STATE OF CALIFORNIA

THE NATURAL RESOURCES AGENCY

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

MITIGATED NEGATIVE DECLARATION

FOR

THE 2022 FISHERIES RESTORATION GRANT PROGRAM'S MITIGATED NEGATIVE DECLARATION PROJECT
IN
HUMBOLDT, MARIN, MENDOCINO, MONTEREY, DEL NORTE, SANTA BARBERA, SA LUIS OBISPO, AND SONOMA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

Prepared By:

Fisheries Restoration Grant Program

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

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INITIAL STUDY
AND
MITIGATED NEGATIVE DECLARATION
FOR
THE 2022 FISHERIES RESTORATION GRANT PROGRAM'S MITIGATED NEGATIVE DECLARATION PROJECT
IN
HUMBOLDT, MARIN, MENDOCINO, MONTEREY, DEL NORTE, SANTA BARBERA, SA LUIS OBISPO, AND SONOMA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

The Project: This project uses grant funds approved by the California Legislature to initiate activities that are designed to restore, enhance, and protect salmon and steelhead trout (*Oncorhynchus spp.*) habitat in coastal and central valley 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 and central valley streams that historically produced large populations of salmon and steelhead trout. These proposed projects are designed to increase populations of wild anadromous fish in coastal and central valley streams by restoring ecological function to their habitat.

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

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

Basis for the Finding: Based on the initial study, it was determined there would be no 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 nine-county project area. The California Department of Fish and Wildlife (CDFW) finds that implementing the proposed projects will have no significant environmental impact. Therefore, this mitigated negative declaration is filed pursuant to the California Environmental Quality Act (CEQA), Public Resources Code (PRC) § 21080 (c2) and California Code of Regulation (CCR) Title 14 § 763. This proposed mitigated negative declaration consists of all of the following:

- **Introduction - Project Description and Background Information**
- **Initial Study Environmental Checklist Form**
- **Explanation of Response to Initial Study Environmental Checklist Form**
- **Appendix A.**
    - **Non-Physical Items**
    - **Action Items**
    - **State-Wide Action Items Location Maps**
- **Appendix B. Mitigation Measures, Monitoring and Reporting Program For the 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration Project**
- **Appendix C. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities**
- **Appendix D. Procedure for the Programmatic Evaluation of Paleontological Resources for the 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration Project**
- **Appendix E. Procedure for the Programmatic Evaluation of Archaeological Resources for the 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration Project**
- **Appendix F. Comments Received on 2022 Fisheries Restoration Grant Program's Draft Mitigated Negative Declaration Project**

DETAILED PROJECT DESCRIPTION AND BACKGROUND INFORMATION
FOR
THE 2022 FISHERIES RESTORATION GRANT PROGRAM's MITIGATED NEGATIVE DECLARATION PROJECT
IN
HUMBOLDT, MARIN, MENDOCINO, MONTEREY, DEL NORTE, SANTA BARBERA, SAN LUIS OBISPO, AND SONOMA COUNTIES
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INTRODUCTION

The 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration (2022 FRGP MND) project is awarding Fisheries Restoration Grant Program (FRGP) for projects in Humboldt, Marin, Monterey, Del Norte, Santa Barbera, San Luis Obispo, and Sonoma counties. These projects are subject to review under the California Environmental Quality Act (CEQA) (PRC § 21000 et seq.). CDFW received 50 applications in response to its 2022 FRGP Proposal Solicitation Notice. For some of those applications, a lead agency has already prepared an environmental impact report or negative declaration for its approval of the project proposed in the application. Accordingly, the projects proposed in such applications are not included in this Initial Study and MND but still may be considered for funding and are not included in the 36 projects listed in this document.

CDFW conducted administrative reviews on all applications it received in response to its 2022 FRGP Proposal Solicitation Notice and technical reviews on all applications that passed administrative review. Based on those reviews, the CDFW is considering funding, in whole or in part, up to 36 habitat restoration items that are included in this Initial Study and MND: 27 action items and 9 non-physical items. At the time this document is being prepared, CDFW has not made final funding decisions on these items. Therefore, some of the projects described in this document may not receive funding from the CDFW. Projects not selected for funding from the CDFW would then be void from using this CEQA document. This analysis includes all 27 habitat restoration items to disclose the greatest possible potential impacts that could result from CDFW's implementation of the 2022 FRGP MND project.

The 27 action items, which are discussed in detail in the environmental analysis that follows (listed in Appendix A, Action Items) are the principal focus of the environmental analysis set forth below.

The 9 non-physical items are proposed to be carried out within various counties of California. These non-physical items involve activities such as watershed evaluation, assessment, project planning, technical training, monitoring, and public involvement. Each of these non-physical items are identified in Appendix A, Non-Physical Items. If reviewed individually, these items would likely be appropriate for categorical exemptions such as CEQA Guidelines § 15262 (Feasibility and Planning Studies), § 15306 (Information Collection), § 15313 (Acquisition of Lands for Wildlife Conservation Purposes), and § 15321 (Enforcement Actions by Regulatory Agencies). However, as part of the 2022 FRGP MND project, these items are included within the analysis of this Initial Study and MND. Because these items are

limited to non-physical activities that would not be anticipated to result in any environmental impacts or result in significant impacts due to unusual circumstances, they would not incrementally add to any potentially significant impacts that may result from the physical Items. Therefore, these non-physical items are not discussed further in the analysis.

The initial study and MND also serve to address potential environmental impacts that may occur to the extent an individual restoration activity requires a Lake and Streambed Alteration Agreement (LSAA) from the CDFW (See Fish and Game Code, § 1600 et seq.). Construction of all or a portion of some of the individual restoration activities may occur in subsequent years, depending on the terms for each individual 2022 FRGP MND Project grant awarded by the CDFW.

PROJECT GOAL AND OBJECTIVES

The primary goal of the 2022 FRGP MND project is to maintain and restore natural watershed and river processes that create habitat characteristics favorable to salmonids.

The objectives of the 2022 FRGP MND action items are to enhance the capability of streams to produce wild anadromous salmonids by maintaining, restoring, and improving stream function essential to salmonid production.

Finally, it is the CDFW'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, threatened, or rare species.

BACKGROUND

The CDFW may grant funds for habitat restoration to public and nonprofit organizations and Native American Tribes. Sections 1501 and 1501.5 of the Fish and Game Code and Section 6217.1 of the Public Resources Code pertain to activities funded by the CDFW.

The FRGP was established in 1981 and is administered by the CDFW. This program was initiated by the precipitous drop in the population of fish in coastal streams, mainly salmon and steelhead trout. 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 § 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 salmon and steelhead trout stocks. One important factor is the degradation of stream habitats. Activities in watersheds including logging, mining, road building, livestock grazing, water diversions, urban sprawl 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, water diversions, and culverts have impaired habitats

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. Poor ocean conditions resulting in the collapse of the marine food chain along with the various factors stated above has culminated in the population crash of the Central Valley Chinook Salmon (*Oncorhynchus tshawytscha*) in 2008 and 2009. This event prompted the closure of recreational and commercial ocean salmon season in 2008 and 2009. Most stocks have been reduced to the point where listing under the Federal and State Endangered Species Acts has become necessary.

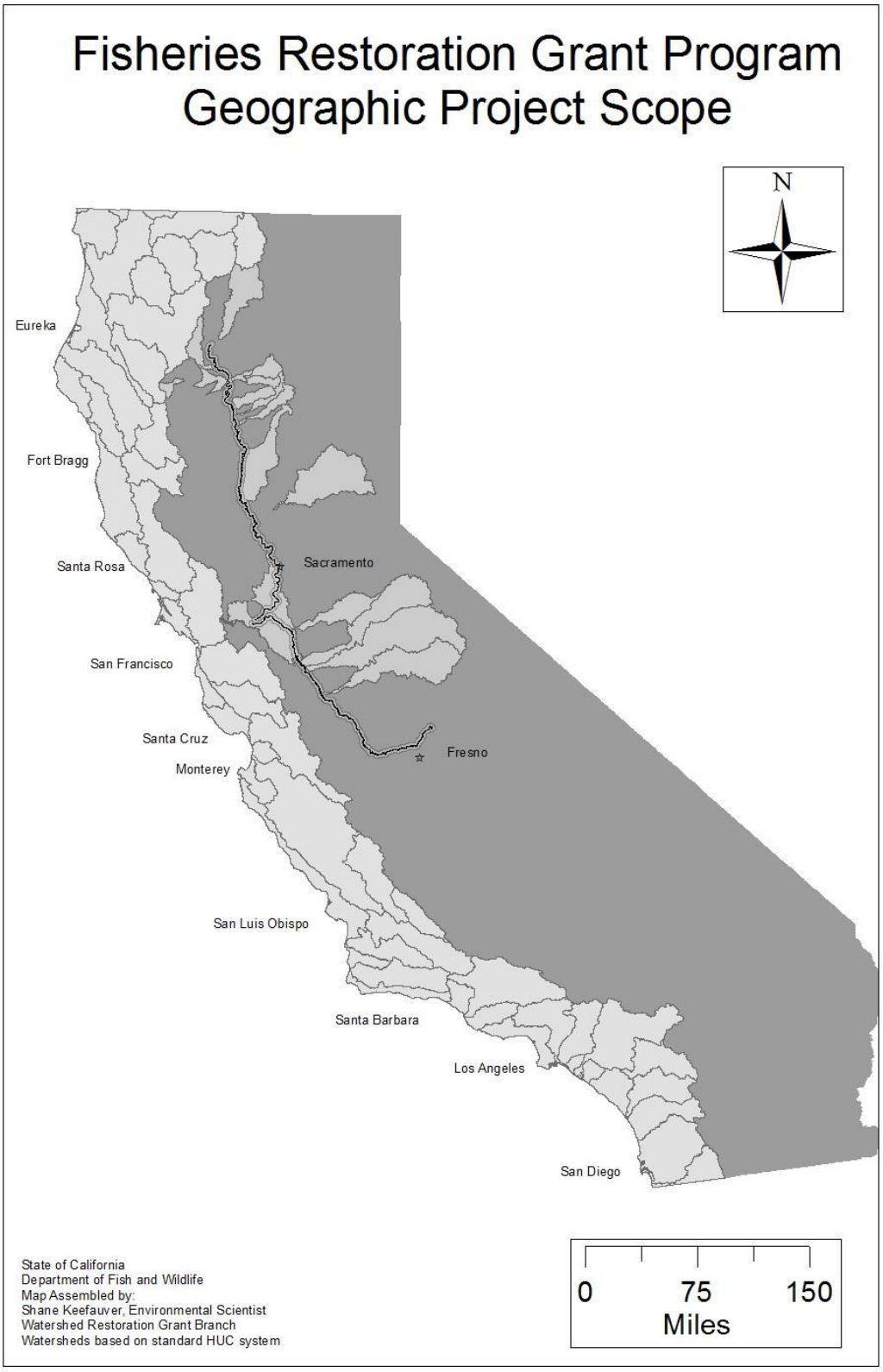
The FRGP was instituted because the critical need to restore salmon and steelhead trout habitat was recognized. Guided by the *California Salmonid Stream Habitat Restoration Manual* 4th Edition (Flosi et al., 2010), hundreds of habitat restoration actions funded by the FRGP have been completed by government agencies, Native American tribes and nonprofit groups. Activities have included revegetation with livestock exclusion fencing, riparian planting, removal of barriers to fish passage, bank stabilization and other bank protection structures, 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 to access additional stream reaches. Finally, other watershed improvement activities include installation of fish screens to prevent entrainment of juvenile salmon and steelhead trout, and beaver dam analogs to increase habitat available for juvenile and adult pacific lamprey. 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. As this program continues, there is an expected gradual rebuilding of salmon and steelhead trout populations.

PROJECT LOCATION

Activities performed in the 2022 FRGP MND 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 forests, 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 FRGP 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. Coastal zone locations include estuaries, coastal wetlands, and saltmarshes.

Inland locations are usually in watersheds dominated by pine and fir forests, often with steep unstable terrain; some inland locations are in valley areas adjacent to 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. Map 1 illustrates the FRGP geographic range, which include the coastal limits of anadromy and the inland range of anadromy in the Central Valley.



Map 1. Area covered by FRGP

SCHEDULE

The activities carried out in the 2022 FRGP MND project will typically occur during the annual period of dry weather. Stream work is normally confined to the period of June 15 through November 1 or the first significant fall rainfall, whichever comes first. This is to take advantage of low stream flows and is outside the spawning and egg/alevin incubation period of salmon and steelhead trout.

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 the extent of such activities is limited through grant conditions and compliance with any required permit. Post-November 1 activities are generally limited to 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 CDFW releases an annual FRGP Proposal Solicitation Notice (Solicitation) for proposals to fund fishery restoration, watershed assessment, and planning work throughout California. CDFW received 50 applications in response to its 2022 FRGP Proposal Solicitation Notice. For some of those applications, a lead agency has already prepared an environmental impact report or negative declaration for its approval of the project proposed in the application. Accordingly, the projects proposed in such applications are not included in this Initial Study and MND. CDFW conducted administrative reviews on all applications it received in response to its 2022 FRGP Proposal Solicitation Notice and technical reviews on all applications that passed administrative review. That process involved consideration of benefits to the fishery resources; the benefit for targeted species; project costs; potential environmental impacts of proposed projects; and the need for work in particular drainages or sites, which utilized various watershed assessment and planning work done by CDFW and others, including work previously funded through the FRGP. Based on those reviews, CDFW is considering funding up to 36 habitat restoration items included in this Initial Study and MND: 14 action items and 12 non-physical items. Those 26 habitat restoration items include funding proposals for projects in Humboldt, Marin, Monterey, Del Norte, Santa Barbera, San Luis Obispo, and Sonoma counties. Prior to making final funding decisions, the Director of CDFW will consider the recommendations of the 2022 FRGP Technical Review Team and this MND together with any comments received during the public review process for this MND. CDFW will then develop and execute grant agreements for the non-physical and action items selected for funding.

The 2022 FRGP MND operates under two Regional General Permits (RGP) issued by the U.S. Army Corps of Engineers (USACE). These permits cover most of the action items in the 2022 FRGP MND project. RGP-12 (file number: 2003-27922N) was issued in 2010 and renewed in 2016 by the USACE San Francisco District and covers action items implemented within the regulatory boundaries of the San Francisco District. RGP-78 (file number: SPL-2019-00120-CLH) was issued in 2009 and re-issued in 2014 and 2019 by the USACE Los Angeles District and covers action items implemented within the regulatory boundaries of the Los Angeles District. The RGPs allow the CDFW, grantees, and other individuals and groups to conduct fishery habitat restoration activities using methods described in the *California Salmonid Stream Habitat Restoration Manual* 4th edition (Flosi et al 2010) that have been evaluated by CDFW biologists. The National Oceanic and Atmospheric Administration (NOAA) and the U.S. Fish and Wildlife Service (USFWS) have issued biological opinions, which are incorporated into the corresponding RGPs. The biological opinions address the impacts of the 2022 FRGP MND project and stipulate the mitigations that shall be implemented to avoid and/or minimize impacts to listed species.

CDFW will submit an application for a programmatic Section 401 Water Quality Certification to the State Water Resources Control Board for the 2022 FRGP MND project items covered by the RGP-12 and RGP-78. That application will include a description of project work and methods to prevent impacts to water quality.

The CDFW's Lake and Streambed Alteration Agreement process (Fish and Game Code § 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 CDFW Lake and Streambed Alteration Program (1600) webpage https://www.wildlife.ca.gov/Conservation/LSA. 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 2022 FRGP MND project items are considered to fall into two categories corresponding to similar activities and requirements for CEQA review. These two categories of items are as follows.

Public Involvement, Planning, Research, Monitoring, and Habitat Acquisition – Non-physical Items

Non-physical items in this category include watershed evaluation, assessment, planning, habitat acquisition, and monitoring projects. The 9 non-physical items are listed in Appendix A, Non-physical Items. The non-physical items are all appropriate for either statutory or categorical exemptions under CEQA Guidelines § 15262 (Feasibility and Planning Studies), § 15306 (Information Collection), § 15313 (Acquisition of Lands for Wildlife Conservation Purposes), and § 15321 (Enforcement Actions by Regulatory Agencies). These non-physical items will not have a significant

effect on physical conditions including land, air, water, minerals, plants, animals, ambient noise, historic sites, or aesthetics. Accordingly, these types of non-physical items will not be discussed further in this document.

There is a notable difference in the level of activity found under this category. The names of the 27 action items (action items) in this category are presented in a list in Appendix A, Action Items. The location of each action item is illustrated on a statewide and on CDFW regional level maps in Appendix A. A detailed description of each action item in this element is also located in Appendix A, sorted by county.

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 to stabilize banks and slopes, promote long-term shade and channel stability, and enhance large-wood recruitment. Indigenous stocks (when available) shall be used for all planting projects. Upslope earthmoving and culvert replacement require large size material and increased volumes to be moved by heavy equipment and, in so doing, involve certain limited construction activities. The techniques that are used for these action items have proven successful on many coastal streams and are detailed in the current version of the *California Salmonid Stream Habitat Restoration Manual* 4th edition and other approved restoration manuals (appendix B, Table 1). This manual describes in detail how the work shall be performed in the field.

Typically, 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 are used to access the stream in most cases. If stream crossings do not exist, the least damaging access points are 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 usually re-sprout and recover. Access to restoration activity sites are identified before implementation of the action item and shall not create bank erosion or cause the removal of riparian trees. Staging areas at the activity sites are set up on dry stream banks where there is a minimum, and less than significant, impact to vegetation. Disturbed or bare mineral soils resulting from work activities, which are subject to surface erosion, are seeded and straw mulched.

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.

Action items that stabilize stream banks or small stream-side landslides shall 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 shall be backfilled with boulders and will extend up to the high-water mark. Rock from the toe trench, up to the high-water mark, shall be of a size that will withstand normal high flows. Revetment shall extend upstream and downstream of the unstable reach and shall be keyed into the stable banks.

