STATE OF CALIFORNIA

THE RESOURCES AGENCY

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE

MITIGATED NEGATIVE DECLARATION

FOR

THE 2020 FISHERIES HABITAT RESTORATION PROJECT IN DEL NORTE, HUMBOLDT, MENDOCINO, SANTA BARBARA, SISKIYOU, 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

If you have difficulty accessing any content in the Department of Fish and Wildlife's 2020 FRGP MND, please contact FRGP staff at frgp@wildlife.ca.gov.

INITIAL STUDY
AND
MITIGATED NEGATIVE DECLARATION
FOR
THE 2020 FISHERIES HABITAT RESTORATION PROJECT
IN
DEL NORTE, HUMBOLDT, MONTEREY, SANTA BARBARA, SISKIYOU, 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 mykiss*) 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 seven-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 2020 Fisheries Habitat Restoration 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 Fisheries Habitat Restoration Project**
- **Appendix E. Procedure for the Programmatic Evaluation of Archaeological Resources for the Fisheries Habitat Restoration Project**

DETAILED PROJECT DESCRIPTION AND BACKGROUND INFORMATION

FOR

THE 2020 FISHERIES HABITAT RESTORATION PROJECT
IN
DEL NORTE, HUMBOLDT, MENDOCINO, MONTEREY, SANTA BARBARA, SANTA CRUZ, AND SONOMA COUNTIES
AND
REQUIRED AGREEMENT REGARDING PROPOSED STREAM OR LAKE ALTERATION

INTRODUCTION

The 2020 Fisheries Habitat Restoration (FHR) project is awarding Fisheries Restoration Grant (FRGP), and Forest Land Anadromous Restoration (FLAR) grants for projects in Del Norte, Humboldt, Mendocino, Santa Barbara, Siskiyou, and Sonoma counties. These projects are subject to review under the California Environmental Quality Act (CEQA) (PRC § 21000 et seq.). CDFW received 79 applications in response to its 2020 FHR 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 being considered for funding and are not included in the 42 projects listed in this document.

CDFW conducted administrative reviews on all applications it received in response to its 2020 FHR 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 42 habitat restoration items that are included in this Initial Study and MND: 28 action items and 14 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 document. This analysis includes all 42 habitat restoration items in order to disclose the greatest possible potential impacts that could result from CDFW's implementation of the FHR project.

The 28 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 14 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 FHR 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 FHR grant awarded by the CDFW.

PROJECT GOAL AND OBJECTIVES

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

The objectives of the FHR 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, Indian 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. 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.

The FLAR funds projects in forested watersheds to restore conditions beneficial to State and/or federally listed coho salmon (*Oncorhynchus kisutch*), Chinook Salmon, or steelhead trout. FLAR projects are funded by the Timber Regulation and Forest Restoration Fund. FLAR projects must address legacy impacts of forest management such as impeded fish passage at forest road stream crossings, sediment discharge from old forest roads and landings, and lack of in-stream large woody debris providing rearing habitat.

