are discovered during project construction, work will stop at the discovery location, within 20 meters (66 feet), and any nearby area reasonably suspected to overlie adjacent to human remains (Public Resources Code, Section 7050.5). The county coroner will be contacted to determine if the cause of death must be investigated. If the coroner determines that the remains are of Native American origin, it is necessary to comply with state laws relating to the disposition of Native American burials, which fall within the jurisdiction of the NAHC (Public Resources Code, Section 5097). The coroner will contact the NAHC. The descendants or most likely

descendants of the deceased will be contacted, and work will not resume until they have made a recommendation to the landowner or the person responsible for the excavation work for means of treatment and disposition, with appropriate dignity, of the human remains and any associated grave goods, as provided in Public Resources Code, Section 5097.98. Work may resume if NAHC is unable to identify a descendant or the descendant failed to make a recommendation.

Procedures for treatment of an inadvertent discovery of human remains:

- a) Immediately following discovery of known or potential human remains all ground-disturbing activities at the point of discovery shall be halted,
- b) No material remains shall be removed from the discovery site, a reasonable exclusion zone shall be cordoned off,
- c) The DFG Grant Manager and property owner shall be notified and the DFG Grant Manager shall contact the county coroner.
- d) DFG shall retain the services of a professional archaeologist to immediately examine the find and assist the process.
- e) All ground-disturbing construction activities in the discovery site exclusion area shall be suspended.
- f) The discovery site shall be secured to protect the remains from desecration or disturbance, with 24-hour surveillance, if prudent.
- g) Discovery of Native American remains is a very sensitive issue, and all project personnel shall hold any information about such a discovery in confidence and divulge it only on a need-to-know basis.
- h) The coroner has two working days to examine the remains after being notified. If the remains are Native American, the coroner has 24 hours to notify the Native American Heritage Council (NAHC) in Sacramento (telephone 916/653-4082).
- i) The NAHC is responsible for identifying and immediately notifying the Most Likely Descendant (MLD) of the deceased Native American.
- j) Within 24 hours of their notification by the NAHC, the MLD shall be granted permission by the landowner's authorized representative to inspect the discovery site, if they so choose.
- k) Within 24 hours of their notification by the NAHC, the MLD shall recommend to the landowner and DFG Grant Manager means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials.
- l) Whenever the NAHC is unable to identify a MLD, or the MLD identified fails to make a recommendation, or the landowner or his/her authorized representative rejects the recommendation of the MLD and mediation between the parties by the NAHC fails to provide measures acceptable to the landowner, the landowner or his/her authorized representatives shall re-inter the human remains and associated grave offerings with appropriate dignity on the property in a location not subject to further subsurface disturbance.

- m) Following final treatment measures, the DFG shall ensure that a report is prepared that describes the circumstances, nature and location of the discovery, its treatment, including results of analysis (if permitted), and final disposition, including a confidential map showing the reburial location. Appended to the report shall be a formal record about the discovery site prepared to current California standards on DPR 523 form(s). DFG shall ensure that report copies are distributed to the appropriate California Historic Information Center, NAHC and MLD.

VI. GEOLOGY AND SOILS

There is no potential for a significant adverse impact to geology and soils; implementation of the restoration project will contribute to an overall reduction in erosion and sedimentation. Existing roads will be used to access work sites. Ground disturbance at most work sites will be minimal, except for road improvements or decommissioning. Road improvements and decommissioning will involve moving large quantities of soil from road fills and stream crossings to restore historic land surface profiles and prevent chronic erosion and sediment delivery to streams. In order to avoid temporary increases in surface erosion, the following mitigation measures will be implemented:

- 1) DFG will implement the following measures to minimize harm to listed salmonids resulting from culvert replacement activities and other instream construction work:
 - a) All stream crossing replacement or modification designs, involving fish passage, must be visually reviewed and authorized by NMFS Fisheries (or DFG) engineers prior to commencement of work.
 - b) If the stream in the project location was not passable to, or was not utilized by all life stages of, all covered salmonids prior to the existence of the road crossing, the project shall pass the life stages and covered salmonid species that historically did pass there. Retrofit culverts shall meet the fish passage criteria for the passage needs of the listed species and life stages historically passing through the site prior to the existence of the road crossing.
 - c) Effective erosion control measures shall be in-place at all times during construction. Construction within the 5-year flood plain will not begin until all temporary erosion controls (ie, straw bales or silt fences that are effectively keyed-in) are in-place down slope of project activities within the riparian area. Erosion control measures shall be maintained throughout the construction period. If continued erosion is likely to occur after construction is completed, then appropriate erosion prevention measures shall be implemented and maintained until erosion has subsided.
 - d) Sediment shall be removed from sediment controls once it has reached one-third of the exposed height of the control. Whenever straw bales are used, they shall be staked and dug into the ground 6 inches. Catch basins shall be maintained so that no more than 6 inches of sediment depth accumulates within traps or sumps.
 - e) Sediment-laden water created by construction activity shall be filtered before it leaves the right-of-way or enters the stream network or an aquatic resource area. Silt fences or other detention methods shall be installed as close as possible to culvert outlets to reduce the amount of sediment entering aquatic systems.
 - f) If the DFG determines that turbidity/siltation levels resulting from an activity or activities constitute a threat to aquatic life, all activities associated with the turbidity/siltation shall cease until effective DFG approved sediment control devices are installed and/or abatement procedures are implemented.

erosion and the formation of rills; and installation of culverts, silt fences, and other erosion control devices where necessary to convey concentrated water across unfinished surfaces, and trap exposed sediment before it leave the work site.

- c) Adequate erosion control supplies (gravel, straw bales, shovels, etc.) shall be kept at all restoration sites to ensure sediment is kept out of water bodies.
- d) If the DFG determines that turbidity/siltation levels resulting from an activity or activities constitute a threat to aquatic life, all activities associated with the turbidity/siltation shall cease until effective DFG approved sediment control devices are installed and/or abatement procedures are implemented.
- e) Mulching and seeding is required on all exposed soil which may deliver sediment to a stream. Soils exposed by project operations shall be mulched to prevent sediment runoff and transport. Mulches shall be applied so that not less than 90% of the disturbed areas are covered. All mulches, except hydro-mulch, shall be applied in a layer not less than two (2) inches deep. Where feasible, all mulches shall be kneaded or tracked-in with track marks parallel to the contour, and tackified as necessary to prevent excessive movement. All exposed soils and fills, including the downstream face of the road prism adjacent to the outlet of culverts, shall be reseeded with a mix of native grasses common to the area, free from seeds of noxious or invasive weed species, and applied at a rate which will ensure establishment.

VII. HAZARDS AND HAZARDOUS MATERIALS

The project will not create a significant hazard to the public or the environment. At work sites requiring the use of heavy equipment, there is a small risk of an accident upsetting the machine and releasing fuel, oil, and coolant, or of an accidental spark from equipment igniting a fire. The potential for these impacts will be reduced to a less than significant level through implementation of the following mitigation measures:

- 1) The grantee shall have dependable radio or phone communication on-site to be able to report any accidents or fire that might occur.
- 2) Heavy equipment that will be used in these activities will be in good condition and will be inspected for leakage of coolant and petroleum products and repaired, if necessary, before work is started.
- 3) When operating vehicles in wetted portions of the stream channel, or where wetland vegetation, riparian vegetation, or aquatic organisms may be destroyed, the responsible party shall, at a minimum, do the following:
 - a. check and maintain on a daily basis any vehicles to prevent leaks of materials that, if introduced to water, could be deleterious to aquatic life, wildlife, or riparian habitat;
 - b. take precautions to minimize the number of passes through the stream and to avoid increasing the turbidity of the water to a level that is deleterious to aquatic life; and
 - c. allow the work area to “rest” to allow the water to clear after each individual pass of the vehicle that causes a plume of turbidity above background levels, resuming work only after the stream has reached the original background turbidity levels.
- 4) Work with heavy equipment will be performed in isolation from flowing water, except as may be necessary to construct coffer dams to divert stream flow and isolate the work site.

- 5) All equipment operators will be trained in the procedures to be taken should an accident occur. Prior to the onset of work, DFG shall ensure that the grantee has prepared a plan Spill Prevention/Response plan to help avoid spills and allow a prompt and effective response should an accidental spill occur. All workers shall be informed of the importance of preventing spills and of the appropriate measures to take should a spill occur.
- 6) All activities performed in or near a stream will have absorbent materials designed for spill containment and cleanup at the activity site for use in case of an accidental spill. Clean-up of all spills shall begin immediately. The responsible party shall notify the State Office of Emergency Services at 1-800-852-7550 and the DFG immediately after any spill occurs, and shall consult with the DFG regarding clean-up procedures.
- 7) All fueling and maintenance of vehicles and other equipment shall be located at least 150 feet from any riparian habitat or water body. The grantee shall ensure contamination of habitat does not occur during such operations.
- 8) Location of staging/storage areas for equipment, materials, fuels, lubricants, and solvents, will be located outside of the stream's high water channel and associated riparian area. The number of access routes, number and size of staging areas, and the total area of the work site activity shall be limited to the minimum necessary to complete the restoration action. To avoid contamination of habitat during restoration activities, trash will be contained, removed and disposed of throughout the project.
- 9) Stationary equipment such as motors, pumps, generators, compressors, and welders, located within the dry portion of the stream channel or adjacent to the stream, will be positioned over drip-pans.
- 10) No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement, or concrete or washings thereof; asphalt, paint, or other coating material; oil or petroleum products; or other organic or earthen material from any construction or associated activity of whatever nature shall be allowed to enter into, or placed where it may be washed by rainfall or runoff into, waters of the state. When operations are completed, any excess materials or debris shall be removed from the work area and disposed of in a lawful manner.
- 11) All internal combustion engines shall be fitted with spark arrestors.
- 12) The grantee shall have an appropriate fire extinguisher(s) and fire fighting tools (shovel and axe at a minimum) present at all times when there is a risk of fire.
- 13) Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.
- 14) The grantee shall follow any additional rules the landowner has for fire prevention.
- 15) The potential for mercury contamination is largely predicted by the presence of historic hydraulic gold mines and mercury (cinnabar) mines (California's Abandoned Mines: A Report on the Magnitude and Scope of the Issue in the State, DOC 2000). Therefore, only a few limited areas within the geographic scope of this grant program have any potential for gravels contaminated with elemental mercury, they are: Middle Klamath River, Salmon River, Scott River, and the Lower Middle and Upper Trinity River. (Though studies by the USGS failed to find significant levels of methyl mercury near these mines.) The only other mercury mine contamination within the FRGP-area is in Marin County (Walker Creek), and this contamination is not in instream gravels or dredger tailings, instead it is from the bedrock; and therefore, not easily methylized, and not as bio-available.

