



**ENVIRONMENTAL PROTECTION PLAN**

**SUPPLEMENT TO THE DEBRIS REMOVAL OPERATIONS PLAN**

**FOR THE**

**CAMP DEBRIS REMOVAL INCIDENT**

**BUTTE COUNTY, CALIFORNIA**

**TOWN OF PARADISE, CALIFORNIA**

Version 2.3

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## **INTRODUCTION**

During a local or state declaration of a State of Emergency, rapid response action is necessary to protect response personnel and the public from potential exposure to uncontrolled hazardous materials and toxic substances. Previous wildfire disasters have demonstrated exposures to response personnel and have shown that residents returning to their communities have encountered toxic substances within the dust and debris. Without the proper identification, handling, and removal of structural ash and debris (including asbestos), the public will continue to be at risk of exposure. To reduce these exposures from structural ash and debris, the California Governor's Office of Emergency Services (Cal OES) has authorized a coordinated emergency debris removal for the Camp Incident in Butte County. This is referred to as the Camp Fire Debris Removal Project (Project).

This Environmental Protection Plan's (Plan) purpose is to provide protections that accelerate the Project's cleanup and recovery, while at the same time protecting public health and the environment. This Plan supplements the Debris Removal Operations Plan (DROP) and shall be utilized as a guideline to protect aquatic resources and wildlife as the need develops.

## **ROLES AND RESPONSIBILITIES**

CDFW staff who are mission tasked by OES to the debris removal operation serve in Incident Command Structure (ICS) positions within the Planning and Operations Sections as determined by OES. In these roles, CDFW staff work strictly under the direction and authority of OES. They are not Agency Representatives and as such, they do not have authority to make decisions for CDFW. In contrast to the CDFW staff who are mission tasked by OES, Agency Representatives under ICS are part of Command Staff and are assigned by a cooperating agency to an incident and have full delegated authority to make decisions on behalf of that agency. CDFW does not have an Agency Representative under this ICS.

## **LEGAL FRAMEWORK**

On November 14, 2018, the Governor of California, Edmund G. Brown Jr., issued an *Executive Order*, which declared a state of emergency in Butte County. Among other items, the Executive Order provides that "such statutes, rules, regulations and requirements are hereby suspended only to the extent necessary for expediting the removal and cleanup of debris from the wildfire...Individuals who desire to conduct activities under this suspension of statutes, rules, regulations, and requirements shall first request that the appropriate Agency Secretary, or his delegate, make a determination

that the proposed activities are eligible to be conducted under this suspension. The Secretary for the California Environmental Protection Agency and the Secretary for the California Natural Resources Agency shall use sound discretion in applying this Executive Order to ensure that the suspension serves the purpose of accelerating cleanup and recovery, while at the same time protecting public health and the environment.

The suspension applies to state laws implemented by state government agencies including, but not limited to, the Department of Fish and Wildlife (DFW), State Water Resources Control Board and Central Valley Water Board (Water Boards), and the Department of Forestry and Fire Protection (CAL FIRE). The regulatory suspension does not supersede local or federal laws, which remain in effect and shall be adhered to.

As relevant to the EO, laws potentially applicable to the Project would include:

- Clean Water Act Section 401; California Water Code (CWC) § 13160; California Code of Regulations, title 23, § 3855 et seq.; requires an applicant for a federal license or permit to conduct any activity which may result in any discharge to navigable waters to obtain a water quality certification from the appropriate regional board or state board.
- California Fish and Game Code (FGC) § 86 where "Take" shall be avoided. Take is defined as to hunt, pursue, catch, capture, or kill, or attempt to hunt, pursue, catch, capture, or kill.
- FGC § 1600 (*et seq*); Lake or Streambed Alteration Agreement, notification of significant alteration to stream channel, bank, or bed.
- FGC § 2000; taking is unlawful except as provided.
- FGC § 3503 and § 3503.5; Protection for bird nests and eggs and birds of prey.
- FGC § 5650 and § 5652; Deposition of deleterious material into waters of the state.
- FGC § 5901; Fish passage.
- FGC § 5937; Sufficient water for fish.
- FGC § 5948; Obstruction of stream.
- California Endangered Species Act (CESA); FGC § 2050-2115.5; prohibition of the Take of any species of wildlife designated as Endangered, Threatened, or candidates for listing.
- California Water Code (CWC) § 13260: requires that any person discharging waste, or proposing to discharge waste, within any region that could affect the quality of waters of the state shall file with the appropriate regional board a report of the discharge.

The laws identified above should not be considered an exhaustive list and the Project may or may not need additional environmental compliance based on scope of work and site specificity.

## **COVERED ACTIVITIES**

As mentioned above, this Plan supplements the DROP, which is based on California Environmental Protection Agency's "Guidance for Conducting Emergency Debris, Waste and Hazardous Material Removal Actions Pursuant to a State or Local Emergency Proclamation" dated October 7, 2011, and other past debris wildfire incidents. The Plan identifies Best Management Practices (BMPs) for undertaking the removal of debris and hazardous materials and asbestos from residential and commercial structures after a significant wildfire. Below are examples of Project activities that may impact the environment and that will be conducted subject to these BMPs:

- 1) Debris removal next to or in waterways with heavy equipment and/or hand work. This would include the removal of:
  - a) Burned vehicles, storage containers, heavy equipment, RVs, trailers, etc.
  - b) Destroyed structures, sheds, residential homes, garages, etc.
  - c) Foundations, footing, and some retaining walls
  - d) Driveways and/or other pads
  - e) Burned landscaping material such as railroad ties, pressure treated lumber, and other toxic materials
  - f) Other burned debris and metal, house foundation, footings, etc.
- 2) Existing Low water crossings
- 3) Minor culvert installation/modification in watercourses where flowing water is present to access debris sites
- 4) Removal of debris near nesting birds
- 5) Sediment deposition from clean-up activities
- 6) Removal of chimneys

## **STREAMBED EMERGENCY BEST MANAGEMENT PRACTICES WITHIN THE CAMP FIRE WILDFIRE ZONE**

The Camp Fire Debris Removal Operation Incident Commander (IC) shall consider the following best management practices (BMPs) as it conducts emergency debris removal. To avoid undue delay, IC may exercise its judgment to adapt these BMPs commensurate with the need to accelerate emergency cleanup and recovery. In doing so, IC will consult with its biological monitors where feasible.

### **Watercourse Buffer:**

Equipment Limitation Zone. A minimum 50-foot watercourse buffer should be implemented when possible as an Equipment Limitation Zone (ELZ). The intent of the ELZ is to reduce or eliminate the likelihood of ground disturbance from heavy equipment that may result in ruts, erosion and direct sediment delivery to the watercourse. Heavy equipment, or vehicles, will limit operations within the ELZ unless removal of structures or debris are necessary within the ash footprint. If an existing or new watercourse crossing must be used, the crossing site should be inspected for fish and wildlife species prior to entering the watercourse. If a California Endangered Species Act (CESA) listed species is found within the crossing location, the site should be flagged and avoided until consultation with a biological monitor occurs.

### **Vegetation Clearing:**

Vegetation Removal. Disturbance or removal of vegetation should be kept to the minimum necessary to complete project related activities.

Remove Cleared Material from Stream. All trimmed or cleared material/vegetation should be removed from the area and deposited where it cannot re-enter the stream.

### **Sediment Control:**

Disturbed Soils. Prior to any ground disturbing work at a project site, erosion control materials should be stock-piled on site. All disturbed soils within the Project site should be stabilized to reduce erosion potential, both during and following construction. Planting and seeding with native species, or a sterile seed mix and mulching is acceptable. Where suitable vegetation cannot reasonably be expected to become established, non-erodible materials, such as coconut fiber matting, should be used for such stabilization.

Trenching / Excavation Spoils. No castings or spoils from the trenching / excavation operations should be placed on the stream side of the trenching / excavation site.

Bank Stabilization. Bank stabilization should be constructed with suitable non-erodible materials that will withstand wash out. The bank stabilization material should extend above the normal high-water mark. Only clean material such as rock riprap that is free of trash, debris and deleterious material shall be used as bank stabilization. Asphalt should not be considered an acceptable material.

Sediment and Erosion Control Measures. Sediment and erosion control measures should be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a river, stream, or lake. Measures should be maintained in good operating condition until the site is signed off by the ICS.. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged silt fencing, compost socks, coir logs, coir rolls, and/or straw bale dikes. Modifications, repairs and improvements should be made to the sediment and erosion control measures whenever it is needed. If the sediment barrier fails to retain sediment, corrective measures should be employed, and a biological monitor notified, immediately. ***Materials used in the sediment barriers should not pose an entanglement risk to fish or wildlife.***

Runoff from Steep Areas. Preparations should be made so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential or contained behind erosion control structures. Erosion control structures such as straw bales and/or siltation control fencing should be placed and maintained until the threat of erosion ceases. Frequent water-bars should be installed on dirt roads, equipment tracks, or other work trails to control erosion.

Silt Barriers. If work or vehicle crossings must occur within a wetted stream or lake area, precautions to minimize turbidity and siltation should be employed and may require the placement of silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to pass to downstream reaches. ***Materials used in the silt barrier should not pose an entanglement risk to fish or wildlife.***

Removal of Silt from Barriers. Silt collected around the silt barriers should be removed on an as needed basis to prevent silty/turbid water from flowing around the silt barriers during storm events. Silt barriers which trap sediment should be removed when temporary crossings have been taken out and after all flowing water is cleared of turbidity in a manner that will not introduce silt to the stream. The stream should then be restored to a clean and natural condition.

## **Pollution:**

Operating Equipment and Vehicle Leaks. Any equipment or vehicles driven and/or operated within or adjacent to the *stream/lake* should be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.

Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the *stream/lake* should be positioned over drip pans. Stationary heavy equipment should have suitable containment to handle a catastrophic spill/leak.

Equipment Maintenance and Fueling. No equipment maintenance, fueling or storage should occur within or near any stream channel or lake margin where petroleum products or other pollutants from the equipment may enter these areas.

No Dumping. No litter or construction debris should be deposited within a stream or lake, or where it may pass into a stream or lake. All debris and waste should be picked up and removed daily.

Hazardous Materials. Debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, wildlife, or riparian habitat resulting from the Project related activities should be prevented from contaminating the soil and/or entering any watercourse.

#### **Wildlife Protection:**

Leave Wildlife Unharmmed. If any wildlife is encountered during the course of construction, said wildlife should be allowed to leave the construction area unharmed. If any CESA listed wildlife is encountered, a biological monitor should be notified.

Trees with Active Nests. Prevent disturbance of trees that contain active bird nests. If a nest survey identifies an active nest, a buffer should be established between the construction activities and the active nest so that nesting activities are not interrupted. The buffer should be delineated by temporary fencing or orange markers and remain in effect throughout project activities or until the nest is no longer active. The buffer(s) should be determined by the biological monitor based upon the life history of the individual species, including their sensitivity to noise, vibration, ambient levels of human activity and general disturbance, the current site conditions (screening vegetation, terrain, etc.) and the various project-related activities necessary to implement the project.

Escape Ramp in Trench. At the end of each workday, an escape ramp should be placed at each end of any open trench to allow any animals that may have

become entrapped in the trench to climb out overnight. The ramp may be constructed of either dirt fill or wood planking or other suitable material that is placed at an angle no greater than 30 degrees.

Aquatic Species Surveys. If work or dust abatement activities are proposed within a watercourse, a person who is knowledgeable in the identification of CESA listed fish and amphibian species, should survey the work area prior to initiating operations within or immediately adjacent to the watercourse. If a CESA listed species or evidence of their presence are found, the site should be flagged and all water drafting, vegetation and ground disturbing operations at that location site should cease until consultation with a biological monitor occurs to identify measures to minimize and avoid impacts where feasible.

### **Watercourse Crossings:**

Do Not Impair Water Flow. The installation of bridges, culverts or other structures should be installed such that water flow is not impaired and upstream or downstream passage of fish and all aquatic life-forms is assured at all times. If structures and associated materials are not designed to withstand high seasonal flows, they should be removed before such flows occur.

Fill Materials. Materials and methods used for temporary crossings should cause minimal turbidity or siltation. 2-6 inch pit run rock, screened river gravels, clean washed 2-inch plus rock or gravel, and/or logs in fill materials should be included. Bridge abutments below the high-water mark shall be rock or logs. When fill material is removed from the crossing, the channel shape and gradient should be returned to pre-project condition to the extent feasible, and any adjacent bare soil should be stabilized by mulching or other effective method.

Recreate Channel Grade. During crossing removal, all fill material should be excavated in a manner that recreates the natural channel grade and orientation, with a channel bed that is as wide as or slightly wider than the original watercourse.

Stabilize Crossing Sites. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, should be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff. Erosion control should consist of packed slash or weed-free straw mulch in a mosaic of depths of ½ to 2 inches. If the site is seeded, planting and seeding with native species, or a sterile seed mix and mulching is acceptable.



Stabilize and Inspect Decommissioned and Abandoned Road Crossings.

Decommissioned/abandoned road crossings should be stabilized and then inspected following the first storm event producing bankfull stage flows and again prior to filing the completion report. The inspection should verify the effectiveness of the stabilization measures in preventing sediment discharges to the watercourse and to ensure the measures are functioning to restore natural drainage and hillslope stability. If stabilization measures are found to be ineffective, further stabilization measures should be applied, unless reentering the site would cause greater damage than leaving the ineffective stabilization measures.

Access Prevention Barricades. Barricades should be constructed at all points of access to the decommissioned or abandoned road to effectively prevent use by any passenger vehicle or equipment.