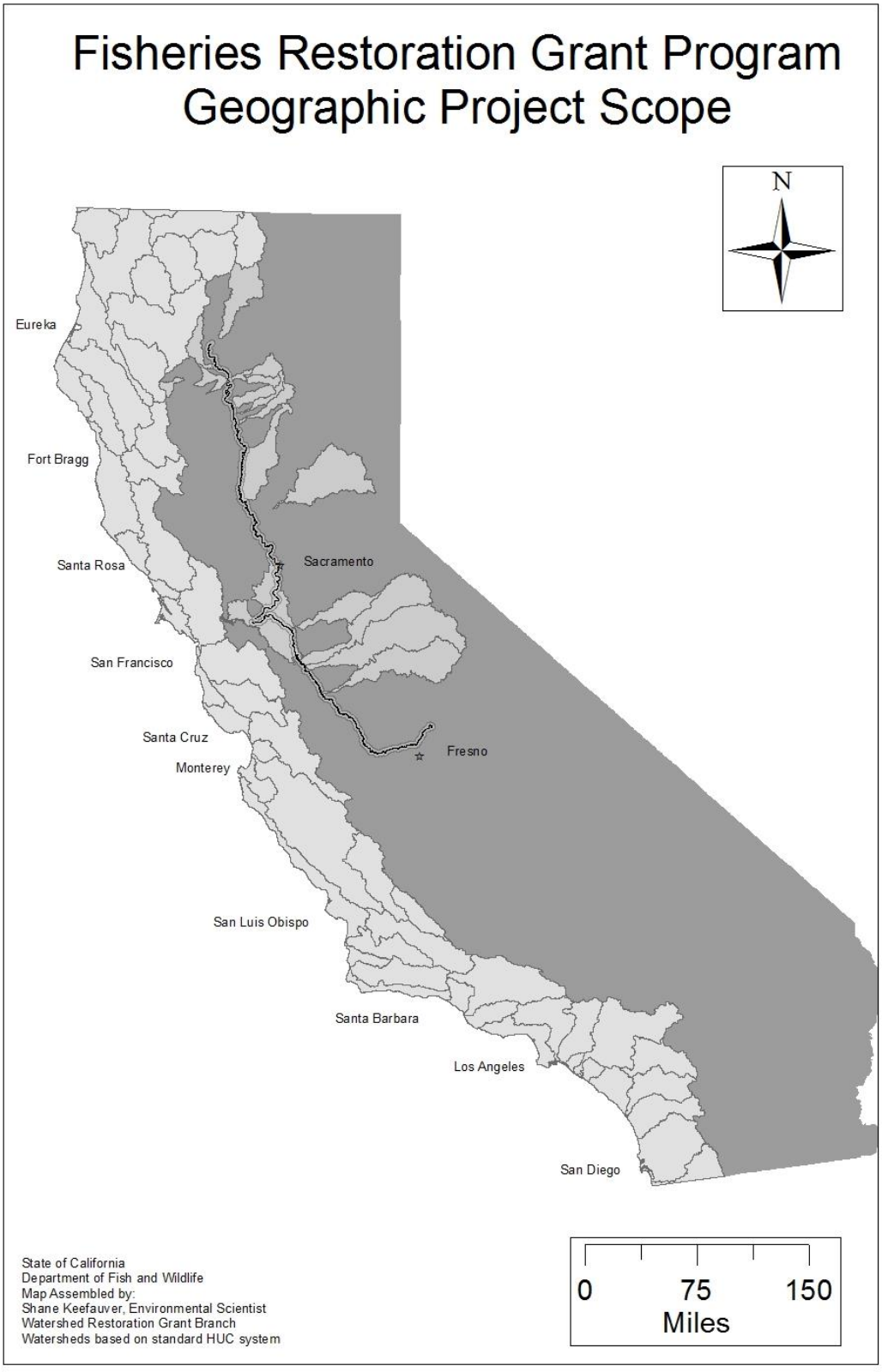
PROJECT LOCATION

Activities performed in the FHR 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.