Given the limited geographical potential for encountering mercury contamination (from historic mining) within the geographic scope, and the limited number of projects within these areas that will either disturb the channel bottom or import gravels for instream restoration; the following avoidance and mitigation measure will be adhered to:

- a. Any gravel imported from offsite will be from a source known to not contain historic hydraulic gold mine tailings, dredger tailings, or mercury mine waste or tailings.

VIII. HYDROLOGY AND WATER QUALITY

- 1) Work shall be conducted during the period of lowest flow.
- 2) Work shall be performed in isolation from flowing water. If there is any flow when the work is done, the grantee shall construct coffer dams upstream and downstream of the excavation site and divert all flow from upstream of the upstream dam to downstream of the downstream dam. The coffer dams may be constructed with clean river gravel or sand bags, and may be sealed with sheet plastic. Sand bags and any sheet plastic shall be removed from the stream upon project completion. Clean river gravel may be left in the stream, but the coffer dams must be breached to return the stream flow to its natural channel.
- 3) For minor actions, where the disturbance to construct coffer dams to isolate the work site would be greater than to complete the action (for example, placement of a single boulder cluster), then measures will be put in place immediately downstream of the work site to capture suspended sediment. This may include installation of silt catchment fences across the stream, or placement of filter berm of clean river gravel. Silt fences and other non-native materials will be removed from the stream following completion of the activity. Gravel berms may be left in place after breaching, provided they do not impede the stream flow.
- 4) Before work is allowed to proceed at a site, DFG will inspect the site to assure that turbidity control measures are in place.

IX. LAND USE AND PLANNING

No specific mitigation measures are required for land use and planning.

X. MINERAL RESOURCES

No specific mitigation measures are required for mineral resources.

XI. NOISE

Personnel shall wear hearing protection while operating or working near noisy equipment (producing noise levels ≥ 85 db, including chain saws, excavators and back hoes).

XII. POPULATION AND HOUSING

No specific mitigation measures are required for population and housing.

XIII. PUBLIC SERVICES

No specific mitigation measures are required for public services.

XIV. RECREATION

No specific mitigation measures are required for recreation.

XV. TRANSPORTATION/TRAFFIC

The project will not affect transportation/traffic, because erosion control and culvert replacement projects will occur in wildland/rural sites with very little use. There is a potential that culvert replacement at some work sites could temporarily interfere with emergency access. This potential impact will be avoided through implementation of the following mitigation measure at any sites where emergency access might be necessary:

- 1) During excavation for culvert replacement, the grantee shall provide a route for traffic around or through the construction site.

XVI. UTILITIES AND SERVICE SYSTEMS

No specific mitigation measures are required for utilities and service systems.

MONITORING AND REPORTING

DFG will implement the following measures to ensure that individual restoration projects authorized annually through the RGP will minimize take of listed salmonids, monitor and report take of listed salmonids, and to obtain specific information to account for the effects and benefits of salmonid restoration projects authorized through the RGP.

- 1) DFG shall provide USACOE, NMFS and USFWS notification of projects that are authorized through the RGP. The notification shall be submitted at least 90 days prior to project implementation and must contain specific project information including; name of project, type of project, location of project including hydrologic unit code (HUC), creek, watershed, city or town, and county.
- 2) DFG Grant Manager will inspect the work site before, during, and after completion of the action item, to ensure that all necessary mitigation measures to avoid impacts are properly implemented.
- 3) DFG shall perform implementation monitoring on all completed restoration activities annually. Current monitoring forms and instructions used by DFG are available online at: http://ftp.dfg.ca.gov/Public/FRGP/Qualitative_Monitoring_Forms/. DFG will submit a copy of the final report, no later than March 1 annually to NMFS.
- 4) DFG shall perform effectiveness monitoring on at least 10 percent of restoration projects funded annually. A random sample, stratified by project type and region, will be chosen from the pool of new restoration projects approved for funding each year. Pre-treatment monitoring will be performed for newly selected projects, and post-treatment monitoring will be performed within three years following project completion. Current monitoring forms and instructions used by DFG are available online at: http://ftp.dfg.ca.gov/Public/FRGP/Qualitative_Monitoring_Forms/. DFG will submit a copy of the final report, no later than March 1 annually to NMFS.
- 5) The DFG shall prepare an annual report to be submitted to NMFS by March 1 of each year. This report will provide a summary of all restoration action items completed during the previous year. The annual report shall include a summary of the specific type and location of each project, stratified by individual project, 4th field HUC and evolutionary significant unit (ESU). The report shall include the following project-specific summaries, stratified at the individual project, 4th field HUC and ESU level:

- a) A summary detailing fish relocation activities; including the number and species of fish relocated and the number and species injured or killed.
 - b) The number and type of instream structures implemented within the stream channel.
 - c) The length of stream bank (feet) stabilized or planted with riparian species.
 - d) The number of culverts replaced or repaired, including the number of miles or restored access to unoccupied salmonid habitat.
 - e) The distance (feet) of aquatic habitat disturbed at each project site.
- 6) DFG shall incorporate project data into a format compatible with the DFG/NMFS/Pacific Fisheries Management Council Geographic Information System (GIS) database, allowing scanned project-specific reports and documents to be linked graphically within the GIS database.
- 7) For Alameda, Contra Costa, Lake, Napa, San Francisco, San Mateo, Santa Clara, Solano, and Sonoma counties, DFG must submit an annual report due by January 31 of each year of implemented projects to the US Fish and Wildlife Service Office, 2800 Cottage Way, Sacramento, California 95825. The report must include:
- a) A table documenting the number of California freshwater shrimp or red-legged frogs killed, injured, and handled during each Program project that utilizes the Corps authorization.
 - b) A summary of how the terms and conditions of this biological opinion and the protective measures by the Corps and DFG worked.
 - c) Any suggestions of how these measures could be revised to improve conservation of this species while facilitating compliance with the Act.
- 8) For Monterey, San Benito, San Luis Obispo, and Santa Cruz counties, DFG must submit an annual report due by January 31 of each year of implemented projects to the US Fish and Wildlife Service Office, 2493 Portola Road, Suite B, Ventura, California 93003. The report must include:
- a) A table documenting the number of red-legged frogs killed, injured, and handled during each Program project that utilizes the Corps authorization.
 - b) A summary of how the terms and conditions of this biological opinion and the protective measures by the Corps and DFG worked.
 - c) Any suggestions of how these measures could be revised to improve conservation of this species while facilitating compliance with the Act.
- 9) DFG will submit annual reports on July 1 of each year to the 401 Program Managers of the State Water Resources Control Board and the appropriate RWQCB(s) documenting work undertaken during the preceding year and identifying for all such work the following:
- a) Project name and grant number;
 - b) Project purpose and summary work description;
 - c) Name(s) of affected water body(ies);
 - d) Latitude/longitude in decimal degrees to at least four decimals;;
 - e) Type(s) of receiving water body(ies);

- f) For each water body type affected, the quantity of waters of the U.S. temporarily and permanently impacted. Fill/excavation discharges shall be reported in acres and fill/excavations discharges for channels, shorelines, riparian corridors, and other linear habitat shall also be reported in linear feet;
 - g) Actual construction start and end-dates;
 - h) Whether the project is on-going or completed.
- 10) DFG shall report any previously unknown historic archeological and paleontological remains discovered at a site to the U. S. Army Corps of Engineers as required in the Regional General Permit. This information will also be provided to the Native American Heritage Commission, 915 Capitol Mall, Sacramento, CA 95814.

APPENDIX C

Guidelines for Assessing the Effects of Proposed Projects on Rare, Threatened, and Endangered Plants and Natural Communities State of California THE RESOURCES AGENCY Department of Fish and Game December 9, 1983 Revised May 8, 2000

The following recommendations are intended to help those who prepare and review environmental documents determine **when** a botanical survey is needed, **who** should be considered qualified to conduct such surveys, **how** field surveys should be conducted, and **what** information should be contained in the survey report. The DFG may recommend that lead agencies not accept the results of surveys that are not conducted according to these guidelines.

1. Botanical surveys are conducted in order to determine the environmental effects of proposed projects on all rare, threatened, and endangered plants and plant communities. Rare, threatened, and endangered plants are not necessarily limited to those species which have been "listed" by state and federal agencies but should include any species that, based on all available data, can be shown to be rare, threatened, and/or endangered under the following definitions:

A species, subspecies, or variety of plant is "endangered" when the prospects of its survival and reproduction are in immediate jeopardy from one or more causes, including loss of habitat, change in habitat, over-exploitation, predation, competition, or disease. A plant is "threatened" when it is likely to become endangered in the foreseeable future in the absence of protection measures. A plant is "rare" when, although not presently threatened with extinction, the species, subspecies, or variety is found in such small numbers throughout its range that it may be endangered if its environment worsens.

Rare natural communities are those communities that are of highly limited distribution. These communities may or may not contain rare, threatened, or endangered species. The most current version of the California Natural Diversity Database's List of California Terrestrial Natural Communities may be used as a guide to the names and status of communities.