# Exhibit 3 – Environmental Compliance Plan

## Best Management Practices and Avoidance and Minimization Measures

### Introduction

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b><u>Source</u></b>
Intro-1	<p>This document is a living document (subject to change), supplemental to the Hazard Tree Removal Program (H.T.R.P.) Environmental Protection Plan (E.P.P.), and in partnership with FEMA Environmental and Historic Preservation (EHP), California Department of Fish and Wildlife (CDFW), Central Valley Water Board, US Fish and Wildlife Service (USFWS), NOAA Marine Fisheries Service (NMFS), Butte County (County), CalOES Incident Command (IC), CalRecycle Contracts Liaison, and the Consultant. Pertinent environmental regulations from which the Best Management Practices (BMPs) and Avoidance and Minimization Measures (A.M.M.s) were derived are summarized in Table 1 of the E.P.P. This document and the rules set in place will be weighed against OSHA Safety practices, when attempting to comply with Environmental Law. If a Best Management Practice, or rule, is deemed unsafe, Operations will halt work in the particularly affected area, and work with the proper authority, to allow work to continue.</p> <p>Exhibit 1 contains an Environmental Trigger Matrix that summarizes federal and state listed sensitive species with their respective limited operating period for use and reference by environmental monitors during H.T.R.P. implementation. If not superseded by federal resource agency consultations, and/or, waivers issued by the Secretaries of California Environmental Protection Agency (Cal EPA) and California Natural Resources Agency (CNRA), this document may be amended by the CalOES and FEMA Environmental Team with concurrence from the H.T.R.P. Incident Management Team.</p> <p>Exhibit 2 contains ESA Review Form for Projects Under FEMA's PBA with USFWS in California in the Sacramento FWO Jurisdiction, with Avoidance and Minimization Measures from USFWS</p> <p>Exhibit 3 contains Draft Avoidance and Minimization Measures from NMFS</p>	n/a

Intro-2	<p>This document contains acronyms on the furthest right column pertaining to CalFire Forest Practice Rules, and Central Valley Water Boards Timber Harvest General Order, and where they pertain to the project geographically. Also, the word Draft is used next to the NMFS A.M.M.s, as they are pending a concurrence letter. These acronyms include:</p> <p>Right of Way Exemption (R.O.W. E.X.)</p> <p>Emergency Exemption (E.M. E.X.)</p> <p>Pre-processing sites (not otherwise exempt) (PPS)</p> <p>Processing Sites (not in the exemption area [e.g. Log Decks in Oroville] – usually in the valley) (PS)</p>	n/a
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## Environmental Unit Authority

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b>Source</b>
EU-1	<p>Stop Work Authority.</p> <p>Monitors (e.g., Environmental Unit, tribal monitors, qualified biologists, and environmental monitors, and Secretary of Interior qualified archaeologists) have the authority to stop work of a Task Force if any portion of this ECP, or, federal and state directives is violated; or certain environmentally or culturally sensitive resources are discovered. In such conditions, the RPF or Environmental Specialist, will immediately contact the H.T.R.P. Operations Chief, who will consult the Environmental Lead (as designated in the IAP) for concurrence on the notice to stop work.</p>	n/a
EU-2	<p>Non-Compliance Warning.</p> <p>The Environmental Unit will determine, upon non-compliance of the ECP or E.P.P., whether an individual or Task Force will be issued a written warning. Once two warnings are accrued per Task Force, the crew will be referred to the H.T.R.P. Operations Chief to determine the appropriate action (e.g., termination or reassignment) is appropriate.</p>	n/a

## Regulators/Inspections

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b>Source</b>
R-1	Any State, Federal, or Local Regulatory Authority has the right to inspect the project area (any portion of the burn area under the influence of the H.T.R.P.), following the rules of a landowner's Fourth Amendment Rights. CAL FIRE will notify the Central Valley Water Board for the purposes of on-site consultation prior to project implementation, mid-way through the project, and within 7 days of the anticipated completion of the project and while equipment is still on-site to implement any necessary management measures.	R.O.W. E.X.
R-2	The timber harvesting portion of the project will be enrolled under the Central Valley Water Board's Timberland Management General Order of Waste Discharge Requirements, Order R5-2017-0061 (Timber General Order). As a condition of enrollment, the Timber General Order requires reasonable access to the property be provided whenever requested by Central Valley Water Board staff for the purpose of performing inspections and conducting monitoring, including; sample collection, measuring and photographing/taping to determine compliance with permit conditions. Management practices and/or water quality protective measures resulting from such inspections, shall be incorporated in the project. The Timber General Order requires that additional mitigation or management measures developed as a result of inspection, during enrollment, that are necessary to achieve water quality protection be incorporated into the project	R.O.W. E.X.
R-3	The pre-processing sites and processing sites portions of the project will be enrolled under Central Valley Water Board permits as appropriate and as indicated in the sections below. As a condition of such permit coverage, reasonable access to the property must be provided whenever requested by Central Valley Water Board staff for the purpose of performing inspections and conducting monitoring, including; sample collection, measuring and photographing/taping to determine compliance with permit conditions. Any corrective measures directed by the Central Valley Water Board, or required by a permit's provisions, shall be implemented and incorporated into the project.	PPS, PS

## Air Quality

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b><u>Source</u></b>
AQ-1	Consultants/contractors will comply with all applicable Clean Air Act Laws and Permit Requirements.	n/a
AQ-2	The consultant/contractor will mitigate dust from project activities by including dust abatement measures (e.g., water trucks and non-toxic tackifiers) in project contracts.	n/a

## Forest Practice Rules

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b><u>Source</u></b>
FPR-1a	<p>Forest Practice Rules Prohibitions</p> <p>There are limitations for trees to be taken without special provisions under the Section 1104.1i are met (see FPR-1b) Harvesting Plan Conversion, specifically:</p> <ol style="list-style-type: none"> <li>1. Trees that existed before 1800 A.D.</li> <li>2. Sierra or Coastal Redwoods greater than sixty (60) inches in diameter at stump height.</li> <li>3. All other trees, greater than forty-eight (48) inches in diameter at stump height.</li> </ol>	R.O.W. E.X.
FPR-1b	<p>In-lieu practices for Watercourse and lake protection zones as specified under Article 6 of the FPR Rules, exceptions to Rules, and alternative practices are not allowed. However, harvesting of large old trees (not part of a late successional stand) and work within a WLPZ shall only occur when the RPF puts in writing attached with the Exemption notice that the following conditions are met:</p> <ol style="list-style-type: none"> <li>1. The tree(s) is a hazard to safety or property. The hazard shall be identified in writing by an RPF or professionally certified arborist;</li> <li>2. The removal of the tree(s) is necessary for the construction of a building as approved by the appropriate county/city permitting process and as shown on the county/city approved site plan, which shall be attached to the Notice of Exemption;</li> <li>3. The tree is dead or is likely to die within one year of the date of proposed removal, as determined by an RPF or professionally certified arborist.</li> </ol>	R.O.W. E.X.
FPR-2	<b>Roads and Crossings</b>	E.M. E.X.

FPR-2	Road building, watercourse crossings, and other activities outside of timber harvesting are not covered under the Utility R.O.W. THP Exemption (14 CCR 1104.1). If a temporary road, or crossing would be necessary, options for exemptions may fall under the 1052.1.b Emergency Notice; or for new roads, or crossings, may fall under the 1051 Modified Timber Harvest Plan, or a full Timber Harvest Plan, may prove necessary per the discretion of Cal Fire. These activities would be isolated plans for the affected area, beyond the inaccessible crossing, or road and the landowner would need to be identified.	E.M. E.X.
FPR-2a	<b>Roads - Existing</b>	R.O.W. E.X., PS
FPR-2a.i	A stable operating surface will be maintained.	R.O.W. E.X., PS
FPR-2b	<b>Roads - New</b>	E.M. E.X.
FPR-2b.i	Should new road construction be necessary, the following will apply: a Notice of Emergency Operations (1052.1.b) will be filed with CAL FIRE and enrollment under the Central Valley Water Board's Timberland General Order under either Category 2A or 2B, (as applicable to the specific property) will be obtained.	E.M. E.X.
FPR-2b.i.a	Consultation with the Central Valley Water Board and DFW will be sought prior to construction.	E.M. E.X.
FPR-2b.i.b	Construction will not exceed 600' in length per span.	E.M. E.X.
FPR-2c	Forest Practice Road Building and BMP Standards will be met.	E.M. E.X.
FPR-3	<b>Equipment Restrictions</b>	R.O.W. E.X.
FPR-3a	Tractor or heavy equipment operations will not be conducted under the following conditions:	R.O.W. E.X.
FPR-3a.i	Slopes steeper than 65 percent.	R.O.W. E.X.
FPR-3a.ii	Slopes steeper than 50 percent where the erosion hazard rating is high or extreme.	R.O.W. E.X.
FPR-3a.iii	Slopes over 50 percent which lead without flattening to sufficiently dissipate water flow and trap sediment before it reaches a Watercourse or lake protection zone (WLPZ)	R.O.W. E.X.
FPR-3a.iv	When driving through a watercourse without an established crossing.	R.O.W. E.X.
FPR-3a.v	Within a WLPZ.	R.O.W. E.X.
FPR-3b	Tractor or heavy equipment operations will not be conducted on known slides or unstable areas.	R.O.W. E.X.

FPR-3c	Heavy equipment operations will not be conducted within the standard width of a watercourse or lake protection zone, except for maintenance of roads and drainage facilities or structures.	R.O.W. E.X.
FPR-3d	Should operations extend into the winter period, as defined by the Forest Practice Rules (FPR), limitations on operations related to using saturated roads, stabilizing erodible soils and installing erosion control measures will be followed.	R.O.W. E.X.
FPR-3e	Equipment maintenance will occur outside the watercourse protection zones.	R.O.W. E.X.
FPR-3f	Operations will be limited, or halted in saturated conditions (e.g., where heavy equipment would become stuck in mud, create deep ruts, cause sediment runoff, etc.) As called by the Operations Chief and RPF.	R.O.W. E.X.
FPR-3g	Management measures will be installed to prevent overflow, erosion and sediment discharge to surface waterbodies, can include installation of brow logs, rock, and absorbent/adsorbent materials or drip pans to prevent petroleum leaks from entering the watercourse	R.O.W. E.X.
FPR-4	<b>Vegetation Removal</b>	R.O.W. E.X.
FPR-4a	Vegetation Removal. Disturbance or removal of vegetation will be kept to the minimum necessary to complete project related activities (not including removal of dead or dying trees). When practicable, the native vegetation will be cut off at ground level instead of grubbed so it can potentially grow back and establish on its own.	R.O.W. E.X.
FPR-4b	Avoid / Remove Cleared Material from Stream. Trees will be felled away from waterbodies, including streams and wetlands. All trimmed or cleared material/vegetation will avoid falling into any nearby waterbody. If anything incidentally falls into a waterbody, it will be immediately removed by hand.	R.O.W. E.X.
FPR-4c	Sawdust and Bark. Materials from tree removal operations will be controlled using methods that prevent materials from falling or running-off into waterbodies.	R.O.W. E.X.
FPR-4d	Treatment and Removal Deadlines. The contractor will treat and remove felled trees and slash from a site within 7 working days.	R.O.W. E.X.
FPR-4e	Full Slash and woody debris treatment may include any of the following (following Fire Code):	R.O.W. E.X.
FPR-4e.i	chipping and spreading (only in areas where materials will not clog culverts or storm drains);	R.O.W. E.X.
FPR-4e.ii	piling (no burning) following Butte County PLG 21 Chapter 53-10 and Section 53-19. Temporary Log Storage Yards. D 9 c. d.	R.O.W. E.X.

FPR-4e.iii	removing slash and woody debris from the site for treatment	R.O.W. E.X.
FPR-4f	No Burning. Slash and woody debris may not be burned. Any changes to this rule must be approved by the Incident Management Team.	R.O.W. E.X.
FPR-4g	Existing Disturbance. All heavy equipment, vehicles, tree cutting activities, landings, and other associated activities will attempt to utilize existing access roads, road shoulders, and disturbed, or designated work areas limited to the Scope of Work. Work areas will be limited to what is necessary for tree cutting and associated activities.	R.O.W. E.X.
FPR-5	<b>Watercourse Buffers</b>	R.O.W. E.X.
FPR-5a	Location and Classification of All Watercourses. The Registered Professional Forester (RPF), or supervised designee will identify the classification of all water courses.	R.O.W. E.X.
FPR-5b	Flagging. The RPF or supervised designee will visit the site and flag the boundary of the conversion exemption timber operation area and flag any applicable WLPZs and equipment limitation zones. In-lieu practices for watercourse and lake protection zones (WLPZ) as specified under Article 6 of the Forest Practice Rules, exceptions to Rules, and alternative practices are not allowed (see FPR-5d).	R.O.W. E.X.
FPR-5c	Equipment Limitation Zone. A minimum 50-foot watercourse buffer will be implemented as an ELZ, for Class III and IV watercourses. The intent of the ELZ is to reduce or eliminate the likelihood of ground disturbance from heavy equipment that may result in ruts, erosion and direct sediment delivery to the watercourse. Heavy equipment, or vehicles, will limit operations within the ELZ, including use of equipment that stages outside of the ELZ, equipment that enters and exits the WLPZ in its own tracks, use of smaller/lighter (less impactful) equipment, use of hand equipment. If rutting or disturbance occurs from equipment within this zone, the operator will immediately restore the ground to its original contour and install erosion and slope protection measures.	R.O.W. E.X.
FPR-5d	Equipment Exclusion Zone (E.E.Z.). No heavy equipment will cross into the WLPZ and must follow with 1104.1i (see FPR-1b). practices such may include hand-felling of trees that are then as a tree can be felled and drug or carried out of the zone by such practices as a cable, or grapple.	R.O.W. E.X.