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

All work, except for the revegetation, shall take place during the summer and fall (low flow period) and shall be completed by November 1 or before the first significant seasonal rainfall, whichever comes first. Planting of seedlings takes 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 15. All habitat improvements shall be done in accordance with techniques described in the *California Salmonid Stream Habitat Restoration Manual* 4th edition.

Upslope action items 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; outsloping roadbeds; re-vegetating 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 shall be authorized under this category. Work shall not be authorized to improve aesthetic values only.

Removal of road and skid trails shall include retrieving unstable material sidecast during original road construction and excavation of stream crossings and other watercourse fill. Stream crossings shall 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 shall 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 road bench shall be ripped or decompacted first. The fill shall 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 shall be compacted to the top of the filled cut to reduce the potential for fill cut failure. Spoil material shall 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 shall be devoid of tree and shrub vegetation. Upon completion of each site, woody debris shall 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 shall be used as coarse wood mulch on bare soils to reduce surface erosion. Some of the material shall be transplanted on-site as one component of the restoration action items. In all cases, disruption of existing vegetation shall 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 shall be consistent with current CDFW and NOAA criteria concerning fish passage. Current NOAA fish passage guidelines can be found on the web at: http://www.westcoast.fisheries.noaa.gov/fish_passage/solutions/index.html. CDFW fish passage guidelines can be found in Volume II, Part IX of the *California Salmonid Stream Habitat Restoration Manual* 4th edition, available at http://www.dfg.ca.gov/fish/Resources/HabitatManual.asp.

Appendix A contains a list of major action item titles, locations, and descriptions of work that shall be implemented at each site. The action item designs are reviewed by the CDFW and are implemented by grantees utilizing heavy equipment and some hand labor crews. During a pre-project inspection, the grantee and the CDFW will tour the entire activity area and identify the sites and techniques necessary to carry out the recommendations. The site-specific recommendations shall be listed in an inspection report, which will be acknowledged by the grantee's signature, as a required element of the activity. The CDFW shall continue to inspect the work site during and after completion of the action item. All road upgrading, or decommissioning shall be done in accordance with techniques described in Volume II, Part X of the *California Salmonid Stream Habitat Restoration Manual 4th edition*.

All culvert replacement projects shall be done in accordance with techniques and criteria consistent with current CDFW and NOAA guidelines concerning fish passage. Implementation of each major action item shall be conditioned and controlled to prevent any potentially significant impacts under CEQA.

Complete site plans and prescriptions for action and non-physical items located in Del Norte, Humboldt, Mendocino, Marin, Monterey, San Luis Obispo, Monterey, and Sonoma counties are available for review at the California Department of Fish and Wildlife, Northern Regional Office at 1455 Sandy Prairie Court, Suite J, Fortuna, California 95540. For an appointment to view this information, contact Senior Environmental Scientist,
Trevor Tollefson 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 and non-physical items located in Marin and Sonoma counties are available for review at the California Department of Fish and Wildlife, Bay Delta Region, office of Senior Environmental Scientist, Manfred Kittel, 32825 Cordelia Road, Suite 200 Fairfield, CA 94534. Appointments may be made by telephoning (707) 944-5522, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Complete site plans and prescriptions for action and non-physical items in Monterey and Stanislaus counties are available for review at the California Department of Fish and Wildlife, Central Coast Region, office of Senior Environmental Scientist, Suzanne Deleon, 20 Lower Ragsdale Drive, Suite 100,

Monterey, California 93940. Appointments may be made by telephoning (831) 233-8593, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Complete site plans and prescriptions for action and non-physical items in Santa Barbara County are available for review at the California Department of Fish and Wildlife, South Coast Region, office of Senior Environmental Scientist, Kyle Evans, 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, major action items listed in Appendix A shall comply with CDFW policies to protect rare, endangered, and listed animal species. A review of the CDFW's CNDDB for the entire seven-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 shall be assumed present at the work site and mitigation measures to avoid impact to that species shall be implemented. Any site-specific surveys to confirm the presence, or absence, of a listed animal species at a work site will be performed by qualified biologists according to protocols described in Appendix B. Lake and Streambed Alteration Agreements and grants for each site shall be conditioned to avoid impacts to any special status species that could potentially be affected at that site. The CDFW shall ensure that the grantee or responsible party is aware of all specific conditions that apply to their work site. In addition, the CDFW shall 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 shall 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.

Second, major action items listed in Appendix A shall comply with CDFW policies to conduct rare plant surveys. A qualified botanist shall be contracted by the grantee to complete the surveys using standard protocols. Rare plant surveys shall be conducted following the Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities (California Department of Fish and Wildlife, 2018), Appendix C. A review of the CDFW's current

California Natural Diversity Data Base (CNDDB) for each project located in the entire seven-county programmatic project area is attached to the statement of work for each major action item listed in Appendix A. These reviews indicate which plant species found on a State or Federal special status list could potentially be affected at the work sites. Rare plant surveys shall be completed prior to any ground disturbing activities. If any potentially significant impact cannot be avoided, the action item shall not be implemented. Any site-specific recommendations made by a CDFW 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 Lake and Streambed Alteration Agreement (Fish and Game Code § 1600 et seq.). The CDFW's grant managers shall ensure that the grantee or responsible party is aware of, and implements, these site-specific conditions during routine inspections. The CDFW shall inspect the work site before, during, and after completion of the action item. Any violation of the specific recommendations shall be immediately rectified. Failure, or inability, to rectify a particular recommendation shall cause all work to cease until a remediation plan is developed that avoids the potentially significant impact.

Third, all major action items listed in Appendix A shall comply with CDFW policies to conduct cultural resource surveys, including archaeological or paleontological surveys (if necessary). A qualified cultural resource specialist(s) shall be contracted by the grantee to complete the surveys using standard protocols. Research shall be done on available cultural data repositories and a review of cultural resources with regional experts to identify possible areas of importance within the seven-county programmatic project area will occur. Site-specific detailed research shall be done for projects sites deemed likely to encounter cultural resources (Appendices C & D). Review of cultural surveys shall be completed prior to any ground disturbing activities. If any potentially significant impact cannot be avoided, the action item shall not be implemented. Any site-specific recommendations made by a qualified cultural specialist, to avoid any potentially significant impacts shall become part of the work plan and incorporated into the measures required in the issued Lake and Streambed Alteration Agreement (Fish and Game Code § 1600 et seq.). The CDFW's grant managers shall ensure that the grantee or responsible party is aware of, and implements, these site-specific conditions during routine inspections. The CDFW shall inspect the work site before, during, and after completion of the action item. Any violation of the specific recommendations shall be immediately rectified. Failure, or inability, to rectify a particular recommendation shall cause all work to cease until a remediation plan is developed that avoids the potentially significant impact.

Through careful design, scheduling, and monitoring, all potentially significant impacts associated with the action items shall be avoided or mitigated to below a level of significance under CEQA. To ensure that each action item adheres to avoidance and mitigation measures, a CDFW grant manager is assigned to each action item. Additional details regarding implementation of 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 helps provide a measure of the benefits, insight, and guidance for future projects.

Activity during implementation is overseen by a CDFW 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 grant 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 efficacy of the project and shall occur within one to three years after an action item is complete. The CDFW shall randomly select ten percent of the action items within each project work type for effectiveness/validation monitoring. A random sample, stratified by project type and region, shall be chosen from the pool of new restoration projects approved for funding each year. This evaluation shall be recorded on standard project evaluation forms. Effectiveness monitoring addresses the physical response associated with an activity, while validation monitoring evaluates fish response to the project. Pre-treatment monitoring shall be performed for newly selected projects, and post-treatment monitoring shall be performed within three years following project completion.

Complete monitoring specifications can be found in Volume I, Part VIII of the *California Salmonid Stream Habitat Restoration Manual* 4th edition (Flosi *et al* 2010) (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 https://www.wildlife.ca.gov/Conservation/LSA

California Department of Fish and Game. 2018. Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities. The Resources Agency, State of California, Sacramento, CA.

Flosi, G, S. Downie, J. Hopelain, M. Bird, R. Coey, and B. Collins. 1998, 2009, 2010. *California Salmonid Stream Habitat Restoration Manual*. Fourth 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, 2009, 2010. *California Salmonid Stream Habitat Restoration Manual*. Volume II, Fourth 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.

Appendix A

Non-Physical Items

Project ID	Project Type	Title	Applicant	County	Focus	CDFW Region
1728104	WC	Mt. Gilead Water Conservation and Streamflow Improvement Project	Gold Ridge Resource Conservation District	Sonoma	FRGP	3
1728186	PD*	Lower SF Cottaneva Watershed Habitat Enhancement Design Project	Eel River Watershed Improvement Group (ERWIG)	Mendocino	FRGP	1
1727896	PI	FRGP 2022 Funding Opportunity	California Conservation Corps - Watershed Stewards Program	Various counties	FRGP	Program-wide
1728031	TE	40th and 41st SRF Annual Salmonid Restoration Conferences	Salmonid Restoration Federation	Various counties	FRGP	Program-wide
1728221	PD*	Upper Gaviota Fish Passage Project-65% Engineering Designs	Earth Island Institute	Santa Barbara	FRGP	5
1727985	PI	Southern Steelhead Coalition	California Trout, Inc.	Los Angeles, Ventura, Santa Barbara	FRGP	5
1728103	PI	CCC Fortuna Fish Habitat Assistant	California Conservation Corps - Fortuna	Various counties	FRGP	1
1728135	PD*	Chadd Creek Channel Restoration Planning Project	Eel River Watershed Improvement Group (ERWIG)	Humboldt	FRGP	1

1727718	PD*	Last Dam: Restoring steelhead rearing habitat through barrier removal on Upper Stuart Creek, Sonoma County.	Audubon Canyon Ranch	Sonoma	FRGP	3

Project Type:

MO: Monitoring Watershed Restoration
TE: Private Sector Technical Training and Education
PD*: Project Design (these PD projects have no on the ground-work necessary for planning survey completion)
PI: Public Involvement and Capacity Building (includes AmeriCorps projects)
PL: Watershed Evaluation, Assessment, and Planning

Focus:

FRGP: Fisheries Restoration Grant Program

Appendix A

Action Items

Project ID	Project Type	Title	Applicant	County	Focus	CDFW Region
1727764	HR	Lower Stotenburg Coho Habitat Enhancement Project	Smith River Alliance	Del Norte	FRGP	1
1727801	HI	Robinson Creek Instream Habitat Enhancement	The Conservation Fund	Mendocino	FRGP	1
1728012	HI	Little North Fork Big River Instream Habitat Enhancement	The Conservation Fund	Mendocino	FRGP	1
1728147	HI	Lower Green Valley Creek Off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase I	Gold Ridge Resource Conservation District	Sonoma	FRGP	3
1728212	HU	TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project	The Conservation Fund	Sonoma	FRGP	3
1727774	FP	Bradley (Ringer) Cachagua Creek Fish Passage Project	Resource Conservation District of Monterey County	Monterey	FRGP	4
1727864	HI	Chimney Rock Creek Instream Habitat Restoration Project	Trout Unlimited, Inc.	Mendocino	FRGP	1
1727863	HU	Chimney Rock Creek Upslope Watershed Restoration Project	Trout Unlimited, Inc.	Mendocino	FRGP	1
1727975	HI	Upper South Fork Little River Instream Habitat Improvement Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Humboldt	FRGP	1
1727761	HI	SF Cottaneva Watershed Habitat Enhancement	Eel River Watershed Improvement Group (ERWIG)	Mendocino	FRGP	1
1727892	HI	Lindsay Creek Off-Channel Coho Habitat Improvement Project	Pacific Coast Fish, Wildlife and Wetlands	Humboldt	FRGP	1

			Restoration Association			
1727989	HI	Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat Improvement Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Humboldt	FRGP	1
1728048	HI	Willits Creek Instream Restoration Project	Eel River Watershed Improvement Group (ERWIG)	Mendocino	FRGP	1
1727751	FP	Little Case Two Barrier Removal Project	Eel River Watershed Improvement Group (ERWIG)	Mendocino	FRGP	1
1728178	FP	Maria Ygnacio Creek Fish Passage Project Implementation - Patterson Ave Bridge	Earth Island Institute	Santa Barbara	FRGP	5
1727893	FP	Lindsay Creek Coho Barrier Removal Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Humboldt	FRGP	1
1728116	PD**	Accelerated Large Woody Debris Recruitment in Lagunitas Creek	Salmon Protection and Watershed Network	Marin	FRGP	3
1728115	PD**	Process-Based Floodplain Restoration of lower Lagunitas Creek	Salmon Protection and Watershed Network	Marin	FRGP	3
1727957	PD**	Rail Dump Gulch Fish Passage and Habitat Improvement Design Project	Trout Unlimited, Inc.	Mendocino	FRGP	1
1728175	PD**	Camp Creek Coho Habitat Enhancement Design Project	Mid Klamath Watershed Council	Humboldt	FRGP	1
1727817	PD**	Coulborn Creek Salmonid Habitat Assessment and Enhancement Planning and Design Project	Mattole Salmon Group	Mendocino	FRGP	1

1727865	PD**	Cider Mill Creek (Lindsay Creek tributary) Coho Barrier Removal and Habitat Enhancement Design Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Humboldt	FRGP	1
1728001	PD**	South Fork Rowdy/Savoy Creeks Salmonid Habitat Improvement Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Del Norte	FRGP	1
1728143	PD**	Tip Top Ridge Creek (formerly known as Squaw Creek) Coho Habitat Improvement Design Project	Pacific Coast Fish, Wildlife and Wetlands Restoration Association	Humboldt	FRGP	1
1727754	PD**	Durphy Creek Fish Passage Design Project	Eel River Watershed Improvement Group (ERWIG)	Humboldt	FRGP	1
1728032	PD**	Santa Rosa Creek Restoration and Improved Land Management Design Project	Upper Salinas Las Tablas Resource Conservation District	San Luis Obispo	FRGP	4
1728118	PD**	Gualala River Estuary Habitat Enhancement Planning Project	Redwood Coast Land Conservancy	Mendocino	FRGP	1

Project Types: HI: Instream Habitat Restoration
HU: Watershed Restoration (Upslope)
FP: Fish Passage Improvement at Stream Crossings
PD**: Project Design (These PD projects may require minimal ground disturbance to complete planning surveys)

Focus:
FRGP: Fisheries Restoration Grant Program

Appendix A


Northern Region
Bay Delta Region
Central Coast Region
South Coast Region
Del Norte
Siskiyou
Modoc
Humboldt
Shasta
Lassen
Tehama
Plumas
Glenn
Butte
Sierra
Mendocino
Colusa
Yuba
Nevada
Lake
Placer
Sutter
El Dorado
Yolo
Alpine
Sonoma
Napa
Sacramento
Amador
Solano
Calaveras
Marin
San Joaquin
Tuolumne
Mono
San Francisco
Alameda
Stanislaus
Mariposa
San Mateo
Santa Clara
Merced
Madera
Santa Cruz
Fresno
Inyo
San Benito
Monterey
Tulare
Kings
San Luis Obispo
Kern
San Bernardino
Santa Barbara
Ventura
Los Angeles
Riverside
Orange
San Diego
Imperial
County Lines
Regions
Type
FP - Fish Passage at Stream Crossings
HI - Instream Habitat Restoration
HR - Riparian Restoration
HU - Watershed Restoration (Upslope)
PD - Project Design
California Department of Fish and Wildlife. Watershed Restoration Grants Branch. D.Mastalir. 20220919.
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
0 40 80 160 Miles
Fisheries Restoration Grant Program
2022 Mitigated Negative Declaration
Fisheries Habitat Restoration Project
Action Items Location Map


1727764
1728001
Del Norte
Yreka
Siskiyou
1728175
1727893
1727975
1727989
1727892
1727865
1728143
Arcata
Eureka
Humboldt
Trinity
Shasta
Redding
Tehama
1727754
1727817
1727864
1727863
1727761
1727751
Chico
Butte
Glenn
1728048
Mendocino
1727957
1728012
Lake
Clearlake
1727801
County Lines
FRGP Northern Region
Project Type
FP - Fish Passage at Stream Crossings
HI - Instream Habitat Restoration
HR - Riparian Restoration
HU - Watershed Restoration (Upslope)
PD - Project Design
California Department of Fish and Wildlife. Watershed Restoration Grants Branch. D.Mastalir. 20220919.
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
0 12.5 25 50 Miles
Fisheries Restoration Grant Program
2022 Mitigated Negative Declaration
Fisheries Habitat Restoration Project
Northern Region Action Items Location Map


Mendocino
Lake
Colusa
Yuba City
Clearlake
Sutter
Oroville
1728118
1728212
Yolo
Sonoma
Napa
Davis
Sacramento
1728147
Santa Rosa
Amador
Vacaville
Solano
Fairfield
1728115
1728116
Marin
San Rafael
Oakley
Contra Costa
San Joaquin
Berkeley
San Francisco
Alameda
Modesto
San Mateo
Stanislaus
Santa Clara
Merced
Santa Cruz
Gilroy
Santa Cruz
County Lines
FRGP Bay Delta Region
Project Type
HI - Instream Habitat Restoration
HU - Watershed Restoration (Upslope)
PD - Project Design
San Benito
Monterey
California Department of Fish and Wildlife. Watershed Restoration Grants Branch. D.Mastalir. 20220901
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
0 12.5 25 50 Miles
Fisheries Restoration Grant Program
2022 Mitigated Negative Declaration
Fisheries Habitat Restoration Project
Bay Delta Region Action Items Location Map

Appendix A


San Mateo
Stanislaus
Mariposa
Santa Clara
Merced
Merced
Santa Cruz
Gilroy
Santa Cruz
Madera
Fresno
Fresno
San Benito
1727774
Monterey
Tulare
Kings
1728032
San Luis Obispo
San Luis Obispo
Bakersfield
Taft
Santa Maria
Santa Barbara
Lompoc
Santa Barbara
Ventura
County Lines
FRGP Central Coast Region
Project Type
FP - Fish Passage at Stream Crossings
PD - Project Design
California Department of Fish and Wildlife. Watershed Restoration Grants Branch. D.Mastalir. 20220901
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
0 12.5 25 50 Miles
Fisheries Restoration Grant Program
2022 Mitigated Negative Declaration
Fisheries Habitat Restoration Project
Central Coast Region Action Items Location Map

Appendix A


San Luis Obispo
San Luis Obispo
Bakersfield
Kern
Taft
Santa Maria
Santa Barbara
Lompoc
Santa Barbara
1728178
Ventura
Ventura
Santa Clarita
Lancaster
Palmdale
Los Angeles
Buena Park
Orange
County Lines
FRGP South Coast Region
Project Type
FP - Fish Passage at Stream Crossings
California Department of Fish and Wildlife. Watershed Restoration Grants Branch. D.Mastalir. 20220901
CALIFORNIA DEPARTMENT OF FISH & WILDLIFE
0 12.5 25 50 Miles
Fisheries Restoration Grant Program
2022 Mitigated Negative Declaration
Fisheries Habitat Restoration Project
South Coast Region Action Items Location Map

APPENDIX B

MITIGATION MEASURES, MONITORING AND REPORTING PROGRAM FOR THE 2022 FISHERIES RESTORATION GRANT PROGRAM'S MITIGATED NEGATIVE DECLARATION PROJECT

SECTION 1: MITIGATION

General mitigation measures are implemented for all action items. Specific mitigation measures are identified for the various species found at or near the project site. A CDFW grant manager is assigned to each action item and is responsible for ensuring the general and specific mitigation measures are implemented.

