CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
NORTH CENTRAL REGION
1701 NIMBUS ROAD, SUITE A
RANCHO CORDOVA, CA 95670

STREAMBED ALTERATION AGREEMENT
EPIMS NOTIFICATION NO. BUT-14986-R2
UNNAMED TRIBUTARIES TO FEATHER RIVER, DOGWOOD CREEK, & CAMP CREEK

BUTTE COUNTY RESOURCE CONSERVATION DISTRICT
POST CAMP FIRE DIXIE ROAD SEDIMENT REDUCTION PROJECT

This Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Butte County Resource Conservation district (Permittee) as represented by Thad Walker.

RECITALS

WHEREAS, pursuant to Fish and Game Code section 1602, Permittee notified CDFW on insert date notification received that Permittee intends to complete the project described herein.

WHEREAS, pursuant to Fish and Game Code section 1603, CDFW has determined that the project could substantially adversely affect existing fish or wildlife resources and has included measures in this Agreement necessary to protect those resources.

WHEREAS, Permittee has reviewed this Agreement and accepts its terms and conditions, including the measures to protect fish and wildlife resources.

NOW THEREFORE, Permittee agrees to complete the project in accordance with this Agreement.

PROJECT LOCATION

The projects are located at unnamed tributaries to the Feather River, Dogwood Creek, and Camp Creek, in the County of Butte, State of California. See **Project Site Locations** Table below.

Project Site Locations

Site ID #	Latitude / Longitude (WGS 84 Datum)
1	39.837454°, -121.421668°
3	39.839431°, -121.423018°
4	39.839686°, -121.423009°
5	39.839561°, -121.423896°

6	39.838543°, -121.424087°
7	39.838096°, -121.424525°
8	39.837672°, -121.424641°
15	39.838249°, -121.427294°
17	39.838416°, -121.428993°
20	39.836759°, -121.429028°
22	39.835765°, -121.429271°
23	39.835594°, -121.430062°
24	39.835867°, -121.430287°
28	39.835784°, -121.444270°
30	39.835186°, -121.445696°
38	39.829913°, -121.420960°
40	39.832246°, -121.422332°
42	39.834539°, -121.423196°
47	39.836837°, -121.423666°
48	39.837874°, -121.423775°
54	39.838952°, -121.459048°
56	39.836397°, -121.464570°
61	39.833654°, -121.471809°
62	39.834024°, -121.473542°
Temporary Water Diversion	39.836150°, -120465214°

Exhibit A shows the project locations.

PROJECT DESCRIPTION

The project is limited to the removal and replacement of 21 culverts, the construction of two low-water stream crossings, the re-construction of rolling dips, the re-construction of one fill crossing, and a temporary water diversion that will be used during construction implementation in 25 separate locations along Dixie Road. In addition, drainage treatments will be implemented to the road to help reduce pooling water on Dixie Road after rain events. A total of approximately 280 yd^3 of sediment will be removed from various culvert reconstruction sites to provide adequate culvert alignment in the stream channels during project implementation.

Stream Crossing Site 1: The project at Stream Crossing Site 1 is limited to the removal and replacement of the existing culvert with a new 60“ by 40‘ corrugated metal pipe (CMP) culvert. Approximately 60 cubic yards (yd^3) of rock slope protection (RSP) will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. In addition, 9 rolling dips to the left of the road and 7 rolling dips to the right of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and approximately 50 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 3: The project at Stream Crossing Site 3 is limited to the removal and replacement of the existing culvert with a new 48" by 50' CMP culvert. Project activities will require the removal of approximately 20 yd^3 of sediment from the channel and approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion and a 48" trash rack will be installed above the culvert inlet. In addition, a rolling dip will be installed and connected to the cutbank for better drainage off of the road.

Stream Crossing Site 4: The project at Stream Crossing Site 4 is limited to the removal and replacement of the existing culvert with a new 48" by 40' CMP culvert. Project activities will require the removal of approximately 35 yd^3 of sediment from the channel and approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion and a 48" trash rack will be installed above the culvert inlet. In addition, 2 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road.

Stream Crossing Site 5: The project at Stream Crossing Site 5 is limited to the removal and replacement of the existing culvert with a new 36" by 60' CMP culvert. Project activities will require the removal of approximately 10 yd^3 of sediment from the channel and approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. Approximately 13 yd^3 of RSP will be placed along the entire outboard edge of the fill slope. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion and a 36" trash rack will be installed above the culvert inlet. In addition, 2 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road.

Stream Crossing Site 6: The project at Stream Crossing Site 6 is limited to the removal and replacement of the existing culvert with a new 24" by 50' CMP culvert. Approximately 30 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion.

Stream Crossing Site 7: The project at Stream Crossing Site 7 is limited to the removal and replacement of the existing culvert with a new 24" by 50' CMP culvert. Approximately 1 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet and 10 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. In addition, a 24" trash rack will be installed above the culvert inlet.

Stream Crossing Site 8: The project at Stream Crossing Site 8 is limited to the removal and replacement of the existing culvert with a new 24" by 50' CMP culvert and a 24" by 40' downspout attached to the culvert outlet. Approximately 1 yd^3 of RSP will

be placed within the stream channel underneath the culvert outlet and 30 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion and a 24'' trash rack will be installed above the culvert inlet. In addition, a rolling dip to the right of the road will be installed and connected to the ditch for better drainage off of the road.

Stream Crossing Site 15: The project at Stream Crossing Site 15 is limited to the removal and replacement of the existing culvert with a new 24'' by 40' CMP culvert. Approximately 1 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. In addition, two rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road.

Stream Crossing Site 17: The project at Stream Crossing Site 17 is limited to the removal and replacement of the existing culvert with a new 84'' by 60' CMP culvert. Existing sediment fill will be excavated to establish a 8' by 85' channel upstream of the crossing. Project activities will require the removal of approximately 135 yd^3 of sediment from the channel and approximately 300 yd^3 of clean fill material will be imported to accommodate the new culvert structure. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion. The existing road will be compacted and approximately 125 yd^3 of aggregate base will be utilized to resurface the road.

To better help reestablish the habitat at this site, an amphibian habitat structure will be installed along the left bank of the restored channel approximately 45 feet upstream of the stream crossing. The structure will utilize locally generated wood. In addition, the banks of the restored stream channel for approximately 60 feet upstream of the newly constructed culvert will be replanted with locally present tree species. Twenty-four trees will be replanted in 100 square foot intervals throughout the impacted area.

Exhibit B shows the Amphibian Habitat Structure and **Exhibit C** shows the Tree Replanting Plans.

Stream Crossing Site 20: The project at Stream Crossing Site 20 is limited to the excavation and placement of RSP at an existing fill crossing. A broad dip will be excavated through the existing fill crossing along with a 10' long by 2' deep keyway. The keyway will be 20' wide at the top and 10' wide at the base. Approximately 15 yd^3 of RSP will be placed within the keyway. The existing road will be compacted and approximately 15 yd^3 of aggregate base will be utilized to resurface the road. In addition, the skid road to the left of this site will be decommissioned and the road surface will be ripped approximately 400 feet. Cross-road drains will be installed every 75 feet.

Stream Crossing Site 22: The project at Stream Crossing Site 22 is limited to the removal and replacement of the existing culvert with a new 24'' by 70' CMP culvert. Project activities will require the removal of approximately 45 yd^3 of sediment from the

channel. A critical dip will be constructed on the left hinge line of the crossing to prevent stream diversion. In addition, 2 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road.

Stream Crossing Site 23: The project at Stream Crossing Site 23 is limited to the construction of a low flow water crossing. A broad dip will be excavated through the existing fill crossing along with a 25' long by 2' deep keyway. The keyway will be 15' wide at the top and 10' wide at the base. Approximately 25 yd^3 of RSP will be placed within the keyway. The existing road will be compacted and approximately 15 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 24: The project at Stream Crossing Site 24 is limited to the construction of a low flow water crossing. A broad dip will be excavated through the existing fill crossing along with a 15' long by 2' deep keyway. The keyway will be 18' wide at the top and 8' wide at the base. Approximately 15 yd^3 of RSP will be placed within the keyway. The existing road will be compacted and approximately 15 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 28: The project at Stream Crossing Site 28 is limited to the removal and replacement of the existing culvert with a new 24" by 50' CMP culvert. Project activities will require the removal of approximately 25 yd^3 of sediment from the channel and approximately 1 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion and a 24" trash rack will be installed above the culvert inlet.

Stream Crossing Site 30: The project at Stream Crossing Site 30 is limited to the removal and replacement of the existing culvert with a new 24" by 50' CMP culvert. Project activities will require the removal of approximately 10 yd^3 of sediment from the channel. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion. In addition, a cross-road drain will be installed 90 feet below Dixie Road to help redirect flow to the historic stream channel.

Stream Crossing Site 38: The project at Stream Crossing Site 38 is limited to the removal and replacement of the existing culvert with a new 24" by 60' CMP culvert. Approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet and 8 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. In addition, 2 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and approximately 40 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 40: The project at Stream Crossing Site 40 is limited to the removal and replacement of the existing culvert with a new 40" by 60' CMP culvert. Approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. In addition, one rolling dip to the left of

the road will be installed and one rolling dip to the right of the road will be regraded for better drainage off of the road. The existing road will be compacted and approximately 40 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 42: The project at Stream Crossing Site 42 is limited to the removal and replacement of the existing culvert with a new 24" by 60' CMP culvert. Approximately 2 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet and 18 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion and a 24" trash rack will be installed above the culvert inlet. In addition, one rolling dip to the left of the road will be installed and connected to the cutbank and another rolling dip to the left of the road will be regraded for better drainage off of the road. The existing road will be compacted and approximately 40 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 47: The project at Stream Crossing Site 47 is limited to the removal and replacement of the existing culvert with a new 24" by 60' CMP culvert. Approximately 5 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet and 25 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion. In addition, 1 rolling dip to the left of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and approximately 30 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 48: The project at Stream Crossing Site 48 is limited to the removal and replacement of the existing culvert with a new 30" by 50' CMP culvert. Approximately 5 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet and 25 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion and a 30" trash rack will be installed above the culvert inlet. In addition, one rolling dip to the left of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and spoils from the failed cutbank will be utilized to resurface the road.