FPR-5e	WLPZ Buffers (916.5, 936.5, 956.5 Procedure for Determining Watercourse and Lake Protection Zone (WLPZ), Forest Practice Rules 2019). No temporary crossings, or road building will occur within this E.E.Z. under the R.O.W. Exemption. The LTO will use FPR measures to delineate the WLPZ trees. Table 2 shows the way WLPZ's are measured with associated protective measures. Class I protection zones will include increased buffer widths where anadromous salmonid habitat exists or can be restored, and/or where waterbodies are 303(d) listed for temperature/sediment. Consultation with the Central Valley Water Board will be sought prior to operations. Any work that may occur within this zone will require BMPs to be used and practice of FPR-1b followed.	R.O.W. E.X.
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**Table 2. WLPZ Designation Measures**

Waterbody	Distance
Perennial Streams (Class I) – Domestic supplies, springs, fish always, or seasonally present.	75 feet (less than 30% slope) 100 feet (30% to 50% slope) 150 feet (greater than 50% slope)
Intermittent Streams, Wetlands, Lakes (Class II) – Fish always or seasonally present within 100 feet. Aquatic habitat (non-fish).	50 feet (less than 30% slope) 75 feet (30% to 50% slope) 100 feet (greater than 50% slope)
Ephemeral Streams (Class III) – No aquatic habitat present. Capable of delivering sediment.	25 feet (less than 30% slope) 50 feet (30% plus)
Man-Made Ditches (Class IV) – Domestic, agricultural, hydroelectric supply.	Same as Class III, or if present existing riparian vegetation, whichever is more conservative

## Central Valley Water Quality Control Board

<u>Reference ID</u>	<u>Rule</u>	<u>Source</u>
WB-1	<b>Water Quality</b>	R.O.W. E.X.
WB-1a	Saturated Conditions. Operations will be limited or halted in saturated conditions. As called by the Operations Chief and RPF.	R.O.W. E.X.
WB-1b	Work requiring coverage under a permit issued by the Central Valley Water Board (or other Agency) may not begin until such coverage is obtained.	PPS, PS
WB-1c	Tree Felling. No trees will be felled in a manner in which they might fall into a watercourse.	R.O.W. E.X.

WB-1d	Broken Culverts. Culverts broken by the contractor during work in pre-processing and processing sites may require a permit (storm water or water quality certification) from the Central Valley Water Board. In such instances consultation with the Central Valley Water Board to determine permitting requirements will be initiated prior to work. Refer to FPR-2 for broken culverts in the Forest Lands Treatment Areas.	PPS, PS, E.M. E.X.
WB-1e	Septic. Septic systems broken by the contractor will be addressed expeditiously, and consultation with the appropriate resource agencies, such as the county Environmental Health Department, to fix it will occur. The contractor will submit a plan to remedy within 3 days of an incident. Communications with a property owner will occur immediately.	PPS, PS, E.M. E.X.
WB-1f	Temporary crossings. New and replacement temporary watercourse crossings will be removed before winter. Permanent watercourse crossing will accommodate the estimated 100-year flood flow, including debris and sediment loads.	R.O.W. E.X.
WB-1g	Shade-producing canopy. Should be retained where waterbodies are 303(d) listed for temperature. Consultation with the Central Valley Water Board will be sought prior to operations.	R.O.W. E.X.
WB-1h	Disturbance and creation of bare areas. Will be planned to avoid sediment discharge to waterbodies. At pre-processing and processing sites, the contractor will receive coverage under a storm water permit administered by the Central Valley Water Board may be required. Generally, coverage is required for soil disturbances of one acre or more, or when part of a larger plan of development.	R.O.W. E.X., PPS, PS
WB-1i	Water drafting locations. If deemed necessary, water drafting associated with surface waters will be treated with BMPs to prevent overflow from transporting sediment to the waterbody.	R.O.W. E.X.
WB-1i.i	Water drafting locations will be treated with BMPs to prevent petroleum products from entering the waterbody. Intakes will be screened to prevent entrainment of aquatic species. Consultation with Federal, State and Local agencies will occur before such an activity.	R.O.W. E.X.
WB-1j	Waste Discharge Requirements. General Conditions for the 2017 Order Waste Discharge Requirements for Categories 2A, Industrial Fire Salvage and Non-Industrial Fire Salvage with No Residences, and 2B, Non-Industrial Fire Salvage with Residences are specified in Exhibit 7A, pages 16 through 20. Although eligibility and enrollment conditions are different between the two categories, there are the following common conditions between them as noted below if certain prerequisites are determined to be applicable.	R.O.W. E.X., E.M. E.X.

WB-1k	SWPPP. At pre-processing and processing sites, if storm water permit coverage is required, the designated contractors' Qualified SWPPP Developer (QSD) will develop a Storm Water Pollution Prevention Plan that meets permit requirements. For soil disturbance at other project areas, sediment and erosion control Best Management Practices to minimize water related erosion will, at a minimum, include the following protective measures:	R.O.W. E.X., PPS, PS
WB-1k.i	Operating Equipment and Vehicle Leaks. Any equipment or vehicles driven and/or operated within, or adjacent to a WLPZ will be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.	R.O.W. E.X.
WB-1k.ii	Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake will be positioned over drip pans. Stationary heavy equipment will have suitable containment to handle a catastrophic spill/leak. Crews will maintain spill containment kits on-site at all times during project operations and/or staging or fueling of equipment.	R.O.W. E.X.
WB-1k.iii	Equipment Maintenance and Fueling. No equipment maintenance, fueling or storage will occur within or near any stream channel or lake margin where petroleum products or other pollutants from the equipment may enter these areas.	R.O.W. E.X.
WB-1k.iv	No Dumping. No litter or construction debris will be deposited within a stream or lake, or where it may pass into a stream or lake. All debris and waste will be picked up and removed daily.	R.O.W. E.X.
WB-1k.v	Sawdust. Sawdust will be controlled in such a way that it does not enter a watercourse.	R.O.W. E.X.
WB-1k.vi	Hazardous Materials. Debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, wildlife, or riparian habitat resulting from the Project related activities will be prevented from contaminating the soil and/or entering any watercourse.	R.O.W. E.X.
WB-1k.vii	Dust Control. Implement dust control practices, such as rocking temporary access road entrances and exits and covering temporary stockpiles when weather conditions require.	R.O.W. E.X.
WB-1k.viii	Permanent erosion control. Incorporate permanent erosion control measures such as bio-filtration strips and swales to receive storm water discharges from the project work areas to the maximum extent practicable.	R.O.W. E.X.
WB-1k.ix	Pesticides. No use of herbicides or pesticides will occur.	R.O.W. E.X.

WB-1k.x	Should operations extend into the winter period, as defined by the Forest Practice Rules (FPR), limitations on operations related to using saturated roads, stabilizing erodible soils and installing erosion control measures will be followed.	R.O.W. E.X.
WB-1k.xi	Stormwater drop inlet protections near work areas.	R.O.W. E.X.
WB-1k.xii	Monitoring for project effectiveness and effectiveness of resource protection measures should be conducted. Including monitoring of areas with potential erosion.	R.O.W. E.X.
WB-2	<b>Watercourse Crossings</b>	E.M. E.X., PPS, PS
WB-2a	CEQA. Watercourse Crossings do not fall under 14 CCR 11041.1 Right-of-Way Exemption, therefore causing the activity to require a separate Notice of Emergency T.H.P. Exemption. CEQA coverage, or an exemption under CEQA, is required for watercourse crossings at pre-processing and processing sites, which require coverage under CWA section 401.	E.M. E.X., PPS, PS
WB-2b	Clean Water Act Compliance. If a new watercourse crossing must be installed, or existing watercourse crossing is in need of maintenance within a Water of the United States or Water of the State (within the ordinary high water mark [OHWM]) in a pre-processing or processing area, the Environmental Unit will consult with the US Army Corps of Engineers, and the Regional Water Quality Control Board for the necessity of Clean Water Act Section 404 and 401 permits, before work will occur. The contractor will provide a work plan to aid in the drafting of the permit.	E.M. E.X., PPS, PS
WB-2c	Endangered Species Act Consultation. If a new watercourse crossing must be installed, or existing watercourse crossing is in need of maintenance, the crossing site will be inspected by a wildlife biologist for fish and wildlife species prior to entering the watercourse. If a California Endangered Species Act (C.E.S.A.) or Federal Endangered Species Act (F.E.S.A.) listed species is found within the crossing location, the site will be flagged and avoided until consultation with the Department of Fish and Wildlife occurs.	E.M. E.X., PPS, PS
WB-2d	Cultural/Tribal Consultation. If a new watercourse crossing must be installed, or existing watercourse crossing is in need of maintenance, the crossing site will be inspected by an Secretary of the Interior (SOI) qualified Archaeologist and Tribal Monitor. Confirmation that the site complies with Section 106 of the National Historic Preservation Act (NHPA) must be confirmed before work will occur.	E.M. E.X., PPS, PS
WB-2e	Winter Period. Installation of temporary crossings will attempt to be installed outside of the Winter Period, October 15 to April 15.	R.O.W. E.X., E.M. E.X., PPS, PS

WB-2f	Watercourse Crossings – New. Should new watercourse crossings be necessary, the following will apply:	E.M. E.X., PPS, PS
WB-2f.i	Consultation with the Central Valley Water Board and DFW will be sought prior to construction	E.M. E.X., PPS, PS
WB-2f.ii	Crossings should meet, or exceed the 100 year flood flow and associated debris standard in the FPR	E.M. E.X., PPS, PS
WB-2g	Silt protection. Silt barriers, geotextile fabrics, and swamp mats will be utilized during installation.	E.M. E.X., PPS, PS
WB-2h	Equipment in-water. If equipment must cross into a watercourse, equipment will be utilized that is the lightest to achieve the installation of the crossing. Tracks or wheels will be cleaned before they enter the watercourse. Equipment will not enter the water without express permission from US Army Corps of Engineers, the Central Valley Water Board, and the relevant Federal or State Department of Fish and Wildlife. Any in-water work may require coverage under a CWA section 401 Water Quality Certification from the Central Valley Water Board. This activity is not covered by CalFires' Utility R.O.W. Exemption.	E.M. E.X., PPS, PS
WB-2i	Do Not Impair Water Flow. The installation of bridges, culverts or other structures should be installed such that water flow is not impaired and upstream or downstream passage of fish and all aquatic life-forms is assured at all times. If structures and associated materials are not designed to withstand high seasonal flows, they should be removed before such flows occur.	E.M. E.X., PPS, PS
WB-2j	Fill Materials. Materials and methods used for temporary crossings should cause minimal turbidity or siltation. Clean 2 to 6 inch pit run rock, screened river gravels, clean washed 2 inch plus rock or gravel, and/or logs in fill materials should be included. Bridge abutments below the high-water mark shall be rock or logs. When fill material is removed from the crossing, the channel shape and gradient should be returned to pre-project condition and stabilized to the extent feasible, and any adjacent bare soil should be stabilized by mulching or other effective method (see subsection WB-2h & WB-2i ). Any fill or excavation in Waters of the US or Waters of the State may require coverage under a CWA section 401 Water Quality Certification issued by the Central Valley Water Board.	E.M. E.X., PPS, PS
WB-2k	Recreate Channel Grade. During crossing removal, all fill material should be excavated in a manner that recreates the natural channel grade and orientation, with a channel bed that is as wide as or slightly wider than the original watercourse.	E.M. E.X., PPS, PS

WB-2l	Stabilize Crossing Sites. All bare mineral soil exposed in conjunction with crossing construction, deconstruction, maintenance or repair, should be treated for erosion immediately upon completion of work on the crossing, and prior to the onset of precipitation capable of generating runoff. Erosion control will be used as specified to stabilize the approach and bank of the watercourse. If the site is seeded, planting and seeding with native species, and mulching is acceptable.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-2m	Stabilize and Inspect Decommissioned and Abandoned Road Crossings. Decommissioned/abandoned roads and crossings, once used by Operations, should be stabilized and then inspected following the first storm event producing bankfull stage flows and again prior to filing the completion report. The inspection should verify the effectiveness of the stabilization measures in preventing sediment discharges to the watercourse and to ensure the measures are functioning to restore natural drainage and hillslope stability. If stabilization measures are found to be ineffective, further stabilization measures should be applied, unless reentering the site would cause greater damage than leaving the ineffective stabilization measures. Such inspection results should be reported to the Central Valley Water Board and will likely be included as supplemental monitoring requirements under the Timberland General Order.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-2n	Access Prevention Barricades. Barricades should be constructed at all points of access to the decommissioned or abandoned road to effectively prevent use by any passenger vehicle or equipment.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3	<b>Sediment Control</b>	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3a	Best Management Practices (BMPs). Use of CASQA and/or Forest Practice BMP Standards will be met.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3b	Disturbed Soils. Prior to any ground disturbing work at a project site, erosion control materials (fiber rolls and silt fence) will be stock-piled on site. All disturbed soils within the Project site will be stabilized to reduce erosion potential, both during and following construction. Planting and seeding with native species, and mulching is acceptable. Where suitable vegetation cannot reasonably be expected to become established, non-erodible materials, such as coconut fiber matting, will be used for such stabilization. At pre-processing and processing sites, coverage under a storm water permit administered by the Central Valley Water Board may be required. Generally, coverage is required for soil disturbances of one acre or more, or when part of a larger plan of development.	R.O.W. E.X., E.M. E.X., PPS, PS