2. It is appropriate to conduct a botanical field survey to determine if, or to the extent that, rare, threatened, or endangered plants will be affected by a proposed project when:

- a. Natural vegetation occurs on the site, it is unknown if rare, threatened, or endangered plants or habitats occur on the site, and the project has the potential for direct or indirect effects on vegetation; or
- b. Rare plants have historically been identified on the project site, but adequate information for impact assessment is lacking.

3. Botanical consultants should possess the following qualifications:

- a. Experience conducting floristic field surveys;
- b. Knowledge of plant taxonomy and plant community ecology;
- c. Familiarity with the plants of the area, including rare, threatened, and endangered species;
- d. Familiarity with the appropriate state and federal statutes related to plants and plant collecting; and,
- e. Experience with analyzing impacts of development on native plant species and communities.

4. Field surveys should be conducted in a manner that will locate any rare, threatened, or endangered species that may be present. Specifically, rare, threatened, or endangered plant

surveys should be:

a. Conducted in the field at the proper time of year when rare, threatened, or endangered species are both evident and identifiable. Usually, this is when the plants are flowering.

When rare, threatened, or endangered plants are known to occur in the type(s) of habitat present in the project area, nearby accessible occurrences of the plants (reference sites) should be observed to determine that the species are identifiable at the time of the survey.

b. Floristic in nature. A floristic survey requires that every plant observed be identified to the extent necessary to determine its rarity and listing status. In addition, a sufficient number of visits spaced throughout the growing season are necessary to accurately determine what plants exist on the site. In order to properly characterize the site and document the completeness of the survey, a complete list of plants observed on the site should be included in every botanical survey report.

c. Conducted in a manner that is consistent with conservation ethics. Collections (voucher specimens) of rare, threatened, or endangered species, or suspected rare, threatened, or endangered species should be made only when such actions would not jeopardize the continued existence of the population and in accordance with applicable state and federal permit requirements. A collecting permit from the Habitat Conservation Planning Branch of DFG is required for collection of state-listed plant species. Voucher specimens should be deposited at recognized public herbaria for future reference. Photography should be used to document plant identification and habitat whenever possible, but especially when the population cannot withstand collection of voucher specimens.

d. Conducted using systematic field techniques in all habitats of the site to ensure a thorough coverage of potential impact areas.

e. Well documented. When a rare, threatened, or endangered plant (or rare plant community) is located, a California Native Species (or Community) Field Survey Form or equivalent written form, accompanied by a copy of the appropriate portion of a 7.5 minute topographic map with the occurrence mapped, should be completed and submitted to the Natural Diversity Database. Locations may be best documented using global positioning systems (GPS) and presented in map and digital forms as these tools become more accessible.

5. Reports of botanical field surveys should be included in or with environmental assessments, negative declarations and mitigated negative declarations, Timber Harvesting Plans (THPs), EIR's, and EIS's, and should contain the following information:

a. Project description, including a detailed map of the project location and study area.

b. A written description of biological setting referencing the community nomenclature used and a vegetation map.

c. Detailed description of survey methodology.

d. Dates of field surveys and total person-hours spent on field surveys.

e. Results of field survey including detailed maps and specific location data for each plant population found. Investigators are encouraged to provide GPS data and maps documenting population boundaries.

f. An assessment of potential impacts. This should include a map showing the distribution of plants in relation to proposed activities.

g. Discussion of the significance of rare, threatened, or endangered plant populations in the project area considering nearby populations and total species distribution.

h. Recommended measures to avoid impacts.

i. A list of all plants observed on the project area. Plants should be identified to the taxonomic level necessary to determine whether or not they are rare, threatened or endangered.

j. Description of reference site(s) visited and phenological development of rare, threatened, or endangered plant(s).

k. Copies of all California Native Species Field Survey Forms or Natural Community Field Survey Forms.

l. Name of field investigator(s).

m. References cited, persons contacted, herbaria visited, and the location of voucher specimens.

APPENDIX D

Procedure for the Programmatic Evaluation of Paleontological Resources for the Fisheries Restoration Grant Program

There will be three phases to the process of investigating paleontological resources: 1) project initiation where basic data will be compiled, reviewed and sorted to determine the next steps that need to be taken on any given project; 2) scrutinize individual project evaluation for projects that may encounter paleontological resources at a higher level; and 3) mitigation planning to develop mitigation strategies for projects that have identified paleontological resources. The three phases are summarized below.

Project Initiation

The project initiation phase of the resource investigation project will be done to evaluate the logistical and time needs for conducting the paleontological evaluation. The below outlined questions will facilitate rapid evaluation of individual projects and assure cooperation among evaluators, pertinent agencies, and landowners. The evaluation procedure will generally follow standards being implemented by other agencies conducting ground disturbance activities such as Cal Trans.

Pertinent evaluation steps, associated questions for this phase, and triggered actions include:

- A) Evaluate the likelihood of paleontological resources and land manager issues
- 1) Does the project involve ground disturbance?
If no, then a negative declaration report will be prepared.
 - 2) Are there likely to be paleontological resources present at the project site?
If yes, answer question 3
If no, then negative declaration report is prepared
 - 3) Does the project involve lands administered by the US Forest Service, Bureau of Land Management, National Park Service, Army Corps of Engineers, or California Department of Parks and Recreation? If the answer to question 3 is yes, then coordinate paleontological report with involved entities.

Individual Project Evaluation

If paleontological resources are likely to be present, then qualified staff will evaluate the paleontological resources in coordination with any affected agencies.

If no resources are present then a negative declaration report will be prepared.

If there are paleontological resources present then the evaluator will delineate the extent and type of resources present and discuss any issues with pertinent agencies, project managers, and local experts to develop mitigation planning, or to go to the next phase of the investigation.

Mitigation Planning

If there are paleontological resources at any project site, then plans will be developed to mitigate impacts to the resource. These plans will be consistent with current mitigation strategies employed by other entities conducting CEQA investigations. The initial investigation report, along with mitigation recommendations, will be compiled and delivered to the appropriate CDFG grant/contract manager and the project manager of the proposed project in question. Minimum report elements will include:

- 1) Project description and location
- 2) Results of the investigation
- 3) Mitigation recommendations and plans
- 4) Maps depicting project location and paleontological resource locations.

APPENDIX E

Procedure for the Programmatic Evaluation of Archeology Resources for the Fisheries Restoration Grant Program

Cultural resource investigations are used to identify archaeological resources in California Department of Fish and Game Fisheries Restoration Grant Program funded project areas. When archaeological resources are found measures are implemented to protect these resources. The purpose of the below described investigations are to: 1) locate and record cultural resources within the project area; 2) evaluate the significance of cultural resources in the study area; 3) assess potential impacts to cultural resources resulting from implementation of the project and; 4) recommend appropriate mitigation measures when necessary.

Investigative Methods

Background research for each project will include an examination of historical maps, aerial photographs, archaeological site records and a survey at the appropriate regional information center of the Historical Resources Information System. The background research will also include a review of pertinent ethnographic literature. For all projects an intensive archaeological field survey that covers the entire project area will be completed.

The California Office of Historical Preservation has established regional information centers as local repositories for all archaeological reports that are prepared under cultural resource management regulations. For each of the projects funded by the Restoration Program a background literature search will be conducted at the appropriate regional information center as required by state guidelines and current professional standards. Following completion of the archeological studies a report shall be prepared summarizing the findings of the research. A copy of the report shall be deposited with the California Office of Historical Preservation. The literature review will determine if there are any previously recorded archeological resources or historic structures within the project area, and whether the area has been included within any previous archaeological research or reconnaissance project.

Project notification letters shall be sent to the Native American Heritage Commission along with a request for a Sacred Lands File search of the project areas and appropriate Native American contacts for the projects as soon as funding and contracts are fully routed. In addition, letters shall be sent to local Native American tribes stating that archaeological surveys are being conducted in areas that may be of interest to them. The letters shall request any additional information and shall ask specifically if the tribe(s) have any concerns regarding the project.

In addition to the records search at the Northwest Information Center, pertinent published ethnographic literature and various inventories shall be reviewed including but not limited to: 1) California Athabascan Groups (Baumhoff 1958); 2) California Inventory of Historic Resources; 3) California Historic Property Inventory and; 4) Government Land Office Land Plot Map.

Intensive surveys are conducted instream and along the bank of the areas included in the project area. All locations of exposed soil along road cuts, skid trails and creek banks are inspected. In areas where mineral soil is visibility obscured, a geology pick shall be used to scrape the surface vegetation and expose the mineral soil to inspect for cultural resources.

- 1) Any archaeological sites identified during an investigation shall be recorded in a manner consistent with the Office of Historic Preservations Manual titled Instructions for Recording Historic Resources 1955. The DFG shall report any previously unknown historic, archeological and paleontological remains discovered at a site to the US Army Corps of Engineers as required in the Regional General Permit (RGP 12). This information will also be provided to the Native American Heritage Commission, 915 Capitol Mall, Sacramento, CA 95814.