Stream Crossing Site 54: The project at Stream Crossing Site 54 is limited to the removal and replacement of the existing culvert with a new 72" by 60' CMP culvert. Approximately 20 yd^3 of RSP will be placed along the outboard edge of the fill slope to reduce the potential for erosion. A 72" trash rack will be installed above the culvert inlet. The skid road to the upper right of the crossing will be decommissioned and the road will be ripped for approximately 500 feet. Five cross-road drains will be installed every 100 feet. In addition, 5 rolling dips to the right of the road will be installed and connected to the cutbank. Approximately 120 feet of the left berm will be removed and used to reshape the road to the left and right of the crossing. The existing road will be compacted and approximately 70 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 56: The project at Stream Crossing Site 56 is limited to the removal of debris and sediment from the ditch to the right of the crossing for approximately 140 feet. The slopes of the channel will be contoured at a 2:1 slope and a 5' channel bottom will be constructed. A 15' by 15' grade control structure will be excavated at the break-in-slope along the bank of Camp Creek where the inboard ditch flows into the creek. Approximately 17 yd^3 of RSP will be placed within the grade control structure to reduce the potential for erosion. In addition, two rolling dips to the left of the road will be installed and connected to the ditch.

Stream Crossing Site 61: The project at Stream Crossing Site 61 is limited to the removal and replacement of the existing culvert with a new 48'' by 60' CMP culvert. A critical dip will be constructed on the right hinge line of the crossing to prevent stream diversion and a 48'' trash rack will be installed above the culvert inlet. In addition, 2 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and approximately 40 yd^3 of aggregate base will be utilized to resurface the road.

Stream Crossing Site 62: The project at Stream Crossing Site 62 is limited to the removal and replacement of the existing culvert with a new 48'' by 80' CMP culvert. Approximately 5 yd^3 of RSP will be placed within the stream channel underneath the culvert outlet to reduce the potential for erosion. In addition, 10 rolling dips to the left of the road will be installed and connected to the cutbank for better drainage off of the road. The existing road will be compacted and approximately 120 yd^3 of aggregate base will be utilized to resurface the road.

Temporary Water Diversion: The project is limited to the temporary water diversion from Camp creek. Water will be drafted from Camp Creek at a stream crossing on Dixie Road using a screened pump utilized for the purposes of moisture conditioning of fill materials for optimal compaction and dust abatement during construction. The water drafting shall be limited to a maximum of 7,000 gallons/day and the maximum instantaneous diversion rate shall not exceed 50 gallons per minute. The rate of pumping will be manipulated in order to permit at least 80% bypass flows during drafting activities. The intake screen shall be placed into the culvert outlet pool and left in-place until the project is completed to minimize disturbance to aquatic wildlife from screen placement. Width of the outlet pool will be measured prior to drafting and drafting shall temporarily cease if the width of the pool decreases by more than 10%.

Temporary Dewatering: In locations where water is present during project implementation, water will be temporarily diverted around the work site. Construction activities at each site will not begin until the existing drainage is fully dewatered and dry. Once constructed is complete in that location, the temporary water diversion structure will be removed to reestablish stream connectivity.

Exhibit D shows the temporary water dewatering method.

A variety of earthmoving equipment such as scrapers, excavators, compactors, graders, bulldozers, and dump trucks will do most of the earthmoving work within the site. Water

trucks, service trucks, and other typical construction vehicles will be present. The majority of equipment and materials will be staged near the intersection of Concow and Dixie Road at 39.833220°, -121.480465° (WGS 84 Datum). For each separate culvert replacement, material staging will occur on Dixie Road near the work site.

Exhibit E shows the project plans.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: fish species, amphibians, and other aquatic and terrestrial plant and wildlife species.

The adverse effects the project could have on the fish or wildlife resources identified above include:

loss of foraging, nesting, and shelter habitat; disruption to wildlife; disturbance of nesting due to increased human activity, noise, and vibrations; direct take of fish and other aquatic species; direct mortality or injury to individual plants and animals caused by construction activities; impediment to migration of aquatic and terrestrial species during construction; and direct loss of resources for aquatic organisms.

introduction of sedimentation or other pollutants into the watercourse; short-term release of contaminants (e.g., incidental from construction); loss of natural bed or bank; change in contour of bed, channel or bank; degradation of channel; loss of bank stability during construction; increase of bank erosion during construction; disturbance from project activity; diversion of flow water from, or around, activity site; and dewatering.

The implementation of the project will cause permanent impacts to 664 square feet of intermittent stream habitat and will temporarily disturb 4727 square feet of intermittent streambed habitat. Additionally, the project will permanently impact one Red Alder and ten Dogwood species at project site #17. See **Project Impacts** Table below.

Project Impacts

Site #	Temporary Stream Impacts (ft^2)	Permanent Stream Impacts (ft^2)	Riparian Vegetation Impacts
3	-	60	-
4	280	40	-
5	75	-	-
15	-	24	-
17	3200	240	(1) 2’ diameter Red Alder (10) 1’’ diameter Dogwood

22	300	-	-
23	260	-	-
24	148	-	-
28	240	-	-
30	30	-	-
38	30	-	-
42	20	-	-
47	24	-	-
56	-	225	-
61	-	15	-
62	120	60	-
Total Impacts	0.109 acres	0.015 acres	(1) 2' diameter Red Alder (10) 1" diameter Dogwood

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

Permittee shall meet each administrative requirement described below.

1.1 Documentation at Project Site. Permittee shall make this Agreement, any extensions and amendments to this Agreement, and all related notification materials and California Environmental Quality Act (CEQA) documents, readily available at the project site at all times and shall be presented to CDFW personnel, or personnel from another state, federal, or local agency upon request.

1.2 Providing Agreement to Persons at Project Site. Permittee shall provide copies of this Agreement and any extensions and amendments to this Agreement to all persons who will be working on the project at the project site on behalf of Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.

1.3 Notification of Conflicting Provisions. Permittee shall notify CDFW if Permittee determines or learns that a provision in this Agreement might conflict with a

provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall work with the Permittee to resolve any conflict.

1.4 Project Site Entry. Permittee agrees that CDFW personnel may enter the project site at any time to verify compliance with this Agreement.

1.5 No Trespass. To the extent that any provisions of this Agreement provide for activities that require the Permittee to traverse another owner's property, such provisions are agreed to with the understanding that the Permittee possesses the legal right to so traverse. In the absence of such right, any such provision is void.

1.6 Notification of Project Modification. Permittee agrees to notify CDFW of any modifications made to the project plans submitted to CDFW.

1.7 Change of Conditions and Need to Cease Operations. If conditions arise, or change, in such a manner as to be considered deleterious to the stream or wildlife, operations shall cease until corrective measures approved by CDFW are taken.

1.8 Does Not Authorize "Take". This Agreement does not authorize "take" of any California Endangered Species Act (CESA) listed species. Take is defined in Fish and Game Code section 86, as hunt, pursue, catch, capture or kill or attempt to hunt, pursue, catch, capture, or kill. If there is potential for take of any listed species to occur, Permittee shall consult with CDFW and demonstrate compliance with CESA.

1.9 Limitations on Authorization of Water Use. This Agreement does not authorize any diversion, use, or storage of water unless already permitted by law. ~~The~~ Permittee is responsible for obtaining all necessary water rights and maintaining compliance with the State Water Code and Title 23 California Code of Regulations as appropriate. Permittee shall store and use water in accordance with a valid water right, including any limitations on when water may be stored and used, the purpose for which it may be stored and used, and the location(s) where water may be stored and used. Information regarding water right registrations can be found at https://www.waterboards.ca.gov/waterrights/water_issues/programs/registrations. Information about water right permits and applications can be found here: https://www.waterboards.ca.gov/waterrights/water_issues/programs/applications.

2. Avoidance and Minimization Measures

To avoid or minimize adverse impacts to fish and wildlife resources identified above, Permittee shall implement each measure listed below.

2.1 Work Period. Project activities covered under this Agreement shall be confined to the period between June 1 and November 1 of the same calendar year during the term of this Agreement. *Revegetation, restoration and erosion control work is not confined to this time period*.

2.2 Work Period Modification. If the Permittee needs more time to complete the project activity, the work may be permitted outside of the work period and extended on a day-to-day basis (or for some other set period of time) by a CDFW representative who reviewed the project, or if unavailable, through contact with the Regional office (see Contact Information). The Permittee shall submit a written request for a work period variance to CDFW. The work period variance request shall: 1) describe the extent of work already completed; 2) detail the activities that remain to be completed; 3) detail the time required to complete each of the remaining activities; and 4) provide photographs of both the current work completed and the proposed site for continued work. Work period variances are issued at the discretion of CDFW. CDFW will review the written request to work outside of the established work period. CDFW will have ten (10) calendar days to review the proposed work period variance. CDFW reserves the right to require additional measures to protect fish and wildlife resources as a condition for granting the variance.

2.3 Work Period in Low Rainfall / Dry Weather Only. The work period within unnamed tributaries to the Feather River, Dogwood Creek, and Camp Creek shall be restricted to periods of low rainfall (less than ¼-inch per 24 hour period) or periods of dry weather (with less than a 50% chance of rain). Permittee shall monitor the National Weather Service (NWS) 72-hour forecast for the project area. No work shall occur during a dry-out period of 24 hours after the above referenced wet weather. Weather forecasts shall be provided upon request by the CDFW. *All erosion control measures shall be initiated prior to all storm events. Revegetation, restoration and erosion control work is not confined to this work period.*

2.4 Designated Biologist. At least thirty (30) days before initiating ground- or vegetation-disturbing activities, Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information for a biological monitor (Designated Biologist). Permittee shall obtain CDFW's written approval of the Designated Biologist prior to the commencement of Project activities. The Designated Biologist shall be knowledgeable and experienced in the biology and natural history of local fish and wildlife resources present at the Project site and have the necessary handling permits. The Designated Biologist shall be responsible for monitoring all project activities, including construction and any ground- or vegetation-disturbing activities in areas subject to this Agreement. The Designated Biologist shall be responsible for observing bird activity and any newly active nests. Permittee shall notify CDFW in writing if a substitute Designated Biologist is selected or identified at any time during the term of this Agreement.

2.5 On-site Biologist with Stop Work Authorization. Permittee shall have a Designated Biologist on-site during Project activities, as appropriate, to ensure avoidance and minimization measures are implemented. The Designated CDFW-approved Biologist, in consultation with the Project Engineer, shall be authorized to stop construction if necessary, to protect fish and wildlife resources.

2.6 Designated Representative. Before initiating ground-disturbing Project activities, Permittee shall designate a representative (Designated Representative)

responsible for communications with CDFW and overseeing compliance with this Agreement. Permittee shall notify CDFW in writing five (5) days prior to commencement of Project activities of the Designated Representative's name, business address, and contact information. Permittee shall notify CDFW in writing if a substitute Designated Representative is selected or identified at any time during the term of this Agreement.