WB-3c	Revegetation. If required, as a result of agency consultation, or as required by an applicable permit, disturbed areas will be revegetated with local native species suitable to the restoration. Such as the decommission of an access road leading to a temporary crossing. (See NMFS-9b)	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3d	Trenching / Excavation /Grading Spoils. As required by an applicable permit, castings or spoils from the trenching / excavation operations will be placed on the stream side of the trenching / excavation /Grading site.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3e	Bank Stabilization. Bank stabilization will be constructed with suitable non-erodible materials that will withstand wash out. The bank stabilization material will extend above the normal high-water mark. Only clean material such as rock riprap that is free of trash, debris and deleterious material will be used as bank stabilization. Asphalt will not be considered an acceptable material. Generally, bank stabilization work will require a CWA section 401 permit from the Central Valley Water Board, as well as other applicable regulatory agencies.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3f	Sediment and Erosion Control Measures. Biodegradable sediment and erosion control measures will be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a river, stream, wetland, or lake. If there is a 30 percent chance of a rain event within 24 hours, sediment and erosion control will be inspected (before and after the event), and repaired, or upgraded to prevent any runoff. Measures will be maintained in good operating condition until the site is signed off by the Operations Chief. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged silt fencing, compost socks, coir logs, coir rolls, and/or straw bale dikes. Modifications, repairs and improvements will be made to the sediment and erosion control measures whenever it is needed. If the sediment barrier fails to retain sediment, corrective measures will be employed, and an Environmental Specialist notified, immediately. Materials used in the sediment barriers will not pose an entanglement risk to fish or wildlife (e.g. plastic monofilament netting).	R.O.W. E.X., E.M. E.X., PPS, PS

WB-3g	Silt Barriers. If work or vehicle crossings must occur within a wetted stream or lake area, precautions to minimize turbidity and siltation will be employed and may require the placement of geotextile fabrics, silt fencing, coir logs, coir rolls, straw bale dikes, or other siltation barriers so that silt and/or other deleterious materials are not allowed to pass to downstream reaches. Equipment will be placed on swamp mats, where the ground is softer. Materials used in the silt barrier will not pose an entanglement risk to fish or wildlife (no plastic monofilament netting). The contractor will obtain coverage under a storm water permit and/or a CWA section 401 Water Quality Certification from the Central Valley Water Board, refer to the specific permit requirements regarding sediment and erosion control.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3h	Removal of Silt from Barriers. Silt collected around the silt barriers will be removed on an as needed basis to prevent silty/turbid water from flowing around the silt barriers during storm events. Silt barriers which trap sediment will be removed when temporary crossings have been taken out and after all flowing water is cleared of turbidity in a manner that will not introduce silt to the stream. The stream will then be restored to a clean and natural condition. For coverage under a storm water permit and/or a CWA section 401 Water Quality Certification from the Central Valley Water Board, refer to the specific permit requirements regarding sediment and erosion control.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-3i	Mapping. The contractor will map out the placement of BMPs, to be kept in the Environmental Tree Removal Data Management System, to account for where they have been placed, what type, and how much material was used. BMPs should be located and removed if they are non-biodegradable. For coverage under a storm water permit and/or a CWA section 401 Water Quality Certification from the Central Valley Water Board, refer to the specific permit requirements regarding sediment and erosion control.	R.O.W. E.X., E.M. E.X., PPS, PS
WB-4	<b>Pre-processing and processing sites.</b>	PPS, PS
WB-4a	In addition to any other required permit coverage or authorization, pre-processing and processing sites may require coverage under a general Industrial Stormwater Permit, and/or Waste Discharge Requirements issued by the Central Valley Water Board, depending on the type of operation, exposure of materials, and other factors. Pre-project consultation with the Central Valley Water Board is recommended.	PPS, PS

## County

<u>Reference ID</u>	<u>Rule</u>	<u>Source</u>
CO-1	<b>Log Decks</b>	PPS, PS



CO-1a	Operations will comply, with all relevant Federal, State and County Code Ordinances, Chapter 53, Section 53-19. - Temporary log storage yards.	PPS, PS
CO-1b	Log decks within the project area will meet Forest Practice Rules standards for building, maintenance, and BMPs.	PPS, PS
CO-1c	Use of California Manual on Uniform Traffic Control Devices (M.U.T.C.D.) and/or American Association of State Highway and Transportation Officials (A.A.S.H.T.O.) standards will be met	PPS, PS
CO-1d	Use of CASQA or Forest Practice BMP Standards will be met	PPS, PS
CO-1e	A Storm Water Pollution Prevention Plan (SWPPP) will be developed by the contractor	PPS, PS
CO-1f	AB-52 and EO B-10-11 Tribal Consultation will be conducted by CalRecycle, or their Consultant	PPS, PS
CO-1g	Log decks will not be placed within habitat of Endangered or Threatened Species, or significantly impact historical, or tribal resources	PPS, PS
CO-1h	The Planning Section will consult with the County on compliance with listed ordinances	PPS, PS

## Cultural Resources

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b><u>Source</u></b>
C.R.-1	Notice to Monitors. When tree removal is scheduled to begin at a given location, the Planning Section will provide Archaeological and Tribal Monitors notice in advance of crew mobilization onto a site. Archaeological and Tribal Monitors will maintain lists of parcels that require surveys and/or monitoring.	n/a
C.R.-2	Road Grading and Ground Disturbance. Prior to road grading, the Planning Section will give Archaeological and Tribal Liaisons notice to survey the site.	n/a
C.R.-3	Work Hold. No work will begin at locations of road grading, or other ground disturbing activities without the locations being first surveyed by archaeological and Tribal monitors. Archaeologists and Tribal Monitors will convey monitoring requirements based on survey/site inspection results prior to the proposed start of work. Operations will attempt to notify monitors before the start of such activities.	n/a
C.R.-4	Non-federally recognized Tribal Consultation will be conducted by CalRecycle's Tribal Liaison (as mandated under A.B.-52 and EO B-10-11)	n/a

## Wildlife

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b>Source</b>
WL-1	Endangered Species Act. Location of areas needing special measures for protection of animals (or plants) as Threatened, Endangered, Proposed or species under the ESA of 1973 or C.E.S.A. and Sensitive Species are shown on Figure 5.1-5.9 of the E.P.P., and discussed in this document. If protection measures prove inadequate, if other such areas are discovered, or if new species are listed on the Endangered Species List, Cal Recycle may either cancel or unilaterally modify this contract to provide additional protection regardless of when such facts become known. Discovery of such areas by either party will be promptly reported to the other party. Limited Operating Periods except when agreed otherwise will be —limited as described within this document and as describe in the Environmental Trigger Matrix (Exhibit 1).	n/a
WL-2	Biologist Qualification Check. Qualified Biologists will submit their credentials within 10 business days of beginning work to U.S. Fish and Wildlife Service.	n/a
WL-3	Trash. All trash will be removed at the end of each working day.	n/a
WL-4	Non-sensitive Species. If any non-sensitive wildlife comes into the work site:	n/a
WL-4a	Stop work until animal leaves the site.	n/a
WL-4b	If an animal will not leave and is in danger from work or a danger to the crew, contact animal control 530-552-3888.	n/a
WL-4c	Do not remove animal unless unmitigable circumstances arise (unable to reach animal control/biologists, environmental; or timing of response would cause harm to the species).	n/a
WL-5	Limiting Operating Periods (L.O.P.s):	n/a
WL-5a	L.O.P.s are designed to reduce potential harm/harassment to wildlife during critical seasons, primarily nesting and their offspring seasons, when animals are most vulnerable to activities (running equipment, timber harvest, and hauling, burning, operating chainsaws/brush cutters) that could result in failed nesting attempts.	n/a

WL-5b	If management objectives cannot be met by implementing the L.O.P.s identified, a qualified wildlife biologist will be consulted to determine more specific areas and kinds of activities that may be pursued. The biologist may recommend removing L.O.P.s, if sufficient information is provided by additional surveys or new information arises.	n/a
WL-5c	If potential raptor nests, large stick nests, or signs of active denning are observed in or near trees that are designated for removal, the occurrence and location will be reported to a wildlife biologist to determine the need for further review. During marking of the timber sale, potential raptor nest trees will be identified and reported to the CDFW and/or USFWS Biologist(s).	n/a
WL-5d	Implement BMPs to ensure water quality standards are met and riparian and upslope conditions are maintained or improved as appropriate. Effectiveness monitoring of all applicable BMPs will occur.	n/a
WL-5e	If all other conditions and permits are met, environmental resource monitoring will be implemented to allow work outside of an exclusion zone.	n/a
WL-5f	Follow all measures under FEMA-4407-DR-CA, Hazard Tree Removal Program Applicable Project BMPs, General Avoidance and Minimization Measures, and Species-Specific Conservation Measures (attached Exhibit 2 and 3).	n/a

## NOAA Marine Fisheries

<b><u>Reference ID</u></b>	<b><u>Rule</u></b>	<b>Source</b>
NMFS-1	To reduce dust, all traffic associated with project activities will be restricted to a speed limit of 20 miles per hour when driving on unpaved roads.	DRAFT
NMFS-2	There will be no ground disturbance within an ELZ adjacent to waterways supporting anadromous fish (i.e., Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds) within 48 hours before a rain event. Erosion control materials within ELZ work areas would be installed within 48 hours of any ground disturbance.	DRAFT

NMFS-3	All hazardous materials will be stored in properly designated containers within a storage area with an impermeable membrane between the ground and the hazardous materials. The storage area will be encircled by a berm to prevent the discharge of pollutants to groundwater or runoff into the habitats of listed species.	DRAFT
NMFS-4	All staging, equipment, and material storage areas, including temporary staging areas and locations where equipment and vehicles are parked overnight, will be placed outside of the flood zone of a watercourse, away from and outside riparian woodland and wetland habitat. When possible, staging and access areas will be situated in areas that are previously disturbed, such as developed areas, paved areas, parking lots, areas with bare ground or gravel, and areas clear of vegetation. Riparian trees and shrubs will not be removed for staging areas.	DRAFT
NMFS-5	For temporary access roads and water crossings within the 150 foot ELZs in watersheds supporting anadromous fish (i.e., Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds), revegetation will occur to replace living woody vegetation removed for temporary access roads or water crossings. Areas that are disturbed by heavy equipment, but where the removal of living woody vegetation does not occur, will have erosion control measures put in place, but will not be replanted.	DRAFT
NMFS-5a	In areas that require revegetation, a contractor identified by CalRecycle will prepare and implement a revegetation plan. Because follow-up monitoring and corrective planting cannot occur, all trees larger than 6 inches diameter at breast height that are removed during Project implementation will be replaced at an 8:1 ratio. All other disturbed areas will be planted or hydroseeded at a rate sufficient to revegetate the site. When practicable, the native vegetation will be cut off at ground level instead of grubbed so it can potentially grow back and establish on its own, and disturbed areas should be planted in late fall after summer temperatures decrease or near the beginning of the first growing season after hazard tree removal.	DRAFT
NMFS-5a.i	Additional revegetation requirements are specified as follows:	DRAFT
NMFS-5a.ii	Use a diverse assemblage of plant species native to the area, including trees, shrubs, and herbaceous species.	DRAFT
NMFS-5a.iii	For long-term revegetation use only species native to the area that will achieve shade and erosion control objectives, including forb, grass, shrub, or tree species that are appropriate for the site.	DRAFT
NMFS-5a.iv	Do not apply surface fertilizer within 50 feet of any wetland or water body.	DRAFT

NMFS-5a.v	Spot treatments of mulching or soil amendments (such as hydrogel), and/or a slow-release watering system (e.g., dri-water tubes or Cocoon systems, which are bio-degradable water reservoirs installed around saplings) should be used where needed to increase soil moisture retention and improve survival rates.	DRAFT
NMFS-5a.vi	Install fencing or other protection, as necessary, to protect plantings from livestock.	DRAFT
NMFS-5a.vii	Do not use invasive or non-native species for revegetation.	DRAFT
NMFS-6	Every hazard tree (as defined in Section 3.1.1) that is removed within the Large Woody Contribution Zone (LWCZ) (i.e., within 50 feet of the edge of channel of waterways supporting anadromous fish, such as Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds), will be replaced at an 8:1 ratio. The exact location of the plantings will depend on site-specific conditions and will be in areas where survival rates are expected to be greater.	DRAFT
NMFS-6a	Additional tree replacement requirements are specified as follows:	DRAFT
NMFS-6a.i	Use appropriate tree species native to the area and suited for the soil moisture conditions at the site.	DRAFT
NMFS-6a.ii	When possible, trees should be placed adjacent to waterways that support anadromous fish in areas where they will contribute to shade over anadromous waterways and may eventually fall into the creeks and become LWD.	DRAFT
NMFS-6a.iii	Do not apply surface fertilizer within 50 feet of any wetland or water body.	DRAFT
NMFS-6a.iv	Spot treatments of mulching or soil amendments (such as hydrogel), and/or slow-release watering systems (e.g., dri-water tubes or Cocoon systems, which are bio-degradable water reservoirs installed around saplings) will be used where needed to increase soil moisture retention and improve survival rates.	DRAFT
NMFS-6a.v	Install fencing or other protection, as necessary, to protect plantings from livestock.	DRAFT
NMFS-6a.vi	Do not use invasive or non-native tree species for hazard tree replacement.	DRAFT