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

A. 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 where flows are low, or streams are dry.

2. Work around streams is restricted to the period of June 15 through November 1 or the first significant rainfall, whichever comes first. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Wildlife (i.e., on the Shasta River, projects must be completed between July 1 and September 15 to avoid impacts to immigrating and emigrating salmonids). This is to take advantage of low stream flow and avoid the spawning and egg/alevin incubation period of salmon and steelhead.

3. Upslope work generally occurs during the same period as stream work. Road decommissioning and other sediment reduction activities are dependent on soil moisture content. Non jurisdictional upslope projects do not have seasonal restrictions in the Incidental Take Statement, but work may be further restricted at some sites to allow soils to dry out adequately. In some areas equipment access and effectiveness is constrained by wet conditions.

4. The approved 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 9, 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 16 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.

5. For restoration work that may affect swallow nesting habitat (such as removal or modification of bridges, culverts or other structures that show evidence of past swallow nesting activities), construction shall occur after August 31 to avoid the swallow nesting period. Suitable nesting habitat shall be netted prior to the breeding season to prevent nesting. Netting shall be installed before any nesting activity begins, generally prior to March 1. Swallows shall be excluded from areas where construction activities cause nest damage or abandonment.

6. All project activities shall be confined to daylight hours.

7. Projects shall not disturb or dewater more than 1,000 feet of contiguous stream reach.

8. 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.

9. 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 where it cannot enter the stream channel. 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, CDFW 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.

10. 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 while minimizing riparian disturbance without affecting less stable areas, which may increase the risk of channel instability. Existing roads shall be used to access work sites as much as practicable.

11. The access and work area limits shall be identified with brightly colored flagging or fencing. Flagging and fencing shall be maintained in good repair for the duration of project activities. All areas beyond the identified work area limits shall not be disturbed.

12. Any construction debris shall be prevented from falling into the stream channel. Any material that does fall into a stream during construction shall be immediately removed in a manner that has minimal impact to the streambed and water quality.

13. Where feasible, the construction shall occur from the bank, or on a temporary pad underlain with filter fabric.

14. Any work within the stream channel shall be performed in isolation from the flowing stream and erosion protection measures shall be in place before work begins.

    a. Prior to dewatering, the best means to bypass flow through the work area to minimize disturbance to the channel and avoid direct mortality of fish and other aquatic invertebrates shall be determined.

    b. If there is any flow when work will be 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.

    c. 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.

    d. Coffer dams may be constructed with clean river run gravel or sandbags and may be sealed with sheet plastic. Upon project completion, sandbags and any sheet plastic shall be removed from the stream. Clean river run gravel may be left in the stream channel, provided it does not impede stream flow or fish passage and conforms to natural channel morphology without significant disturbance to natural substrate.

    e. Dewatering shall be coordinated with a qualified fisheries biologist to perform fish and wildlife relocation activities.

    f. The length of the dewatered stream channel and the duration of the dewatering shall be kept to a minimum and shall be expected to be less than 1,000 contiguous feet.

    g. When bypassing stream flow around work area, stream flow below the construction site shall be maintained similar to the unimpeded flow at all times.

    h. The work area shall be periodically pumped dry of seepage. Pumps shall be placed in flat areas, away from the stream channel. Pumps shall be secured by tying off to a tree or staked in place to prevent movement by vibration. Pump

intakes shall be covered with 0.125-inch mesh to prevent entrainment of fish or amphibians that failed to be removed. Pump intakes shall be periodically checked for impingement of fish or amphibians and shall be relocated according to the approved measured outlined for each species bellow.

i. If necessary, flow shall be diverted 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 CDFW and NOAA 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.

j. Fish shall be excluded from the work area by blocking the stream channel above and below the work area with fine-meshed net or screen. Mesh shall be no greater than 1/8-inch diameter. The bottom edge of the net or screen shall be completely secured to the channel bed to prevent fish from reentering the work area. Exclusion screening shall be placed in areas of low water velocity to minimize fish impingement. Screens shall be regularly checked and cleaned of debris to permit free flow of water.

15. 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), the action shall be carried out without dewatering and fish relocation. Furthermore, measures shall 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 the stream channel provided it does not impede stream flow or fish passage and conforms to natural channel morphology without significant disturbance to natural substrate.

16. Best management practices associated with fish screens and measures to minimize effects to salmonids associated with fish screen construction, maintenance, and repair are presented below:

    a. Screening projects shall only take place on diversions with a capacity of 60 cfs or less. Screening larger diversions shall require separate consultation. Fish screens shall be operated and maintained in compliance with current law, including Fish and Game Code, and CDFW fish screening criteria.

    b. Notwithstanding Fish and Game Code Section 6027, fish screens and bypass pipes or channels shall be in-place and maintained in working order at all times while water is being diverted.

c. If a screen site is dewatered for repairs or maintenance when targeted fish species are likely to be present, measures shall be taken to minimize harm and mortality to targeted species resulting from fish relocation and dewatering activities. The responsible party shall notify CDFW before the project site is de-watered and streamflow diverted. The notification shall provide a reasonable time for personnel to supervise the implementation of a water diversion plan and oversee the safe removal and relocation of salmonids and other fish life from the project area. If the project requires site dewatering and fish relocation, the responsible party shall implement the dewatering and relocation measures as described in this document to minimize harm and mortality to listed species.

d. If a fish screen is removed for cleaning or repair, measures shall be undertaken to ensure juvenile fish are not passively entrained into the diversion canal. The area shall be isolated, cleared of fish, and dewatered prior to screen maintenance or replacement. If dewatering the work area is infeasible, then the area in front of the screen shall be cleared of fish utilizing a seine net that remains in place until the project is complete. In the case of a damaged screen, a replacement screen shall be installed immediately, or the diversion shut down until a screen is in place.

e. Fish screens shall be inspected and maintained regularly (not less than two times per week) to ensure that they are functioning as designed and meeting CDFW fish screening criteria. During the diversion season, screens shall be visually inspected while in operation to ensure they are performing properly. Outside the diversion season when the screening structure is dewatered, the screen and associated diversion structure shall be more thoroughly evaluated.

f. Existing roads shall be used to access screen sites with vehicles and/or equipment whenever possible. If it is necessary to create access to a screen site for repairs or maintenance, access points shall be identified at stable stream bank locations that minimize riparian disturbance.

g. Sediment and debris removal at a screen site shall take place as often as needed to ensure that screening criteria are met. Sediment and debris shall be removed and disposed at a location where it will not re-enter the water course.

h. Stationary equipment used in performing screen maintenance and repairs, such as motors, pumps, generators, and welders, located within or adjacent to a stream shall be positioned over drip pans.

i. Equipment which is used to maintain and/or repair fish screens shall be in good condition and checked and maintained on a daily basis to prevent leaks of materials that could be deleterious to aquatic life, wildlife, or riparian habitat.

j. To the extent possible repairs to a fish screen or screen site shall be made during a period of time when the target species of fish are not likely to be present (for example, in a seasonal creek, repair work should be performed when the stream is dry).

k. Equipment used to maintain and/or repair fish screens shall not operate in a flowing stream except as may be necessary to construct coffer dams to divert stream flow and isolate the work site.

l. Turbid water which is generated by screen maintenance or repair activities shall be discharged to an area where it will not re-enter the stream. If the CDFW determines that turbidity/siltation levels resulting from screen maintenance or repair activities constitute a threat to aquatic life, all activities associated with the turbidity/siltation shall cease until effective CDFW-approved sediment control devices are installed and/or abatement procedures are implemented.

17. 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.

18. 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 § 15380, Article 20 in Title 14 of the California Code of Regulations, also known as the “CEQA Guidelines”.

19. Any red tree vole nests encountered at a work site shall be flagged and avoided during construction.

20. For any work sites containing western pond turtles, salamanders, foothill yellow-legged frogs, California red-legged frogs, or tailed frogs, the grantee shall provide to the CDFW 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.

21. All habitat improvements shall be done in accordance with techniques in the California Salmonid Stream Habitat Restoration Manual or other approved guidelines and manuals for salmon and steelhead habitat restoration. The most current version of the manual is available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=22610&inline and other approved guidelines and manuals are available at:

http://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=183423 (see table 1 for table of FRGP's other approved restoration manuals).

22. The grantee shall have dependable radio or phone communication on-site to be able to report any accidents or fire that might occur.

23. Installation of bridges, culverts, or other structures shall be done so that water flow is not impaired and upstream and downstream passage of fish is assured at all times. Bottoms of temporary culverts shall be placed at or below stream channel grade.

24. Temporary fill shall be removed in its entirety prior to close of work-window.

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

Rare Plants

The work sites for the 2022 FRGP MND project 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 2022 FRGP MND project, was determined from a search of CDFW'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. Experience with grant projects from previous years has shown that the potential for adverse impacts on rare plants at salmonid restoration work sites is very low. Before a Notice to Proceed is given to the grantee to begin implementation work, all botanical surveys following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" shall be completed and produced to a project's CDFW grant manager. In order to avoid impacts to rare plants during the 2022 FRGP MND project, the following mitigation measures will be implemented:

1. A qualified biological consultant shall survey all work sites for rare plants prior to any ground disturbing activities. Rare plant surveys will be conducted following the "Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities" (CDFW, 2018). These guidelines are available in Appendix C or on the web at: https://www.wildlife.ca.gov/Conservation/Plants.

2. If any special status plant species are identified at a work site, CDFW shall require one or more of the following protective measures to be implemented before work can proceed:

    I. Fencing to prevent accidental disturbance of rare plants during construction,

II. On-site monitoring by a qualified biologist during construction to assure that rare plants are not disturbed, or

III. Redesign of proposed work to avoid disturbance of rare plants.

3. Plant surveys will also include any host plants for butterflies identified as occurring in the area either in the CNDDB or the official species list. These host plants are as follows for each butterfly:

Butterfly	Host Plant
Mission Blue Butterfly (*Icaricia icarioides missionensis*) - Endangered	Silver Bush Lupine (*Lupinus albifrons*)
San Bruno Elfin Butterfly (*Callophrys mossii bayensis*) - Endangered	Stonecrop (*Sedum spathulifolium*)
Callippe Silverspot Butterfly (*Speyeria callippe callippe*) - Endangered	Johnny Jump Up (*Viola pedunculata*)
Myrtle's Silverspot (*Speyeria zerene myrtleae*) - Endangered	Hookedspur Violet (*Viola adunca*)
Bay Checkerspot Butterfly (*Euphydryas editha bayensis*) - Threatened	Native Plantain (*Plantago erecta*)
Smith's Blue Butterfly (*Euphilotes enptes smithi*)-Endangered	Buckwheat (*Eriogonum latifolium*) and Seacliff Buckwheat (*Eriogonum parvifolium*)

4. If any host plant species are identified at a work site, CDFW shall require one or more of the following protective measures to be implemented before work can proceed:

- Fencing to prevent accidental disturbance of larval host plants during construction,

- On-site monitoring by a qualified biologist during construction to assure that larval host plants are not disturbed, and

- Redesign of proposed work to avoid disturbance of larval host plants.

- If it becomes impossible to implement the project at a work site without impacts to larval host plants, then activity at that work site shall not proceed. 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 shall be discontinued.

- CDFW shall ensure that the grantee or responsible party is aware of these site-specific conditions, and shall inspect the work site before, during, and after completion of the action item.

Arroyo Toad (Anaxyrus californicus)

One of the 27~~29~~ projects proposed as part of the 2022 FRGP MND project one occurs within the range of arroyo toad (1728178-Maria Ygnacio Creek Fish Passage Project Implementation- Patterson Ave Bridge). While none of the activities proposed for this project will significantly degrade existing habitat, the following measures will be taken to avoid any potential impact to habitat should arroyo toads be found within project sites:

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. The authorized biologist will be present during all dewatering and relocation efforts.
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:
    i. A detailed description of the arroyo toad's physical characteristics and life history, including color photographs.

    ii. The protection the arroyo toad receives under the Endangered Species Act and possible legal action that may be incurred for violation of the act.

    iii. The protective measures being implemented to conserve the arroyo toad and other species during construction activities associated with the proposed project; and

    iv. A point of contact if arroyo toads are observed.

3. All trash that may attract predators of the arroyo toad, e.g., food scraps, will be removed from work sites or completely secured at the end of each workday.
4. USFWS-approved biologist(s) who handle arroyo toads shall ensure that their activities do not transmit diseases. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist, the fieldwork code of practice developed by

the Declining Amphibian Populations Task Force (http://www.fws.gov/ventura/docs/species/protocols/DAFTA.pdf) shall be followed at all times.

5. A USFWS-approved biologist shall survey the project site at least two weeks before the onset of activities. If arroyo toads are found in the project area and these individuals are likely to be killed or injured by work activities, the USFWS-approved biologist will allow sufficient time to move them from the site before work activities resume. Only USFWS-approved biologists will participate in activities with the capture, handling, and monitoring of arroyo toads.

6. Before any project-related activities, the approved biologist must identify appropriate areas to receive arroyo toads' 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 (e.g., bullfrogs, crayfish) to the best of the approved biologist's knowledge.

7. A USFWS-approved biologist shall be present at the work site until such time as removal of arroyo toads, instruction of workers, and habitat disturbance has been completed. The USFWS-approved biologist shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USACE and USFWS during review of the proposed action. If work is stopped, the USACE and the USFWS shall be notified immediately by the USFWS-approved biologist or on-site biological monitor.

8. If arroyo toads are found during construction and these individuals are likely to be killed or injured by work activities, the USFWS-approved biologists must be allowed sufficient time to move them from the site before work activities resume. The USFWS-approved biologist must relocate the arroyo toads the shortest distance possible to one of the predetermined areas. The USFWS-approved biologist must maintain detailed records of any individuals that are moved (e.g., size, coloration, any distinguishing features, photographs (digital preferred) to assist in determining whether translocated animals are returning to the point of capture. Only arroyo toads that are at risk of injury or death by project activities may be moved.

9. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.125-inch to prevent arroyo toads from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain down stream flows during construction activities and eliminate the possibility of ponded water. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the lease disturbance to the substrate.

10. Ponded areas shall be monitored for arroyo toads that may become entrapped. Any entrapped arroyo toad shall be relocated to a pre-determined receiving area by a USFWS-approved biologist.

11. A USFWS-approved biologist will permanently remove, exotic species, such as bullfrogs (*Rana catesbiana),* centrarchid fishes, and non-native crayfish from the project area 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.

12. The CDFW or USACE shall report any observation of arroyo toad incidental take associated with the implementation of the Restoration Program projects in accordance with RGP-78. The USFWS and the USACE must review the circumstances surrounding the incident to determine whether any patterns of repeated authorized or unauthorized activities are occurring that may indicate that additional protective measures are required. If, after completion of the review, the USACE and the USFWS agree that additional protective measures are required and can be implemented within the existing scope of the action, the USACE must require the CDFW to implement the agreed-upon measures within a reasonable time frame; if the corrective actions cannot be implemented with the scope of the existing action, the USACE and USFWS will determine whether re-initiation of consultation is appropriate.

13. Despite term and condition "l)" of this section (above), the USACE must immediately re-initiate formal consultation with the USFWS, pursuant to 7(a) (2) of the Endangered Species Act, if arroyo toads are taken within the action area at or in excess of the incidental take anticipated in the Incidental Take Statement section of the U.S, Fish and Wildlife biological opinion (file no. 2008-F-0441), whether by project or by year.

14. If these mitigation measures cannot be implemented or the project activities proposed at a specific work site cannot be modified to prevent or avoid potential impacts to arroyo toads or their habitat, then project activity at that work site shall be discontinued.

California Freshwater Shrimp (Syncaris pacifica)

Four ~~Three~~ of the 27 projects proposed as part of the 2022 FRGP MND project occurs within the range of California freshwater shrimp (CFS) (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, 1728115- Process-Based Floodplain Restoration of lower Lagunitas Creek, 1728147- Lower Green Valley Creek off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase 1, 1728118 Gualala River Estuary Habitat Enhancement Planning Project) (Appendix A). Therefore, the potential for impacts to CFS shall 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 (USFWS), Biological Opinion (file no. 08ESMF00-2016-F-0874). CDFW proposes to implement the following measures to minimize adverse effects to the CFS and its habitat:

1. Project activities in potential shrimp habitat shall be restricted to the period between July 1 and November 1.

2. At least 15 days prior to the onset of activities, CDFW shall submit the name(s) and credentials of biologists who will conduct activities specified in the following measures to the USFWS. The grantee shall implement any additional conservation measures requested by CDFW and/or the USFWS.