2.7 Vegetation Removal. Disturbance or removal of vegetation shall be kept to the minimum necessary to complete project related activities. Except for tree removal already described in the project description, no native trees with a trunk diameter at breast height (DBH) in excess of four (4) inches shall be removed or damaged without prior consultation and approval of a CDFW representative. Where native trees or woody riparian vegetation split into several trunks close to ground level, the DBH shall be measured for each trunk and calculated as one tree. Vegetation marked for protection may only be trimmed with hand tools to the extent necessary to gain access to the work sites.

2.8 Vegetation Removal Methods. Hand tools (e.g., trimmer, chain saw, etc.) shall be used to trim vegetation to the extent necessary to gain access to the work site(s); larger equipment shall not be used for vegetation removal unless already described in the project description.

Biological Resources

2.9 Leave Wildlife Unharmed. If any wildlife is encountered during the course of the project, said wildlife shall be allowed to leave the project area unharmed.

2.10 Special-Status Species encountered during work. If the Permittee encounters any special-status species during project activities, work shall be suspended, CDFW notified, and conservation measures shall be developed in agreement with CDFW prior to re-initiating the activity. If during project activities, the Permittee encounters any species listed pursuant to CESA, work shall be suspended, and CDFW notified. Work may not re-initiate until the Permittee has consulted with CDFW and can demonstrate compliance with CESA.

2.11 Check for Wildlife in Pipes / Construction Materials. Permittee shall visually check all sections of pipe / construction materials for the presence of sheltering wildlife prior to the pipe sections being placed in the trench. Alternatively, pipe ends shall be capped while stored on site to prevent wildlife from entering. After attachment of the pipe sections to one another, whether in the trench or not, the exposed end(s) of the pipeline shall be capped at the end of each day during project implementation to prevent wildlife from entering and being trapped within the pipeline.

2.12 Nesting Bird Survey. If Project-related activities are scheduled between February 1 to August 31 (the typical nesting season), a focused survey for nests shall be conducted by a Designated Biologist no more than fourteen (14) calendar days

prior to the beginning of Project-related activities. The Designated Biologist shall survey the area within a 500-foot (for migratory birds) and 1/2-mile (for raptors) radius around the Project area that can be accessed by Permittee. The results of the survey shall be provided to CDFW upon completion. If no active nests are found, Project activities may proceed as scheduled.

2.12.1 Active Nests. If an active nest is found, active nests should be avoided, and a no disturbance or destruction buffer shall be determined and established by a Designated Biologist. The buffer shall be kept in place until after the breeding nesting season or the Designated Biologist confirms the young have fledged, are foraging independently, and the nest is no longer active for the season. The extent of these buffers shall be determined by the Designated Biologist and will depend on the species present, the level of noise or project disturbance, line of sight between the nest and the disturbance, ambient levels of noise and other disturbances, and other topographical or artificial barriers.

2.12.2 Project Delay. If a lapse in Project-related work of fourteen (14) calendar days or longer occurs, the Designated Biologist shall complete another focused survey before Project work can be reinitiated.

2.12.3 Permittee Responsibility. It is the Permittee's responsibility to comply with Fish and Game Code Sections 3503, 3503.5, and 3513, regardless of the time of year. This Agreement does not authorize take of birds, their nests, or their eggs.

2.13 Bird Management and Monitoring Plan. If a survey identifies an active nest, the Designated Biologist shall prepare and implement a Bird Management and Monitoring Plan (Plan) which includes survey results and appropriate avoidance measures such as, but not limited to, temporary no-disturbance buffers, sound walls, visual barriers, and/or changes in Project phasing to protect the nest and the birds. The Plan design shall be based upon site conditions, Project activities, and species present or likely to be present during all project activities. The Designated Biologist shall be onsite during the initiation of Project activities and if there is a change in the level of activity (i.e., noise level, etc.). If the Designated Biologist determines that avoidance measures are insufficient to avoid take of the birds, their nest, or their eggs, all specific Project activities shall cease and the Designated Biologist or Permittee shall immediately consult with CDFW and demonstrate compliance with Fish and Game Code Sections 3503, 3503.5, and 3513, regardless of the time of year. This Agreement does not authorize take of birds, their nests, or their eggs.

2.14 Invasive Species. Permittee shall conduct project activities in a manner that prevents the introduction, transfer, and spread of aquatic, riparian, and terrestrial invasive species from one work site and/or water body to another. Prior to entering the project area, Permittee shall inspect equipment for invasive species and, if any signs of invasive species are found, the equipment shall be cleaned to remove

those species. All visible soil/mud, plant materials, and animal remnants on equipment will be removed prior to entering and exiting the work site and/or between each use in different water bodies. Permittee shall notify CDFW immediately if an invasive species not previously known to occur within the work site is discovered during work activities by contacting CDFW's Invasive Species Program by email at Invasives@wildlife.ca.gov.

2.15 Foothill yellow-legged frog preconstruction surveys. Prior to the initiation of project activities, Permittee shall perform protocol level visual encounter surveys for foothill yellow-legged frog (*Rana boylii*) (FYLF) within the project area where potential habitat for the species is present. Surveys should occur at the appropriate time of the year, typically between May 1 and September 30. Documentation of surveys and findings shall be received by CDFW no later than ten (10) days prior to conducting any project activity. If FYLF is detected, the additional measures below shall be implemented. No take of FYLF shall occur, as defined by Section 86 of the Fish and Game Code. This includes capture and relocation of FYLF, unless Permittee obtains an Incidental Take Permit pursuant to CESA.

2.16 Foothill Yellow-legged Frog – Exclusion Fencing. If FYLF is found in or adjacent to the project area, exclusion fencing shall be installed around the project site in consultation with CDFW. After installation of the fence barrier, the Designated Biologist shall inspect the project work area daily prior to the commencement of activities. If the Designated Biologist determines that FYLF are not present within the work area, equipment or materials may be moved onto the work site under the observation of the Designated Biologist.

2.17 Foothill Yellow-legged Frog - Cease Activities. If FYLF are encountered within the project area, all work shall stop until the animal leaves of its own volition. Any sightings and/or injuries of this species shall be immediately reported to CDFW.

2.18 California Red-Legged Frog Surveys. A focused survey for California red-legged frogs (*Rana draytonii*) (CRLF) in all life stages shall be conducted by a CDFW approved biologist no more than fourteen calendar (14) days prior to the start of construction activities. If CRLF are discovered on the site during pre-Project surveys or during Project activities, a CDFW approved biologist shall submit an avoidance plan to CDFW for approval. The avoidance plan may include, but is not limited to environmental sensitive area fencing (ESA), a water diversion plan, and new avoidance or minimization measures. Refer to EPIMS Notification Number BUT-14986-R2 when submitting the report to CDFW.

2.18.1 Relocation Plan. If avoidance is not feasible, a CDFW-approved biologist shall develop a Relocation Plan for CRLF and submit it to CDFW for approval. The Relocation Plan should include what life stage(s) shall be relocated (e.g., adults or egg masses) and specific protocols for each life stage. The Relocation Plan shall quantify the amount, location, and quality of suitable receiving habitat (e.g., breeding and dispersal habitat). The Relocation Plan shall include capture and handling methods specific to

each life stage.

Revegetation and Restoration

2.19 Seeding. Permittee shall restore all exposed/disturbed areas and access points within the project area, not including roadbeds and road shoulders, by seeding with a native seed mix of known genetic origin whose original stock seed was collected from Sierra Nevada foothills, unless otherwise agreed upon with CDFW. Revegetation shall be completed in the fall before the start of the rainy season and as soon as possible after project activities.

2.20 Native Plant Materials. Revegetation shall include only local plant materials native to the project area, unless otherwise approved by CDFW in writing.

2.21 Prohibited Plant Species. Permittee shall not plant, seed or otherwise introduce invasive non-native plant species. Prohibited invasive non-native plant species include those identified in the California Exotic Pest Plant Council's database, which is accessible at: http://www.cal-ipc.org.

Erosion Control/Stabilization

2.22 Erosion Control. Permittee shall actively implement best management practices (BMPs) to minimize turbidity and siltation and prevent erosion and the discharge of sediment where it may pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat during project activities. Precautions shall include, but are not limited to: pre-construction planning to identify site specific turbidity and siltation minimization measures; best management erosion control practices during project activity; and settling, filtering, or otherwise treating silty and turbid water prior to discharge into a stream or storm drain. This 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.

2.22.1 Monitoring. BMPs shall be monitored routinely throughout the construction period and repaired if necessary to ensure maximum erosion and sediment control.

2.22.2 Materials. All fiber rolls, straw wattles, and/or hay bales utilized within and adjacent to the project site shall be free of non-native plant materials. Fiber rolls or erosion control mesh shall be made of loose-weave mesh that is not fused at the intersections of the weave, such as jute, or coconut (coir) fiber, or other products without welded weaves. Products with plastic monofilament or cross joints in the netting that are bound/stitched (such as found in straw wattles/fiber rolls and some erosion control blankets), which may cause entrapment of wildlife, shall not be allowed.

2.22.3 Implementation. Passage of sediment beyond the sediment barrier(s) is prohibited. If any sediment barrier fails to retain sediment, corrective

measures shall be taken. The sediment barrier(s) shall be maintained in good operating condition throughout the construction period and the following rainy season. Maintenance includes, but is not limited to, removal of accumulated silt and/or replacement of damaged silt fencing, coir logs, coir rolls, and/or straw bale dikes. Upon the CDFW's determination that turbidity/siltation levels resulting from project-related activities constitute a threat to aquatic life, activities associated with the turbidity/siltation shall be halted until effective CDFW-approved control devices are installed or abatement procedures are initiated.

2.23 Prohibition Against Use of Plastic Netting in Erosion Control Measures. Permittee shall not use temporary or permanent erosion control devices containing plastic netting, including photo- or bio-degradable plastic netting. These items are commonly found in straw waddles (fiber rolls) and erosion control blankets.

2.24 Site Restoration. All areas and access points exposed or disturbed during project activities shall be restored using conditions as set forth in the *Revegetation and Restoration* section above. Seeded areas shall be covered with broadcast straw and/or seeded erosion control blankets.

Avoid/Minimize Effects of Equipment

2.25 Heavy Equipment. No heavy equipment shall operate, or any excavation take place, in waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat unless previously described in the project description.