NMFS-7	Before entering wetlands or working within an ELZ, all heavy equipment, vehicles, and power tools will be power washed, allowed to fully dry, and inspected for fluid leaks. After cleaning, the equipment will be inspected to make certain no plants, soil, or other organic material are adhering to the surface. Cleaning will be repeated as often as necessary during operation to keep all equipment, vehicles, and power tools free of external fluids and grease, and to prevent a leak or spill from entering the water.	DRAFT
NMFS-8	All contractors will follow guidelines in the California Invasive Plant Council's <i>Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers</i> (Cal-IPC 2012) to prevent the spread of invasive plant species. Construction equipment will be clean of material that may harbor invasive plant seeds or invasive pests before entering the work area. This material includes dirt or plant seeds on construction equipment, tools, boots, and clothing.	DRAFT
NMFS-9	With the exception of vegetation-clearing equipment, no vehicles or construction equipment will be operated in areas of tall, dry vegetation. CalRecycle (or a designated contractor) will develop and implement a fire prevention and suppression plan for all activities that have a risk of starting a wildfire.	DRAFT
NMFS-10	All contractors will, to the maximum extent practicable, reduce the amount of disturbance at each site to the absolute minimum necessary to accomplish the project. Any topsoil removed by excavation, grading, trenching, or other means will be stockpiled, covered, and encircled with silt fencing to prevent loss or movement of the soil into listed species habitats. All topsoil will be replaced in a manner to recreate pre-disturbance conditions as closely as possible.	DRAFT
NMFS-11	All construction personnel will participate in an environmental awareness training by the biological monitor before the start of hazard tree removal. The training will familiarize all construction personnel with the listed species that may occur onsite, their habitats, general provisions and protections afforded by the ESA and MSA, BMPs and AMMs to be implemented to protect these species and their habitat, and the project boundaries. This training will be provided within 3 days of the arrival of any new worker.	DRAFT

## Threatened, Endangered and Sensitive Species

<u>Reference ID</u>	<u>Rule</u>	<b>Source</b>
TES-1	<b>Nesting Birds (Sensitive):</b>	n/a
TES-1a	A qualified Biologist will conduct surveys for the nests and habitat of migratory bird species, from February 1 through September 15.	n/a

TES-1a.i	Biologists upon finding a nest, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-1a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-1a.iii	Nests will be checked weekly (unless work is going to occur nearby, see d. below) to give an update of the nests progress.	n/a
TES-1b	If an active nest is found, a buffer of avoidance will be designated with consultation from the Department of Fish and Wildlife.	n/a
TES-1c	If an unoccupied nest is found, or in the process of being built within a work area, a biologist, or appointee designated by the biologist will remove the nest and scatter the material on the ground.	n/a
TES-1d	A qualified biologist will monitor for nest activity (eggs, hatchlings, fledglings) daily before, during and after work activity near nests.	n/a
TES-1e	If a nest needs to be relocated a Migratory Bird Special Purpose Permit (S.P.R.E.) will be sought for the relocation, or removal of the nest. A wildlife biologist, Environmental Specialist, RPF, upon conference with the Environmental Unit Leader, will safely remove the nest and take it to the nearest receptive wildlife rehabilitation center, if one cannot be found, the nest will be relocated nearby, out of the way of the project area and monitored to make sure the adults return to their nest.	n/a
TES-2	<b>Rare/Sensitive Plant Community:</b>	n/a
TES-2a	A qualified biologist/botanist will survey the areas with suitable habitat for rare plants, especially during a particular plant's blooming period and map those areas for their avoidance.	n/a
TES-2b	The biologist will attempt to work as close as possible to the wetted habitat these species live in, being careful not to disturb wetted soils.	n/a
TES-2c	The biologist will flag the site, mark a GPS location, document species.	n/a
TES-2d	<p>Surveys for the following species will be conducted during their associated blooming period:</p> <p>Butte County Meadowfoam, Endangered, March to May</p> <p>Green's tuctoria, Endangered, May to July</p> <p>Hairy Orcutt grass, Endangered, May to September</p> <p>Hoover's spurge, Threatened, July to September</p>	n/a

TES-2e	A limited operating period (L.O.P.) will be established outside of a plant communities blooming period, and/or exclusion zone for ground disturbing activities will be flagged and monitored in areas where rare/endangered plant communities are suspected, known, or discovered.	n/a
TES-2f	Vehicles wheel wells will be washed before coming into the Burn Area.	n/a
TES-2g	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-3	<b>California Red-legged Frog (CRLF), Sierra Nevada Yellow Legged Frog (SNYLF), Foothill Yellow-legged Frog (FYLF), Western Pond Turtle (WPT), and Hardhead Minnow (HHM):</b>	n/a
TES-3a	Follow all measures under FEMA-4407-DR-CA, Hazard Tree Removal Program Applicable Project BMPs, General Avoidance and Minimization Measures, and Species-Specific Conservation Measures - CRLF (attached)	n/a
TES-3a	A qualified Biologist will conduct surveys (year round) for TES species of fish, amphibians and reptiles in or around water courses; including eggs, larvae, and adults, throughout their range.	n/a
TES-3a.i	The biologist will perform a Visual Encounter Survey, entailing standing in one area with binoculars looking for species basking on the bank, hiding amongst plants, rocks, or other refugia, or swimming in the water.	n/a
TES-3a.ii	The biologist will then walk a transect along the bank, looking in the water and bank for presence, movement, calls, or other signs of the target species.	n/a
TES-3a.iii	The biologist will walk in a parallel transects pattern for 500 feet, or between the work area and the watercourse looking for species hiding amongst plants, rocks, or other refugia, as well as for the presence of ground squirrel burrows.	n/a
TES-3a.iv	The biologist will flag the site, mark a GPS location, document species, and take note of any ground squirrel burrows, refugia, which may support dry weather habitat.	n/a
TES-3b	Exclusion area: If a species, or supporting dry season burrow is known, or found near a work site, the area will be marked or fenced off to exclude work from occurring within this area. A buffer of limited work will be established 500 feet around this exclusion area.	n/a
TES-3c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a



TES-3d	Limited Operating Period (L.O.P.): Limited, or no activity from October 1, or the first wetting rain (more than ¼ inch precipitation), until April 15th. From April 15 to October 1, if a weather system resulting in more than ¼ inch of precipitation occurs in project area, operations must be suspended within 50 feet of a lake or watercourse until a dry period of 72 hours occurs, unless the Department of Fish and Wildlife determines there will be no effect to amphibians.	n/a
TES-3e	Best Management Practices (BMPs) will be applied that re-distribute soil and debris to pre-treatment landscape contours to minimize sedimentation to creeks.	n/a
TES-4	<b>Giant Garter Snake (GGS):</b>	n/a
TES-4a	A qualified Biologist will conduct surveys (year round) for GGS, including eggs and adults, throughout their range, especially from May 1 to August 1.	n/a
TES-4a.i	The biologist will perform a Visual Encounter Survey, entailing standing in one area with binoculars looking for species basking on the bank, hiding amongst plants, rocks, or other refugia.	n/a
TES-4a.ii	The biologist will then walk a transect along the bank, looking in the water and bank for presence, movement, or other signs of the target species.	n/a
TES-4a.iii	The biologist will walk in a parallel transects pattern for 200 feet, or between the work area and the watercourse.	n/a
TES-4a.iv	The biologist will flag the site, mark a GPS location, document species, and take note of any animal burrows, refugia which may support dry weather habitat.	n/a
TES-4b	Confine construction activities within 200 feet of GGS aquatic habitat to the period from May 1 to October 1.	n/a
TES-4c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-5	<b>Coastal Horned Lizard (CHL):</b>	n/a
TES-5a	A qualified Biologist will conduct surveys (year round) for GGS, including eggs and adults, throughout their range, especially from May 15 to July 15.	n/a
TES-5a.i	The biologist will perform a Visual Encounter Survey, entailing standing in one area with binoculars looking for species hiding amongst plants, burrows, rocks, or other refugia.	n/a
TES-5a.ii	The biologist will then walk transects along the given parcels, looking for presence, movement, or other signs of the target species.	n/a

TES-5a.iii	The biologist will flag the site, mark a GPS location, document species, and take note of any animal burrows, refugia which may support habitat.	n/a
TES-5b	Exclusion area: If a species is known, or found near a work site, the area will be marked or fenced off to exclude work from occurring within this area.	n/a
TES-5c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat. Especially before ground work occurs on a known site with potential for Coastal Horned Lizard.	n/a
TES-5d	Limited Operating Period (L.O.P.): Limited activity from Late May to Early July during mating season.	n/a
TES-6	<b>Chinook Salmon Spring Run ESU, Central Valley Steelhead, Green Sturgeon:</b>	n/a
TES-6a	A qualified Biologist will conduct Visual Encounter Surveys for TES species of anadromous fish, from August 1 to October 31, walking along the bank of the target watercourse, looking for the given species in the water.	n/a
TES-6b	Exclusion area: Anadromous watercourses will be given a buffer of 150 feet, establishing a maximum WLPZ for Class I Streams.	n/a
TES-6c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-6d	Limited Operating Period (L.O.P.): Limited, or no activity from August 1 until October 31.	n/a
TES-6e	Best Management Practices (BMPs) will be applied that re-distribute soil and debris to pre-treatment landscape contours to minimize sedimentation to creeks.	n/a
TES-6f	Dust will be controlled at all times near anadromous watercourses.	n/a
TES-7	<b>Bald Eagle:</b>	n/a
TES-7a	Nest Trees/Site: A qualified Biologist will conduct surveys within ¼ mile around work areas with supporting habitat, to determine where the eagle pair are nesting and which roost and perch trees they are utilizing. At a minimum, it is expected that roost/perch trees around Paradise and Concow Lake may be utilized from January 15 to September 15 of each year.	n/a
TES-7a.i	Biologists upon finding a nest, suspecting a nesting site, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-7a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a

TES-7a.iii	Nests will be checked weekly (unless work is going to occur nearby, see c. below) to give an update of the nests progress.	n/a
TES-7b	If nesting status is determined, the L.O.P. would be implemented around the nest stand, or as determined by the USFWS. If any new occurrences of these species are detected during implementation of the project, the USFWS will be notified for further evaluation before continuing operation.	n/a
TES-7c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-8	<b>Northern Spotted Owl:</b>	n/a
TES-8a	Seasonal restrictions apply including road access from February 15 through August 15 within the designated activity centers.	n/a
TES-8b	A qualified Biologist will conduct surveys within ¼ miles of work areas supporting habitat prior to project implementation.	n/a
TES-8b.i	Biologists upon finding a nest or activity center, suspecting a nesting site or activity center, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-8b.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-8b.iii	Nests will be checked weekly (unless work is going to occur nearby, see f. below) to give an update of the nests progress.	n/a
TES-8c	If owls are located an L.O.P. (March 1 through August 15) will be required for treatment units where activity centers (nests, pair, young) have been located within ¼ mile of the treatment unit.	n/a
TES-8d	If owls are located the L.O.P. may be added or modified for this project by the district wildlife biologist. Stand prescriptions may be adjusted as well (an example might be to have no harvest around the nest tree, etc.).	n/a
TES-8e	A new Protected Activity Center (PAC) and Home Range Core Area (HRCA) will be created if a new territory is discovered.	n/a
TES-8f	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-9	<b>Northern Goshawk:</b>	n/a
TES-9a	A qualified Biologist will conduct surveys within ¼ miles around work areas prior to project implementation from February 15 to September 15.	n/a

TES-9a.i	Biologists upon finding a nest, suspecting a nesting site, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-9a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-9a.iii	Nests will be checked weekly (unless work is going to occur nearby, see c. below) to give an update of the nests progress.	n/a
TES-9b	If goshawks are located a L.O.P. (March 1 through September 15) would be required. The L.O.P. may be added or modified for this project by the USFWS.	n/a
TES-9c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-10	<b>Burrowing Owl and Peregrine Falcon:</b>	n/a
TES-10a	A qualified Biologist will conduct surveys within 500 feet of the work area, prior to project implementation from February 15 to September 15.	n/a
TES-10a.i	Biologists upon finding a nest or occupied ground squirrel burrow, suspecting a nesting site, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-10a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-10a.iii	Nests will be checked weekly (unless work is going to occur nearby, see d. below) to give an update of the nests progress.	n/a
TES-10b	If birds are located an L.O.P. (February 15 through September 15) would be required. The L.O.P. may be added or modified for this project by the USFWS.	n/a
TES-10c	The area will be marked for avoidance within 500 feet.	n/a
TES-10d	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-11	<b>California Blackrail:</b>	n/a
TES-11a	A qualified Biologist will conduct surveys within 500 feet of work areas, within wetland areas prior to project implementation from March 1 to September 15.	n/a
TES-11a.i	Biologists upon finding a nest, suspecting a nesting site, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a

TES-11a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-11a.iii	Nests will be checked weekly (unless work is going to occur nearby, see d. below) to give an update of the nests progress.	n/a
TES-11b	If goshawks are located a L.O.P. (March 1 through September 15) would be required. The L.O.P. may be added or modified for this project by the USFWS.	n/a
TES-11c	The area will be marked for avoidance within 500 feet.	n/a
TES-11d	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-12	<b>Tricolored Blackbird:</b>	n/a
TES-12a	A qualified Biologist will conduct surveys within 500 feet of work areas, within wetland areas prior to project implementation from February 1 to September 15.	n/a
TES-12a.i	Biologists upon finding a nest colony, suspecting a nesting site, or being informed of a nesting site, will observe the nest and surrounding area for nesting behavior for a total of 15 minutes.	n/a
TES-12a.ii	The biologist will flag the site, mark a GPS location, document species, and if verifiable, give a status of the nests progress.	n/a
TES-12a.iii	Nests will be checked weekly (unless work is going to occur nearby, see c. below) to give an update of the nests progress.	n/a
TES-12b	If tricolored blackbirds are located a L.O.P. (February 1 through September 15) would be required around the nesting colony, until all nests are full-fledged. The L.O.P. may be added or modified for this project by the USFWS.	n/a
TES-12c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-13	<b>Pallid Bat and Western Red Bat:</b>	n/a
TES-13a	A qualified Biologist will conduct surveys of roosting habitat within 500 feet of work areas, prior to project implementation, from May 15 to August 15, looking for trees, buildings, or rock outcroppings that may hold the species, looking for droppings, presence in a cavity, or listening for calls.	n/a
TES-13b	If a roost is found, project activities will be modified to avoid impacts to bat species or a L.O.P. (no activity May 15 to August 15, or as otherwise determined) may be applied during the breeding season.	n/a
TES-13c	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a