3. CDFW shall be notified at least one week in advance of the date on which work will start in the stream, so that a qualified CDFW biologist can monitor activities at the work site. All work in the stream shall be stopped immediately if it is determined by CDFW that the work has the potential to adversely impact shrimp or its habitat. Work shall not recommence until CDFW is satisfied that there will be no impact on the shrimp.

4. Where appropriate, a USFWS-approved CDFW 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.

5. Prior to the onset of work at a work site that may contain shrimp, the USFWS-approved CDFW 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.

6. Only USFWS-approved biologists shall participate in the capture, handling, and monitoring of shrimp. CDFW shall report annually on the number of captures, release and injuries/mortality and agrees to modify capture/release strategy with USFWS staff as needed to prevent adverse effects.

7. In site locations where shrimp are present, CDFW will require the grantee to implement the mitigation measures listed:

    i. Equipment work shall 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.

    ii. Hand placement of logs or rocks shall 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.

iii. 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 removed, trimmed, or otherwise modified.

iv. 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.

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

8. If in the opinion of the USFWS-approved biologist, adverse effects to shrimp would be further minimized by moving shrimp away from the project site, the following procedure shall be used:

    i. A second survey shall be conducted within 24 hours of any construction activity and shrimp shall be relocated to the nearest suitable habitat. Shrimp shall be moved while in the net or placed in buckets containing stream water. Stress and temperature monitoring of shrimp shall be performed by the USFWS-approved biologist. Numbers of shrimp and any mortalities or injuries shall be identified and recorded. Shrimp habitat is defined as reaches in low elevation (less than 116 m) and low gradient (less than one percent) streams where banks are structurally diverse with undercut banks, exposed fine root systems, overhanging woody debris or overhanging vegetation.

    ii. When no other habitat exists on a landowner's property, the shrimp shall be held in suitable containers with site water and released as soon as possible. Containers shall be placed in the shade.

9. If moving the shrimp out of the work area cannot be accomplished, and other avoidance measures have been deemed inappropriate, CDFW shall drop activities at the work site from the project.

10. A USFWS-approved CDFW 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 USFWS-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 USFWS-approved biologist shall immediately notify CDFW and the USFWS.

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. A USFWS-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 Wildlife.

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. Re-vegetated sites shall be irrigated as necessary until vegetation is established. Re-vegetated sites shall be monitored until shading and cover achieves 80% of pre-project shading and cover and for a minimum of five years.

California Red-Legged Frog (Rana draytonii)

Eight (8) Of the 27 projects proposed as part of the 2022 FRGP MND project, five projects occur within the range of the California red-legged frog (CRLF). Activities proposed (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, 1727774 Bradley (Ringer) Cachagua Creek Fish Passage Project, ~~1727801- Robinson Creek Instream Habitat Enhancement~~, 1728212- TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project, 1727774- Bradley (Ringer) Cachugua Creek Fish Passage Project, 1728032- Santa Rosa Creek Restoration and Improved Land Management Design Project, 1728118- Gualala River Estuary Habitat Enhancement Planning Project, 1728115- Process-Based Floodplain Restoration of lower Lagunitas Creek, 1728147- Lower Green Valley Creek off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase I) (Appendix A) will not remove or degrade CRLF habitat; however, precautions shall be required at these sites to avoid the potential for take of CRLF while using heavy equipment. 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 USFWS, Biological Opinions. CDFW shall implement the following measures to minimize adverse effects to the CRLF and its habitat:

1. Project activities in potential red-legged frog habitat shall be restricted to the period between July 1 and October 15.

2. At least 15 days prior to the onset of project activities, CDFW shall submit the names(s) and credentials of biologists who would conduct activities specified in the following measures. No project activities shall begin until CDFW has received written approval from the USFWS that the biologist(s) is qualified to conduct the work.

3. USFWS-approved biologist(s) who handle red-legged frogs shall ensure that their activities do not transmit diseases. To ensure that diseases are not conveyed between work sites by the USFWS-approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (http://www.fws.gov/ventura/docs/species/protocols/DAFTA.pdf) shall be followed at all times.

4. A CDFW monitoring plan shall be developed to determine the level of incidental take of red-legged frogs associated with the Restoration Program funded activities in the area. The monitoring plan must include a standardized mechanism to report any observations of dead or injured red-legged frogs to the appropriate USACE and USFWS offices.

5. A USFWS-approved biologist shall survey the project 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 USFWS-approved biologist will allow sufficient time to move them from the site before work activities resume. Only USFWS-approved biologists will participate in activities with the capture, handling, and monitoring of red-legged frogs.

6. Before 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 (e.g., bullfrogs and crayfish) to the best of the approved biologist's knowledge.

7. Prior to the onset of project activities, a USFWS-approved biologist shall 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.

8. A USFWS-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 USFWS-approved biologist shall have the authority to halt any action that might result in impacts that exceed the levels anticipated by the USACE and USFWS during review of the proposed action. If work is stopped, the USACE and the USFWS shall be notified immediately by the USFWS-approved biologist or on-site biological monitor.

9. If red-legged frogs are found and these individuals are likely to be killed or injured by work activities, the USFWS-approved biologists must be allowed sufficient time to move them from the site before work activities resume. The USFWS-approved biologist must relocate the red-legged frogs the shortest distance possible to one of the

predetermined areas. The USFWS-approved biologist must maintain detailed records of any individuals that are moved (e.g., 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.

10. If a work site is to be temporarily dewatered by pumping, intakes shall be completely screened with wire mesh not larger than 0.125-inch to prevent red-legged frogs from entering the pump system. Water shall be released or pumped downstream at an appropriate rate to maintain down stream flows during construction activities and eliminate the possibility of ponded water. Upon completion of construction activities, any barriers to flow shall be removed in a manner that would allow flow to resume with the lease disturbance to the substrate.

11. Ponded areas shall be monitored for red-legged frogs that may become entrapped. Any entrapped red-legged frog shall be relocated to a pre-determined receiving area by a USFWS-approved biologist.

12. A USFWS-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. The CDFW or USACE shall report any observation of the incidental take of red-legged frogs associated with the implementation of the Restoration Program projects in accordance with RGP78. The USFWS and the USACE must review the circumstances surrounding the incident to determine whether any patterns of repeated authorized or unauthorized activities are occurring that may indicate that additional protective measures are required. If, after completion of the review, the USACE and the USFWS agree that additional protective measures are required and can be implemented within the existing scope of the action, the USACE must require the CDFW to implement the agreed-upon measures within a reasonable time frame; if the corrective actions cannot be implemented with the scope of the existing action, the USACE and USFWS will determine whether re-initiation of consultation is appropriate.

14. Despite term and condition “i)” of this section (above), the USACE must immediately re-initiate formal consultation with the USFWS, pursuant to 7(a) (2) of the Endangered Species Act, if red-legged frogs are taken within the action area at or in excess of the incidental take anticipated in the Incidental Take Statement section of the U.S, Fish and Wildlife biological opinion (file no. 2008-F-0441), whether by project or by year.

15. If these mitigation measures cannot be implemented or the project activities proposed at a specific work site cannot be modified to prevent or avoid potential impacts to CRLF or its habitat, then project activity at that work site shall be discontinued.

California Tiger Salamander (Ambystoma californiense)

Five (5)~~Four (4)~~ of the 27 proposed projects in the 2022 FRGP MND project are within the range of the California tiger salamander (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, 1728115- Process-based Floodplain Restoration of lower Lagunitas Creek, ~~1728147- Lower Green Valley Creek Off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase I~~, 1727774- Bradley (Ringer) Cachagua Creek Fish Passage Project, 1728212- TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project, 1728118-Gualala River Estuary Enhancement Planning Project.) (Appendix A). Impacts to the species however is unlikely, due to implementation projects occurring in or near stream and riparian corridors. California tiger salamanders primarily use ponds and vernal pools for breeding and grassland habitat for estivation, both of which are not usually in proximity to anadromous fish-bearing streams. If it is determined that an individual project could adversely affect Central California or Sonoma County California tiger salamanders or their critical habitat, the project proponents will consult with the Sacramento Fish and Wildlife Office to determine appropriate avoidance and minimization measures and determine if additional consultation is needed.

Chinook Salmon (Oncorhynchus tshawytscha), Coho Salmon (Oncorhynchus kisutch), Steelhead Trout (Oncorhynchus mykiss), and Coast Cutthroat Trout (Oncorhynchus clarkii clarkii)

While all of the work proposed under this program will enhance habitat for one or more of these species, all of the projects proposed as part of the 2022 FRGP MND project 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 rainfall, or whichever comes first. This is to take advantage of low stream flows and to avoid the spawning and egg/alevin incubation period of salmon and steelhead. Actual project start and end dates, within this timeframe, are at the discretion of the Department of Fish and Wildlife (i.e., on the Shasta River projects must be completed between July 1 and September 15 to avoid impacts to immigrating and emigrating salmonids). 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. 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, reduce surface erosion, contribute to amounts of organic debris in the soil, encourage fungi, provide immediate cover for small terrestrial species and to speed recovery of native vegetation.

3. A maximum of 1,000 contiguous feet of that stream reach may be dewatered at any given time. Other sections of stream within the same project area may be dewatered in up to 1,000 contiguous foot increments, as long as listed fish that were handled during the initial dewatering event are not handled during subsequent dewatering events during the same year. To avoid handling the same fish multiple times during sequenced dewatering events, fish must be relocated to suitable habitat conditions outside of the zone that could be dewatered during that season. In addition, for each dewatering and relocation event,
   sufficient field staff must be available to efficiently move and care for relocated fish. The fish relocation plan submitted prior to the event must describe this sufficiency.

4. 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 where it cannot enter the stream channel. 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. Prior to the onset of work, CDFW shall ensure that the grantee has prepared a plan to allow a prompt
   and effective response to any accidental spills.

5. The number of access routes and footpaths, number and size of staging areas, and the total area of the work site activity shall be limited to the minimum necessary. All access routes, footpaths, and staging areas created during the project shall be replanted with native vegetation.

6. Any construction debris shall be prevented from falling into the stream channel. Any material that does fall into a stream during construction shall be immediately removed in a manner that has minimal impact to the streambed and water quality.

7. Prior to dewatering a construction site, fish and amphibian species shall be captured and relocated by CDFW personnel (or designated agents). The following measures shall be taken to minimize harm and mortality to listed salmonids resulting from fish relocation and dewatering activities:

8. Fish relocation and dewatering activities shall only occur between June 15 and November 1 of each year and shall be performed by a qualified fisheries biologist.

9. Fish relocation shall be performed by a qualified fisheries biologist, with all necessary State and Federal permits. Captured fish shall be moved to the nearest appropriate site outside of the work area. A record shall be maintained of all fish rescued and moved. The record shall include the date of capture and relocation, the method of capture, the location of the relocation site in relation to the project site, and the number and species of fish captured and relocated. The record shall be provided to CDFW within two weeks of the completion of the work season or project, whichever comes first.

10. Electrofishing shall be conducted by properly trained personnel following NOAA *Guidelines for Electrofishing Waters Containing Salmonids Listed under the Endangered Species Act*, June 2000.

11. Prior to capturing fish, the most appropriate release location(s) shall be determined. The following shall be determined:

    i. Temperature: Water temperature shall be similar as the capture location.

    ii. Habitat: There shall be ample habitat for the captured fish.

    iii. Exclusions from work site: There shall be a low likelihood for the fish to reenter the work site or become impinged on exclusion net or screen.

12. The most efficient method for capturing fish shall be determined by the biologist. Complex stream habitat generally requires the use of electrofishing equipment, whereas in outlet pools, fish may be concentrated by pumping-down the pool and then seining or dip netting fish.

13. Handling of salmonids shall be minimized. However, when handling is necessary, always wet hands or nets prior to touching fish.

14. Temporarily hold fish in cool, shaded, aerated water in a container with a lid. Provide aeration with a battery-powered external bubbler. Protect fish from jostling and noise and do not remove fish from this container until time of release.

15. Air and water temperatures shall be measured periodically. A thermometer shall be placed in holding containers and, if necessary, periodically conduct partial water changes to maintain a stable water temperature. If water temperature reaches or exceeds 18°C, fish shall be released, and rescue operations ceased.

16. Overcrowding in containers shall be avoided by having at least two containers and segregating young-of-year (YOY) fish from larger age-classes to avoid predation. Larger amphibians, such as Pacific giant salamanders, shall be placed in the container with larger fish. If fish are abundant, the capturing of fish and amphibians shall cease periodically and shall be released at the predetermined locations.

17. Species and year-class of fish shall be visually estimated at time of release. The number of fish captured shall be counted and recorded. Anesthetization or measuring fish shall be avoided.

18. If feasible, initial fish relocation efforts shall be performed several days prior to the start of construction. This provides the fisheries biologist an opportunity to return to the work area and perform additional electrofishing passes immediately prior to construction. In many instances, additional fish will be captured that eluded the previous day's efforts.

19. If mortality during relocation exceeds three percent, capturing efforts shall be stopped and the appropriate agencies shall be contacted immediately.

20. In regions of California with high summer temperatures, relocation activities shall be performed in the morning when the temperatures are cooler.

21. CDFW shall minimize the amount of wetted stream channel that is dewatered at each individual project site to the fullest extent possible.

22. Additional measures to minimize injury and mortality of salmonids during fish relocation and dewatering activities shall be implemented as described in Volume II, Part IX, pages 52 and 53 of the *California Salmonid Stream Habitat Restoration Manual*.

23. If 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 shall be discontinued.

Foothill Yellow-Legged Frog (Rana boylii)

~~All of~~ Two (2) of the proposed 27 projects in the FRGP program occur within the range of FYLF habitat (1727774- Bradley (Ringer) Cachagua Creek Fish Passage Project, 1728032- Santa Rosa Creek Restoration and Improved Land Management Design Project. Five of the six FYLF clades are considered threatened or endangered. The Feather and Upper Feather River Watershed and Northeast/North Sierra clade are threatened, and the East/Southern Sierra, West/Central Coast, and Southwest/West Coast are endangered. ~~However,~~ Precautions shall be required at ~~these~~ sites with threatened or endangered clades to avoid potential significant impacts to the FYLF while using heavy equipment. The potential for impacts to FYLFs will be mitigated by complying with all of the terms and conditions set forth in this section. Measures for minimization and avoidance of incidental take of FYLF must be developed on a site- and project-specific basis. CDFW's *Considerations for Conserving the Foothill Yellow-Legged Frog* (May 2018) provides guidance and examples of avoidance and minimization measures, invasive non-native control and eradication, and a riparian enhancement plan for the species. CDFW shall implement the additional following measures to minimize adverse effects to the FYLF and its habitat:

1. Prior to start of work, all permits necessary to survey, handle, and relocate FYLFs shall be obtained. All best management practices, special conditions, mitigation, and avoidance measures of any take permit obtained shall be complied with.

2. Within 3-5 days prior to entering or working near stream/riparian habitat within the foothill yellow-legged frog range, a qualified biologist shall examine the project site to determine the presence and/or the potential for presence of FYLF

adults, juveniles, tadpoles, or egg masses within the project area and 300 feet upstream and downstream.

3. The biologist must be able to recognize all potential age classes of FYLFs relative to other amphibians in the project area.

4. The CDFW approved biologist(s) shall ensure that their activities do not transmit diseases. To ensure that diseases are not conveyed between work sites by the approved biologist, the fieldwork code of practice developed by the Declining Amphibian Populations Task Force (http://www.fws.gov/ventura/docs/species/protocols/DAFTA.pdf) shall be followed at all times.

5. If any life stage of FYLFs are found, the biologist must consult with CDFW immediately by either telephone, facsimile, or e-mail, and provide a short description of existing conditions and observations, and a list of all species observed during the examination.

6. Site-specific mitigation measures to avoid or minimize take and to avoid or minimize disturbance to FYLF habitat shall be developed and approved by the CDFW. Work shall not commence until the CDFW has provided written approval of the proposed mitigation measures and any permit to relocate FYLFs have been obtained

7. The approved biologist will dispatch and remove from the project area, any individuals of exotic species, such as bullfrogs (*Lithobates catesbeianus*), 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.

8. If these mitigation measures cannot be implemented or the project activities proposed at a specific work site cannot be modified to prevent or avoid potential impacts to FYLF or its habitat, then project activity at that work site shall be discontinued.

Least Bell's Vireo (Vireo bellii pusillus)

Of the 27 projects proposed as part of the 2022 FRGP MND project, one project is within the range of the Least Bell's Vireo (1728178- Maria Ygnacio Creek Fish Passage Project Implementation- Patterson Ave Bridge) (Appendix A). Activities proposed for the project will not remove, degrade, or downgrade suitable Least Bell's Vireo habitat or result in direct injury or mortality. The potential does exist however for noise from heavy equipment work and the harvesting of willow branches for revegetation at these sites to disrupt Least Bell's 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. CDFW 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)

Fifteen (15)~~Seven (7)~~ of the 27 projects proposed as part of the 2022 FRGP MND project are in potentially suitable habitat for the Marbled Murrelet. Activities proposed for the sites (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, 1728115- Processed-Based Floodplain Restoration of Lower Lagunitas Creek, 1728175- Camp Creek Coho Habitat Enhancement Design Project, 1727817- Coulborn Creek Salmonid Habitat Assessment and Enhancement Planning and Design Project, 1727865- Cider Mill Creek (Lindsay Creek tributary) Coho Barrier Removal and Habitat Enhancement Design Project, 1727892- Lindsay Creek Off-Channel Coho Habitat Improvement Project, 1727754- Durphy Creek Fish Passage Design Project, 1728118- Gualala River Estuary Habitat Enhancement Planning Project, 1728178- Maria Ygnacio Creek Fish Passage Project Implementation - Patterson Ave Bridge, 1727893- Lindsay Creek Coho Barrier Removal Project, 1727764- Lower Stotenburg Coho Habitat Enhancement Project, ~~1727801- Robinson Creek Instream Habitat Enhancement~~, 1728212- TCF North Fork Buckeye Creek Storm- proofing and Habitat Protection Project, 1727957- Rail Dump Gulch Fish Passage and Habitat Improvement Design Project, 1727975- Upper South Fork Little River Instream Habitat Improvement Project, ~~1728001- South Fork Rowdy/Savoy Creeks Salmonid Habitat Improvement Project~~, 1727751- Little Case Two Barrier Removal Project) (Appendix A) will not remove, degrade, or downgrade suitable Marbled Murrelet habitat. As a result, direct injury or mortality of Marbled Murrelets 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 shall be implemented:

1. Restoration work in areas considered by the Arcata and Ventura USFWS offices shall not be conducted within 0.25-mile of occupied or un-surveyed

suitable Marbled Murrelet habitat between March 24 and September 15. Restoration work in areas considered by the Sacramento USFWS Office shall not be conducted within 0.25-mile of any occupied or un-surveyed suitable Marbled Murrelet habitat between November 1 and September 15.