2.26 Heavy Equipment Maintenance. Any equipment or vehicles driven and/or operated shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat. If maintenance or refueling of vehicles or equipment must occur on-site, use a designated area and/or a secondary containment, located away from drainage courses to prevent the runoff of storm water and the runoff of spills. Place drip pans or absorbent materials under vehicles and equipment when not in use. Equipment shall be stored in areas that any possible contamination from the equipment would not pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.27 Minimize Vehicle Parking. Vehicles may enter and exit the work area as necessary for project activities, but vehicles shall not be parked where mechanical fluid leaks may potentially pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.28 Building Material Storage. Project building material and/or construction equipment shall not be placed where materials could pass into waters of the state (Fish & G.

Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat, or where they may cover aquatic or riparian vegetation.

2.29 Decontamination of Project Equipment. Permittee shall decontaminate all tools, waders and boots, and other equipment that will enter the water prior to entering and exiting the project site to avoid the introduction and transfer of organisms. Permittee shall decontaminate project gear and equipment utilizing one of three methods: drying, using a hot water soak, or freezing, as appropriate to the type of gear or equipment. For all methods, Permittee shall begin the decontamination process by thoroughly scrubbing equipment, paying close attention to small crevices such as boot laces, seams, net corners, etc., with a stiff-bristled brush to remove all organisms. To decontaminate by drying, Permittee shall allow equipment to dry thoroughly (i.e., until there is a complete absence of water), preferably in the sun, for a minimum of 48 hours. To decontaminate using a hot water soak, Permittee shall immerse equipment in 140 degrees Fahrenheit or hotter water and soak for a minimum of 5 minutes. To decontaminate by freezing, Permittee shall place equipment in a freezer 32 degrees Fahrenheit or colder for a minimum of eight (8) hours. Repeat decontamination is required only if the equipment/clothing is removed from the site, used within a different waterbody, and returned to the project site.

2.30 Decontamination Sites. Permittee shall perform decontamination of vehicles, watercraft, and other project gear and equipment in a designated location where runoff can be contained and not allowed to pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.31 Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders shall be positioned over drip pans and secondary containment, as necessary. Stationary equipment shall have suitable containment to handle any spill/leak. Equipment shall be stored in areas that any possible contamination from the equipment would not pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.32 Equipment Maintenance and Fueling. No equipment maintenance or fueling shall be done where petroleum products or other pollutants from the equipment may pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.33 Staging and Storage Areas. Staging and storage areas for equipment, materials, fuels, lubricants, and solvents shall be located more than thirty (30) feet from waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat, unless otherwise approved by CDFW in writing. All

equipment and fuel stored on site shall be properly contained and protected from rain.

Debris Materials and Waste

2.34 Remove Structures. Project-related structures and associated materials not designed to withstand high water flows or placed in seasonally dry portions of a stream or lake that could be washed downstream or could be deleterious to aquatic life, wildlife, or riparian habitat shall be moved to areas above high water before such flows occur.

2.35 No Dumping. Permittee and all contractors, subcontractors, and employees shall not dump any litter or construction debris on the project site.

2.36 Remove Temporary Flagging, Fencing, and Barriers. Permittee shall remove all temporary flagging, fencing, and/or barriers from the project area and vicinity immediately upon completion of project activities.

2.37 Wash Water. Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter sensitive areas, or placed in locations where it may pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat.

2.38 Hazardous Materials. Debris, soil, silt, sand, rubbish, construction waste, cement or concrete or washings thereof, asphalt, paint, oil or other petroleum products or any other substances which could be hazardous to aquatic life, or other organic or earthen material from project activities shall not be stored where it may pass into waters of the state (Fish & G. Code § 89.1), the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located more than one hundred (100) feet from the waters of the state, the stream bed, bank, or channel (including but not limited to dry, ponded, flowing, or wetland areas), drainages, lakes, other sensitive habitat, unless otherwise approved by CDFW in writing. Ensure that all construction areas have proper spill clean-up materials (absorbent pads, sealed containers, booms, etc.) to contain the movement of any spilled substances. All debris shall be disposed of properly. BMPs shall be employed to accomplish these requirements. CDFW shall be notified immediately by the Permittee of any spills and shall be consulted regarding clean-up procedures.

2.39 Removal of Debris, Materials and Rubbish. Permittee shall remove all project generated debris, building materials and rubbish from the project area following completion of project activities.

Culvert Replacement

2.40 Culverts Appropriately Sized and Designed. Storm drains lines/culverts shall be adequately sized to carry peak 100-year storm flows for the drainage to one outfall structure. The storm drain lines/culverts and the outfall structure shall be properly aligned within the stream and otherwise engineered, installed and maintained, to assure resistance to washout, and erosion of the stream bed, stream banks and/or fill. If necessary to prevent erosion, water velocity shall be dissipated at the outfall using rock slope protection.

2.41 Culvert Outlets. Culvert outlets (including the outfall area) and fill faces shall be armored where stream flow, road runoff or rainfall energy is likely to erode fill material and the outfall area.

2.42 Rock Slope Protection. Un-grouted RSP and energy dissipater materials shall consist of clean rock, competent for the application, sized and properly installed to resist washout. RSP slopes shall be supported with competent boulders keyed into a footing trench with a depth sufficient to properly seat the footing course boulders and prevent instability (typically at least 1/3 diameter of footing course boulders).

Temporary Water Diversion and Dewatering

2.43 Stream Diversion. When work in a flowing stream is unavoidable, Permittee shall divert the stream flow around or through the work area during construction operations.

2.44 General Compliance with Screening Requirement. Notwithstanding Fish and Game Code §6027, fish screens and bypass pipes or channels shall be in place and maintained in working order at all times water is being diverted.

2.45 Screening Requirements. The inlets and outlets of the diversion structure and flow bypass pipe structure shall be fitted with screens that consist of ¼-inch mesh or smaller opening material, preferably consisting of wire, or alternatively fabric netting capable of withstanding flow.

2.46 Maximum Diversion Rate and Bypass Flow for Water Drafting. The maximum instantaneous rate of withdrawal at the point of diversion shall be limited to 20 percent of the total estimated stream flow but shall not exceed *50 gallons per minute (gpm)*. Permittee shall allow 80 percent of stream flow to bypass the diversion structure at all times while water is being diverted.

2.47 Maintain Aquatic Life. When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, Permittee shall allow sufficient water at all times to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code §5937.

2.48 Stranded Aquatic Life and Scientific Collection. The Designated Biologist shall check daily for stranded aquatic life as the water level in the dewatered area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered area. Capture methods may include fish landing nets, dip nets, buckets, and by hand. Captured aquatic life shall be released immediately in the closest unaffected body of water adjacent to the project area. An account of the species and quantity of aquatic organisms that are captured, handled, and/or moved shall be reported to CDFW in the Mandatory Wildlife Report spreadsheet form (DFW 1379a) available at the following website: https://wildlife.ca.gov/Licensing/Scientific-Collecting#53949794-reporting. This condition does not allow for the take or disturbance of any state listed species, candidate species, or fully protected species. This condition also does not allow for the take or disturbance of a state species of special concern unless approved in a relocation plan per Measures 2.18.1 and 2.49.

2.49 Fish Relocation Plan. Permittee shall prepare and implement a Fish Relocation Plan to limit the number of fish that may be entrained and/or stranded during construction when the Designated Biologist identifies that work will be conducted in a fish bearing stream. The plan shall include, at minimum: 1) a list of fish species that may be encountered, 2) descriptions of the proposed methods and equipment to be used to prevent fish stranding, 3) the proposed timing of fish relocation activities, and 4) the qualifications of the Designated Biologist(s) implementing the plan. Permittee shall submit the Fish Relocation Plan to CDFW **no less than ten (10) business days** prior to planned dewatering. Permittee shall obtain CDFW's written approval of the Fish Relocation Plan prior to starting project activities. This measure does not allow for the take or relocation of any state listed species.

2.50 Restore Normal Flows. Permittee shall restore normal flows to the effected stream immediately after completion of work in that location.

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

3.1 Notification of Project Initiation. The Permittee shall notify the CDFW two (2) working days prior to beginning work for each construction season. Notification shall be submitted as instructed in Contact Information section below. Email submittal is preferred.

3.2 Notification of Project Completion. Upon completion of the project activities described in this Agreement, the project activities shall be digitally photographed. Photographs shall be submitted to CDFW within fifteen (15) days of project completion. Photographs and project completion notification shall be submitted as instructed in Contact Information section below. Email submittal is preferred.

3.3 Notification to the California Natural Diversity Database. If any special-status species are observed during project implementation, the Permittee shall submit the

California Natural Diversity Data Base (CNDDB) Online Field Survey Form electronically at https://www.wildlife.ca.gov/data/CNDDB/submitting-data within five (5) working days of the sightings, and provide a copy of the form, survey map and/or report to the CDFW's Regional office as instructed in Contact Information section below.

CONTACT INFORMATION

Any communication that Permittee or CDFW submits to the other shall be in writing and any communication or documentation shall be delivered to the address below by U.S. mail, fax, or email, or to such other address as Permittee or CDFW specifies by written notice to the other.

To Permittee:

Thaddeus Walker
150 Chuck Yeager Way, Suite A
Oroville, CA 95965
(530) 693-3173
thad@bcrcd.org

To CDFW:

Department of Fish and Wildlife
North Central Region
1701 Nimbus Road, Suite A
Rancho Cordova, CA 95670
Attn: Lake and Streambed Alteration Program
EPIMS Notification No. BUT-14986-R2
Phone: (916) 358-2885
Fax: (916) 358-2912
Email: R2LSA@wildlife.ca.gov

LIABILITY

Permittee shall be solely liable for any violations of this Agreement, whether committed by Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents or contractors and subcontractors, to complete the project or any activity related to it that this Agreement authorizes.

This Agreement does not constitute CDFW's endorsement of, or require Permittee to proceed with the project. The decision to proceed with the project is Permittee's alone.

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that Permittee or any person acting on behalf of Permittee, including its officers, employees,

representatives, agents, or contractors and subcontractors, is not in compliance with this Agreement.

Before CDFW suspends or revokes this Agreement, it shall provide Permittee written notice by certified or registered mail that it intends to suspend or revoke. The notice shall state the reason(s) for the proposed suspension or revocation, provide Permittee an opportunity to correct any deficiency before CDFW suspends or revokes this Agreement, and include instructions to Permittee, if necessary, including but not limited to a directive to immediately cease the specific activity or activities that caused CDFW to issue the notice.

ENFORCEMENT

Nothing in this Agreement precludes CDFW from pursuing an enforcement action against Permittee instead of, or in addition to, suspending or revoking this Agreement.