TES-14	<b>Valley Elderberry Longhorn Beetle (V.E.L.B.):</b>	n/a
TES-14a	A qualified Biologist will conduct surveys of within 500 feet of work areas for presence of elderberry shrubs with at least one stem measuring one, or more inches in diameter. This area will be mapped for avoidance. Riparian elderberries will be especially monitored.	n/a
TES-14b	If an elderberry tree is found, an exclusion area will be designated and flagged for avoidance.	n/a
TES-14c	No elderberry trees will be taken during the course of operations.	n/a
TES-14d	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a
TES-14e	USFWS Imposed AMMs	n/a
TES-14e.i	Revised V.E.L.B.-1 Surveys and Mapping or Flagging (formerly Fencing). A qualified Biologist will conduct surveys within 50-meters (165-feet) of work areas for presence of elderberry shrubs with at least one stem measuring one, or more inches in diameter. Identified shrubs will be flagged and or mapped. The qualified Biologist will record the results of elderberry shrub surveys.	n/a
TES-14e.ii	Revised V.E.L.B.-2 Avoidance Area. Project activities that may damage or kill an elderberry shrub (e.g., hazard tree removal, temporary access roads, etc.) will be avoided and minimized to the extent feasible. Contractors will select hazard tree removal method that avoids or reduces potential for effects of the identified shrub,(e.g., use of crane) and will attempt to fell the hazard tree at least 6 meters (20 feet) away from the drip-line of the shrub to the extent practicable. Similarly, other project activities, (e.g., temporary access roads) will also avoid or reduce potential effects on identified elderberry shrubs through route adjustments, equipment selection, and other planning or engineering means, to the extent practicable.	n/a
TES-14e.iii	V.E.L.B.-3 Worker Education.	n/a
TES-14e.iv	Revised V.E.L.B.-4 Biological Monitor. A SFWO-approved biologist will monitor activities conducted within 50 meters (165 feet) of suitable elderberry shrubs (stems measured at ground surface $\geq$ 1-inch in diameter) have been identified to assure that all avoidance and minimization measures are implemented. Monitoring will be conducted before, during and after work activities occur in proximity to the elderberry shrubs, in coordination between the contractor and the SFWO-approved biologist.	n/a

TES-14e.v	Revised V.E.L.B.-5 Seasonal Avoidance. To the extent practicable, all activities that could occur within 50 meters (165 feet) of a suitable elderberry shrub (stems measured at ground surface $\geq$ 1-inch in diameter) will be conducted between August and February, outside of the flight season of the valley elderberry longhorn beetle, which occurs from March to July, coinciding with the bloom period of the elderberry plant.	n/a
TES-14e.vi	Revised V.E.L.B.-6 Elderberry Shrub Avoidance and Trimming (formerly Trimming). To the maximum extent practicable, no suitable elderberry shrubs will be taken during operations (Revised V.E.L.B.-2, Avoidance; and Revised V.E.L.B.-5 Seasonal Avoidance). However, if take of suitable elderberry shrubs is unavoidable, then certain project operations may require trimming elderberry shrubs. Trimming may remove or destroy V.E.L.B. eggs or larvae and may reduce the health and vigor of the elderberry shrub. If trimming is necessary, then it will take place between November and February and to the extent practicable will avoid the removal of any suitable branches or stems that are greater than or equal to 1 inch in diameter. Measures to address regular or large-scale maintenance (trimming) will be established in consultation with the SFWO.	n/a
TES-14e.vii	V.E.L.B.-9 Erosion Control and Revegetation.	n/a
TES-14e.viia	Revised V.E.L.B.-1: Surveys and Mapping or Flagging.	n/a
TES-15	<b>Vernal Pools (Conservancy/ Vernal Pool Fairy/Tadpole Shrimp):</b>	n/a
TES-15a	A qualified Biologist will conduct surveys of all wetlands within 500 feet of work areas prior to project implementation, especially during the wet season, October 15 to June 1.	n/a
TES-15b	If found, an Environmental Specialist, or designated contracted specialist will perform a wetland delineation to establish the boundaries of the wetland.	n/a
TES-15c	This boundary will have an exclusion fence established for avoidance and a WLPZ of 100 feet will be established.	n/a
TES-15d	The WLPZ will be in effect October 15 to June 1, or until the vernal pool dries.	n/a
TES-15e	An ELZ of 50 feet will be established and exclusion fencing maintained the rest of the year. No operations, or driving will occur through a vernal pool.	n/a
TES-15f	A qualified biologist will monitor for presence daily before, during and after work activity near suitable habitat.	n/a

## Camp Fire Hazard Tree Removal Program

### DRAFT Avoidance and Minimization Measures for Anadromous Fish

*Note: these measures are from the draft Programmatic ESA Consultation for NMFS, as of 04/17/2020. These DRAFT AMMs are currently under NMFS review, these AMMs will be finalized once NMFS issues a concurrence letter for the project.*

AMM Number	Measure Type	Avoidance and Minimization Measure
1	Dust Control	To reduce dust, all traffic associated with project activities will be restricted to a speed limit of 20 miles per hour when driving on unpaved roads.
2	Erosion/ Sedimentation	There will be no ground disturbance within an ELZ adjacent to waterways supporting anadromous fish (i.e., Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds) within 48 hours before a rain event. Erosion control materials within ELZ work areas would be installed within 48 hours of any ground disturbance.
3	Spill Prevention	All hazardous materials will be stored in properly designated containers within a storage area with an impermeable membrane between the ground and the hazardous materials. The storage area will be encircled by a berm to prevent the discharge of pollutants to groundwater or runoff into the habitats of listed species.
4	Staging	All staging, equipment, and material storage areas, including temporary staging areas and locations where equipment and vehicles are parked overnight, will be placed outside of the flood zone of a watercourse, away from and outside riparian woodland and wetland habitat. When possible, staging and access areas will be situated in areas that are previously disturbed, such as developed areas, paved areas, parking lots, areas with bare ground or gravel, and areas clear of vegetation. Riparian trees and shrubs will not be removed for staging areas.
5	Riparian Revegetation of Temporary Access Roads and Water Crossings	<p><b>For temporary access roads and water crossings within the 150-foot ELZs in watersheds supporting anadromous fish</b> (i.e., Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds), revegetation will occur to replace living woody vegetation removed for temporary access roads or water crossings. Areas that are disturbed by heavy equipment, but where the removal of living woody vegetation does not occur, will have erosion control measures put in place, but will not be replanted.</p> <p>In areas that require revegetation, a contractor identified by CalRecycle will prepare and implement a revegetation plan. Because follow-up monitoring and corrective planting cannot occur, all trees larger than 6 inches diameter at breast height that are removed during Project implementation will be replaced at an 8:1 ratio. All other disturbed areas will be planted or hydroseeded at a rate sufficient to revegetate the site. When practicable, the native vegetation will be cut off at ground level instead of grubbed so it can potentially grow back and establish on its own, and disturbed areas should be planted in late fall after summer temperatures decrease or near the beginning of the first growing season after hazard tree removal.</p>



AMM Number	Measure Type	Avoidance and Minimization Measure
5 (continued)	Riparian Revegetation of Temporary Access Roads and Water Crossings (continued)	<p>Additional revegetation requirements are specified as follows:</p> <ul style="list-style-type: none"> <li>a) Use a diverse assemblage of plant species native to the area, including trees, shrubs, and herbaceous species.</li> <li>b) For long-term revegetation use only species native to the area that will achieve shade and erosion control objectives, including forb, grass, shrub, or tree species that are appropriate for the site.</li> <li>c) Do not apply surface fertilizer within 50 feet of any wetland or water body.</li> <li>d) Spot treatments of mulching or soil amendments (such as hydrogel), and/or a slow-release watering system (e.g., dri-water tubes or Cocoon systems, which are bio-degradable water reservoirs installed around saplings) should be used where needed to increase soil moisture retention and improve survival rates.</li> <li>e) Install fencing or other protection, as necessary, to protect plantings from livestock.</li> <li>f) Do not use invasive or non-native species for revegetation.</li> </ul>
6	Hazard Tree Replacement Within LWCZs	<p>Every hazard tree (as defined in Section 3.1.1) that is removed within the LWCZ (i.e., within 50 feet of the edge of channel of waterways supporting anadromous fish, such as Little Chico Creek Watershed; Little Dry Creek Watershed; and Butte Creek Watershed, including Little Butte, Middle Butte, and Honey Run Creek sub-watersheds), will be replaced at an 8:1 ratio. The exact location of the plantings will depend on site-specific conditions and will be in areas where survival rates are expected to be greater.</p> <p>Additional tree replacement requirements are specified as follows:</p> <ul style="list-style-type: none"> <li>a) Use appropriate tree species native to the area and suited for the soil moisture conditions at the site.</li> <li>b) When possible, trees should be placed adjacent to waterways that support anadromous fish in areas where they will contribute to shade over anadromous waterways and may eventually fall into the creeks and become LWD.</li> <li>c) Do not apply surface fertilizer within 50 feet of any wetland or water body.</li> <li>d) Spot treatments of mulching or soil amendments (such as hydrogel), and/or slow-release watering systems (e.g., dri-water tubes or Cocoon systems, which are bio-degradable water reservoirs installed around saplings) will be used where needed to increase soil moisture retention and improve survival rates.</li> <li>e) Install fencing or other protection, as necessary, to protect plantings from livestock.</li> <li>f) Do not use invasive or non-native tree species for hazard tree replacement.</li> </ul>
7	Equipment Maintenance and Cleaning	<p>Before entering wetlands or working within an ELZ, all heavy equipment, vehicles, and power tools will be power washed, allowed to fully dry, and inspected for fluid leaks. After cleaning, the equipment will be inspected to make certain no plants, soil, or other organic material are adhering to the surface. Cleaning will be repeated as often as necessary during operation to keep all equipment, vehicles, and power tools free of external fluids and grease, and to prevent a leak or spill from entering the water.</p>

AMM Number	Measure Type	Avoidance and Minimization Measure
8	Invasive Species Prevention	All contractors will follow guidelines in the California Invasive Plant Council's <i>Preventing the Spread of Invasive Plants: Best Management Practices for Land Managers</i> (Cal-IPC 2012) to prevent the spread of invasive plant species. Construction equipment will be clean of material that may harbor invasive plant seeds or invasive pests before entering the work area. This material includes dirt or plant seeds on construction equipment, tools, boots, and clothing.
9	Fire Prevention	With the exception of vegetation-clearing equipment, no vehicles or construction equipment will be operated in areas of tall, dry vegetation. CalRecycle (or a designated contractor) will develop and implement a fire prevention and suppression plan for all activities that have a risk of starting a wildfire.
10	Topsoil Salvage	All contractors will, to the maximum extent practicable, reduce the amount of disturbance at each site to the absolute minimum necessary to accomplish the project. Any topsoil removed by excavation, grading, trenching, or other means will be stockpiled, covered, and encircled with silt fencing to prevent loss or movement of the soil into listed species habitats. All topsoil will be replaced in a manner to recreate pre-disturbance conditions as closely as possible.
11	Environmental Awareness Training	All construction personnel will participate in an environmental awareness training by the biological monitor before the start of hazard tree removal. The training will familiarize all construction personnel with the listed species that may occur onsite, their habitats, general provisions and protections afforded by the ESA and MSA, BMPs and AMMs to be implemented to protect these species and their habitat, and the project boundaries. This training will be provided within 3 days of the arrival of any new worker.
Notes	Notes	<p>Acronyms:</p> <p>AMM: Avoidance and Minimization Measure</p> <p>BMP: Best Management Practice</p> <p>CalRecycle: California Department of Resources Recycling and</p> <p>Recovery ELZ: Equipment Limitation Zone</p> <p>ESA: Federal Endangered Species Act</p> <p>LWCZ: Large Wood Contribution</p> <p>Zone LWD: large woody debris</p> <p>MSA: Magnuson-Stevens Fishery Conservation and Management Act</p>

**USFWS and NOAA Marine Fisheries  
Project Best Management Practices, General  
Avoidance and Minimization Measures, and  
Species-Specific Conservation Measures**

**FEMA-4407-DR-CA, Hazard Tree Removal Program****Applicable Project BMPs, General Avoidance and Minimization Measures, and Species-Specific Conservation Measures**

CalOES and CalRecycle have identified measures that would be implemented to ensure that delivery of disaster response and recovery activities are compliant with applicable federal and state environmental laws. The measures are identified in the Environmental Protection Plan (EPP) and Environmental Compliance Plan (ECP) and were developed to supplement the Tree Removal Operations Plan (TROP) to address the hazards associated with removing wildfire-impacted trees in the Camp Fire Burn Scar Area on non-federal land. These measures are referred to in this document as project BMPs and have been incorporated into the federal action. In many instances these project BMPs provide the same, or similar coverage and requirements as the general *Avoidance and Minimization Measures* required under the USFWS Programmatic Biological Opinion (PBO) to FEMA.