2. 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.

3. If 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 shall be discontinued.

4. For projects contained in streams and watersheds included in a USFWS Habitat Conservation Plan the mitigation measures contained within those Habitat Conservation Plans shall be followed.

Western Yellow-Billed Cuckoo

Six ~~One (1)~~ of the 27 projects proposed as part of the 2022 FRGP MND project are in potentially suitable habitat for the Western Yellow-Billed Cuckoo (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek , 1728115- Process-Based Floodplain Restoration of lower Lagunitas Creek, 1728212- TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project, 1728175- Camp Creek Coho Habitat Enhancement Design Project, 1728118- Gualala River Estuary Habitat Enhancement Planning Project, 1728178- Maria Ygnacio Creek Fish Passage Project Implementation - Patterson Ave Bridge ~~1728147- Lower Green Valley Creek Off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase I~~) (Appendix A).

Effects to western yellow-billed cuckoos from project activities could include noise disturbances during the breeding season, and disturbance from harvesting of revegetation material. Noise from heavy equipment has the potential to cause nesting birds to abandon nests, and harvesting revegetation material could reduce habitat quality during the breeding season. Limiting this type of work to the fall and winter months would reduce the potential adverse effects.

Projects may affect yellow-billed cuckoo, but it is not likely to adversely affect yellow-billed cuckoo. The following measures will be applied based on the low likelihood of disturbance to yellow-billed cuckoo.

1. Program activities that occur in known suitable breeding habitat (contiguous riparian habitat covering 50 acres or more) will not be conducted from June 1 to August 31.

2. If protocol surveys determine that no nesting western yellow-billed cuckoos occur within 0.25 mile of a specific project site, project activities at that site may commence prior to August 31.

3. Project activities will not remove or degrade suitable habitat for western yellow-billed cuckoo.

Northern Spotted Owl (Strix occidentalis caurina)

Eighteen (18) ~~None~~ of the 27 proposed projects under FRGP occur within the range of Northern Spotted Owl (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, 1728115- Process-Based Floodplain Restoration of lower Lagunitas Creek, 1728212- TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project, 1727864- Chimney Rock Creek Instream Habitat Restoration Project, 1727863- Chimney Rock Creek Upslope Watershed Restoration Project, 1727957- Rail Dump Gulch Fish Passage and Habitat Improvement Design Project, 1727975- Upper South Fork Little River Instream Habitat Improvement Project, 1727761- SF Cottaneva Watershed Habitat Enhancement, 1727817- Coulborn Creek Salmonid Habitat Assessment and Enhancement Planning and Design Project, 1727865- Cider Mill Creek (Lindsay Creek tributary) Coho Barrier Removal and Habitat Enhancement Design Project, 1727892- Lindsay Creek Off-Channel Coho Habitat Improvement Project, 1727989- Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat Improvement Project, 1728048- Willits Creek Instream Restoration Project, 1728143- Tip Top Ridge Creek (formerly known as Squaw Creek) Coho Habitat Improvement Design Project, 1727754- Durphy Creek Fish Passage Design Project, 1728118- Gualala River Estuary Habitat Enhancement Planning Project, 1727751- Little Case Two Barrier Removal Project, 1727893- Lindsay Creek Coho Barrier Removal Project). ~~As a result, direct injury or mortality of Northern Spotted Owls is not likely.~~ The potential exists for heavy equipment work at these sites to disturb Northern Spotted Owl nesting. To avoid this potential effect, the following mitigation measures will be implemented:

1. 1. Work with heavy equipment at any site within 0.25 miles of suitable habitat for the Northern Spotted Owl shall not occur from November 1 to July 31 for projects in areas under the jurisdiction of the Sacramento USFWS Office and from November 1 to July 9 for projects in areas under the jurisdiction of the Arcata USFWS Office.

2. 2. The work window at individual work sites may be advanced prior to July 9 or July 31 (corresponding to the different time constraints of the Sacramento and Arcata USFWS office), if protocol surveys determine that suitable habitat is unoccupied.

3. 3. If 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 shall be discontinued and CDFW must reinitiate consultation with USFWS.

4. 4. For projects contained within streams and watersheds included in a USFWS Habitat Conservation Plan the mitigation measures contained within those Habitat Conservation Plans shall be followed.

Point Arena Mountain Beaver (Aplodontia rufa nigra)

Of the 27 projects proposed in the 2022 FRGP MND project, none are within the range of the Point Arena Mountain Beaver. Proposed projects are not likely to affect the Point Arena Mountain Beaver. To avoid this potential effect, the following mitigation measures will be implemented:

1. Within 500 feet of occupied habitat during the breeding season from December 15 through June 15 the following restrictions are in place:

    a. Action and related activities shall be greater than 100 feet from occupied habitat

    b. Noise-generating activities shall be limited to the use of hand tools and light power-tools (e.g., chainsaw, axe, etc.).

    c. No tools shall be used that require an air compressor.

    d. No power tools shall be operated while in direct contact with the ground.

San Francisco Garter Snake (Thamnophis sirtalis tetrataenia)

Of the 27 projects proposed in the 2022 FRGP MND project, none are within the range of the San Francisco Garter Snake. precautions shall be required at these sites to avoid the potential for take of garter snakes while using heavy equipment. The potential for impacts to San Francisco garter snakes will be mitigated by complying with all of the mandatory terms and conditions associated with incidental take authorized by the Service, Biological Opinions. CDFW shall implement the following measures to minimize adverse effects to the San Francisco garter snake and its habitat:

1. A USFWS approved biologist will conduct preconstruction surveys and monitor for San Francisco garter snakes prior to implementation of project activities. If San Francisco garter snakes are identified at a project site, work will be halted. If the identified animal(s) do not leave the project area of their own volition, the USFWS and CDFW will be contacted to determine appropriate actions. Only Service-approved biologists will participate in activities associated with the capture, handling, or relocation of San Francisco garter snakes.

2. Exclusion fencing shall be established around staging areas and soil stockpile areas. Exclusion fencing shall include escape funnels and the lower edge of the fence shall be buried at least for (4) inches to prevent burrowing animals from tunneling under the fence. Exclusion fence posts will be placed on the inside to prevent snakes from being able to climb into the project site.

3. The USFWS approved biologist will conduct daily inspections of the project work area, staging area, and the perimeter of any exclusion fencing prior to the commencement of construction activities. Upon completion equipment or materials may be moved onto the work site and project activities may commence with a USFWS approved monitor.

4. The exclusion fencing will remain in operating conditions for the duration of the project. The biological monitor shall daily inspect the integrity of the exclusion fencing to ensure there are no gaps, tears, or damage. Maintenance of the fencing

shall be conducted as needed. Any necessary repairs to the fencing shall be completed within 24 hours of the initial observance of the damage.

5. A USFWS approved biological monitor will be on-site while project activities are being conducted. The monitor will walk in from of equipment to ensure San Francisco garter snakes are not crushed.

6. Vegetation removed shall be kept within the exclusion fencing or placed into a disposal vehicle and removed from the project site. Vegetation will not be piled on the ground outside fencing unless it is later transferred, piece by piece, under the direct supervision of the USFWS-approved biologist.

7. Soil will not be stockpiled unless it is on a paved surface or an area where burrows are absent. The USFWS- approved biologist will approve such locations within the defined work area.

8. If San Francisco garter snakes are found on site, the construction contractor shall stop work and contact the Service immediately and allow the San Francisco garter snakes to leave on its own volition.

9. Prior to work, all burrows will be flagged and avoided to prevent their collapse.

10. All workers will check stockpiled construction materials, and under equipment to be moved for presence of wildlife sheltering within them prior to use.

11. Any vehicle parked on site for more than 15 minutes will be inspected before it is moved to ensure that San Francisco garter snakes have not moved under the vehicle.

12. The USFWS-approved biological monitor shall have the responsibility and authority of stopping the project if any crews or personnel are not complying with the above measures.

Southwestern Willow Flycatcher (Empidonax traillii extimus)

One (1) of the 27 work sites proposed as part of the 2022 FRGP MND project are in potentially suitable habitat for the Southwestern Willow Flycatcher (1728178- Maria Ygnacio Creek Fish Passage Project Implementation- Patterson Ave Bridge) (Appendix A). None of the activities proposed for these sites will significantly degrade existing Southwestern Willow Flycatcher habitat; however, the potential exists for the noise from heavy equipment work or harvesting of re-vegetation material at these sites to disrupt Southwestern Willow Flycatcher nesting. To avoid this potential impact, the following mitigation measures shall be implemented:

1. 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. Prior to any work in areas where riparian habitat is present, a qualified biologist shall do a habitat assessment and determine whether the area within 500-feet of the project site is suitable for nesting by Southwestern Willow Flycatchers. If not, work may proceed without further surveys. If the biologist determines that the area is suitable, a qualified biologist must monitor before and during the project to determine the status of the Southwestern Willow Flycatchers within 500-feet of the project site.

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. Harvest of willow branches at any site with potential habitat for the Southwestern Willow Flycatcher shall not occur between May 1 and September 15.

5. 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.

6. If any Southwestern Willow Flycatchers are observed nesting within 500-feet of the project activities, work shall cease temporarily until it is determined that either the birds are not nesting, or young have fledged.

7. CDFW shall ensure that the grantee or responsible party is aware of this site-specific condition, and shall inspect the work site pre-, during, and post-completion of the action item.

If 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 Southwestern Willow Flycatcher or their habitat, then activity at that work shall be discontinued.

Tidewater Goby (Eucyclogobius newberryi)

Five (5) ~~17~~ of the 27 work sites proposed as part of the 2022 FRGP MND project are listed on the corresponding species lists as in potentially suitable habitat for tidewater goby The project (1728116- Accelerated Large Woody Debris Recruitment in Lagunitas Creek, ~~1728012- Little North Fork Big River Instream Habitat Enhancemen~~t, 1728115- Process-Based Floodplain Restoration of lower Lagunitas Creek, 1728212- TCF North Fork Buckeye Creek Storm-proofing and Habitat Protection Project, ~~1728147- Lower Green Valley Creek Off-Channel Habitat Enhancement Project at Iron Horse Vineyards, Phase 1, 1727957- Rail Dump Gulch Fish Passage and Habitat Improvement Design Project, 1727761- SF Cottaneva Watershed Habitat Enhancement, 1727865- Cider Mill Creek (Lindsay Creek tributary) Coho Barrier Removal and Habitat Enhancement Design Project, 1727892- Lindsay Creek off-Channel Coho Habitat Improvement Project, 1727989- Lindsay Creek (Kramer/Daley Property) Instream Salmonid Habitat~~

~~Improvement Project, 1728001- South Fork Rowdy/Savoy Creeks Salmonid Habitat Improvement Project, 1728143- Tip Top Ridge Creek (formally known as Squaw Creek) Coho Habitat Improvement Design Project, 1728032- Santa Rosa Creek Restoration and Improved Land Management Design Project,~~ 1728118- Gualala River Estuary Habitat Enhancement Planning Project, ~~1727751- Little Case Two Barrier Removal Project,~~ 1728178- Maria Ygnacio Creek Fish Passage Project Implementation-Patterson Ave Bridge~~, 1727893- Lindsay Creek Coho Barrier Removal Project~~) (Appendix A). Work under FRGP will enhance habitat for tidewater goby. To avoid any potential for negative impacts to this species, the following measures will be implemented:

1. Construction activities at stream crossings will only occur between June 15 and October 31 to avoid or minimize adversely affecting tidewater goby and to minimize soil compaction and sediment transport.

2. Equipment will not be operated directly within tidal waters or stream channels of flowing streams.

3. Work will be done during low tide when no water or fish are present, to temporarily prevent tidewater goby from gaining access to the vicinity of the work area. If water is present, the work area will be seined, and a fish barrier installed to isolate the work area. At this time, gobies are susceptible to being injured or crushed by workers while they are entangled in or being removed from netting. In order to minimize potentially adverse effects to gobies, all translocation/removal of tidewater gobies will be conducted by qualified biologists under a scientific recovery permit pursuant to section 10(a)(1)(A) of the Act.

4. The temporary fish barrier will be removed after work is completed.

5. Silt fences will be deployed at culvert removal areas to prevent any sediment from
flowing into the creek or wetted channels. If the silt fences are not adequately containing sediment, construction activity will cease until remedial measures are
implemented that prevents sediment from entering the waters below.

6. All exposed surfaces will be slash-packed with native vegetation and planted with willow sprigging when the work has been completed.

7. Construction materials, debris, or waste will not be placed or stored where it may be allowed to enter into or be placed where it may be washed by rainfall into waters of the U.S./State.

8. Turbid water will be contained and prevented from being transported in amounts that are deleterious to fish, or in amounts that could violate state

pollution laws. Silt fences or water diversion structures will be used to contain sediment. If sediment is not being contained adequately, as determined by visual observation, the activity will cease.

9. Designated areas will be used for equipment refueling. If equipment must be washed, washing will occur where wash water cannot flow into wetlands or waters of the U.S./State.

10. Best Management Practices (BMPs) will be implemented to prevent entry of storm
water runoff into the project site, the entrainment of excavated contaminated materials leaving the site, and to prevent the entry of polluted storm water runoff into coastal waters during the transportation and storage of excavated materials.

Willow Flycatcher (Empidonax traillii)

Of the 27 work sites proposed as part of the 2022 FRGP MND project, none are located in potential suitable habitat for the Willow Flycatcher (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 September 15.

2. Harvest of willow branches at any site with potential habitat for the 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. CDFW 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 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 southwestern willow flycatcher or their habitat, then activity at that work shall be discontinued.

Pacific Lamprey (Entosphenus tridentatus)

Eleven (11) of the 27 work sites proposed as part of the 2022 FRGP MND project (1728012- Little North Fork Big River Instream Habitat Enhancement, 1727774- Bradley (Ringer) Cachagua Creek Fish Passage Project, 1727957- Rail Dump Gulch Fish Passage and Habitat Improvement Design Project, 1727761- SF Cottaneva Watershed Habitat Enhancement, 1727975- Upper South Fork Little River Instream Habitat Improvement Project, 1727865- Cider Mill Creek (Lindsay Creek tributary) Coho Barrier Removal and Habitat Enhancement Design Project, 1728048- Willits Creek Instream Restoration Project, 1727754- Durphy Creek Fish Passage Design Project, 1727751- Little Case Two Barrier Removal Project, 1728178- Maria Ygnacio Creek Fish Passage Project Implementation - Patterson Ave Bridge, 1727893- Lindsay Creek Coho Barrier Removal Project) ~~all~~ are located in potential suitable habitat for the Pacific lamprey (Appendix A) While most the activities proposed will require instream in their habitat the following documents by the Pacific Lamprey Conservation Initiative and their minimization measures shall be implemented and followed by project proponents in order to avoid any potential for negative impacts to the species:

1. Best Management Guidelines for Native Lampreys During In-water Work Living document, Original Version 1.0 (May 2020)

2. Practical guidelines for Incorporating Adult Pacific Lamprey at Fishways (June 2017)

3. Best Management Practices to Minimize Adverse Effects to Pacific Lamprey (April 2010)

Riparian and re-vegetation

1. 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. 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 Volume II, Part XI of the *California Salmonid Stream Habitat Restoration Manual*.

3. Disturbed and compacted areas shall be re-vegetated with native plant species. The species shall be comprised of a diverse community structure that mimics the native riparian corridor. Planting ratio shall be 2:1 (two plants to every one removed).

4. Unless otherwise specified, the standard for success is 80 percent survival of plantings or 80 percent ground cover for broadcast planting of seed after a period of three years.

5. To 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 possible, invasive exotic plants at the work site shall be removed. Areas disturbed by project activities will be restored and planted with native plants.

6. Mulching and seeding shall be done 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.

7. If erosion control mats are used in re-vegetation, they shall be made of material that decomposes. Erosion control mats made of nylon plastic, or other non-decomposing material shall not be used.

8. CDFW shall retain as many trees and brush as feasible, emphasizing shade producing and bank stabilizing trees and brush to minimize impacts to the riparian corridor.

9. If riparian vegetation is to be removed with chainsaws, the grantee shall use saws that operate with vegetable-based bar oil when possible.

10. Disturbed and decompacted areas shall be re-vegetated with native species specific to the project location that comprise a diverse community of woody and herbaceous species.

V.CULTURAL RESOURCES

Ground-disturbance will be required to implement the project at certain locations that, despite efforts to identify cultural resources, have the potential to affect these resources. The procedure for a programmatic evaluation of archeological resources is provided in Appendix E. Potential for inadvertent impacts will be avoided through implementation of the following mitigation measures:

1. The Grantee shall contract with an archaeologist(s) or other historic preservation professional that meets The Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61, and 48 FR 44716) to complete cultural resource surveys at any sites with the potential to be impacted prior to any ground disturbing activities. This work may be augmented with the aid of a Native American cultural resources specialist that is culturally affiliated with the project area. Cultural and paleontological resource surveys shall be conducted using standard protocols to meet CEQA Guideline requirements. Paleontological survey protocols are listed in Appendix D.