EXHIBIT A
Lower Mattole Sediment Reduction Project
STATEMENT OF WORK

Under direction of the Department of Fish and Game, and under the following conditions and terms, the Grantee will:

1. Improve habitat conditions for Chinook salmon, coho salmon and steelhead trout in the Lower Mattole River Watershed, tributary to the Pacific Ocean in Humboldt County. This will be done by reducing road related and stream bank sediment delivery.
2. Work will take place in the Lower Mattole River watershed including mainstem Mattole River and the following tributaries; North Fork Mattole River, Wild Turkey Creek, Conklin Creek, Mill Creek, Upper Mill Creek, East Mill Creek, Stansberry Creek, Indian Creek, and Clear Creek. The project is located in Township 1S, Range 1W, Section 31, Township 1S, Range 2W, Sections 27, 34, 35, and 36, Township 2S, Range 1W, Sections 6, 7 and 19, Township 2S, Range 2W, Sections 1, 2, 3, 4, 9, 10, 11, 12, 13, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26 and 27 and Township 2S, Range 3W, Sections 13 and 24 of the Petrolia and Buckeye Mountain 7.5 minute, U.S.G.S Quadrangles. The project maps, Exhibits B, C, D and E, are attached and made part of this agreement by this reference.
3. Sites will be treated as described in Exhibits F, G, H, I, J, K and L, which are attached and made part of this agreement by this reference. The following treatments will be implemented where appropriate:
 - Installation of culverts sized for the 100-year flood flow, including sufficient capacity for expected wood and sediment;
 - Installation of stream crossings designed to meet fish passage following the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for fish passage;
 - Installation and/or armoring of critical dips to eliminate diversion potential;
 - Excavation and/or armoring of inboard ditches;
 - Excavation of culvert inlets;
 - Excavation of instream stored sediment;
 - Installation of downspouts and/or rock dissipation at culvert outlets;
 - Construction of rock armored fords;
 - Removal of road berms;
 - Installation of rolling dips;
 - Reshaping of road surfaces;
 - Installation of ditch relief culverts;
 - Rocking of road surfaces;
 - Excavation of unstable or potentially unstable sidecast materials that could otherwise fail and deliver sediment to a stream;

- Installation of boulder for streambank protection and grade control;
 - Construction of boulder deflectors incorporating large wood;
 - Construction of willow/brush walls, baffles and/or mattresses;
 - Seeding and mulching of all exposed soils which may deliver sediment to a stream. The standard for success is 80% ground cover for broadcast planting of seed, after a period of three years.
4. The Grantee will not proceed with on the ground implementation until all necessary permits and consultations are secured.
 5. The Grantee shall notify the Grant Manager a minimum of five working days before the project site is de-watered and the stream flow diverted. The notification will provide a reasonable time for Department personnel to supervise the implementation of the water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires dewatering of the site, and the relocation of salmonids, the Grantee will implement the following measures to minimize harm and mortality to listed salmonids:
 - Fish relocation and dewatering activities shall only occur between June 15 and October 31 of each year.
 - The Grantee shall minimize the amount of wetted stream channel dewatered at each individual project site to the fullest extent possible.
 - All electrofishing shall be performed by a qualified fisheries biologist and conducted according to the National Marine Fisheries Service, *Guidelines for Electrofishing Waters Containing Salmonids Listed Under the Endangered Species Act*, June 2000.
 - The Grantee will provide fish relocation data to the Grant Manager on a form provided by the Department of Fish and Game.
 - Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.
 6. The stream crossing design and installation will meet flow carrying capacity required for a 100-year flood event as identified by specifications determined by NOAA Fisheries and the California Department of Fish and Game, for adult and juvenile salmonid fish passage.
 7. The project will follow the National Marine Fisheries Service (NMFS 2001) Guidelines for Salmonid Passage at Stream Crossings and DFG criteria for fish passage as described in the Third Edition, Volume II, Part IX, February 2003, of the *California Salmonid Stream Habitat Restoration Manual*. Designs shall be visually reviewed and authorized by NOAA Fisheries (or CDFG) engineers prior to commencement of work.

8. All habitat improvements will be in accordance with techniques described in the Third Edition, January 1998, of the *California Salmonid Stream Habitat Restoration Manual*.
9. Work in flowing streams is restricted to June 15 through October 31. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Game. Planting of tree seedlings will take place after December 1 or when sufficient rainfall has occurred to insure the best chance of survival of the seedlings. The standard for success is 80% survival of plantings or 80% ground cover for broadcast planting of seed, after a period of three years.
10. The Grantee will maintain the new crossing, inspect the crossing in a timely manner and remove debris as necessary during the storm season.
11. An annual report will be submitted each year, no later than December 1, detailing the work completed that field season. The annual report will include, but not necessarily be limited to the following where applicable:
 - implementation start and end dates;
 - percentage of the project completed to date;
 - dewatering and fish relocation data on DFG data sheet (to be provided by the DFG Grant Manager upon request);
 - projected start and end dates for work to be implemented the following season;

The annual report will also include, on a site by site basis:

- road length upgraded;
 - number of stream crossings upgraded;
 - number of landslides/fillslope failures treated;
 - area (ft²) of landslide/fillslope failure treatments;
 - stream crossings treated for fish passage;
 - length of stream habitat made accessible by fish passage treatment;
 - sediment savings
 - spoils volumes
 - number of stream bank sites treated
 - length of stream bank protected or stabilized
 - area of feature installed within bankfull width
 - number of trees planted
 - area treated with planting
12. Upon completion of the project, the Grantee shall submit two hard copies of a final written report and one electronic, *Microsoft Word* compatible, copy on 3.5 inch floppy disk(s) or CD. If the project is not completed in the current year, the Grantee will submit a summary of the completed portion no later than December 31

and again each year until completed. The report shall include, but not necessarily be limited to the following information:

- Grant number
- Project name
- Geographic area (e.g., watershed name)
- Location of work – show project location using U.S.G.S. 7.5 minute topographical map or appropriately scaled topographical map
- Geospatial reference/location (lat/long is preferred – defined as point, line, or polygon)
- Project start and end dates and the number of person hours expended
- Total of each fund source, by line item, expended to complete the project, breaking down Grant dollars, by line item, and any other funding, including type of match (cash or in-kind service)
- Expected benefits to anadromous salmonids from the project
- Labeled before and after photographs of any restoration activities and techniques
- Specific project access using public and private roads and trails, with landowner name and address
- Complete as built project description
- Report measurable metrics for the project by responding to the restoration project metrics listed below.

Habitat Protection and Restoration Projects– Reporting Metrics (HB) (Report N/A to those that do not apply)

Habitat Projects: (all)

- Identify the watershed/sub-basin plan or assessment in which the project is identified as a priority.
- Name the priority habitat limiting factors identified in that plan that are addressed by the project
- Type of monitoring included in the project
 - Design spec achieved
 - Fish movement/abundance
- Number of stream miles treated/affected by the project within the project boundaries.

Fish Passage Improvement Projects (HB):

- Number of blockages removed or made passable.
- Number of miles made accessible to salmonids.

Upland Habitat Projects (CF, HU)

- Type and number of actions (e.g., fencing, road removal)
- For upslope tree planting projects, # of trees planted and acres treated

- Number of miles of road decommissioned, upgraded or restored (e.g., closed, obliterated, treated) per road segment
- Number of stream crossings decommissioned and upgraded per road segment
- Area of landslide/fillslope treatments per treatment site
- Number of cubic yards of sediment saved from entering the stream per site and per road segment
- Spoils volumes per site and per road segment

Water Quality Projects (TW, HR, HU, HS)

- Water quality limitations addressed by the project (e.g., sediment, turbidity, heat, nutrient loading, chemical pollution).
13. The Grantee will acknowledge the participation of the Department of Fish and Game, Fisheries Restoration Grant funds on any signs, flyers, or other types of written communication or notice to advertise or explain the Lower Mattole Sediment Reduction Project.