The following PBO general *Avoidance and Minimization Measures* will be implemented:

- GEN AMM-1 Erosion and Sedimentation Prevention Measures (also see ECP project BMPs under Sediment Controls).
- GEN AMM-3 Dust Control Measures (also see ECP project BMPs under SWPPP).
- GEN AMM-4 Spill Control Planning (also see ECP project BMPs under SWPPP).
- GEN AMM-5 Spill Prevention and Pollution Control Measures (also see ECP project BMPs under SWPPP).
- GEN AMM-6 Equipment Inspection and Maintenance (also see ECP project BMPs under SWPPP).
- GEN AMM-7 Fueling Activities (also see ECP project BMPs under SWPPP).
- GEN AMM-8 Equipment Staging (also see ECP project BMPs under Equipment Restrictions, Vegetation Removal, Watercourse Buffer, etc.).
- GEN AMM-9 Materials Storage and Disposal (also see ECP project BMPs under SWPPP and Sediment Control).
- GEN AMM-10 Fire Prevention (also see ECP project BMPs under Vegetation Removal).
- GEN AMM-11 Waste Management (also see ECP project BMPs under SWPPP, and Wildlife).
- GEN AMM-13 Work Area Designation to Minimize Disturbance (also see ECP project BMPs under Watercourse Buffer)
- GEN AMM-14 Access Routes and Staging Areas (also see ECP project BMPs under Vegetation Removal, SWPPP, Watercourse Crossings, and Log Deck).
- GEN AMM-15 Environmental Awareness Training for Construction Personnel.
- GEN AMM-16 Biological Monitor (also see ECP project BMPs under Introduction, Stop Work Authority, and Threatened, Endangered and Sensitive Species)
- GEN AMM-18 Entrapment Prevention (also see ECP project BMPs under Stop Work Authority. Note that no vertically sided holes or trenches would be constructed as part of the Proposed Project).
- GEN AMM-19 Water Quality Protection (also see ECP project BMPs under Water Quality).
- GEN AMM-20 Revegetation of Stream Banks (also see ECP project BMPs under Water Quality, Watercourse Buffer, Sediment Control).
- GEN AMM-21 Restoration of Upland Areas to Pre-Project Conditions (also see ECP project BMPs under Sediment Control).

- GEN AMM-22 Invasive Aquatic Species (also see ECP project BMPs under Watercourse Crossings).
- GEN AMM-23 Work below Mean Higher High Water (also see ECP project BMPs under Watercourse Crossings and Watercourse Buffer).

The following general AMMs identified in the PBO are not applicable to the Proposed Project:

- GEN AMM-2 Bank Stabilization. *Not applicable; no bank stabilization activities are anticipated as part of the Proposed Project.*
- GEN AMM-12 Work Involving Boats and Barges *Not applicable; the proposed project would not require the use of boats or barges.*
- GEN AMM-17 Daily Work Hours. *Not applicable; no nighttime work is anticipated. Work during weekends is expected; however, due to the show duration of activities within a given area is expected to be less than 14 days.*
- GEN AMM-24 Avoidance of Submerged Vegetation. *Not applicable; the Proposed Project would not remove submerged vegetation.*
- GEN AMM-25 Minimization of Shading by Overwater Structures. *Not applicable; the Proposed Project does not include permanent infrastructure over waters.*
- GEN AMM-26 Water Diversion and Dewatering. *Not applicable; no diversion or dewatering are anticipated as part of the Proposed Project.*

The EPP (Attachment B.3) and ECP (Attachment B.4) also identify project BMPs that will be implemented to reduce effects on the VELB and CRLF. These measures have been incorporated into the proposed project and will be supplemented by the applicable specific-specific *Conservation Measures* required by the PBO. In some instances, these project BMPs overlap with and are consistent with the PBO species-specific *Conservation Measures*. To aide in compliance effects, in some instances the PBO species-specific *Conservation Measures* have been revised to include relevant project BMPs, and in other instances, minor revisions to the text to provide project-specific guidance have been incorporated into the measures. These measures are identified with “Revised”. Measures that have been unaltered are presented by title only.

### **Valley Elderberry Longhorn Beetle (VELB)**

For following species-specific *Conservation Measures* for VELB will be implemented:

- **Revised VELB-1 Surveys and Mapping or Flagging (formerly Fencing).** A qualified Biologist will conduct surveys within 50 meters (165 feet) of work areas for presence of elderberry shrubs with at least one stem measuring one, or more inches in diameter. Identified shrubs will be flagged and or mapped. The qualified Biologist will record the results of elderberry shrub surveys.
- **Revised VELB-2 Avoidance Area.** Project activities that may damage or kill an elderberry shrub (e.g., hazard tree removal, temporary access roads, etc.) will be avoided and minimized to the extent feasible. Contractors will select the hazard tree removal method that avoids or reduces potential for effects of the identified shrub,(e.g., use of crane) and will attempt to fell the hazard tree at least 6 meters (20 feet) away from the drip-line of the shrub to the extent practicable. Similarly, other project activities, (e.g., temporary access roads) will also avoid or reduce

potential effects on identified elderberry shrubs through route adjustments, equipment selection, and other planning or engineering means, to the extent practicable.

- **VELB-3 Worker Education.**
- **Revised VELB-4 Biological Monitor.** A SFWO-approved biologist will monitor activities conducted within 50 meters (165 feet) of suitable elderberry shrubs (stems measured at ground surface  $\geq 1$ -inch in diameter) have been identified to assure that all avoidance and minimization measures are implemented. Monitoring will be conducted before, during and after work activities occur in proximity to the elderberry shrubs, in coordination between the contractor and the SFWO-approved biologist.
- **Revised VELB-5 Seasonal Avoidance.** To the extent practicable, all activities that could occur within 50 meters (165 feet) of a suitable elderberry shrub (stems measured at ground surface  $\geq 1$ -inch in diameter) will be conducted between August and February, outside of the flight season of the valley elderberry longhorn beetle, which occurs from March to July, coinciding with the bloom period of the elderberry plant.
- **Revised VELB-6 Elderberry Shrub Avoidance and Trimming (formerly Trimming).** To the maximum extent practicable, no suitable elderberry shrubs will be taken during operations (Revised VELB-2, Avoidance; and Revised VELB-5 Seasonal Avoidance). However, if take of suitable elderberry shrubs is unavoidable, then certain project operations may require trimming elderberry shrubs. Trimming may remove or destroy VELB eggs or larvae and may reduce the health and vigor of the elderberry shrub. If trimming is necessary, then it will take place between November and February and to the extent practicable will avoid the removal of any suitable branches or stems that are  $\geq 1$  inch in diameter. Measures to address regular or large-scale maintenance (trimming) will be established in consultation with the SFWO.
- **VELB-9 Erosion Control and Revegetation.**

The following species-specific Conservation Measures for VELB identified in the PBO are not applicable to the Proposed Project:

- VELB-7. Limitation on Chemical Use. *Not applicable; herbicides are not proposed as part of the Proposed Project.*
- VELB-8. Mowing. *Not applicable, the Proposed Project does not include mechanical weed removal.*
- VELB-10 Transplanting. *Not applicable, the Proposed Project would not likely result in ground disturbance that would affect the root system of suitable elderberry*
- VELB-11 Impacts to Individual Shrubs. *Not applicable; the Proposed Project will have incidental take authorization for the species, and surveys for species will be conducted as part of Revised VELB-1: Surveys and Mapping or Flagging.*
- VELB-12 Other Activities. *Not applicable; the Proposed Project is not restoration, floodway maintenance, or other large-scale habitat modification activity.*

#### **California Red-Legged Frog (CRLF)**

For following species-specific Conservation Measures for CRLF will be implemented:

- **Revised CRLF-1 Biological Monitor.** If activities occur in or within 100 feet of suitable aquatic habitat for the CRLF, then a SFWO-approved biologist(s) will be onsite during all hazard tree removal and/or ground-disturbance activities.
- **Revised CRLF-2 Seasonal Avoidance.** Activities within aquatic habitat are not anticipated. However, in the unlikely event that activities must occur within suitable frog aquatic habitat, these will be conducted during the dry season, typically between July 15 and October 15. Work within suitable aquatic habitat may begin prior to July 15 if the habitat has been dry for a minimum of 30 days prior to initiating work.

If activities would occur within 100 feet of suitable upland habitat (e.g., upland habitats adjacent to suitable aquatic habitats), those areas will be avoided during the wet season. Therefore, work activities in suitable upland habitat will be conducted between May 1<sup>st</sup> and October 15<sup>th</sup>, or the first wetting rain (more than 1-inch precipitation).
- **Revised CRLF-3 Rain Event Limitations.** From May 1 to October 15, if a weather system resulting in more than 1-inch of precipitation occurs in project area, activities that occur within 50 feet of suitable aquatic habitat will be suspended until a dry period of 72 hours occurs.

No project activities will occur within 100 feet of suitable aquatic habitat during rain events or within 24 hours following a rain event. Project activities within 100-feet of suitable aquatic habitat may continue 24 hours after the rain ceases, if no precipitation is forecasted within 24-hours. If rain exceeds 0.5 inches during a 24-hour period; work will cease within 50-feet of suitable aquatic habitat until no further rain is forecasted.
- **Revised CRLF-4 Pre-construction Survey.** If activities are proposed within 100-feet of the suitable aquatic habitat, then a SFWO-approved biologist will conduct a preconstruction survey not more than 24 hours prior, surveys for CRLF will be conducted in or around water courses; including eggs, larvae, and adults.
  - i. The SFWO-approved biologist will perform a Visual Encounter Survey, entailing standing in one area with binoculars looking for species feeding, breeding, sheltering, movement, or other essential behaviors, such as basking on the bank, hiding amongst plants, rocks, or other refugia, or swimming in the water. Micro-habitats such as small woody debris, refuse, and burrow entries will also be inspected.
  - ii. The SFWO-approved biologist will then walk a transect along the bank, looking in the water and bank for presence, movement, calls, or other signs of the target species.
  - iii. The SFWO-approved biologist will conduct pedestrian surveys looking for species hiding amongst plants, rocks, or other refugia, as well as for the presence of ground squirrel burrows.
  - iv. The SFWO-approved biologist will flag the site, mark a GPS location, document species, and take note of any ground squirrel burrows, refugia, which may support dry weather habitat.
- **Revised CRLF-5 Clearance Surveys.** The SFWO-approved biologist will conduct clearance surveys prior to the activities that occur within 100-feet of suitable aquatic habitat, and regularly throughout the duration of hazard tree removal or ground-disturbance activities.
- **Revised CRLF-6 Environmentally Sensitive Area.** If suitable aquatic or riparian habitat conditions are present near a work site, the area will be marked off to exclude work from occurring within this area to the extent practicable. A buffer of limited work will be established 100 feet around this exclusion area. If project activities must occur within the buffer, then a SFWO-approved biological monitor will be present during all project activities and crews will minimize disturbance and duration of activities within the buffer to the extent possible.

- **CRLF-9 Encounters with Species**
- **Revised CRLF-11 Environmental Awareness Training.** Prior to the start of hazard tree removal activities, a SFWO-approved biologist with experience in the ecology of the California red-legged frog as well as the identification of all its life stages will conduct a training program for all construction personnel including contractors and subcontractors. Interpretation for non-English speaking workers will be provided. All construction personnel will be provided a fact sheet conveying this information. The same instruction will be provided to any new workers before they are authorized to perform project work. The training will include, at a minimum:
  - a. habitat within the Action Area;
  - b. an explanation of the species status and protection under state and federal laws;
  - c. the avoidance and minimization measures to be implemented;
  - d. communication and work stoppage procedures in case a listed species is observed within the Action Area; and
  - e. an explanation of the importance and role of the SFWO-approved biological monitor(s).
- **CRLF-12 Disease Prevention and Decontamination Procedures.**
- **Revised CRLF-14 Vegetation and Debris Removal (formerly Hand Clear Vegetation).** Trees will be felled away from suitable aquatic habitat for California red-legged frog, to the extent practicable. All trimmed or cleared material/vegetation will avoid falling into any nearby suitable aquatic habitat and will be removed from the project footprint to prevent attracting animals to the project site. If tree debris incidentally falls into suitable aquatic habitat, then the SFWO-approved biologist will be notified. The SFWO-approved biologist will remain onsite to monitor debris removal activities until they are completed. Debris will be removed by hand if possible or if the SFWO-approved biologist determines potential effects on suitable habitat would be minimized, then debris removal may be assisted from by a crane, thumb of an excavator, or other heavy equipment operated from adjacent uplands, and deposited where it cannot re-enter the waterbody. If heavy equipment will need to be used to remove hazard trees or debris from within suitable aquatic or riparian habitat, the crew will call the Environmental Unit before proceeding.
- **Revised CRLF-16 Accidental Spills, SWPPP, Erosion Control, and BMPs.** *Proposed revision of this PBO measures to utilize the project BMPs which are similar to the PBO measures, and provide project-specific coverage of accidental spills, SWPPP, Erosion Control and BMPs (see ECP), including: Best Management Practices (BMP's). Use of CASQA and/or Forest Practice BMP Standards will be met.*

Sediment and Erosion Control Measures. Sediment and erosion control measures will be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter a river, stream, wetland, or lake. If there is a chance of a rain event over 40 percent within 48 hours, sediment and erosion control will be inspected, repaired, or upgraded to prevent any runoff. Measures will be maintained in good operating condition until the site is signed off by the ICS. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged silt fencing, compost socks, coir logs, coir rolls, and/or straw bale dikes. Modifications, repairs and improvements will be made to the sediment and erosion control measures whenever it is needed. If the sediment barrier fails to retain sediment, corrective measures will be employed, and an Environmental Specialist notified, immediately. Materials used in the sediment barriers will not pose an entanglement risk to fish or wildlife.