Nothing in this Agreement limits or otherwise affects CDFW's enforcement authority or that of its enforcement personnel.

OTHER LEGAL OBLIGATIONS

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with, from obtaining any other permits or authorizations that might be required under, other federal, state, or local laws or regulations before beginning the project or an activity related to it. For example, if the project causes take of a species listed as threatened or endangered under the Endangered Species Act (ESA), such take will be unlawful under the ESA absent a permit or other form of authorization from the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

This Agreement does not relieve Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, from complying with other applicable statutes in the Fish and Game Code including, but not limited to, Fish and Game Code sections 2050 *et seq*. (threatened and endangered species), section 3503 (bird nests and eggs), section 3503.5 (birds of prey), section 5650 (water pollution), section 5652 (refuse disposal into water), section 5901 (fish passage), section 5937 (sufficient water for fish), and section 5948 (obstruction of stream).

Nothing in this Agreement authorizes Permittee or any person acting on behalf of Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

CDFW may amend this Agreement at any time during its term if CDFW determines the amendment is necessary to protect an existing fish or wildlife resource.

Permittee may amend this Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and Permittee. To request an amendment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the corresponding amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

TRANSFER AND ASSIGNMENT

This Agreement may not be transferred or assigned to another entity, and any purported transfer or assignment of this Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of this Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, Permittee shall submit to CDFW a completed CDFW "Request to Amend Lake or Streambed Alteration" form and include with the completed form payment of the minor amendment fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5).

EXTENSIONS

In accordance with Fish and Game Code section 1605, subdivision (b), Permittee may request one extension of this Agreement, provided the request is made prior to the expiration of this Agreement's term. To request an extension, Permittee shall submit to CDFW a completed CDFW "Request to Extend Lake or Streambed Alteration" form and include with the completed form payment of the extension fee identified in CDFW's current fee schedule (see Cal. Code Regs., tit. 14, § 699.5). CDFW shall process the extension request in accordance with Fish and Game Code section 1605, subdivisions (b) through (e).

If Permittee fails to submit a request to extend this Agreement prior to its expiration, Permittee must submit a new notification and notification fee before beginning or continuing the project this Agreement covers (Fish & G. Code § 1605, subd. (f)).

EFFECTIVE DATE

This Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after Permittee's signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable Fish and Game Code section 711.4 filing fee listed at https://www.wildlife.ca.gov/Conservation/CEQA/Fees.

TERM

This Agreement shall **expire five (5) years** from the date signed by CDFW. All provisions in this Agreement shall remain in force throughout its term. Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after this Agreement expires or is terminated, as Fish and Game Code section 1605, subdivision (a)(2) requires.

EXHIBITS

The documents listed below are included as exhibits to this Agreement and incorporated herein by reference.

A. Exhibit A. Project Site Location
B. Exhibit B. Amphibian Habitat Structure Plan
C. Exhibit C. Tree Replanting Plan
D. Exhibit D. Temporary Dewatering Plan
E. Exhibit E. Project Plans

AUTHORITY

If the person signing this Agreement (signatory) is doing so as a representative of Permittee, the signatory hereby acknowledges that he or she is doing so on Permittee's behalf and represents and warrants that he or she has the authority to legally bind Permittee to the provisions herein.

AUTHORIZATION

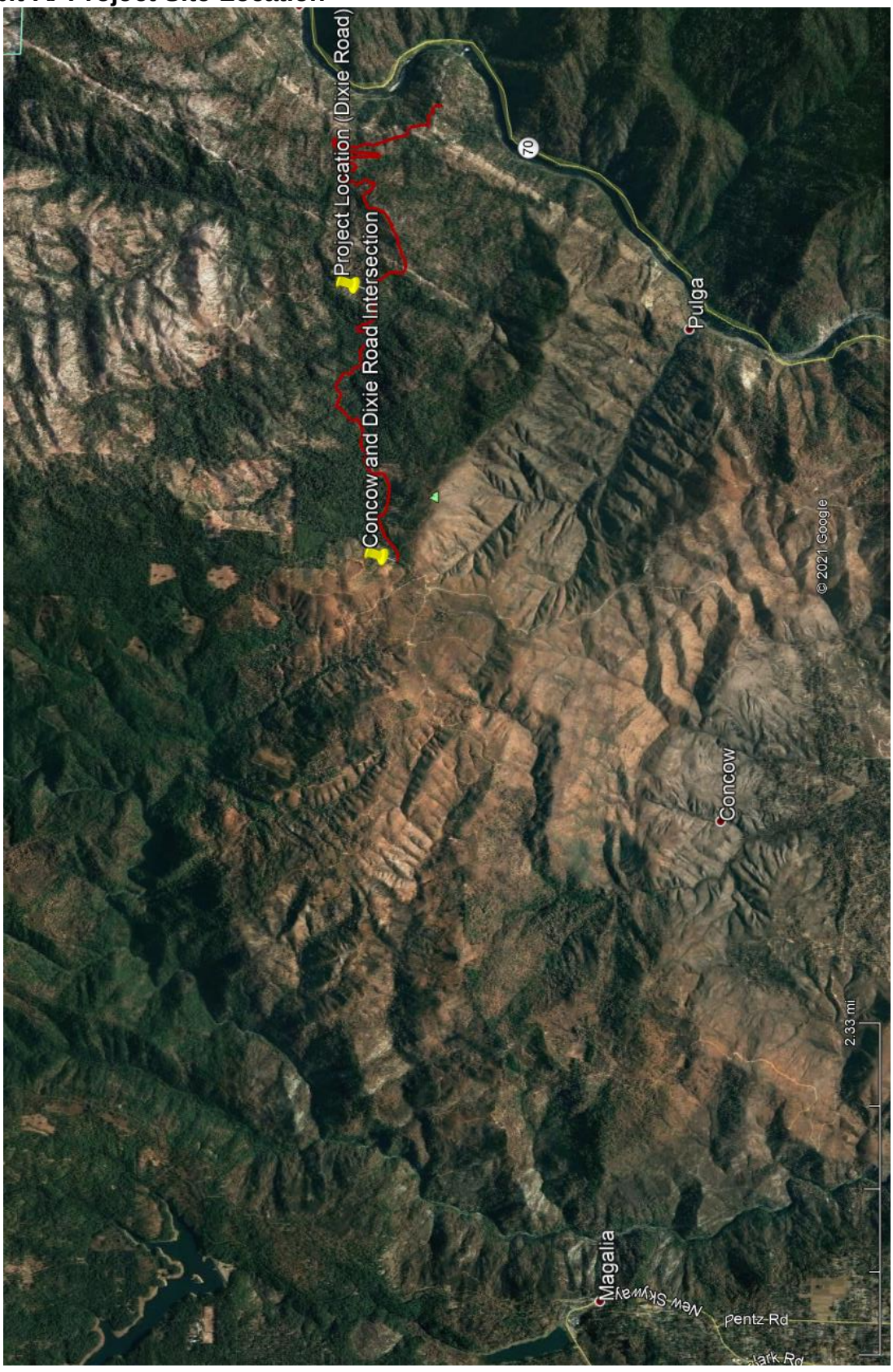
This Agreement authorizes only the project described herein. If Permittee begins or completes a project different from the project this Agreement authorizes, Permittee may be subject to civil or criminal prosecution for failing to notify CDFW in accordance with Fish and Game Code section 1602.

CONCURRENCE

Through the electronic signature by the permittee or permittee's representative as evidenced by the attached concurrence from CDFW's Environmental Permit Information Management System (EPIMS), the permittee accepts and agrees to comply with all provisions contained herein.

The EPIMS concurrence page containing electronic signatures must be attached to this agreement to be valid.

Exhibit A: Project Site Location




Site #1
Site #3
Site #4
Site #5
Site #6
Site #7
Site #8
Site #47
Site #48
Site #42
Site #15
Site #17
Site #20
Site #22
Site #23
Site #24
Dixie Rd
Ruiga Rd
© 2021 Google
832 ft


70
Mayaro-Lodge-Rd
Site #38
Site #40
Site #42
Dixie-Rd

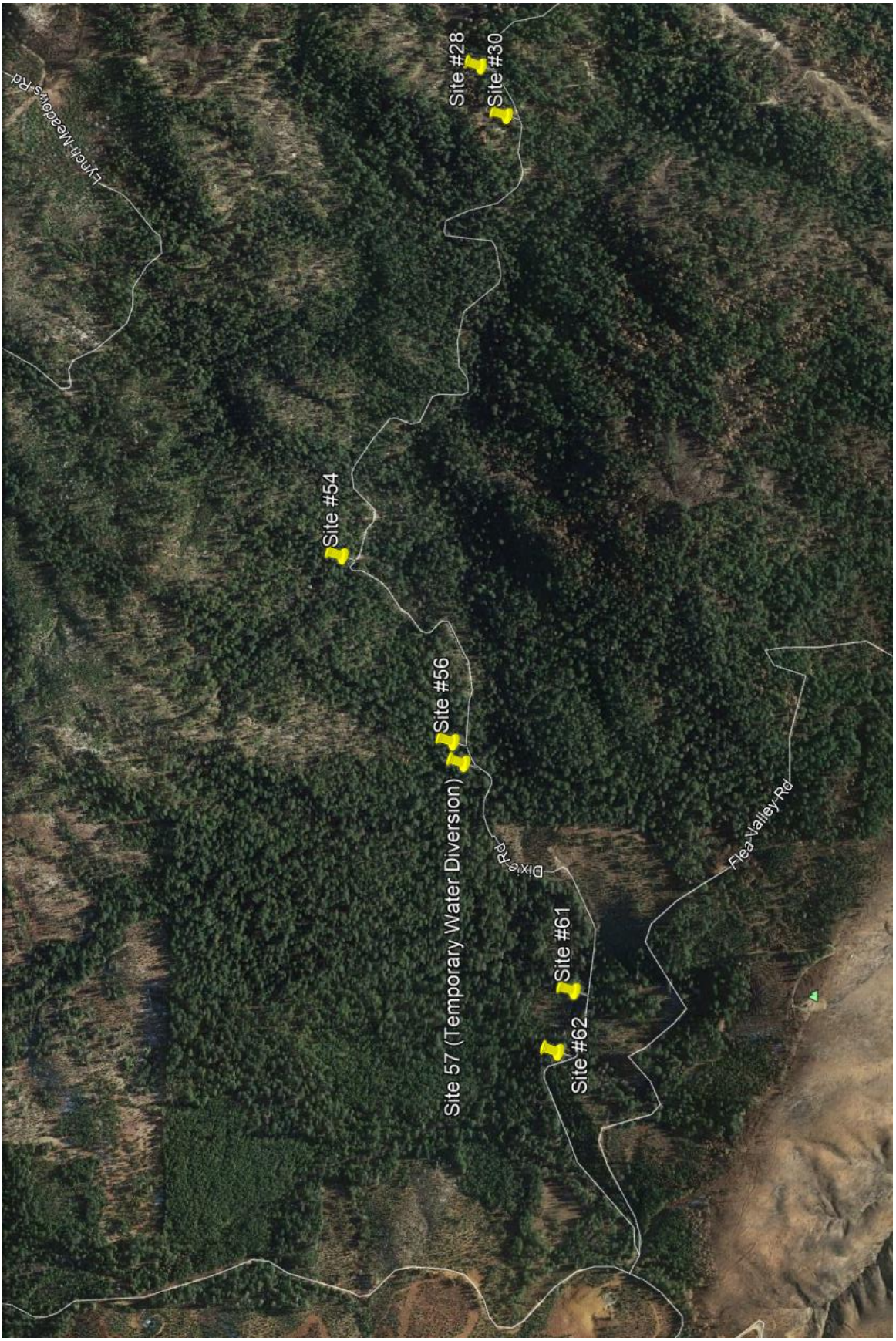

Site #28
Site #30
Lynch Meadows Rd
Site #54
Site #56
Site 57 (Temporary Water Diversion)
Dixie Rd
Site #61
Site #62
Flea Valley Rd