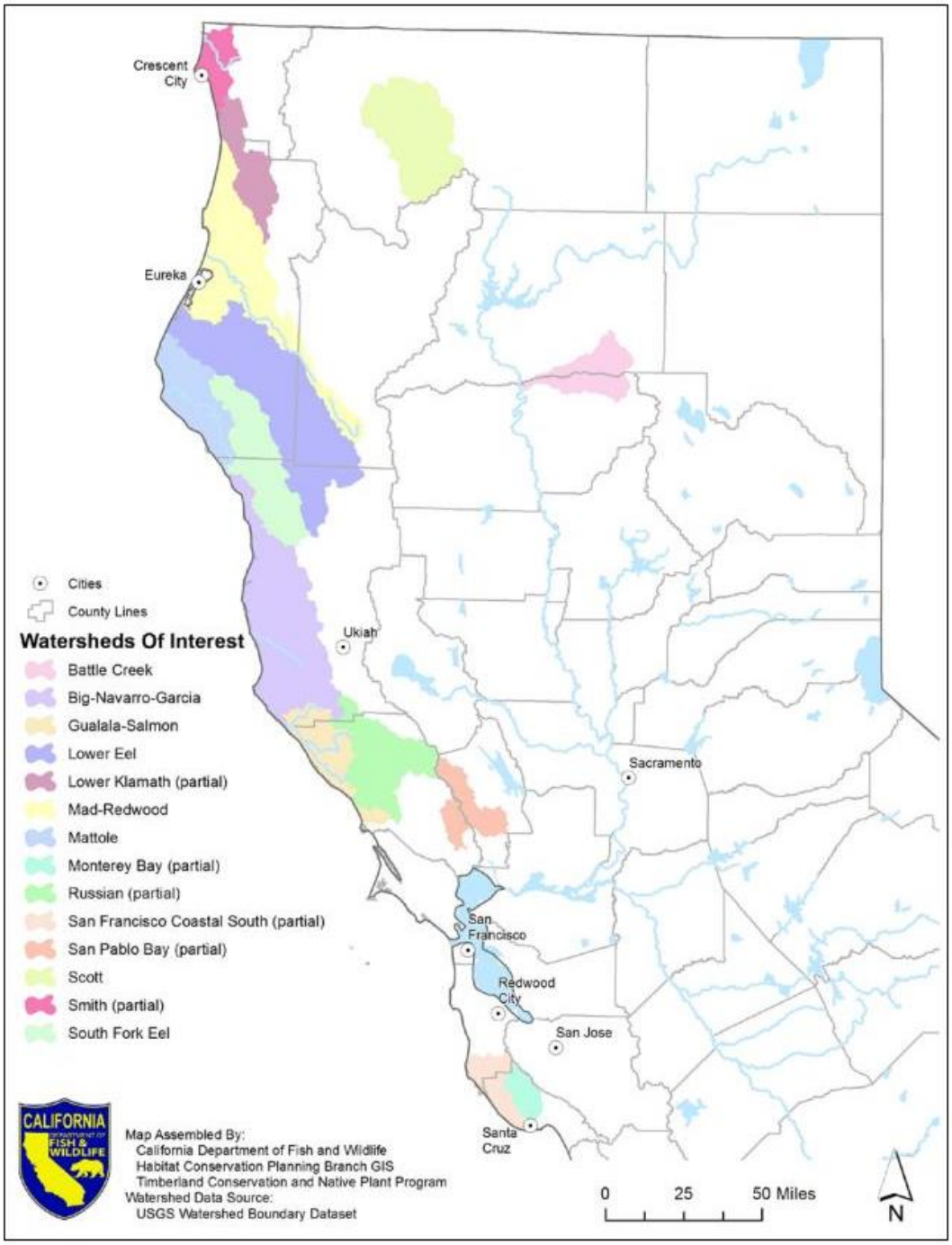
Coastal watersheds previously dominated by mature redwood and Douglas fir forests, contain extensive road and skid trail systems from tractor logging. These previous mature, forested areas can now be found in various seral stages of vegetative recovery and are predominate in the coastal FRGP region. 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.

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

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 2 illustrates the FLAR geographic range; FLAR projects focus on restoring habitat impacted by forest management on private and nonfederal public forests.



Map 1. Area covered by FRGP



Map 2. Area covered by Forest Land Anadromous Restoration

SCHEDULE

The activities carried out in the FHR 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 FHR Proposal Solicitation Notice (Solicitation) for proposals to fund fishery restoration, watershed assessment, and planning work throughout California. CDFW received 79 applications in response to its 2020 FHR 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 2020 FHR 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 FHR. Based on those reviews, CDFW is considering funding up to 42 habitat restoration items that are included in this Initial Study and MND: 28 action items and 14 non-physical items. Those 42 habitat restoration items include funding proposals for projects in Del Norte, Humboldt, Mendocino, Santa Barbara, Siskiyou, and Sonoma counties. Prior to making final funding decisions, the Director of CDFW will consider the recommendations of the FHR 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.

FHR 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 FHR project. RGP12 (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. RGP78 (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 FHR 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 2020 FHR project items covered by the RGP12 and RGP78. 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 FHR 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 14 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.

Restoration Element - Major Action Items

There is a notable difference in the level of activity found under this category. The names of the 28 major 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. 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.

Fish screens are constructed within existing irrigation diversions to prevent entrainment of juvenile salmon and steelhead trout. Fish screens are often composed of a concrete foundation and walls. A steel framework supports perforated screen panels with a mechanical cleaning system. A stream flow bypass carries the fish back to the stream. Current NOAA and CDFW fish screen criteria can be found in Volume I, Appendix S of the *California Salmonid Stream Habitat Restoration Manual* 4th edition.

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, and Siskiyou 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 Sonoma county 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 Orange, Los Angeles, Santa Barbara, and Ventura counties are available for review at the California Department of Fish and Wildlife, South Coast Region, office of Senior Environmental Scientist, Mary Larson, 4665 Lampson Ave, Suite C, Los Alamitos, California 90720 and 1933 Cliff Drive, Suite 9, Santa Barbara, CA 93109. Appointments may be made by telephoning (562) 342-7186, Monday through Friday, between the hours of 9 a.m. and 4 p.m.

Environmental Assessment of Each Major Action Item

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

First, 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.