EXHIBIT B
Lower Mattole Sediment Reduction Project
PROJECT OVERVIEW MAP

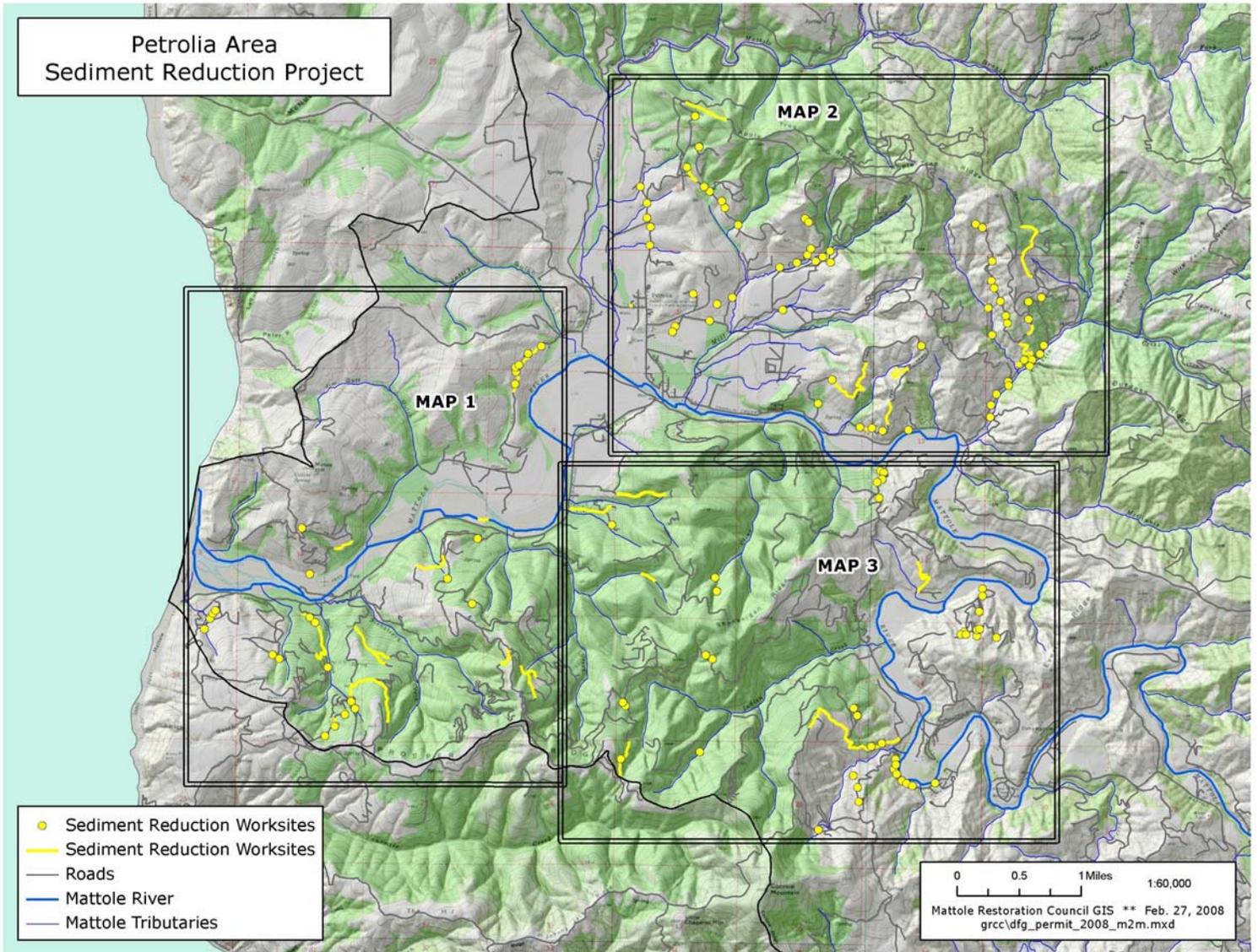


EXHIBIT C
 Lower Mattole Sediment Reduction Project
 MAP 1

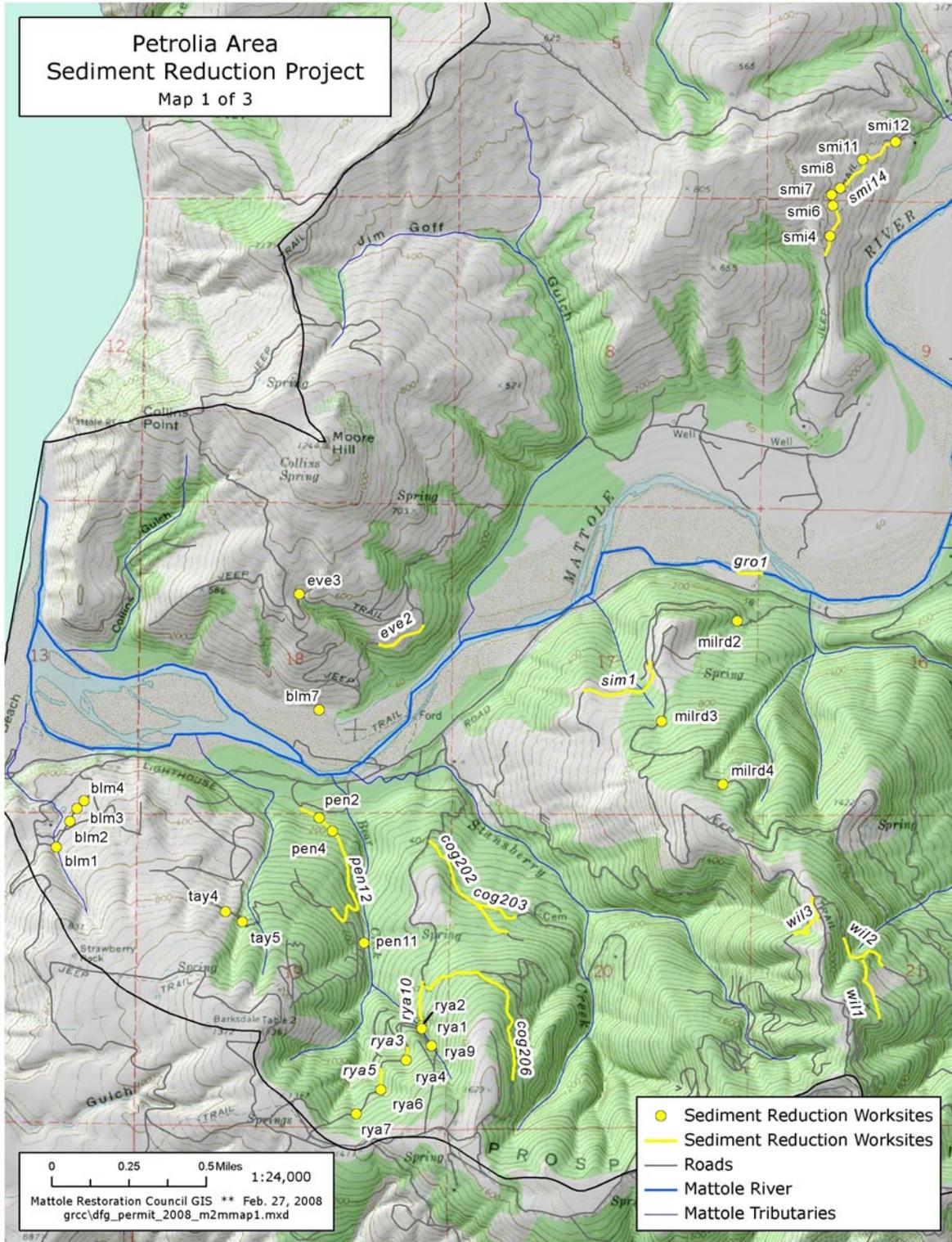


EXHIBIT D
 Lower Mattole Sediment Reduction Project
 MAP 2

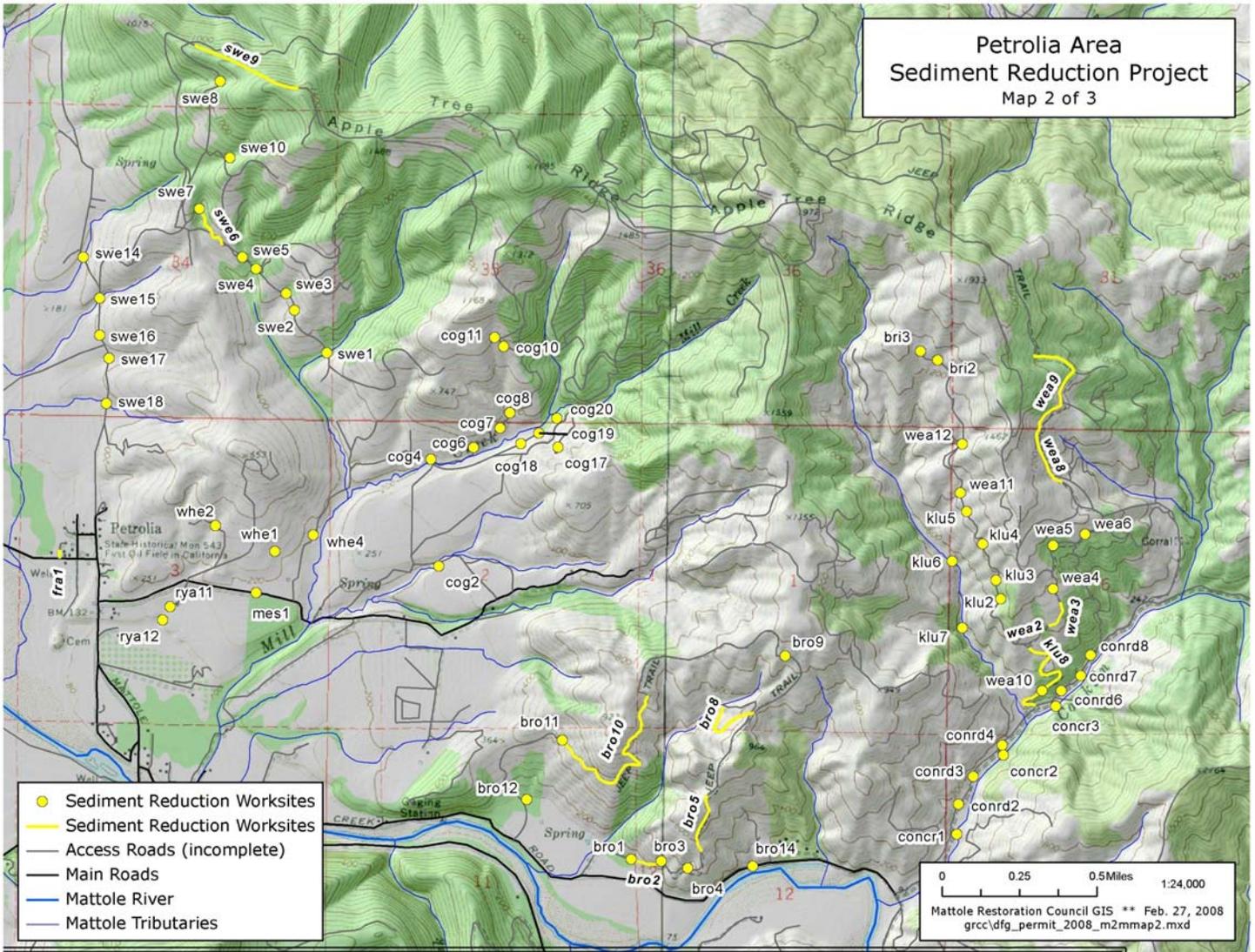


EXHIBIT E
 Lower Mattole Sediment Reduction Project
 MAP 3

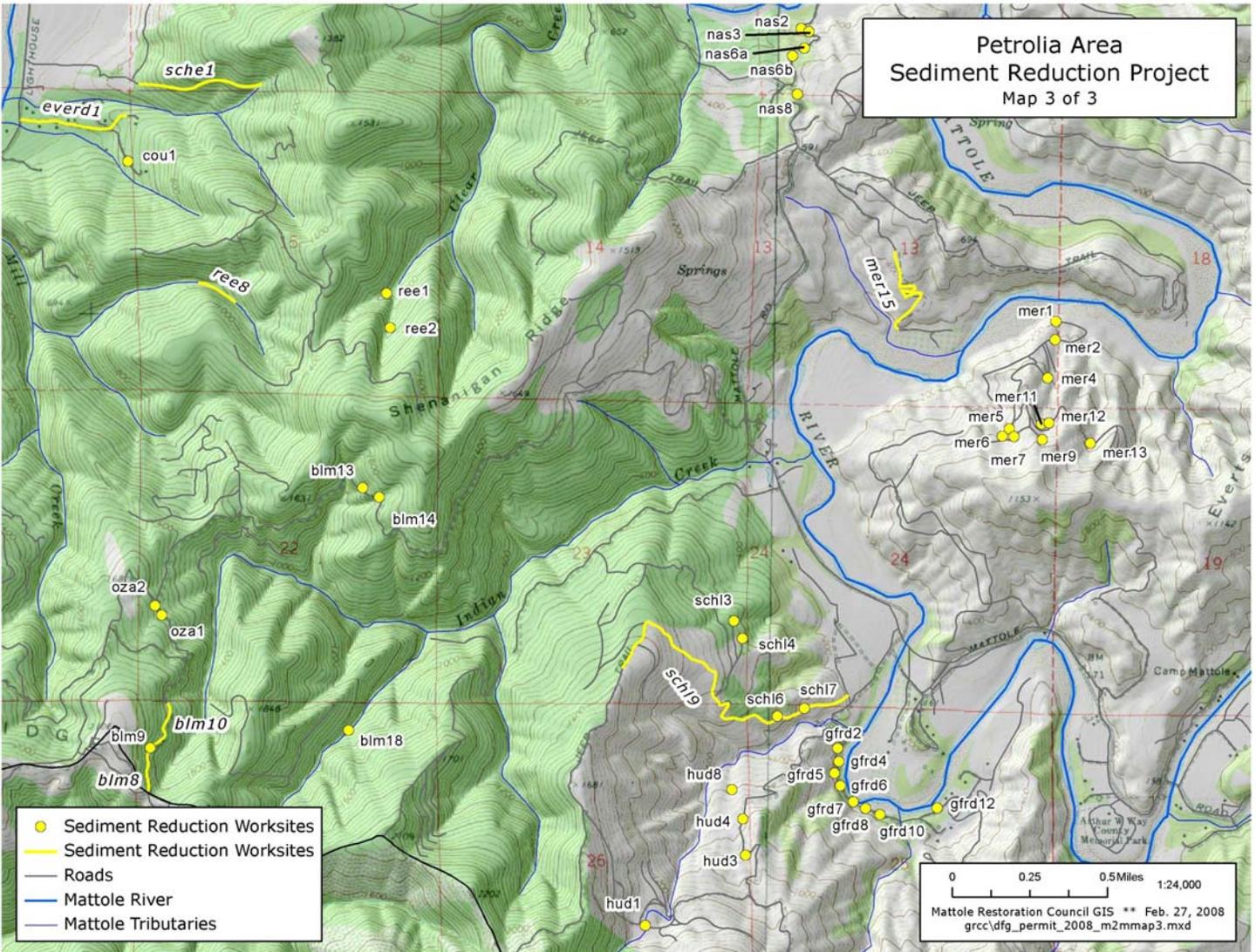


EXHIBIT F
Lower Mattole Sediment Reduction Project
TABLE 1 – TREATMENTS

Site #	Line	Sediment Source	If Crossing, Type	Watershed	Yd3 Sed	New Culvert's Structure	Recommendation
Schl 3		Crossing	Fill	Mattole	45		Compact woody material into gully
Schl 4		Crossing	Fill	Mattole	470		Install armored ford w/ 30yd cobble. Stuff brush in gullies by hand, above and below road.
Schl 6		Crossing	Culvert	Wild Turkey	300	Culvert	Install 2 new pipes-1)about 10' below present pipe, 2) about 100' above. Add 10yd cobble to ea.
Schl 7		Crossing	Culvert	Wild Turkey	150		Add about 20yd cobble@outlet
SchlLine9	yes	Road and/or Landing Drainage		Wild Turkey	750		Reshape w/ about 20 rolling dips. Berm removal and crowning where feasible.
GfRd2		Crossing	Culvert	Mattole	150	Culvert	Replace w/ 24" pipe, 10yd riprap
GfRd4		Debris Slide		Mattole	4000		Install 2 wing deflectors w/ 70yd ea. & LWVD for habitat
GfRd5		Crossing	Culvert	Mattole	80	Culvert	Replace w/ 36" pipe, 20 yd riprap
GfRd6		Crossing	Culvert	Mattole	200	Culvert	Replace w/ 60" pipe, 30 yd riprap
GfRd7		Debris Slide		Mattole	1600		Install wing deflector@toe w/ 60yd: 30yd frenchdrain + retaining wall above road w/ 30yd riprap
GfRd8		Crossing	Fill	Mattole	40		Add 10yd cobble to construct ford
GfRd10		Crossing	Culvert	Mattole	150	Culvert	Replace w/ 24" pipe, 10yd riprap
GfRd12		Crossing	Culvert	Mattole	40		Add 10yd@outlet
Hud1		Crossing	Culvert	Wild Turkey	430	Culvert	Replace w/ 48" pipe, 30yd riprap@outlet
Hud3		Road Fill		Wild Turkey	60		Armor w/ 10yd riprap
Hud4		Crossing	Culvert	Wild Turkey	200	Culvert	Replace w/ 24" pipe w/ 10yd riprap + 10yd roadrock
Hud8		Crossing	Fill	Wild Turkey	150		Add 10 or 20 yd cobble@outlet
Mer1		Crossing	Fill	Mattole	150		Excavate to grade
Mer2		Crossing	Fill	Mattole	70		Excavate to grade
Mer4		Landing Fill		Mattole	200		Excavate overburdened fill
Mer5		Crossing	Fill	Mattole	350		Excavate and install armored ford w/ 10yd rock
Mer6		Landing Fill		Mattole	400		Excavate overburdened fill
Mer7		Crossing	Fill	Mattole	350		Excavate natural channel, install armored ford w/ 10yd rock
Mer9		Crossing	Fill	Mattole	350		Install armored ford w/ 20yd rock
Mer11		Crossing	Fill	Mattole	50		Excavate perched fill
Mer12		Crossing	Fill	Mattole	250		Excavate to grade