Exhibit B: Amphibian Habitat Structure Plan

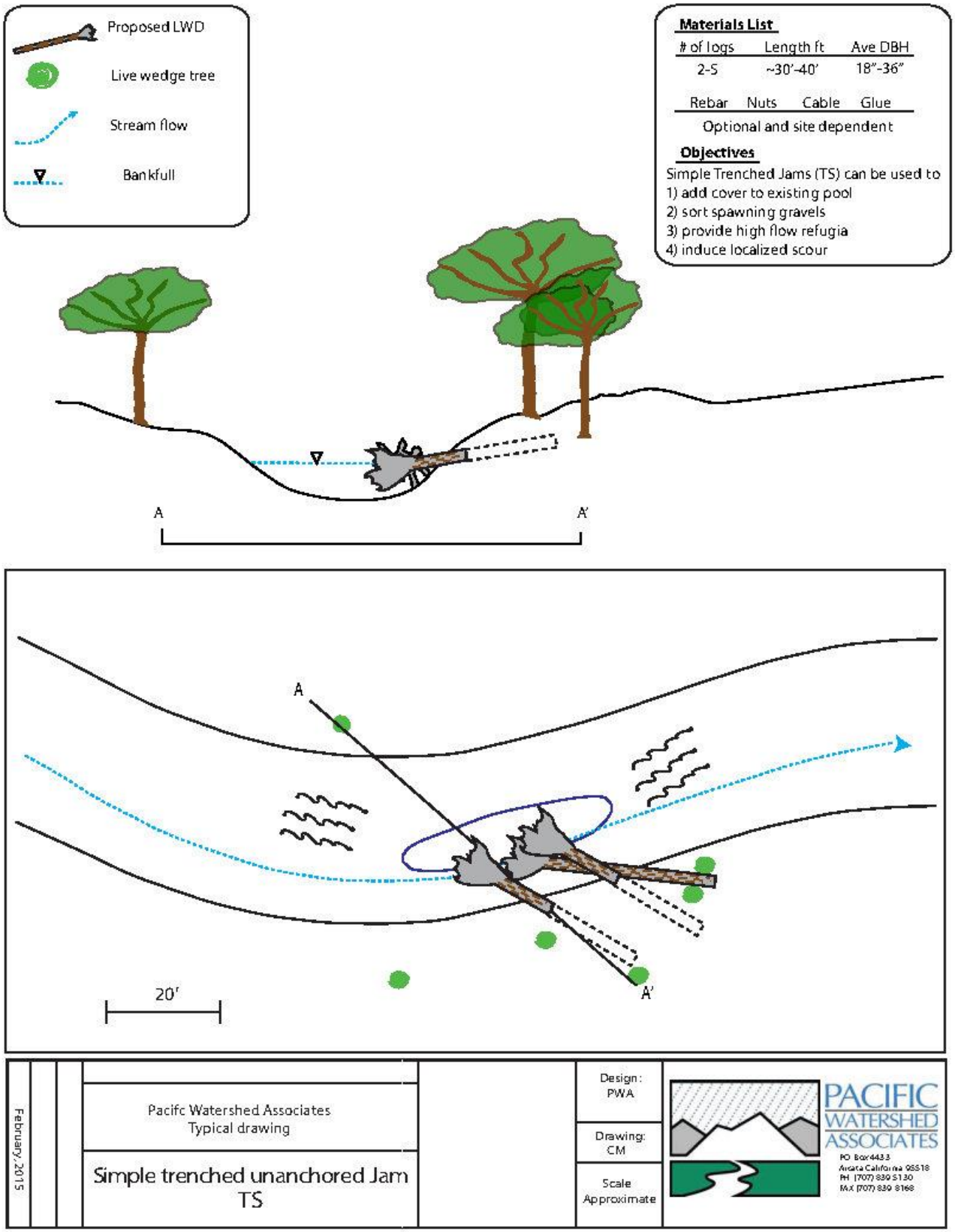


Exhibit C: Tree Replanting Plan

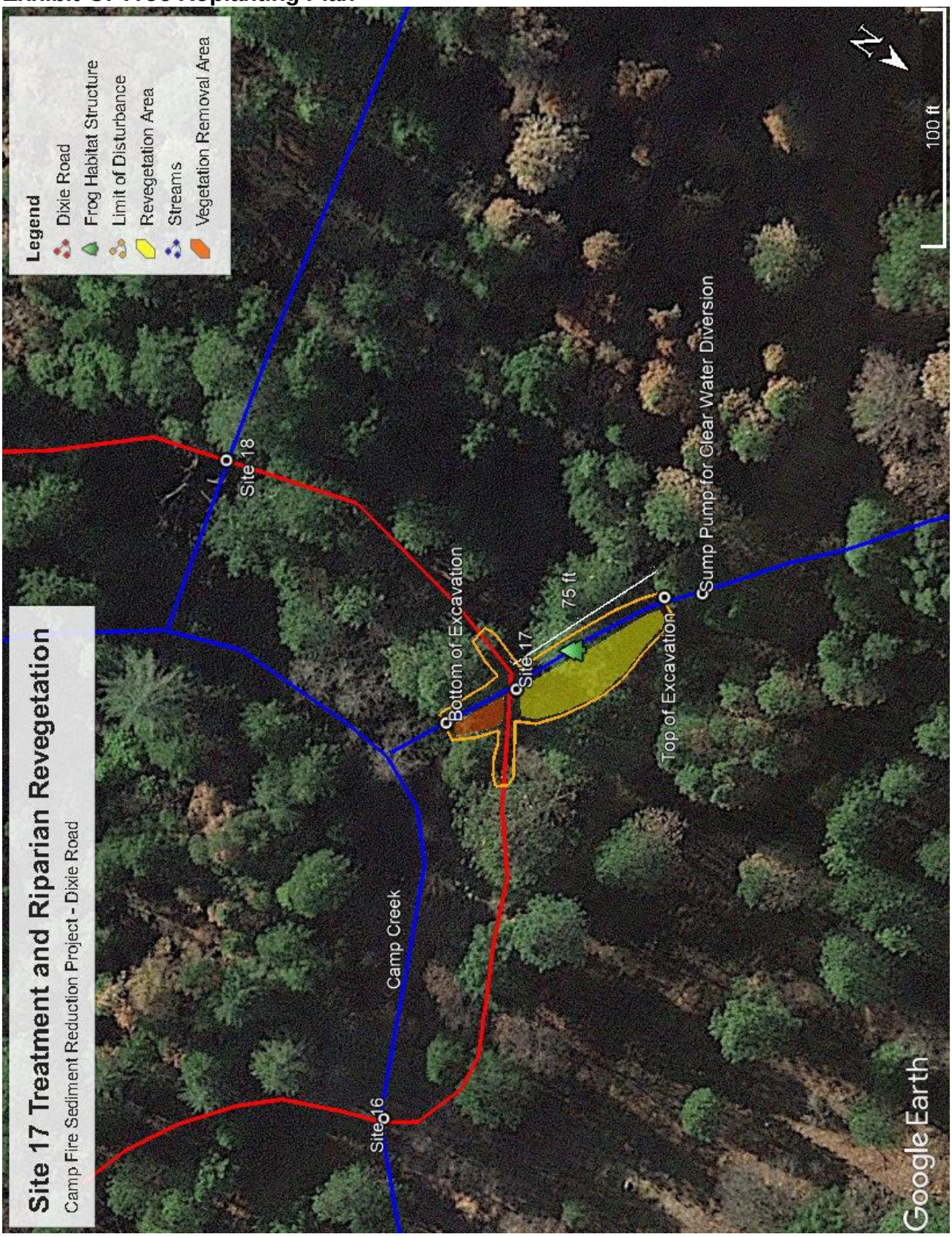
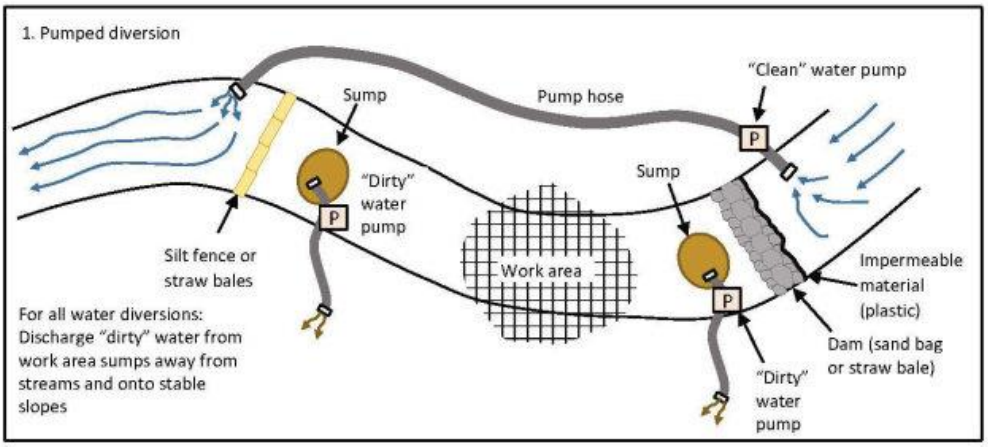
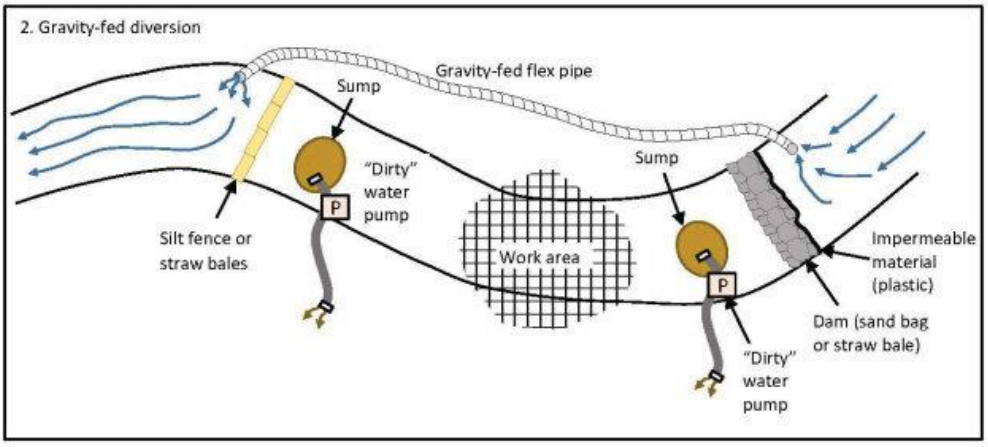