2. If cultural and/or paleontological resource sites are identified at a project location, CDFW 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 cultural and/or paleontological resource professionals during construction to assure that cultural resources are not disturbed, c) redesign of proposed work to avoid disturbance of cultural resources.

3. The Grantee shall report any previously unknown historic, archeological, and paleontological remains discovered at a project location to CDFW for reporting to the USACE as required in the FRGP Regional General Permits.

4. CDFW shall ensure that the grantee or responsible party is aware of these site-specific conditions, and shall inspect the work site before, during, and after completion of the action item.

5. 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 an archaeologist that meets the Secretary of the Interior's Standards and Guidelines suited to the discovery, has evaluated the materials, and offered recommendations for further action. Cultural materials not associated with human interments shall be documented and curated in place.

6. Inadvertent Discovery of Human Remains - If human remains are discovered during project construction, work shall 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, § 7050.5). The county coroner shall 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 Native American heritage Commission (NAHC) (Public Resources Code, § 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work shall 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, § 5097.98.

7. 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, and a reasonable exclusion zone shall be cordoned off.

    c. The CDFW Grant Manager and property owner shall be notified and the CDFW Grant Manager shall contact the county coroner.

    d. The Grantee shall retain the services of a professional archaeologist to immediately examine the finds 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, as determined by the CDFW.

    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 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. The MLD may, with the permission of the landowner, or their representative, inspect the site of the discovered Native American remains and may recommend to the landowner and CDFW Grant Manager means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment with 48 hours of being granted access to the site (Public Resource Code, § 5097.98(a)). The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials.

    k. 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 in accordance with Public Resource Code, § 5097.98(e).

l. Following final treatment measures, the CDFW 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). CDFW shall ensure that report copies are distributed to the appropriate California Historic Information Center, NAHC, and MLD.

m. Pursuant to RGP78 and in accordance with 36 C.F.R. § 800.13, in the event of any discovery during construction of human remains, archeological deposits, or any other type of historic property, the CDFW shall notify the USACE archeological staff (Steve Dibble at 213-452-3849 or John Killeen at 213-452-3861) within 24 hours. Construction work shall be suspended immediately and shall not resume until USACE re-authorizes project construction.

n. If it becomes impossible to implement the project at a work site without disturbing cultural or paleontological resources, then activity at that work site shall be discontinued.

VI. ENERGY

No specific mitigation measures are required to protect energy.

VII. 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. CDFW 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, shall be reviewed, and approved by NOAA (and/or CDFW) engineers prior to onset 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.

2. CDFW shall implement the following measures to minimize harm to listed salmonids resulting from road decommissioning activities:

    a. Woody debris will be concentrated on finished slopes of decommissioned roads adjacent to stream crossings to reduce surface erosion; contribute to amounts of organic debris in the soil; encourage fungi; provide immediate cover for small terrestrial species; and to speed recovery of native forest vegetation.

    b. Work sites shall be winterized at the end of each day to minimize the eroding of unfinished excavations when significant rains are forecasted. Winterization procedures shall be supervised by a professional trained in erosion control techniques and involve taking necessary measures to minimize erosion on unfinished work surfaces. Winterization includes the following: smoothing unfinished surfaces to allow water to freely drain across them without concentration or ponding; compacting unfinished surfaces where concentrated runoff may flow with an excavator bucket or similar tool, to minimize surface 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 leaves the work site.

3. Effective erosion control measures shall be in-place at all times during construction. Construction within the 5-year floodplain shall not begin until all temporary erosion controls (i.e., straw bales or silt fences that are effectively keyed-in) are in place down slope or down stream 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.

4. An adequate supply of erosion control materials (gravel, straw bales, shovels, etc.) shall be maintained onsite to facilitate a quick response to unanticipated storm events or emergencies.

5. Use erosion controls that protect and stabilize stockpiles and exposed soils to prevent movement of materials. Use devices such as plastic sheeting held down with rocks or sandbags over stockpiles, silt fences, or berms of hay bales, to minimize movement of exposed or stockpiled soils.

6. When needed, instream grade control structures shall be utilized to control channel scour, sediment routing, and headwall cutting.

7. Temporary stockpiling of excavated material shall be minimized. However, excavated material shall be stockpiled in areas where it cannot enter the stream channel. Available sites at or near the project location shall be determined prior to the start of construction. If feasible, topsoil shall be conserved for reuse at project location or use in other areas.

8. CDFW will limit the amount of HI projects that are greater than or equal to 50 acres in size. Projects of these sizes will be limited to 1-2 per year HUC-10 size. No more than 1 small dam or project 50 acres or greater would be allowed per year at a HUC-10 watershed scale of 100 square miles or less. No more than 2 small dam projects or projects that are 50 acres or greater would be allowed per year in HUC-10s that are 101 square miles or more. These limits only apply to the instream construction phase of the projects where the mobilization of sediment is most likely to occur and does not pertain to riparian activities of the life of the active grant project. In addition, all projects during their construction phase under this permit will be spaced at least 1,500 lineal feet apart in fish bearing streams and 500 lineal feet apart in non-fish bearing streams to avoid compounding mobilization of sediment during construction activities.

9. Upon project completion, all exposed soil present in and around the project site shall be stabilized within seven days. 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.

10. Soil compaction shall be minimized by using equipment with a greater reach or that exerts less pressure per square inch on the ground, resulting in less overall area disturbed and less compaction of disturbed areas.

11. Disturbed soils shall be decompacted at project completion as heavy equipment exits the construction area.

12. At the completion of the project, soil compaction that is not an integral element of the design of a crossing should be de-compacted.

VIII. GREENHOUSE GAS EMISSIONS

No specific mitigation measures are required. Re-vegetation practices will help offset the short term, less than significant, greenhouse gas emissions.

IX. 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. 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.

2. 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.

3. All equipment operators shall be trained in the procedures to be taken should an accident occur. Prior to the onset of work, CDFW shall ensure that the grantee has prepared a 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. Operators shall have spill clean-up supplies on site and be knowledgeable in their proper deployment.

4. 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. In

an event of a spill, work shall cease immediately. 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 CDFW immediately after any spill occurs and shall consult with the CDFW regarding clean-up procedures.

5. All fueling and maintenance of vehicles and other equipment and staging areas shall occur at least 65 feet (20 meters) from any riparian habitat or water body and place fuel absorbent mats under pump while fueling. The USACE and the CDFW will ensure contamination of habitat does not occur during such operations. Prior to the onset of work, the CDFW 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.

6. 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.

7. Petroleum products, fresh cement, and other deleterious materials shall not enter the stream channel.

8. 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.

9. No debris, soil, silt, sand, bark, slash, spoils, sawdust, rubbish, cement, 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.

10. All internal combustion engines shall be fitted with spark arrestors.

11. The grantee shall have an appropriate fire extinguisher(s) and firefighting tools (shovel and axe at a minimum) present at all times when there is a risk of fire.

12. Vehicles shall not be parked in tall grass or any other location where heat from the exhaust system could ignite a fire.

13. The grantee shall follow any additional rules the landowner has for fire prevention.

14. 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.

    a. 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: any gravel imported from offsite shall be from a source known to not contain historic hydraulic gold mine tailings, dredger tailings, or mercury mine waste or tailings.

X. HYDROLOGY AND WATER QUALITY

1. Instream work shall be conducted during the period of lowest flow.
2. Before work is allowed to proceed at a site, CDFW shall inspect the site to assure that turbidity control measures are in place.
3. The wastewater from construction area shall be discharged to an upland location where it will not drain sediment-laden water back to stream channel.
4. For projects within the USACE San Francisco District, if instream work liberates a sediment wedge, 80% of the wedge shall be removed before the sediment is liberated. The required amount can be modified if NOAA or CDFW hydrologists or hydraulic engineers agree that removing a smaller amount will better protect and enhance fish habitat in the area of the project (e.g., leaving some sediment to replenish areas downstream that lack suitable substrate volume or quality).
5. To control erosion during and after project implementation, CDFW shall implement best management practices, as identified by the appropriate Regional Water Quality Control Board.
6. Sediment-laden water caused 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.
7. If CDFW 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 CDFW approved sediment control devices are installed and/or abatement procedures are implemented.

8. Poured concrete shall be excluded from the wetted channel for a period of two weeks after it is poured. During that time, the poured concrete shall be kept moist, and runoff shall not be allowed to enter flowing stream. Commercial sealants shall be applied to the poured concrete surface where concrete cannot be excluded from the stream flow for two weeks. If sealant is used, water shall be excluded from the site until the sealant is dry.
9. Prior to use, all equipment shall be cleaned to remove external oil, grease, dirt, or mud. Wash sites shall be located in upland locations so that dirty wash water does not flow into the stream channel or adjacent wetlands.
10. Water conservation projects that include water storage tanks and a Forbearance Agreement, for the purpose of storing winter water for summer use, require registration of water use pursuant to the Water Code §1228.3, and require consultation with CDFW and compliance with all lawful conditions required by CDFW. Diversions to fill storage facilities during the winter and spring months shall be made pursuant to a Small Domestic Use Appropriation (SDU) filed with the State Water Resources Control Board (SWRCB). CDFW will review the appropriation of water to ensure fish and wildlife resources are protected. The following conditions shall then be applied:
    a. Seasonal Restriction: No pumping is allowed when stream flow drops below 0.7 cubic feet per second (cfs) except as permitted by CDFW in the event of an emergency.
    b. Bypass Flows: Pumping withdrawal rates shall not exceed 5% of stream flow. If CDFW determines that the streamflow monitoring data indicate that fisheries are not adequately protected, then the bypass flows are subject to revision by CDFW.
    c. Cumulative Impacts: Pumping days shall be assigned to participating landowner(s) when stream flows drop below 1.0 cfs to prevent cumulative impacts from multiple pumps operating simultaneously.
    d. Pump Intake Screens: Pump intake screens shall comply with the “2000 California Department of Fish and Game Screening Criteria” * for California streams that provide habitat for juvenile Coho Salmon, Chinook Salmon, and steelhead trout. The landowner shall be responsible for annual inspection and maintenance of screens. Additionally, the landowner shall be responsible for cleaning screens as needed to keep them free of debris and ensure that screen function complies with the criteria specifications.
    e. These conditions do not authorize incidental take of any species, removal of riparian vegetation, or bed, bank, or channel alteration.
    f. CDFW shall be granted access to inspect the pump system. Access is limited to the portion of the landowner's real property where the pump is located and those additional portions of the real property which must be traversed to gain access to the pump site. Landowners shall be given reasonable notice and any

necessary arrangements will be made prior to requested access including a mutually-agreed-upon time and date. Notice may be given by mail or by telephone with the landowner or an authorized representative of the landowner. The landowner shall agree to cooperate in good faith to accommodate CDFW access.

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*Fish Screening Criteria are from "State of California Resources Agency Department of Fish and Game Fish Screening Criteria, June 19, 2000." The "approach velocity" shall be calculated according to Section 2C "Screens which are not Self Cleaning."

XI. LAND USE AND PLANNING

No specific mitigation measures are required for land use and planning

XII. MINERAL RESOURCES

No specific mitigation measures are required for mineral resources.

XIII. 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). No other specific mitigation measures are required for noise.

XIV. POPULATION AND HOUSING

No specific mitigation measures are required for population and housing.

XV. PUBLIC SERVICES

No specific mitigation measures are required for public services.

XVI. RECREATION

No specific mitigation measures are required for recreation.

XVII. TRANSPORTATION

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.

XVIII. TRIBAL CULTURAL RESOURCES

Ground-disturbance will be required to implement the project at certain locations that, despite efforts to identify cultural resources, have the potential to affect these resources. The procedure for a programmatic evaluation of archeological resources is provided in Appendix E. Potential for inadvertent impacts will be avoided through implementation of the following mitigation measures:

1. The Grantee shall contract with an archaeologist(s) or other historic preservation professional that meets The Secretary of the Interior's Professional Qualifications Standards (36 CFR Part 61, and 48 FR 44716) to complete cultural resource surveys at any sites with the potential to be impacted prior to any ground disturbing activities. This work may be augmented with the aid of a Native American cultural resources specialist that is culturally affiliated with the project area. Cultural resource surveys shall be conducted using standard protocols to meet CEQA Guideline requirements.

2. If cultural resource sites are identified at a project location, CDFW 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 cultural resource professionals during construction to assure that cultural resources are not disturbed, c) redesign of proposed work to avoid disturbance of cultural resources.

3. The Grantee shall report any previously unknown historic, archeological, and paleontological remains discovered at a project location to CDFW for reporting to the USACE as required in the RGP.

4. CDFW shall ensure that the grantee or responsible party is aware of these site-specific conditions, and shall inspect the work site before, during, and after completion of the action item.

5. 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 an archaeologist that meets the Secretary of the Interior's Standards and Guidelines suited to the discovery, has evaluated the materials, and offered recommendations for further action. Cultural materials not associated with human interments shall be documented and curated in place.

6. Inadvertent Discovery of Human Remains - If human remains are discovered during project construction, work shall 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, § 7050.5). The county coroner shall 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 Native American heritage Commission (NAHC) (Public Resources Code, § 5097). The coroner will contact the NAHC. The descendants or most likely descendants of the deceased will be contacted, and work shall 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, § 5097.98.

7. 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, and a reasonable exclusion zone shall be cordoned off.

    c. The CDFW Grant Manager and property owner shall be notified and the CDFW Grant Manager shall contact the county coroner.

    d. The Grantee shall retain the services of a professional archaeologist to immediately examine the finds 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, as determined by the CDFW.

    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 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. The MLD may, with the permission of the landowner, or their representative, inspect the site of the discovered Native American remains and may recommend to the landowner and CDFW Grant Manager means for treating or disposing, with appropriate dignity, the human remains and any associated grave goods. The descendants shall complete their inspection and make recommendations or preferences for treatment with 48 hours of being granted access to the site (Public Resource Code, § 5097.98(a)). The recommendation may include the scientific removal and non-destructive or destructive analysis of human remains and items associated with Native American burials.

k. 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 in accordance with Public Resource Code, § 5097.98(e).

l. Following final treatment measures, the CDFW 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). CDFW shall ensure that report copies are distributed to the appropriate California Historic Information Center, NAHC, and MLD.

8. Pursuant to RGP78 and in accordance with 36 C.F.R. § 800.13, in the event of any discovery during construction of human remains, archeological deposits, or any other type of historic property, the CDFW shall notify the appropriate USACE archeological staff within 24 hours. Construction work shall be suspended immediately and shall not resume until USACE re-authorizes project construction.

9. If it becomes impossible to implement the project at a work site without disturbing cultural resources, then activity at that work site shall be discontinued.

XIX. UTILITIES AND SERVICE SYSTEMS

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

XX. WILDFIRE

No specific mitigation measures are required for wildfire due to majority of project activities being conducted within instream and riparian habitats. However, the projects will still

implement minimization measures as an added safety precaution to further decrease any wildfire risks.

1. Project proponents using mechanized hand tools (e.g., chainsaws) shall have federal- and/or state-approved spark arrestors.

2. Project proponents shall require tree cutting crews to carry one fire extinguisher per chainsaw.

3. Project proponents shall require each vehicle to be equipped with one long-handled shovel and one axe or Pulaski.

4. Parking areas shall be designated and kept free of dry vegetation both before and during construction. Where heavy equipment or generators are used, fire extinguishers shall be made available on, or near such equipment.

5. Smoking shall only be permitted in designated areas that are barren or cleared to mineral soil at least three feet in diameter.

SECTION 2: MONITORING AND REPORTING

CDFW shall implement the following measures to ensure that individual restoration projects authorized annually through the RGP (RGP-12 and RGP-78) 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. CDFW shall provide USACE, NOAA, 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. CDFW Grant Managers shall 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. CDFW shall perform implementation monitoring immediately after the restoration activity is completed to ensure that projects are completed as designed.

4. CDFW shall perform effectiveness/validation monitoring on at least 10 percent of restoration projects funded annually. A random sample, stratified by project type and region, shall be chosen from the pool of new restoration projects approved for funding each year. Pre-treatment monitoring shall be performed for newly selected projects, and post-treatment monitoring will be performed within three years following project completion.

5. Current monitoring forms and instructions used by CDFW for the implementation monitoring and effectiveness monitoring are found in the *California Salmonid Stream Habitat Restoration Manual*. CDFW shall submit a copy of the annual report, no later than March 1 annually to NOAA.

6. The CDFW annual report to NOAA shall include 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, 5th field HUC and affected species and evolutionary significant unit (ESU)/Distinct Population Segment (DPS). The report shall include the following project-specific summaries, stratified at the individual project, 5th field HUC, and ESU level:

    a. A summary detailing fishes relocation activities; including the number and species of fish relocated and the number and species injured or killed. Any capture, injury, or mortality of adult salmonids or half-pounder steelhead shall be noted in the monitoring data and report. Any injuries or mortality from a fish relocation site that exceeds three percent of the affected listed species shall have an explanation describing why.

    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 of restored access to unoccupied salmonid habitat.

    e. The distance (miles) of road decommissioned.

    f. The distance (feet) of aquatic habitat disturbed at each project site.

7. CDFW shall incorporate project data into a format compatible with the CDFW/NOAA/Pacific Fisheries Management Council Geographic Information System (GIS) database, allowing scanned project-specific reports and documents to be linked graphically within the GIS database.

8. For counties within the jurisdiction of RGP-12, CDFW shall submit an annual report due by January 31 of each year of implemented projects to the U.S. Fish and Wildlife Service Office, 2800 Cottage Way, Sacramento, California 95825. The report must include:

    a. A table documenting the number of California red-legged frogs killed, injured, and handled during each FRGP project that utilizes the USACE authorization.

    b. A summary of how the terms and conditions of the biological opinions (file no. 08ESMF00-2016-F-0874) and the protective measures by the USACE and CDFW worked.

c. Any suggestions of how the protective measures could be revised to improve conservation of this species while facilitating compliance with the Endangered Species Act of 1973, as amended (16 U.S.C. 1531 *et seq.*) (Act).