SWPPP. A Storm Water Pollution Prevention Plan and erosion control Best Management Practices will be developed and implemented to minimize water related erosion. At a minimum, protective measures will include:

- a. Operating Equipment and Vehicle Leaks. Any equipment or vehicles driven and/or operated within or adjacent to the stream/lake will be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.
  - b. Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream/lake will be positioned over drip pans. Stationary heavy equipment will have suitable containment to handle a catastrophic spill/leak. Crews will always maintain spill containment kits on-site during project operations and/or staging or fueling of equipment.
  - c. Equipment Maintenance and Fueling. No equipment maintenance, fueling or storage will occur within or near any stream channel or lake margin where petroleum products or other pollutants from the equipment may enter these areas.
  - d. No Dumping. No litter or construction debris will be deposited within a stream or lake, or where it may pass into a stream or lake. All debris and waste will be picked up and removed daily.
  - e. Sawdust. Sawdust will be controlled in such a way that it does not enter a watercourse.
  - f. Hazardous Materials. Debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement/concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to aquatic life, wildlife, or riparian habitat resulting from the Project related activities will be prevented from contaminating the soil and/or entering any watercourse.
  - g. Dust Control. Implement dust control, when rocking temporary access road entrances and exits and covering temporary stockpiles when weather conditions require.
  - h. Permanent erosion control. Incorporate permanent erosion control measures such as bio-filtration strips and swales to receive storm water discharges from the project work areas to the maximum extent practicable.
  - i. Pesticides. No use of herbicides or pesticides will occur.
  - j. Should operations extend into the winter period, as defined by the Forest Practice Rules (FPR), limitations on operations related to using saturated roads, stabilizing erodible soils, and installing erosion control measures will be followed.
- **Revised CRLF-18 Suitable Erosion Control Materials.** Where erosion control materials are placed within 100-feet of suitable aquatic habitat, and in order to prevent California red-legged frogs from becoming entangled, trapped, or injured, erosion control materials that use plastic or synthetic monofilament netting will not be used. This includes products that use photodegradable or biodegradable synthetic netting, which can take several months to decompose. Acceptable materials include natural fibers such as jute, coconut, twine, or other similar fibers. Following site restoration, erosion control materials, such as straw wattles, will not block movement of the California red-legged frog.
  - **CRLF-21 Invasive Non-Native Plant Species Prevention.**
  - **Revised CRLF-24 Restore Contours of Temporarily Disturbed Areas.** If disturbance occurs within 100-feet of CRLF aquatic habitat, then Best Management Practices (BMPs) will be applied that re-distribute soil and debris to pre-treatment landscape contour. Habitat contours will be returned to their original configuration to minimize sedimentation to creeks.

- **Revised CRLF-25 Use of Native Plants for Revegetation.** If there is removal of any suitable riparian and/or wetland vegetation needed to support project activities (i.e., temporary access or waterbody crossings), then disturbed areas will be revegetated with local native species suitable to the restoration. Plants used in revegetation will consist of native riparian and/or wetland, vegetation suitable for the area. Locally collected plant materials will be used to the extent practicable.
- **Revised CRLF-26 Practices to Prevent Pathogen Contamination in Revegetation and Restoration.** In areas where Use of Native Plants for Revegetation is implemented, CalOES and CalRecycle will refer to the following restoration design considerations and practices to help prevent pathogen contamination in revegetation and restoration as published by the Working Group for Phytophthora in Native Habitats in order to address the risk of introduction and spread of Phytophthora and other plant pathogens in site plantings:
  - a. Design restoration with lower initial plant density. Planting large quantities of nursery plants increases the likelihood that some of those plants may be infested with Phytophthora or other plant pathogens. The greater the number of plants installed the higher the risk for pathogen introduction. The closer the plants are to one another the higher the likelihood of pathogen spread.
  - b. To the extent possible, use direct seeding of native plant seeds or cuttings instead of container stock. Planting locally-collected seeds or cuttings rather than installing container stock can minimize the risk of introducing pathogens to a site.
  - c. Ensure the use of clean nursery stock. To prevent and manage the introduction and spread of Phytophthora and other plant pathogens during revegetation and restoration activities, it is essential that projects use clean nursery stock grown with comprehensive best management practices.
  - d. Prevent contamination in site preparation, installation, and maintenance. Implementing best management practices to prevent pathogen introduction and spread is also critical during all other phases of revegetation and restoration to reduce contamination risk. For detailed guidance on how to prevent and manage Phytophthora during various aspects of restoration, including nursery plant production, see The Phytophthora in Native Habitats Work Group "Restoration Guidance" at [www.calphytos.org](http://www.calphytos.org).
  - e. Reduce the potential for pathogen spread and introduction due to movement or use of non-sanitized vehicles, tools, footwear or inadvertent use of contaminated materials (e.g. soil erosion protection wattles and mulch, or non-sanitized materials recycled from other projects such as rebar, fencing materials, etc.). Fundamental principles include:
    - i. Minimize project footprint and soil disturbance. Keep the number of vehicle pass-throughs and other disturbances during site activities to the least necessary. Avoid visits when conditions are wet, and areas are muddy. Park vehicles in designated staging areas.
    - ii. Follow sanitation practices. Phytophthora and many other pathogens move when contaminated soil is transferred on vehicle tires, footwear, on contaminated tools or infested plant materials. Follow sanitation best management practices: tools, boots, and vehicles will be visibly free of soil before and after use.
    - iii. Promote prevention through education. Ensure that onsite personnel are aware of the risk of inadvertent pathogen introductions and understand how to prevent pathogen introduction and spread. A pre-project meeting that provides appropriate BMP training to all workers and oversight managers who will be onsite during the project will help avoid confusion and

delays in the field and will ensure in advance that everyone understands the project goals related to pathogen prevention.

The following species-specific *Conservation Measures* for CRLF identified in the PBO are not applicable to the Proposed Project:

- CRLF-7 Wildlife Exclusion Fencing. *Not applicable; the duration of work activities would be very short, and given the scale of the proposed project, implementation of this measure would not be possible. See Revised CRLF-6: Environmental Sensitive Area for the proposed justification for exception to installation of the wildlife exclusion fencing.*
- CRLF-8 Entrapment Prevention. *Not applicable; no steep-walled holes or trenches would be constructed as part of the Proposed Project.*
- CRLF-10 Species Observations and Handling Protocol. *Not applicable because no take of CRLF is anticipated from the work activities on the proposed project.*
- CRLF-13 Pump Screens. *Not applicable; neither dewatering or the use of pump screens are anticipated components of the Proposed Project.*
- CRLF-15: Wildlife Passage for Road Improvement. *Not applicable; permanent road improvements are not anticipated as part of the proposed project.*
- CRLF-17 Site Restrictions. *Not applicable; most of the project activities would occur on paved roads and all equipment would abide by local speed limit required on unpaved roads. There is no night-time work proposed nor would there be a need for artificial lighting. Where activities occur in proximity to suitable habitat for CRLF, boundaries would be marked by the SFWO-approved biological in accordance with CRLF-6: Environmentally Sensitive Areas.*
- CRLF-19 Limitation on Insecticide/Herbicide Use. *Not applicable; the Proposed Project does not include the use of insecticide or herbicide.*
- CRLF-20 Limitation on Rodenticide Use. *Not applicable; the Proposed Project does not include the use of rodenticide.*
- CRLF-22 Removal of Diversion and Barriers to Flow. *Not applicable; the Proposed Project would not require diversion or barriers to flows, or alteration or deposition of material in stream beds.*
- CRLF-23 Removal of Non-Native Species. *Not applicable; the Proposed Project would generally not occur in aquatic environments and would not convert seasonal aquatic habitat or create perennial water bodies.*

Name	Type	Agency	Work Window (if unavoidable)	Notes	Guidance, or Restrictions
Emergency Notice	Permit	CalFire	Depending on permit. Bridges need to be out by October 15.	Work hold for access	To accompany a CWA 404 Permit from the Army Corps of Engineers and CV Water Board Timber Harvest General Permit.
Foothill Yellow-Legged Frog	Amphibian	CDFW	April 15 to October 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present.
Steelhead or Central Valley Spring Run Chinook Salmon, ESU	Fish	USFWS/CDFW	In-water activities: April 15 to October 15	Survey and monitor	Protect erosion and sediment within the WLPZ (150 feet). Dust control. In-water, active monitoring.
CA Red-Legged Frog Critical Habitat	Amphibian	USFWS	Near water: May 15 to October 15 In water: July 15 to October 15	Work hold to consult if habitat is found.	<b>Revised CLRF-3 Rain Event Limitations.</b> From May 1 to October 15, if a weather system resulting in more than 1 inch of precipitation occurs in project area, activities that occur within 50 feet of <u>suitable</u> aquatic habitat will be suspended until a dry period of 72 hours occurs.
CA Red-Legged Frog Critical Habitat	Amphibian	USFWS	Near water: May 15-October 15 In water: July 15 to October 16	Survey and monitor	<b>Revised CLRF-3 Rain Event Limitations.</b> From May 1 to October 15, if a weather system resulting in more than 1 inch of precipitation occurs in project area, activities that occur within 50 feet of <u>suitable</u> aquatic habitat will be suspended until a dry period of 72 hours occurs.
Large Wood Contribution Zone	Riparian	NMFS	N/A	Survey and flag	50 feet zone along the banks of anadromous watercourses.
Northern Spotted Owl	Bird	USFWS	August 15 to March 1	Survey and consult if found	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Bald Eagle	Bird	CDFW	September 15 to February 15	Survey and consult if found	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Peregrine Falcon	Bird	CDFW	September 15 to February 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Burrowing Owl	Bird	CDFW	September 15 to February 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with CDFW.
Butte County Meadowfoam Critical Habitat	Plant	USFWS	June to February	Work hold to consult.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Butte County Meadowfoam	Plant	USFWS	June to February	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.

CA Black Rail	Bird	CDFW	September 15 to February 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Coastal Horned Lizard	Reptile	CDFW	July 15 to May 1	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with CDFW.
Vernal Pool Fairy, and/or Vernal Pool Tadpole Shrimp Critical Habitat	Ostracod	USFWS	June 1 to October 15	Work hold to consult.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Conservancy, Vernal Pool Fairy, and Vernal Pool Tadpole Shrimp	Ostracod	USFWS	June 1 to October 15	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Greene's Tuctoria Critical Habitat	Plant	USFWS	August to April	Work hold to consult.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Greene's Tuctoria	Plant	USFWS	August to April	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Hardhead Minnow	Fish	CDFW	April 15 to October 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with CDFW.
Hoover's Spurge Critical Habitat	Plant	USFWS	September to July	Work hold to consult.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Hoover's Spurge	Plant	USFWS	September to July	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Tri-Colored Blackbird	Bird	CDFW	September 15 to February 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.

Valley Elderberry Longhorn Beetle	Insect/Plant	USFWS	Within 165 feet: August to February Trimming: November to February	Survey and monitor	<p><b>Revised VELB-5 Seasonal Avoidance.</b> To the extent practicable, all activities that could occur within 50 meters (165 feet) of a suitable elderberry shrub (stems measured at ground surface <math>\geq 1</math>-inch in diameter) will be conducted between August and February, outside of the flight season of the valley elderberry longhorn beetle, which occurs from March to July, coinciding with the bloom period of the elderberry plant.</p> <p><b>Revised VELB-6 Elderberry Shrub Avoidance and Trimming (formerly Trimming).</b> To the maximum extent practicable, no suitable elderberry shrubs will be taken during operations (Revised VELB-2, Avoidance; and Revised VELB-5 Seasonal Avoidance). However, if take of suitable elderberry shrubs is unavoidable, then certain project operations may require trimming elderberry shrubs. Trimming may remove or destroy VELB eggs or larvae and may reduce the health and vigor of the elderberry shrub. If trimming is necessary, then it will take place between November and February and to the extent practicable will avoid the removal of any suitable branches or stems that are <math>\geq 1</math> inch in diameter. Measures to address regular or large-scale maintenance (trimming) will be established in consultation with the SFWO.</p>
Western Spadefoot Toad	Amphibian	USFWS	April 15 to October 15	Survey and monitor	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Slender Orcutt Grass Critical Habitat	Plant	USFWS	September to May	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Slender Orcutt Grass	Plant	USFWS	September to May	Work hold to consult if habitat is found.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.
Western Pond Turtle	Reptile	CDFW	April 15 to October 15	n/a	Flag for avoidance. Provide monitoring if habitat is present. Consult with CDFW.
Sierra Newt	Amphibian	CDFW	April 15 to October 15	n/a	Flag for avoidance. Provide monitoring if habitat is present. Consult with CDFW.
Nesting Birds 2019	Bird	USFWS/CDFW	September 15 to February 15	Can seek permits for removal of nests.	Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS.

Parcels intersecting waterways	Watercourse	Water Boards	All year	Survey and if necessary, monitor.	Survey and establish WLPZ. Ensure no species are present, if present Flag for avoidance. Provide monitoring if habitat is present. Consult with USWFS, CDFW. Monitor for discharges of erosion or sediment.
Temperature Total Maximum Daily Load Restrictions (North Fork Feather River)	Watercourse	Water Boards	All year	Maximum WLPZ for Class I (150 feet)	Monitor for discharges of erosion or sediment.
Animals (Non-sensitive)	Animal	Animal Control	All year	Contact animal control.	Do not approach animal. Allow the animal to pass through the worksite. If the animal refuses to move, call animal control.
Cultural Resource (FEMA)	Cultural Resource	SHPO	All year	Contact archaeological monitor.	Leave cultural artifact intact and call the archaeological monitor. If bones are found, call the tribal liaison, and coroner.
Tribal Resource (FEMA)	Tribal Resource	TIPO	All year	Contact Tribal Liaison	Leave cultural artifact intact and call the tribal monitor liaison. If bones are found, call the tribal liaison, and coroner.