Exhibit D: Temporary Dewatering Plans

Typical Design for De-watering Streams





Stream crossing de-watering

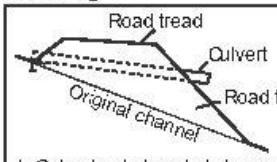
Prior to working in and around the active stream channel, proper stream dewatering and avoidance of increasing downstream turbidity should be employed. Stream flows will be isolated upstream of the work area using cofferdams and transported downstream / around the work site through either a pumped diversion (Type 1) or by gravity diversion (Type 2) to keep the stream "live" (flowing) below the work area. An additional dam will be installed downstream of the work areas to capture any subsurface flow that might travel through the construction area. Any "dirty" water will be collected at this location and pumped away from the site where it can infiltrate into the ground without the potential to delivery to the stream and/or be used to wet fill being deposited in the spoil disposal areas.

Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 2070, Petaluma, CA 95943 / Ph: 707-773-1385/ FAX: 707-773-1451/ www.pacificwatershed.com

Exhibit E: Project Plans

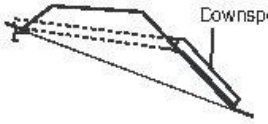
Typical Design of a Non-fish Bearing Culverted Stream Crossing

Existing



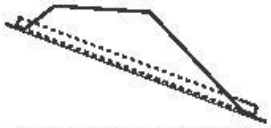
1. Culvert not placed at channel grade.
2. culvert does not extend past base of fill.

Upgraded



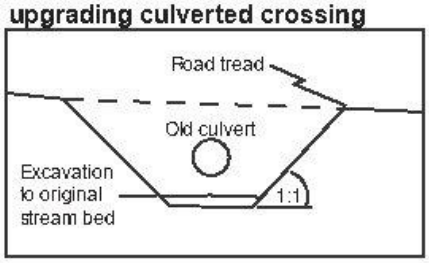
1. Culvert not placed at channel grade.
2. Downspout added to extend outlet past road fill.

Upgraded (preferred)

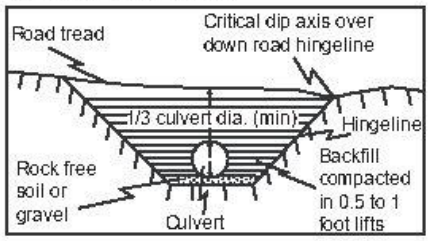


1. Culvert placed at channel grade.
2. Culvert inlet and outlet rest on, or partially in, the originial streambed.

Excavation in preparation for upgrading culverted crossing



Upgraded stream crossing culvert installation



Note:
Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection (trash barriers) to prevent plugging. Culvert sizing for the 100-year peak storm flow should be determined by both field observation and calulations using a procedure such as the Rational Formula.

Stream crossing culvert Installation

1. Culverts shall be aligned with natural stream channels to ensure proper function, and prevent bank erosion and plugging by debris.
2. Culverts shall be placed at the base of the fill and the grade of the original streambed, or downspouted past the base of the fill.
3. Culverts shall be set slightly below the original stream grade so that the water drops several inches as it enters the pipe.
5. To allow for sagging after burial, a camber shall be between 1.5 to 3 incher per 10 feet culvert pipe length.
6. Backfill material shall be free of rocks, limbs or other debris that could dent or puncture the pipe or allow water to seep around pipe.
7. First one end then the other end of the culvert shall be covered and secured. The center is covered last.
8. Backfill material shall be tamped and compacted throughout the entire process:
   - Base and side wall material will be compacted before the pipe is placed in its bed.
   - Backfill compacting will be done in 0.5 - 1 foot lifts until 1/3 of the diameter of the culvert has been covered. A gas powered tamper can be used for this work.
9. Inlets and outlets shall be armored with rock or mulched and seeded with grass as needed.
10. Trash protectors shall be installed just upstream from the culvert where there is a hazard of floating debris plugging the culvert.
11. Layers of fill will be pushed over the crossing until the final designed road grade is achieved, at a minimum of 1/3 to 1/2 the culvert diameter.

Erosion control measures for culvert replacement

Both mechanical and vegetative measures will be employed to minimize accelerated erosion from stream crossing and ditch relief culvert upgrading. Erosion control measures implemented will be evaluated on a site by site basis. Erosion control measures include but are not limited to:

1. Minimizing soil exposure by limiting excavation areas and heavy equipment distrubance.
2. Installing filter windrows of slash at the base of the road fill to minimize the movement of eroded soil to downslope areas and stream channels.
3. Retaining rooted trees and shrubs at the base of the fill as "anchor" for the fill and filter windrows.
4. Bare slopes created by construction operations will be protected until vegetation can stabilize the surface. Surface erosion on exposed cuts and fills will be minimized by mulching, seeding, planting, compacting, armoring, and/or benching prior to the first rains.
5. Excess or unusable soil will be stored in long term spoil disposal locations that are not limited by factors such as excessive moisture, steep slopes greater than 10%, archeology potential, or proximity to a watercourse.
6. On running streams, water will be pumped or diverted past the crossing and into the downstream channel during the construction process.
7. Straw bales and/or silt fencing will be employed where necessary to control runoff within the construction zone.

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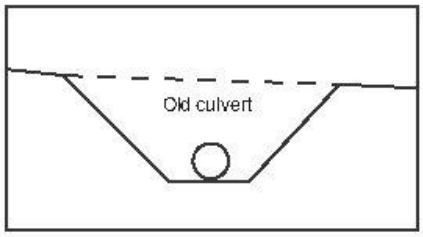
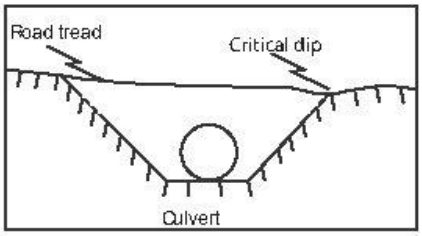
Typical Drawing #2

Typical Design of Upgraded Stream Crossings





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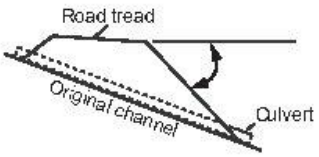
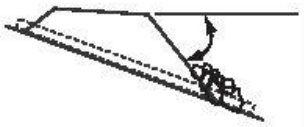
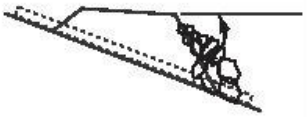
Note:
Road upgrading tasks typically include upgrading stream crossings by installing larger culverts and inlet protection (trash barriers) to prevent plugging. Culvert sizing for the 100-year peak storm flow should be determined by both field observation and calculations using a procedure such as the Rational Formula.

Armoring fill faces

Fill angles ≤ 2:1	Fill angles (between 2:1 & 1.5:1)	Fill angles steeper than 1.5:1
		
No rock armor needed	Armor 1/4 up fill face	Armor 3/4 way up fill face

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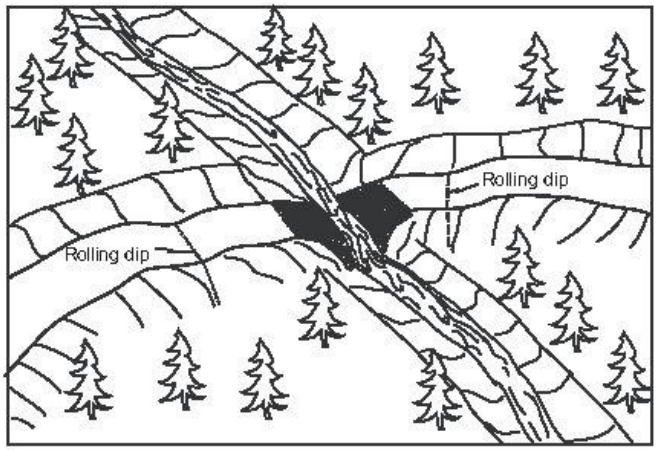
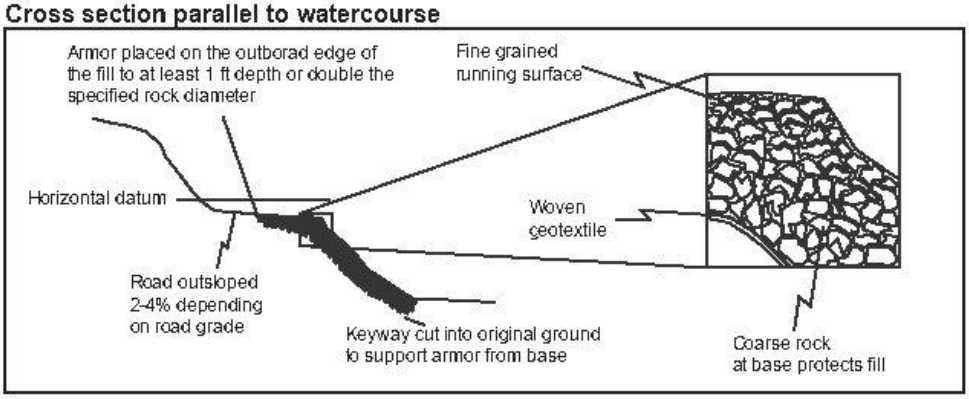
PWA Typical Drawing #4