9. For Santa Barbara County, CDFW shall submit an annual report due by February 28 (RGP-78) of each year of implemented projects to the U.S. Fish and Wildlife Service Office, 2493 Portola Road, Suite B, Ventura, California 93003. The report must include:

    a. A table documenting the number of California red-legged frogs killed, injured, and handled during each FRGP project that utilizes the USACE authorization.

    b. A summary of how the terms and conditions of the biological opinions (file no. 08EVEN00-2016-F-0093 and 2008-F-0441) and the protective measures by the USACE and CDFW worked.

    c. Any suggestions of how these protective measures could be revised to improve conservation of this species while facilitating compliance with the Act.

10. CDFW shall submit annual reports on July 1 of each year to the 401 Program Managers of the State Water Resources Control Board and the appropriate Regional Water Quality Control Boards documenting work undertaken during the preceding year and identifying for all such work:

    a. Project name and grant number.

    b. Project purpose and brief description.

    c. Name(s) of affected water body(ies).

    d. Latitude/longitude in decimal degrees to at least four decimals.

    e. For ongoing projects:

        i. Project progress and schedule including initial ground disturbance, site clearing and grubbing, road construction, site construction, and the implementation status of construction storm water best management practices (BMPs).

            1. If construction has not started, provide estimated start date and reasons for delay.

        ii. Map showing general project progress.

        iii. Mitigation for temporary impact status

1. Planned date of initiation and map showing locations of mitigation for
temporary impacts to waters of the state and all upland areas of temporary disturbance which could result in a discharge to waters of
the state.

2. If mitigation for temporary impacts has already commenced, provide
a map and information concerning attainment of performance standards contained in the restoration plan.

iv. Restoration and enhancement status

1. Planned date of initiation of vegetation installation.

2. If installation is in progress, a map of what has been completed to date.

3. If the restoration site has been installed, provide a final map and information concerning attainment of performance standards contained in the individual project specifications.

f. For projects completed during the year:

i. The type(s) of receiving (affected) water body(ies) (e.g., at minimum: river/streambed, lake/reservoir, ocean/estuary/bay, riparian area, or wetland type); and

ii. The total quantity in acres of each type of receiving water body temporarily impacted, and permanently impacted.

iii. Pre- and post-photo documentation of all restoration sites, including revegetation sites.

iv. A report establishing that the performance standards outlined in the individual project specifications have been met.

v. Final map of all restoration areas.

vi. A report establishing that the performance standards outlined in the restoration plan have been met for each project site upland areas and/or waters of temporary disturbance.

g. 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.

h. Actual construction start and end-dates.

i. Whether the project is on-going or completed.

j. Copies of reports documenting the following monitoring activities:

   i. Post-project monitoring immediately after the activity is completed to ensure that projects are completed as designed; and

   ii. Effectiveness monitoring on a random subset of 10% of the projects, within one to three years after project completion.

11. The Grantee shall notify CDFW so it can report any previously unknown historic archeological and paleontological remains discovered at a site to the USACE as required in the RGP. This information will also be provided to the Native American Heritage Commission, 915 Capitol Mall, Sacramento, CA 95814.

12. Pursuant to RGP-78, CDFW shall monitor and maintain the structures or work conducted at a given site for at least three years after construction to ensure the integrity of the structure and successful growth of the planted vegetation.

13. CDFW shall allow representatives of USACE to inspect the authorized activities at any time deemed necessary to ensure that they are being or have been accomplished with the terms and conditions of the RGP.

14. Pursuant to RGP-78, CDFW shall notify the USACE annually of the year's projects. If the USACE has not issued a Notice to Proceed (NTP) or identified any issues (verbal or written) within 60 days of receive the notifications, CDFW can proceed with project. The NTP may include site specific special conditions to avoid and minimize adverse impacts to waters of the U.S and shall be valid for the duration of the RGP78 unless there is a change in the project's scope of work.

Table 1 FRGP's Other Approved Restoration Manuals

Implementation Activity (FRGP Project Types)	Oregon aquatic habitat: restoration and enhancement guide. The Oregon Plan for salmon and watersheds. 1999. https://digital.osl.stat e.or.us/islandora/obje ct/osl%3A16552	Stream Simulation: An Ecological Approach to Providing Passage for Aquatic Organisms at Road- Stream Crossings. United Stated Forest Service. 2008. https://www.fs.fed.us/ eng/pubs/pdf/Stream Simulation/hi_res/%20FullDoc.pdf	Guide to Placement of Wood, Boulders and Gravel for Habitat Restoration. State of Oregon. 2010. https://digital.osl.stat e.or.us/islandora/obje ct/osl%3A14170	Integrated streambank protection guidelines. Washington State Aquatic Habitat Guidelines Program. 2003. https://wdfw.wa.gov/ publications/00046	Stream habitat restoration guidelines. Washington State Aquatic Habitat Guidelines Program. 2012. https://wdfw.wa.gov/ publications/01374	California Riparian Habitat Restoration Handbook. River Partners. 2009. https://water.ca.gov/ LegacyFiles/urbanstre ams/docs/ca_riparia n_handbook .pdf	Guidance for stream restoration. Steven E. Yochum. United States Department of Agriculture. 2018. https://www.fs.fed.us/ biology/nsaec/assets /yochumusfs-nsaec-tn102-4guidancestreamr estoration.pdf	The Beaver Restoration Guidebook: Working with Beaver to Restore Streams, Wetlands, and Floodplains. M.m. Pollock, G. Lewallen, K. Woodruff, C.E. Jordan and J.M. Castro (Editors). United States Fish and Wildlife Service 2015. http://www.fws.gov/o regonfwo/ToolsForLan downers/RiverScienc e/Beaver.a	Low-tech Process-based Restoration of Riverscapes Desian Manual. Joseph M. Wheton, Stephen N. Bennett, Nicolaas Bouwes, Jeremy M Maestas, and Scott M. Shahverdian, Editors. Utah State Restoration Consortium. 2019. http://lowtechpbr.rest oration.usu.edu/
FP -Fish Passage at Stream Crossing	N A	Whole Document	N A	N A	N A	N A	N A	N A	N A
HB -Instream Barrier Mod. for F. Passage	N A	N A	N A	Chapter 6*	Chapter 5*	N A	Chapter 12*	N A	Whole Document
HI -Instream Habitat Restoration	N A	N A	Whole Document	Chapter 6*	Chapter 5*	N A	Chapter 12*	Section II*	Whole Document
HR -Riparian Restoration	N A	N A	N A	Chapter 6*	Chapter 5*	Whole Document	N A	N A	Whole Document
HS -Instream Bank Stabilization	N A	N A	N A	Chapter 6*	Chapter 5*	N A	N A	N A	N A
HU -Watershed Restoration (Upslope)	N A	N A	N A	N A	N A	N A	N A	N A	N A
PD -Project Design (100% design)	Whole Document	Whole Document	Whole Document	Chapter 6*	Chapter 5*	Whole Document	Chapter 12*	Section II*	Whole Document
RE -Cooperative Rearing	N A	N A	N A	N A	N A	N A	N A	N A	N A
SC -Fish Screen of Diversions	N A	N A	N A	N A	N A	N A	Chapter 12*	N A	N A
WC -Water Conservation Measures	N A	N A	N A	N A	N A	N A	N A	N A	N A

Excluded Sections	NA	NA	NA	*Excluding Structural Techniques 6-67 to 6-77 Riprap, and 6-89 to 6-98 Roughened-Rock Toes, 6-99 to 6-106 Log Cribwalls and 6-107 to 6-119 Manufactured Retention Systems.	*Excluding Technique9-Beaver Re-Introduction, Technique 10-Fish Passage Restoration, Technique 11-Salmonid Spawning Gravel Cleaning and Placement, Technique 12-Bank Protection Construction, Modification and Removal, Technique 13-Instream Sediment Detention Basins.		*Excluding 12.8.8 Rock Walls, 12.8.9Riprap	*Excluding Section II: Chapter 5 Relocating Beaver, Chapter 7 Urban Beaver Population Management, Chapter 8 Managing Habitat for Beavers, Chapter 9 Non-lethal Options for Mitigating the Unwanted Effects of Beavers	NA

Updated 5/4/2022

Protocols for Surveying and Evaluating Impacts to Special Status Native Plant Populations and Sensitive Natural Communities

STATE OF CALIFORNIA
CALIFORNIA NATURAL RESOURCES AGENCY
DEPARTMENT OF FISH AND WILDLIFE

DATE: March 20, 2018

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1. INTRODUCTION AND PURPOSE

The conservation of special status native plants and their habitats, as well as sensitive natural communities, is integral to maintaining biological diversity. The purpose of these protocols is to facilitate a consistent and systematic approach to botanical field surveys and assessments of special status plants and sensitive natural communities so that reliable information is produced and the potential for locating special status plants and sensitive natural communities is maximized. These protocols may also help those who prepare and review environmental documents determine when botanical field surveys are needed, how botanical field surveys may be conducted, what information to include in a botanical survey report, and what qualifications to consider for botanical field surveyors. These protocols are meant to help people meet California Environmental Quality Act (CEQA)[1] requirements for adequate disclosure of potential impacts to plants and sensitive natural communities. These protocols may be used in conjunction with protocols formulated by other agencies, for example, those developed by the U.S. Army Corps of Engineers to delineate jurisdictional wetlands[2] or by the U.S. Fish and Wildlife Service to survey for the presence of special status plants[3].

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1 Available at: http://resources.ca.gov/ceqa
2 Available at: http://www.usace.army.mil/Missions/CivilWorks/RegulatoryProgramandPermits/techbio.aspx
3 U.S. Fish and Wildlife Service Survey Guidelines: https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/

Department of Fish and Wildlife Trustee and Responsible Agency Mission

The mission of the California Department of Fish and Wildlife (CDFW) is to manage California's diverse wildlife and native plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. CDFW has jurisdiction over the conservation, protection, and management of wildlife, native plants, and habitat necessary to maintain biologically sustainable populations (Fish & G. Code, § 1802). CDFW, as trustee agency under CEQA Guidelines section 15386, provides expertise in reviewing and commenting on environmental documents and provides protocols regarding potential negative impacts to those resources held in trust for the people of California.

Certain species are in danger of extinction because their habitats have been severely reduced in acreage, are threatened with destruction or adverse modification, or because of a combination of these and other factors. The California Endangered Species Act (CESA) and Native Plant Protection Act (NPPA) provide additional protections for such species, including take prohibitions (Fish & G. Code, § 2050 *et seq.*; Fish & G. Code, § 1908). As a responsible agency, CDFW has the authority to issue permits for the take of species listed under CESA and NPPA if the take is incidental to an otherwise lawful activity; CDFW has determined that the impacts of the take have been minimized and fully mitigated; and the take would not jeopardize the continued existence of the species (Fish & G. Code, § 2081, subd. (b); Cal. Code Regs., tit. 14 § 786.9, subd. (b)). Botanical field surveys are one of the preliminary steps to detect special status plant species and sensitive natural communities that may be impacted by a project.

Definitions

Botanical field surveys provide information used to determine the potential environmental effects of proposed projects on special status plants and sensitive natural communities as required by law (e.g., CEQA, CESA, and federal Endangered Species Act (ESA)).

Special status plants, for the purposes of this document, include all plants that meet one or more of the following criteria:

- Listed or proposed for listing as threatened or endangered under the ESA or candidates for possible future listing as threatened or endangered under the ESA (50 C.F.R., § 17.12).
- Listed or candidates for listing by the State of California as threatened or endangered under CESA (Fish & G. Code, § 2050 et seq.)[4]. In CESA, “endangered species” means a native species or subspecies of plant which is in serious danger of becoming extinct throughout all, or a significant portion, of its range due to one or more causes, including loss of habitat, change in habitat, overexploitation, predation, competition, or disease (Fish & G. Code, § 2062). “Threatened species” means a native species or subspecies of plant that,

[4] Refer to current online published lists available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109390&inline

although not presently threatened with extinction, is likely to become an endangered species in the foreseeable future in the absence of the special protection and management efforts required by CESA (Fish & G. Code, § 2067). "Candidate species" means a native species or subspecies of plant that the California Fish and Game Commission has formally noticed as being under review by CDFW for addition to either the list of endangered species or the list of threatened species, or a species for which the California Fish and Game Commission has published a notice of proposed regulation to add the species to either list (Fish & G. Code, § 2068).

- Listed as rare under the California Native Plant Protection Act (Fish & G. Code, § 1900 et seq.). 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 (Fish & G. Code, § 1901).
- Meet the definition of rare or endangered under CEQA Guidelines section 15380, subdivisions (b) and (d), including:
    - Plants considered by CDFW to be "rare, threatened or endangered in California." This includes plants tracked by the California Natural Diversity Database (CNDDB) and the California Native Plant Society (CNPS) as California Rare Plant Rank (CRPR) 1 or 2[5];
    - Plants that may warrant consideration on the basis of declining trends, recent taxonomic information, or other factors. This may include plants tracked by the CNDDB and CNPS as CRPR 3 or 4[6].
- Considered locally significant plants, that is, plants that are not rare from a statewide perspective but are rare or uncommon in a local context such as within a county or region (CEQA Guidelines, § 15125, subd. (c)), or as designated in local or regional plans, policies, or ordinances (CEQA Guidelines, Appendix G). Examples include plants that are at the outer limits of their known geographic range or plants occurring on an atypical soil type.

Sensitive natural communities are communities that are of limited distribution statewide or within a county or region and are often vulnerable to environmental effects of projects. These communities may or may not contain special status plants or their

[5] See CNDDB's Special Vascular Plants, Bryophytes, and Lichens List for plant taxa with a CRPR of 1 or 2: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline

[6] CRPR 3 plants (plants about which more information is needed) and CRPR 4 plants (plants of limited distribution) may warrant consideration under CEQA Guidelines section 15380. Impacts to CRPR 3 plants may warrant consideration under CEQA if sufficient information is available to assess potential impacts to such plants. Impacts to CRPR 4 plants may warrant consideration under CEQA if cumulative impacts to such plants are significant enough to affect their overall rarity. Data on CRPR 3 and 4 plants should be submitted to CNDDB. Such data aids in determining and revising the CRPR of plants. See CNDDB's Special Vascular Plants, Bryophytes, and Lichens List for plant taxa with a CRPR of 3 or 4: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=109383&inline

habitat. CDFW's *List of California Terrestrial Natural Communities*[7] is based on the best available information, and indicates which natural communities are considered sensitive at the current stage of the California vegetation classification effort. See the Vegetation Classification and Mapping Program (VegCAMP) website for additional information on natural communities and vegetation classification[8].

2. BOTANICAL FIELD SURVEYS

Evaluate the need for botanical field surveys prior to the commencement of any activities that may modify vegetation, such as clearing, mowing, or ground-breaking activities. It is appropriate to conduct a botanical field survey when:

- Natural (or naturalized) vegetation occurs in an area that may be directly or indirectly affected by a project (project area), and it is unknown whether or not special status plants or sensitive natural communities occur in the project area;
- Special status plants or sensitive natural communities have historically been identified in a project area; or
- Special status plants or sensitive natural communities occur in areas with similar physical and biological properties as a project area.

Survey Objectives

Conduct botanical field surveys in a manner which maximizes the likelihood of locating special status plants and sensitive natural communities that may be present. Botanical field surveys should be floristic in nature, meaning that every plant taxon that occurs in the project area is identified to the taxonomic level necessary to determine rarity and listing status. "Focused surveys" that are limited to habitats known to support special status plants or that are restricted to lists of likely potential special status plants are not considered floristic in nature and are not adequate to identify all plants in a project area to the level necessary to determine if they are special status plants.

For each botanical field survey conducted, include a list of all plants and natural communities detected in the project area. More than one field visit is usually necessary to adequately capture the floristic diversity of a project area. An indication of the prevalence (estimated total numbers, percent cover, density, etc.) of the special status plants and sensitive natural communities in the project area is also useful to assess the significance of a particular plant population or natural community.

Survey Preparation

Before botanical field surveys are conducted, the botanical field surveyors should compile relevant botanical information in the general project area to provide a regional

[7] Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities#natural%20communities%20lists

[8] Available at: https://www.wildlife.ca.gov/Data/VegCAMP

context. Consult the CNDDB[9] and BIOS[10] for known occurrences of special status plants and sensitive natural communities in the project area prior to botanical field surveys. Generally, identify vegetation and habitat types potentially occurring in the project area based on biological and physical properties (e.g. soils) of the project area and surrounding ecoregion[11]. Then, develop a list of special status plants and sensitive natural communities with the potential to occur within the vegetation and habitat types identified. The list of special status plants with the potential to occur in the project area can be created with the help of the CNDDB QuickView Tool[12] which allows the user to generate lists of CNDDB-tracked elements that occur within a particular U.S. Geological Survey 7.5' topographic quad, surrounding quads, and counties within California. Resulting lists should only be used as a tool to facilitate the use of reference sites, with the understanding that special status plants and sensitive natural communities in a project area may not be limited to those on the list. Botanical field surveys and subsequent reporting should be comprehensive and floristic in nature and not restricted to or focused only on a list. Include in the botanical survey report the list of potential special status plants and sensitive natural communities that was created, and the list of references used to compile the background botanical information for the project area.

Survey Extent

Botanical field surveys should be comprehensive over the entire project area, including areas that will be directly or indirectly impacted by the project. Adjoining properties should also be surveyed where direct or indirect project effects could occur, such as those from fuel modification, herbicide application, invasive species, and altered hydrology. Surveys restricted to known locations of special status plants may not identify all special status plants and sensitive natural communities present, and therefore do not provide a sufficient level of information to determine potential impacts.

Field Survey Method

Conduct botanical field surveys using systematic field techniques in all habitats of the project area to ensure thorough coverage. The level of effort required per given area and habitat is dependent upon the vegetation and its overall diversity and structural complexity, which determines the distance at which plants can be identified. Conduct botanical field surveys by traversing the entire project area to ensure thorough coverage, documenting all plant taxa observed. Parallel survey transects may be necessary to ensure thorough survey coverage in some habitats. The level of effort should be sufficient to provide comprehensive reporting. Additional time should be allocated for plant identification in the field.