Mer13		Crossing	Humboldt	Mattole	1300		Excavate to grade, use rock and willow on site to stabilize channel

EXHIBIT G
Lower Mattole Sediment Reduction Project
TABLE 2 – TREATMENTS CONTINUED

Mer15		Road and/or Landing Drainage	Mattole	400		Reshape 1/2 mile of road with berm removal and dips.	
ConCr1		Instream Stored Sediment	Conklin	4000		channel w/ spoils. Install 10 willow-brush baffles & some spoils in R channel. Floodplain to be approx 45' wide.	
ConCr2		Debris Slide	Conklin	3,000		willow-brush baffles, 100yd rock	
ConCr3		Streambank Erosion	Conklin	200		Add 20 yds rip rap	
ConRd2		Crossing	Culvert	Conklin	80	Culvert	Replace w/ 36" pipe installed to grade
ConRd3		Crossing	Culvert	Conklin	40	Culvert	Replace w/ 30" pipe
ConRd4		Crossing	Culvert	Conklin	10	Culvert	Replace undersized culvert on small drainage
ConRd6		Crossing	Culvert	Conklin	10	Culvert	Replace undersized, clogged, low-gradient pipe w/ 24"
ConRd7		Crossing	Culvert	Conklin	10	Culvert	Replace undersized, clogged, low-gradient pipe w/ 24"
ConRd8		Crossing	Culvert	Conklin	150	Culvert	Replace w/ 48" pipe
Bri2		Crossing	Fill	Conklin	130	Culvert	Landowner will cost-share. 10yd riprap
Bri3		Crossing	Fill	Conklin	150	Culvert	Inboard spring. Install culvert or armored ford w/ 10yd rock
Klu2		Crossing	Culvert	Conklin	350	Culvert	Replace w/ 24" pipe, 20 yds rock dissipator
Klu3		Diversion		Conklin	300	Culvert	Install 24" pipe, 20 yds rock dissipator@natural drainage to south
Klu4		Crossing	Fill	Conklin	300	Culvert	Install 24" pipe, 20 yds rock dissipator
Klu5		Crossing	Culvert	Conklin	700	Culvert	24" pipe, crit.dip 10yd armor, excav. channel above & stabilize w/ 40yd rock
Klu6		Streambank Erosion		Conklin	3000		Handwork removing debris from channel, 50' willow fence (available on site)
Klu7		Debris Slide		Conklin	1500		Remove debris from channel, 50' willow fence where possible
Klu8	yes	Road and/or Landing Drainage	Conklin	350			Install rolling dips and crown where nec. 10yd road rock
Wea2	yes	Road and/or Landing Drainage	Conklin	1000			Reshape 200 yds road. Rolling dips, outslope, eliminate inboard ditch
Wea3	yes	Road and/or Landing Drainage	Conklin	400			Reshape road w/ dips and some outsloping
Wea4		Crossing	Fill	Conklin	1000		Install armored ford
Wea5		Crossing	Fill	Conklin	200		Dip & armor crossing w/ 10yd rock
Wea6		Crossing	Fill	Conklin	500		Armor ford, excav old road fill, dip spring swale w/ cobble 20yd
Wea8	yes	Road and/or Landing Drainage	Conklin	700			Reshape road, dip & rock armor crossings
Wea9	yes	Road and/or Landing Drainage	Conklin	500			Reshape road, dip & rock armor crossings

EXHIBIT H
Lower Mattole Sediment Reduction Project
TABLE 3 – TREATMENTS CONTINUED