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9 Available at: https://www.wildlife.ca.gov/Data/CNDDB

10 Available at: https://www.wildlife.ca.gov/Data/BIOS

11 Ecological Subregions of the United States, available at: http://www.fs.fed.us/land/pubs/ecoregions/toc.html

12 Available at: https://www.wildlife.ca.gov/Data/CNDDB/Maps-and-Data. When creating a list of special status plants with the potential to occur in a project area, special care should be taken to search all quads with similar geology, habitats, and vegetation to those found in the project area.

Timing and Number of Visits

Conduct botanical field surveys in the field at the times of year when plants will be both evident and identifiable. Usually this is during flowering or fruiting. Space botanical field survey visits throughout the growing season to accurately determine what plants exist in the project area. This usually involves multiple visits to the project area (e.g. in early, mid, and late-season) to capture the floristic diversity at a level necessary to determine if special status plants are present[13]. The timing and number of visits necessary to determine if special status plants are present is determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which botanical field surveys are conducted.

Reference Sites

When special status plants are known to occur in the type(s) of habitat present in a project area, observe reference sites (nearby accessible occurrences of the plants) to determine whether those special status plants are identifiable at the times of year the botanical field surveys take place and to obtain a visual image of the special status plants, associated habitat, and associated natural communities.

Use of Existing Surveys

For some project areas, floristic inventories or botanical survey reports may already exist. Additional botanical field surveys may be necessary for one or more of the following reasons:

- Botanical field surveys are not current[14];
- Botanical field surveys were conducted in natural systems that commonly experience year to year fluctuations such as periods of drought or flooding (e.g. vernal pool habitats or riverine systems);
- Botanical field surveys did not cover the entire project area;
- Botanical field surveys did not occur at the appropriate times of year;
- Botanical field surveys were not conducted for a sufficient number of years to detect plants that are not evident and identifiable every year (e.g. geophytes, annuals and some short-lived plants);

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13 U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants available at: https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/

14 Habitats, such as grasslands or desert plant communities that have annual and short-lived perennial plants as major floristic components may require yearly surveys to accurately document baseline conditions for purposes of impact assessment. In forested areas, however, surveys at intervals of five years may adequately represent current conditions. For forested areas, refer to “Guidelines for Conservation of Sensitive Plant Resources Within the Timber Harvest Review Process and During Timber Harvesting Operations”, available at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=116396&inline

- Botanical field surveys did not identify all plants in the project area to the taxonomic level necessary to determine rarity and listing status;
- Fire history, land use, or the physical or climatic conditions of the project area have changed since the last botanical field survey was conducted;
- Changes in vegetation or plant distribution have occurred since the last botanical field surveys were conducted, such as those related to habitat alteration, fluctuations in abundance, invasive species, seed bank dynamics, or other factors; or
- Recent taxonomic studies, status reviews or other scientific information has resulted in a revised understanding of the special status plants with potential to occur in the project area.

Negative Surveys

Adverse conditions from yearly weather patterns may prevent botanical field surveyor from determining the presence of, or accurately identifying, some special status plants in the project area. Disease, drought, predation, fire, herbivory or other disturbance may also preclude the presence or identification of special status plants in any given year. Discuss all adverse conditions in the botanical survey report[15].

The failure to locate a known special status plant occurrence during one field season does not constitute evidence that the plant occurrence no longer exists at a location, particularly if adverse conditions are present. For example, botanical field surveys over a number of years may be necessary if the special status plant is an annual or short-lived plant having a persistent, long-lived seed bank and populations of the plant are known to not germinate every year. Visiting the project area in more than one year increases the likelihood of detecting special status plants, particularly if conditions change. To further substantiate negative findings for a known occurrence, a visit to a nearby reference site may help ensure that the timing of botanical field surveys was appropriate.

3. REPORTING AND DATA COLLECTION

Adequate information about special status plants and sensitive natural communities present in a project area will enable reviewing agencies and the public to effectively assess potential impacts to special status plants and sensitive natural communities and will guide the development of avoidance, minimization, and mitigation measures. The information necessary to assess impacts to special status plants and sensitive natural communities is described below. For comprehensive, systematic botanical field surveys where no special status plants or sensitive natural communities were found, reporting

and data collection responsibilities for botanical field surveyor remain as described

[15] U.S. Fish and Wildlife Service Guidelines for Conducting and Reporting Botanical Inventories for Federally Listed, Proposed and Candidate Plants available at: https://www.fws.gov/sacramento/es/Survey-Protocols-Guidelines/

below, excluding specific occurrence information.

Special Status Plant and Sensitive Natural Community Observations

Record the following information for locations of each special status plant and sensitive natural community detected during a botanical field survey of a project area.

- The specific geographic locations where the special status plants and sensitive natural communities were found. Preferably this will be done by use of global positioning system (GPS) and include the datum[16] in which the spatial data was collected and any uncertainty or error associated with the data. If GPS is not available, a detailed map (1:24,000 or larger) showing locations and boundaries of each special status plant population and sensitive natural community in relation to the project area is acceptable. Mark occurrences and boundaries as accurately as possible;
- The site-specific characteristics of occurrences, such as associated species, habitat and microhabitat, structure of vegetation, topographic features, soil type, texture, and soil parent material. If a special status plant is associated with a wetland, provide a description of the direction of flow and integrity of surface or subsurface hydrology and adjacent off-site hydrological influences as appropriate;
- The number of individuals in each special status plant population as counted (if population is small) or estimated (if population is large);
- If applicable, information about the percentage of each special status plant in each life stage such as seedling, vegetative, flowering and fruiting;
- The density of special status plants, identifying areas of relatively high, medium and low density of each special status plant in the project area; and
- Digital images of special status plants and sensitive natural communities in the project area, with diagnostic features.

Special Status Plant and Sensitive Natural Community Documentation

When a special status plant is located, data must be submitted to the CNDDB. Data may be submitted in a variety of formats depending on the amount and type of data that is collected[17]. The most common way to submit data is the Online CNDDB Field Survey Form[18], or equivalent written report, accompanied by geographic locality information (GPS coordinates, GIS shapefiles, KML files, topographic map, etc.). Data submitted in digital form must include the datum[19] in which it was collected.

If a sensitive natural community is found in a project area, document it with a Combined

16 NAD83, NAD27 or WGS84

17 See https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data for information on acceptable data submission formats.

18 Available at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data

19 NAD83, NAD27 or WGS84

Vegetation Rapid Assessment and Relevé Field Form[20] and submit the form to VegCAMP[21].

Voucher Collection

Voucher specimens provide verifiable documentation of special status plant presence and identification and a scientific record. This information is vital to conservation efforts and valuable for scientific research. Collection of voucher specimens should be conducted in a manner that is consistent with conservation ethics, and in accordance with applicable state and federal permit requirements (e.g. scientific, educational, or management permits pursuant to Fish & G. Code, § 2081, subd. (a)). Voucher collections of special status plants (or possible special status plants) should only be made when such actions would not jeopardize the continued existence of the population. A plant voucher collecting permit[22] is required from CDFW prior to the take or possession of a state-listed plant for voucher collection purposes, and the permittee must comply with all permit conditions.

Voucher specimens should be deposited in herbaria that are members of the Consortium of California Herbaria[23] no later than 120 days after the collections have been made. Digital imagery can be used to supplement plant identification and document habitat. Record all relevant collector names and permit numbers on specimen labels (if applicable).

Botanical Survey Reports

Botanical survey reports provide an important record of botanical field survey results and project area conditions. Botanical survey reports containing the following information should be prepared whenever botanical field surveys take place, and should also be submitted with project environmental documents:

Project and location description

- A description of the proposed project;
- A detailed map of the project area that identifies topographic and landscape features and includes a north arrow and bar scale;
- A vegetation map of the project area using Survey of California Vegetation Classification and Mapping Standards[24] at a thematic and spatial scale that allows the display of all sensitive natural communities;
- A soil map of the project area; and

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20 Available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Submit

21 Combined Vegetation Rapid Assessment and Releve Field Forms can be emailed to VegCAMP staff. Contact information available at: https://www.wildlife.ca.gov/Data/VegCAMP/Natural-Communities/Other-Info

22 Applications available at: https://www.wildlife.ca.gov/Conservation/Plants/Permits

23 A list of Consortium of California Herbaria participants is available at: http://ucjeps.berkeley.edu/consortium/participants.html

24 Available at: https://www.wildlife.ca.gov/data/vegcamp/publications-and-protocols

- A written description of the biological setting, including all natural communities; geological and hydrological characteristics; and land use or management history.

Detailed description of survey methodology and results

- Names and qualifications of botanical field surveyor(s);
- Dates of botanical field surveys (indicating the botanical field surveyor(s) that surveyed each area on each survey date), and total person-hours spent;
- A discussion of the survey preparation methodology;
- A list of special status plants and sensitive natural communities with potential to occur in the region;
- Description(s) of reference site(s), if visited, and the phenological development of special status plant(s) at those reference sites;
- A description and map of the area surveyed relative to the project area;
- A list of all plant taxa occurring in the project area, with all taxa identified to the taxonomic level necessary to determine whether or not they are a special status plant;
- Detailed data and maps for all special status plants and sensitive natural communities detected. Information specified above under the headings “Special Status Plant and Sensitive Natural Community Observations,” and “Special Status Plant and Sensitive Natural Community Documentation,” should be provided for the locations of each special status plant and sensitive natural community detected. Copies of all California Native Species Field Survey Forms and Combined Vegetation Rapid Assessment and Relevé Field Forms should be sent to the CNDDB and VegCAMP, respectively, and included in the project environmental document as an Appendix[25];
- A discussion of the potential for a false negative botanical field survey;
- A discussion of how climatic conditions may have affected the botanical field survey results;
- A discussion of how the timing of botanical field surveys may affect the comprehensiveness of botanical field surveys;
- Any use of existing botanical field surveys and a discussion of their applicability to the project;
- The deposition locations of voucher specimens, if collected; and
- A list of references used, including persons contacted and herbaria visited.

[25] It is not necessary to submit entire environmental documents to the CNDDB

Assessment of potential project impacts

- A discussion of the significance of special status plant populations in the project area considering nearby populations and total range and distribution;
- A discussion of the significance of sensitive natural communities in the project area considering nearby occurrences and natural community distribution;
- A discussion of project related direct, indirect, and cumulative impacts to special status plants and sensitive natural communities;
- A discussion of the degree and immediacy of all threats to special status plants and sensitive natural communities, including those from invasive species;
- A discussion of the degree of impact, if any, of the project on unoccupied, potential habitat for special status plants; and
- Recommended measures to avoid, minimize, or mitigate impacts to special status plants and sensitive natural communities.

4. BOTANICAL FIELD SURVEYOR QUALIFICATIONS

Botanical field surveyors should possess the following qualifications:

- Knowledge of plant taxonomy and natural community ecology;
- Familiarity with plants of the region, including special status plants;
- Familiarity with natural communities of the region, including sensitive natural communities;
- Experience with the CNDDB, BIOS, and Survey of California Vegetation Classification and Mapping Standards;
- Experience conducting floristic botanical field surveys as described in this document, or experience conducting such botanical field surveys under the direction of an experienced botanical field surveyor;
- Familiarity with federal, state, and local statutes and regulations related to plants and plant collecting; and
- Experience analyzing the impacts of projects on native plant species and sensitive natural communities.

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This document is available online at: https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=18959&inline

APPENDIX D

Procedure for the Programmatic Evaluation of Paleontological Resources for the 2022 Fisheries Restoration Grant Program Mitigated Negative Declaration Project

There shall 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) evaluation of individual projects that may encounter paleontological resources; and 3) mitigation planning to develop mitigation strategies for projects that have identified paleontological resources. The three phases are summarized below.

Project Initiation

The logistics and time needed for conducting paleontological evaluations shall be assessed in the project initiation phase. The guidelines outlined below will facilitate rapid evaluation of individual projects and ensure cooperation among evaluators, pertinent agencies, and landowners. Landowner cooperation is through property access and local area information. The evaluation procedure generally follows standards implemented by other agencies conducting ground disturbance activities such as CalTrans.

Evaluation of the likelihood of encountering paleontological resources and land management issues shall be assessed by adhering to the following guidelines and the corresponding actions:

1. If the project does not involve ground disturbing work, then a negative declaration report shall be prepared.

2. If the project involves ground disturbing work and there is no likelihood of encountering paleontological resources, then a negative declaration report shall be prepared. However, if there is a likelihood of encountering paleontological resources at the project site, then the evaluator schedules a field investigation by contacting the CDFW grant manager and having them arrange landowner access for the paleontological resource field staff; and if necessary, arrange a meeting with the landowners and the paleontological resources investigation field staff.

3. If the project involves land administered by the US Forest Service, the Bureau of Land Management, the National Park Service, the US Army Corps of Engineers, the Native American tribal lands, or the California Department of Parks and Recreation, then the paleontology report containing site forms, site significance, and mitigation measures shall be coordinated with the involved entities. However, if those agencies are not involved, then the paleontology report with all pertinent information (site forms, site significance, mitigation measures or negative declarations) shall be provided to the CDFW and to the CDFW grant manager.

Individual Project Evaluation

The appropriate regional archaeological information center shall be contacted for a record search and the Native American Heritage Commission shall also be contacted for a Sacred Lands File Check. If paleontological resources are likely to be present, then qualified staff shall evaluate the paleontological resources in coordination with any affected agencies including any affected Native American tribe. If paleontological resources are present, then the evaluator will (1) delineate the extent and type of resources present, (2) discuss any issues with pertinent agencies, Native American tribes, project managers, and local experts with regards to potential mitigation planning, and (3) develop a mitigation plan designed to protect sensitive paleontological resources. However, if no resources are present, then a negative declaration report shall be prepared.

Mitigation Planning

Mitigation plans shall be developed to avoid or lessen impacts to the resource if paleontological resources are discovered at any project site. These mitigation plans shall be consistent with current mitigation strategies employed by other entities conducting CEQA investigations. The initial investigation report, along with mitigation recommendations, shall be compiled and delivered to the appropriate CDFW grant/contract manager and the project manager of the proposed project in question. Minimum report elements shall 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 Archeological Resources for the 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration Project

Cultural resource investigations are used to identify archaeological resources in the California Department of Fish and Wildlife's (CDFW) funded action items 2022 Fisheries Restoration Grant Program's Mitigated Negative Declaration project areas. When archaeological resources are found, measures are implemented to protect these resources. The purpose of the investigations described below 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 shall 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 shall also include a review of pertinent ethnographic literature. For all action items, 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 action items, a background literature search shall 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 action items 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 a 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 visibly 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 Grantee shall report any previously unknown historic, archeological, and paleontological remains discovered at a site to CDFW which will then report to the US Army Corps of Engineers as required in the Regional General Permit (RGP). This information will also be provided to the Native American Heritage Commission, 915 Capitol Mall, Sacramento, CA 95814.

2) An accidental discovery or recognition of any human remains in any location other than a dedicated cemetery, the process stated in Health and Safety Code §7050.5, CEQA §15064.5(e), and Public Resources Code §5097.98 shall be followed.

In the event of a discovery of archeological or historic resource within the jurisdiction of the California State Lands Commission (CSLC), grantees will be responsible for reporting and submitting any required information to the CSLC.

APPENDIX F

CDFW's 2022 FISHERIES RESTORATION GRANT PROGRAM MITIGATED NEGATIVE DECLARATION COMMENT RESPONSE

Comment from: Trout Unlimited

Date received: November 3, 2022

Received by: E-mail

Comment is as follows: The biggest concern we have is related to the Foothill Yellow-Legged Frogs (FYLF), page B-20. There is no distinction made between the clades or distinct populations of FYLF. As it is written, all sites where FYLF are present would require authorized biologists to monitor and handle this species. It's been our understanding that the USFWS excluded two of the DPSs of FYLF in its proposal for listing: the North Coast DPS and the North Sierra DPS. In March 2020, the CA Fish and Game Commission also determined that the Northwest/North Coast clade is "not under any threat of extinction in the near future." Additionally, in March 2021, we were told by CDFW LSAA staff that the general measures for protection of western pond turtles, salamanders and frogs would apply for FYLF in the Northwest/North Coast Clade. This discrepancy is our primary concern.

The rest of our comments are not insignificant but may be resolved through direction communication between FRGP and Grantees when they are securing their 1600 agreements.

We noticed that the MND states that "none of the 27 proposed projects under FRGP occur within the range of the Northern Spotted Owl (page B-24)." This is not accurate; however, this may be less of a concern since the MND does include protection measures for NSO. Two of the proposals submitted by TU are within the range of NSO and have a history of activity. We also included this information in our proposals. We do plan on following the avoidance and minimization measures required for NSO, so we don't believe this will impact our ability to complete those projects if awarded funds.

We questioned some of the sites listed under the section for Tidewater Goby (B-27). Again, not a huge issue, but there were a few sites that don't meet the goby's habitat requirements or salinity needs, nor do they overlap with species range maps developed by USFWS.

Finally, we feel the section on Pacific Lamprey (B-29) could be revised to be more clear and therefore more effective at protecting the species. We would like to recommend that CDFW review the 3 documents referenced in this section and pull out the specific protection measures that need to be followed (like the other species listed in Appendix B) so the requirements are clear to grantees and their subcontractors.

CDFW response is as follows: Thank you for making those comments. Grant Managers caught the NSO and FYLF issues and we planned on having the GMs work with each Grantee appropriately. Based on your comments below, we are going to update the Appendix B in the MND before we adopt it. Changes to Appendix B are depicted using strikethrough for deletions and double underline for additions. Being that it is not a substantial change we do not have to re-circulate the MND. The updated MND will include the IPAC species list, which were left off as an oversight and will address the NSO and TWG

concerns. We will clarify the that only endangered FYLF species require the AMMs. Regarding lamprey, we will include those changes in the 2023 MND. I appreciate you taking the time to read the MND.