Wea10		Crossing	Culvert	Conklin	100		Install critical dip
Wea11		Crossing	Culvert	Conklin	400	Culvert	Install 24" pipe w/ 10yd rock dissipator
Wea12		Crossing	Culvert	Conklin	400	Culvert	Replace w/ 24" pipe, armor crit.dip w/ 10yd rock
Bro1		Crossing	Culvert	Mattole	200	Culvert	Replace w/ 24" pipe, 10yd cobble dissipator
BroLine2	yes	Road Surface		Mattole	100		Reshape w/ berm-removal&dips, 10yd cobble@spring crossing
Bro3		Crossing	Fill	Mattole	200	Culvert	Replace w/ ford or culvert, 20yd riprap
Bro4		Crossing	Culvert	Mattole	150		Replace w/ armored ford, 20yd riprap
Bro5	yes	Road Surface		Mattole	500		Reshape road w/ berm removal & dips
Bro8		Diversion		Mattole	300		Drain road w/ dips. Armor gully w/ 20yd cobble to slow erosion.
Bro9		Crossing	Fill	Mattole	300		Install armored ford@natural drainage
BroLine10	yes	Road Surface		Mattole	200		Reshape select sites w/ berm-removal@dips
Bro11		Crossing	Culvert	Mattole	120	Culvert	Replace w/ 24" pipe installed to grade, 10yd riprap
Bro12		Gulying		Mattole	240		Add 50yd cobble to active nickpts & channel water over rock that has been placed.
Bro14		Crossing	Culvert	Mattole	80	Culvert	Replace w/ new 24" pipe, 10yd cobble
Swe1		Crossing	Pulled Crossin	Upper Mill	300	Pipe Arch	Install 12' diam arch. Armor bank below w/ 20yd riprap & excav channel.
Swe2		Crossing	Fill	Upper Mill	50		Add 10yd cobble
Swe3		Crossing	Culvert	Upper Mill	75	Culvert	Replace w/ 24" pipe, w/ 10yd cobble@outlet
Swe4		Crossing	Humboldt	Upper Mill	800	Culvert	Install 48" pipe, 20yd riprap, excav 200 yds from wedge upstream
Swe5		Crossing	Humboldt	Upper Mill	200	Culvert	Install 36"x60' pipe, w/ 10yd riprap
SweLine6	yes	Road Surface		NFk Mattole	200		Reshape select sites along road seg w/ dips&berm-removal. Some rock avail nearby.
Swe7		Crossing	Culvert	NFk Mattole	200	Culvert	Replace w/ 36"x60' pipe, to grade. Rock avail onsite. Excav perched material below crossing.
Swe8		Crossing	Culvert	NFk Mattole	400	Culvert	Replace w/ 24"x60' pipe, 20yd cobble@outlet
SweLine9	yes	Road Surface		NFk Mattole	200		Reshape w/ dips & berm-removal
Swe10		Crossing	Culvert	NFk Mattole	450	Culvert	Replace w/ 36"x60' pipe, 20yd cobble, remove perched fill, 20yd riprap
Swe14		Crossing	Culvert	NFk Mattole	500	Culvert	Replace w/ 36" pipe, 10yd riprap
Swe15		Crossing	Culvert	NFk Mattole	700	Culvert	Replace w/ 36" pipe, 20yd riprap, 30' willow fence below outlet w/ material avail onsite
Swe16		Crossing	Culvert	NFk Mattole	20	Culvert	Install 24" pipe w/ 10yd cobble
Swe17		Crossing	Culvert	NFk Mattole	800	Culvert	Replace w/ 36" pipe, 20yd riprap

EXHIBIT I
Lower Mattole Sediment Reduction Project
TABLE 4 – TREATMENTS CONTINUED

Swe18		Crossing	Culvert	NFk Mattole	250	Culvert	Replace w/ 36" pipe, 10yd riprap
Simline1	yes	Road Surface	Culvert	Mattole	500	Culvert	Reshape 1/4 mile stretch of road with crowning and dips. Install 1 or two new ditch relief pipes
Whe1		Diversion		East Mill	200		Old road diverting small drainage all the way past residence. Armor eroding knickpoints
Whe2		Crossing	Culvert	East Mill	340	Culvert	Install armored ford or new pipe, 20 yds riprap
Whe4		Crossing	Culvert	East Mill	80	Culvert	Install rock dissipator and critical dip. Replace pipe w/ 24", 10yd rock
Pen2		Crossing	Culvert	Mattole	70		Excavate deeper critical dip, 10yd road rock
Pen4		Crossing	Culvert	Mattole	10		Excavate deeper critical dip
Pen11		Diversion		Mattole	300		Hand excavate to return stream to natural drainage
Pen12	yes	Road Surface		Mattole	500		Reshape road w/ 10 rolling+critical dips, 10+ yd road rock
EveRd1	yes	Road and/or Landing Drainage		Mattole	200		Install 5 rolling dips to improve drainage
Cou1		Crossing	Culvert	Mattole	50	Culvert	Replace culvert, excavate ditch
MilRd2		Crossing	Culvert	Mattole	not spec.		Outslope & dip 50' downroad of diversion gully
MilRd3		Crossing	Culvert	Mattole	500		Install critical dip
MilRd4		Crossing	Culvert	Mattole	260		Add 10 yds small cobble @ critical dip
Cog2		Crossing	Culvert	East Mill	200	Pipe Arch	Install 12' diam pipe arch, 40' length, excavate 20yd up gradient
Cog4		Streambank Erosion		East Mill	2100		Excav. Return channel to nat. course away from failing bank. (See Comments)
Cog6		Crossing	Dip	East Mill	100		Construct armored ford
Cog7		Crossing	Dip	East Mill	50		Deepen dip, armor w/ 20yd cobble. Excav dip@natural small CL3 50' down road.
Cog8		Crossing	Fill	East Mill	1400		Excavate channel below road crossing, armor w/ 40yd rock
Cog10		Crossing	Fill	East Mill	96		Armor ford w/ 20yd small rip rap
Cog11		Crossing	Fill	East Mill	200		Excavate armored crossing. (See Comments also.)
Cog17		Crossing	Dip	East Mill	10		Deepen dip, armor w/ 10yd cobble.
Cog18		Crossing	Fill	East Mill	500		Excavate crossing and overburdened fill
Cog19		Diversion		East Mill	330		Excavate to grade, 30yd cobble to stabilize
Cog20		Streambank Erosion		East Mill	200		Lay back vertical banks
CogLine202	yes	Road and/or Landing Drainage		Stansberry	750		Install 3 armored fords, 20yd cobble ea., waterbars ea. 50'-100'
CogLine203	yes	Diversion		Stansberry	700		Armored ford on upper road. Dip lower road. Cobble ea. crossing structure.

EXHIBIT J
Lower Mattole Sediment Reduction Project
TABLE 5 – TREATMENTS CONTINUED

CogLine206	yes	Road and/or Landing Drainage		Stansberry	600		Add waterbar every 50'-100' w/ <10yd road rock for ea.
Rya1		Crossing	Culvert	Bear	100	Culvert	Replace w/ 24" x 40' pipe, diversion-proof at corner crossing
Rya2		Crossing	Culvert	Bear	180	Culvert	Replace w/ 36" pipe, 30yd riprap, 10yd road rock
RyaLine3	yes	Road and/or Landing Drainage		Bear	100		Reshape w/ crowning and dips(2'
Rya4		Crossing	Culvert	Bear	200		Replace w/ 24" pipe, 10yd riprap
RyaLine5	yes	Road and/or Landing Drainage		Bear	200		riprap, 40yd roadrock. Inslope down to corner, add rolling dip, berm removal and outslope down to Rya4
Rya6		Crossing	Culvert	Bear	400	Culvert	Replace w/ 24" pipe, 30yd riprap to armor crit.dip
Rya7		Crossing	Culvert	Bear	200	Culvert	Replace w/ 24" pipe, 10yd riprap
Rya9		Crossing	Culvert	Bear	350		Excavate to grade
RyaLine10		Road and/or Landing Drainage		Mattole	300	Culvert	Install 2 new DRC(1.Current crossing@N extent; 2.Location up-gradient). Crown road w/ 20 yd cobble, 50
Rya11		Streambank Erosion		Mattole	120		Hand rockwork to stabilize current channel. 30' willow fence@toe of slide
Rya12		Crossing	Culvert	Mattole	150	Culvert	Replace w/ 48" pipe or small walking bridge, 10yd cobble to stabilize small drainage eroding approach to
Gro1		Streambank Erosion		Mattole	2500		Install 3 wing deflectors w/ 80yd ea. Willow mattresses between w/ 40yd in toe trench+cobble avail onsite. Also excav channel.
Eve2		Road Fill		Mattole	100		Armor small blowout w/20yd cobble, reshape road to redirect away from bad spot
Eve3		Crossing	Humboldt	Mattole	120		Install armored ford w/20yd large cobble, use small ecavator
Oza1		Crossing	Bridge	Indian	300		Excavate perched fill + spring drainage
Oza2		Crossing	Fill	Indian	500		Excavate &/or install armored ford
BLM1		Crossing	Culvert	Mattole	155	Culvert	Replace w/ 36" x 50' pipe w/ 10 yd riprap
BLM2		Crossing	Culvert	Mattole	50	Culvert	Replace w/ 24" pipe w/ 10yd riprap + 10yd roadrock
BLM3		Crossing	Culvert	Mattole	50	Culvert	Replace w/ 24" pipe w/ 10yd riprap + 10yd roadrock
BLM4		Crossing	Culvert	Mattole	20		Add 10yd cobble @ outlet
BLM7		Streambank Erosion		Mattole	1600		Install wing deflector w/100yd riprap+LWD for fish habitat
BLMLine8	yes	Road Surface		Indian	1500		Decom 1/4 mile of road
BLM9		Crossing	Culvert	Indian	500		Excavate to grade
BLMLine10	yes	Crossing	Fill	Indian	700		Excavate road fill @ 3 Crossings
BLM13		Crossing	Fill	Indian	300		Excavate to grade

EXHIBIT K
Lower Mattole Sediment Reduction Project
TABLE 6 – TREATMENTS CONTINUED

BLM14		Crossing	Humboldt	Indian	320		Excavate to grade
BLM18		Debris Slide		Indian	4000		chainsaw, rockbars.
REE1		Streambank Erosion		Clear	200		chainsaw, rockbars.
REE2		Debris Slide		Clear	1200		chainsaw, rockbars.
REE8	yes	Streambank Erosion		Mill	800		Handwork--return stream to nat. channel. Wench, chainsaw, rockbars.
Mes1		Crossing	Culvert	Mattole	1000	Culvert	Replace culvert, excav inboard ditch, armor+excav new channel to connect w/ natural drainage. 50yd 1/4ton riprap, 100yd cobble
Willine1		Road and/or Landing Drainage		Mill	400		Install about 10 waterbars
Willine2		Road and/or Landing Drainage		Mill	300		Install 5 rolling dips
Willine3		Road and/or Landing Drainage		Stansberry	300		Install 5 rolling dips
SchelLine1	yes	Road Surface		Mattole	200		Dip crossings to diversion-proof. Install 10-15 waterbars.
Tay4		Crossing	Culvert	Mattole	50		Add 5-10 yd rock, leave as wet crossing
Tay5		Crossing	Other	Mattole	150		Add 15yd rock in stream for armored Xing. Owner will build concrete ribbon as match(?)
Nash2		Diversion		Mattole	500	Culvert	Install ditch relief culverts above and below diversion gully, at what might be natural drainage.
Nash3		Crossing	Culvert	Mattole	400	Culvert	Place ditch relief culvert 150' up road. Make sure runoff hits road where won't cause roadcut failure.
Nash6		Road and/or Landing Drainage		Mattole	400	Culvert	Install 2x18" (or 24"?) ditch relief culverts
Nash8		Crossing	Culvert	Mattole	100	Culvert	Replace culvert
Fra1		Road and/or Landing Drainage		Mattole			Add 20yd road rock, 1/2 day dozer
Smi4		Crossing	Culvert	Mattole	80		Add 10yd riprap@outlet
Smi6		Crossing	Culvert	Mattole	300	Culvert	Replace w/ 24" pipe, 10yd roadrock + 10yd riprap
Smi7		Crossing	Culvert	Mattole	400	Culvert	Replace w/ 30" pipe+10yd ea rock, 20yd rock+willow in gully below road
Smi8		Crossing	Culvert	Mattole	400	Culvert	Replace w/ 30" pipe+10yd ea rock, 20yd rock+willow to reduce gullying below road
Smi11		Crossing	Culvert	Mattole	200	Culvert	Replace w/ 36" pipe, 20yd riprap, 10yd roadrock
Smi12		Crossing	Culvert	Mattole	400	Culvert	Install additional 24"pipe@nat-drainage up-gradient w/10yd ea rock. Additional 10yd riprap to stabilize nickpt.

EXHIBIT L
Lower Mattole Sediment Reduction Project
TABLE 7 – TREATMENTS CONTINUED

Tay5		Crossing	Other	Mattole	150		Add 15yd rock in stream for armored Xing. Owner will build concrete ribbon as match(?)
Nash2		Diversion		Mattole	500	Culvert	Install ditch relief culverts above and below diversion gully, at what might be natural drainage.
Nash3		Crossing	Culvert	Mattole	400	Culvert	Place ditch relief culvert 150' up road. Make sure runoff hits road where won't cause roadcut failure.
Nash6		Road and/or Landing Drainage		Mattole	400	Culvert	Install 2x18" (or 24"?) ditch relief culverts
Nash8		Crossing	Culvert	Mattole	100	Culvert	Replace culvert
Fra1		Road and/or Landing Drainage		Mattole			Add 20yd road rock, 1/2 day dozer
Smi4		Crossing	Culvert	Mattole	80		Add 10yd riprap@outlet
Smi6		Crossing	Culvert	Mattole	300	Culvert	Replace w/ 24" pipe, 10yd roadrock + 10yd riprap
Smi7		Crossing	Culvert	Mattole	400	Culvert	Replace w/ 30" pipe+10yd ea rock, 20yd rock+willow in gully below road
Smi8		Crossing	Culvert	Mattole	400	Culvert	Replace w/ 30" pipe+10yd ea rock, 20yd rock+willow to reduce gulying below road
Smi11		Crossing	Culvert	Mattole	200	Culvert	Replace w/ 36" pipe, 20yd riprap, 10yd roadrock
Smi12		Crossing	Culvert	Mattole	400	Culvert	Install additional 24"pipe@nat-drainage up-gradient w/10yd ea rock. Additional 10yd riprap to stabilize nickpt.
SmiLine14	yes	Road and/or Landing Drainage		Mattole	500		Reshape road w/ berm removal+ditch improvement w/gravel add@softspots.

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name

POSSIBLE SPECIES WITHIN THE PETROLIA, BUCKEYE MOUNTAIN, AND SURROUNDING QUADS FOR THE LOWER MATTOLE SEDIMENT REDUCTION PROJECT LOCATED IN TOWNSHIP 01S RANGE 01W SECTION 31, TOWNSHIP 01S RANGE 02W SECTIONS 27, 34, 35, 36, TOWNSHIP 02S RANGE 01W SECTIONS 6, 7, 19, TOWNSHIP 02S RANGE 02W SECTIONS 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, TOWNSHIP 02S RANGE 03W SECTIONS 13, AND 24, HUMBOLDT COUNTY.

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
1 American badger <i>Taxidea taxus</i>	AMAJF04010			G5	S4	SC
2 Coastal Douglas Fir Western Hemlock Forest	CTT82410CA			G4	S2.1	
3 Coastal and Valley Freshwater Marsh	CTT52410CA			G3	S2.1	
4 Cooper's hawk <i>Accipiter cooperii</i>	ABNKC12040			G5	S3	
5 Hitchcock's blue-eyed grass <i>Sisyrinchium hitchcockii</i>	PMIRI0D0S0			G2	S1.1	1B.1
6 Howell's montia <i>Montia howellii</i>	PDPOR05070			G3G4	S3.2	2.2
7 Oregon coast paintbrush <i>Castilleja affinis ssp. litoralis</i>	PDSCR0D012			G4G5T4	S2.2	2.2
8 Pacific gilia <i>Gilia capitata ssp. pacifica</i>	PDPLM040B6			G5T3T4	S2.2?	1B.2
9 Siskiyou checkerbloom <i>Sidalcea malviflora ssp. patula</i>	PDMAL110F9			G5T1	S1.1	1B.2
10 Sonoma tree vole <i>Arborimus pomo</i>	AMAFF23030			G3	S3	SC
11 Townsend's big-eared bat <i>Corynorhinus townsendii</i>	AMACC08010			G4	S2S3	SC
12 Upland Douglas Fir Forest	CTT82420CA			G4	S3.1	
13 Wolf's evening-primrose <i>Oenothera wolfii</i>	PDONA0C1K0			G1	S1.1	1B.1
14 Yuma myotis <i>Myotis yumanensis</i>	AMACC01020			G5	S4?	
15 beach layia <i>Layia carmosa</i>	PDAST5N010	Endangered	Endangered	G2	S2.1	1B.1
16 coast fawn lily <i>Erythronium revolutum</i>	PMLIL0U0F0			G4	S2.2	2.2
17 coastal marsh milk-vetch <i>Astragalus pycnostachyus var. pycnostachyus</i>	PDFAB0F7B2			G2T2	S2.2	1B.2
18 coho salmon - central California coast ESU <i>Oncorhynchus kisutch</i>	AFCHA02034	Endangered	Endangered	G4	S2?	
19 double-crested cormorant <i>Phalacrocorax auritus</i>	ABNFD01020			G5	S3	
20 foothill yellow-legged frog <i>Rana boylei</i>	AAABH01050			G3	S2S3	SC
21 giant fawn lily <i>Erythronium oregonum</i>	PMLIL0U0C0			G5	S2.2	2.2
22 golden eagle <i>Aquila chrysaetos</i>	ABNKC22010			G5	S3	
23 great blue heron <i>Ardea herodias</i>	ABNGA04010			G5	S4	

California Department of Fish and Game

Natural Diversity Database

Selected Elements by Common Name

POSSIBLE SPECIES WITHIN THE PETROLIA, BUCKEYE MOUNTAIN, AND SURROUNDING QUADS FOR THE LOWER MATTOLE SEDIMENT REDUCTION PROJECT LOCATED IN TOWNSHIP 01S RANGE 01W SECTION 31, TOWNSHIP 01S RANGE 02W SECTIONS 27, 34, 35, 36, TOWNSHIP 02S RANGE 01W SECTIONS 6, 7, 19, TOWNSHIP 02S RANGE 02W SECTIONS 1, 2, 3, 4, 9, 10, 11, 12, 13, 14, 15, 16, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, TOWNSHIP 02S RANGE 03W SECTIONS 13, AND 24, HUMBOLDT COUNTY.

Common Name/Scientific Name	Element Code	Federal Status	State Status	GRank	SRank	CDFG or CNPS
24 great egret <i>Ardea alba</i>	ABNGA04040			G5	S4	
25 great gray owl <i>Strix nebulosa</i>	ABNSB12040		Endangered	G5	S1	
26 leafy reed grass <i>Calamagrostis foliosa</i>	PMPOA170C0		Rare	G3	S3.2	4.2
27 long-beard lichen <i>Usnea longissima</i>	NLLEC5P420			G4	S4.2	
28 maple-leaved checkerbloom <i>Sidalcea malachroides</i>	PDMAL110E0			G3G4	S3S4.2	4.2
29 marbled murrelet <i>Brachyramphus marmoratus</i>	ABNNN06010	Threatened	Endangered	G3G4	S1	
30 mountain shoulderband <i>Helminthoglypta arrosa monticola</i>	IMGASC2035			G2G3T1	S1	
31 northern red-legged frog <i>Rana aurora aurora</i>	AAABH01021			G4T4	S2?	SC
32 osprey <i>Pandion haliaetus</i>	ABNKC01010			G5	S3	
33 running-pine <i>Lycopodium clavatum</i>	PPLYC01080			G5	S3.2	2.2
34 seacoast ragwort <i>Packera bolanderi var. bolanderi</i>	PDAST8H0H1			G4T4	S1.2	2.2
35 sharp-shinned hawk <i>Accipiter striatus</i>	ABNKC12020			G5	S3	
36 southern torrent salamander <i>Rhyacotriton variegatus</i>	AAAAJ01020			G3G4	S2S3	SC
37 summer-run steelhead trout <i>Oncorhynchus mykiss irideus</i>	AFCHA0213B			G5T4Q	S2	SC
38 tufted puffin <i>Fratercula cirrhata</i>	ABNNN12010			G5	S2	SC
39 western tailed frog <i>Ascaphus truei</i>	AAABA01010			G4	S2S3	SC
40 white-flowered rein orchid <i>Piperia candida</i>	PMORC1X050			G3	S3.2	1B.2