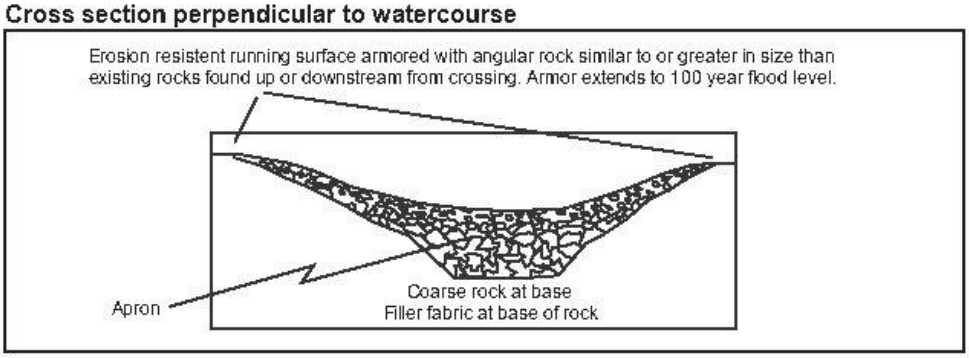
Typical Armored Fill Crossing Installation



Cross section parallel to watercourse



Cross section perpendicular to watercourse



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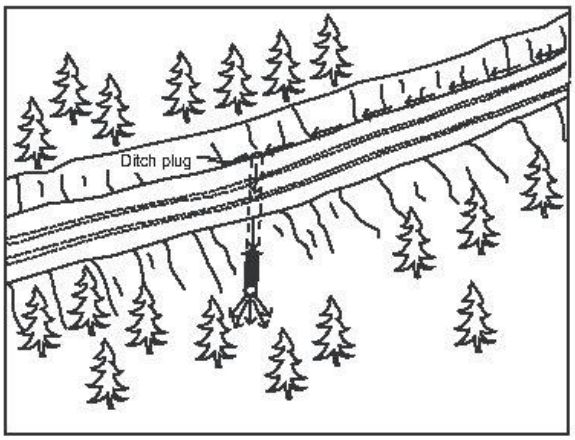
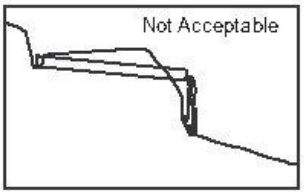
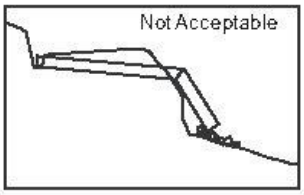
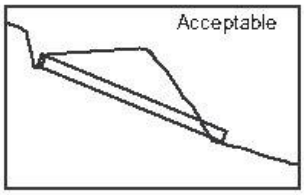
Typical Drawing #6

Typical Ditch Relief Culvert Installation









Ditch relief culvert installation

1) The same basic steps followed for stream crossing installation shall be employed.
2) Culverts shall be installed at a 30 degree angle to the ditch to lessen the chance of inlet erosion and plugging.
3) Culverts shall be seated on the natural slope or at a minimum depth of 5 feet at the outside edge of the road, whichever is less.
4) At a minimum, culverts shall be installed at a slope of 2 to 4 percent steeper than the approaching ditch grade, or at least 5 inches every 10 feet.
5) Backfill shall be compacted from the bed to a depth of 1 foot or 1/3 of the culvert diameter, whichever is greater, over the top of the culvert.
6) Culvert outlets shall extend beyond the base of the road fill (or a flume downspout will be used). Culverts will be seated on the natural slope or at a depth of 5 feet at the outside edge of the road, whichever is less.

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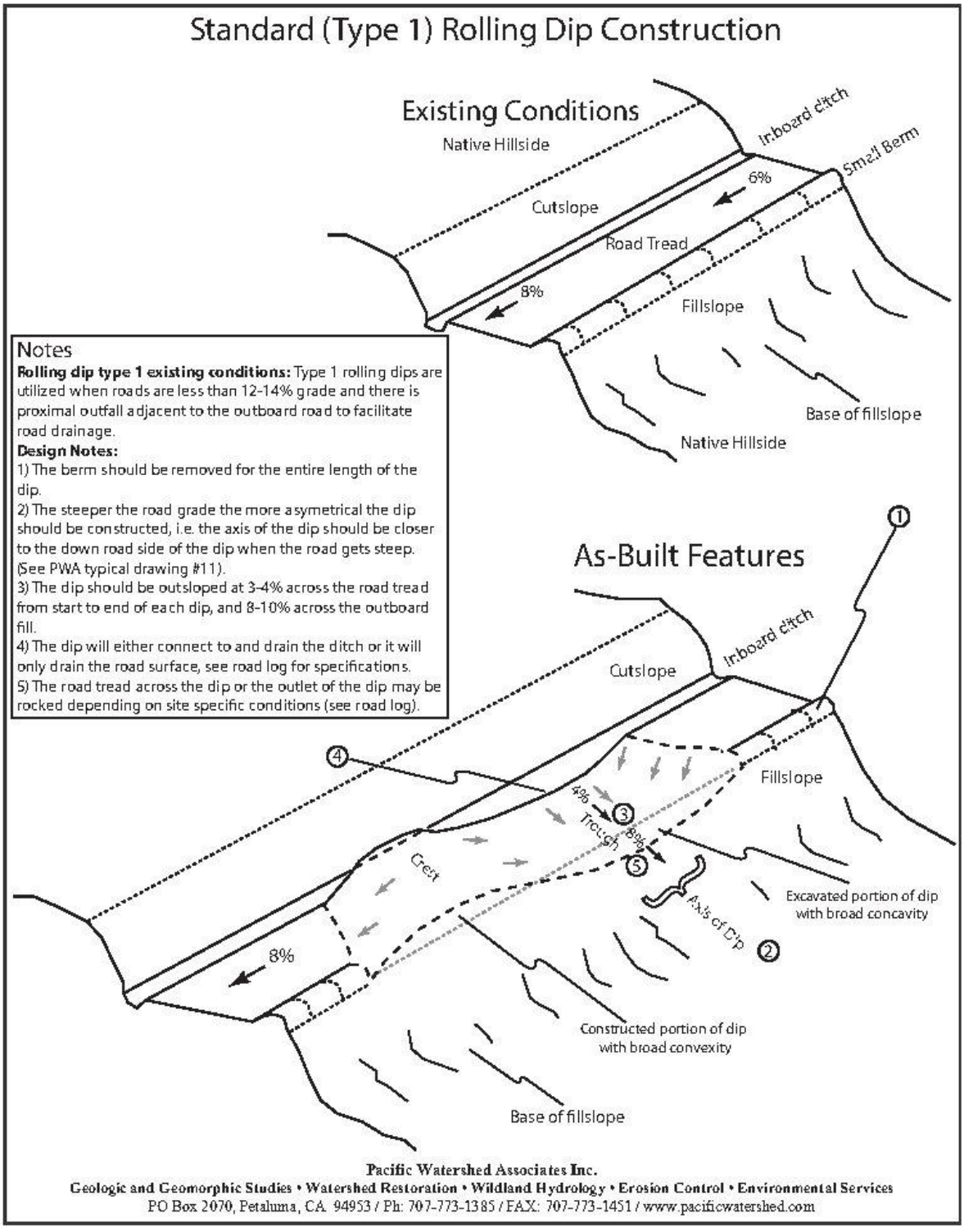
PWA Typical Drawing #8

Standard (Type 1) Rolling Dip Construction



Notes

Rolling dip type 1 existing conditions: Type 1 rolling dips are utilized when roads are less than 12-14% grade and there is proximal outfall adjacent to the outboard road to facilitate road drainage.

Design Notes:

1) The berm should be removed for the entire length of the dip.
2) The steeper the road grade the more asymetrical the dip should be constructed, i.e. the axis of the dip should be closer to the down road side of the dip when the road gets steep. (See PWA typical drawing #11).
3) The dip should be outsloped at 3-4% across the road tread from start to end of each dip, and 8-10% across the outboard fill.
4) The dip will either connect to and drain the ditch or it will only drain the road surface, see road log for specifications.
5) The road tread across the dip or the outlet of the dip may be rocked depending on site specific conditions (see road log).

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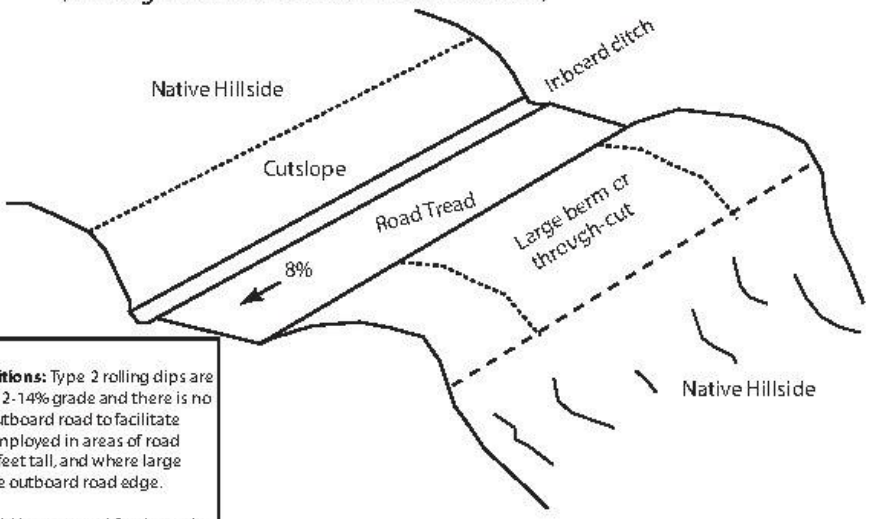
Typical Drawing #19a

Type 2 Rolling Dip Construction

(Through-cut or thick berm road reaches)



Notes

Rolling dip type 2 existing conditions: Type 2 rolling dips are utilized when roads are less than 12-14% grade and there is no proximal outfall adjacent to the outboard road to facilitate road drainage. These should be employed in areas of road throughcuts generally less than 3 feet tall, and where large wide and/or tall berms exist on the outboard road edge.

Design Notes:

1) The berm or native hillside should be removed for the entire length of the excavated portion of the dip, or, at a minimuim through the trough/axis of the dip.

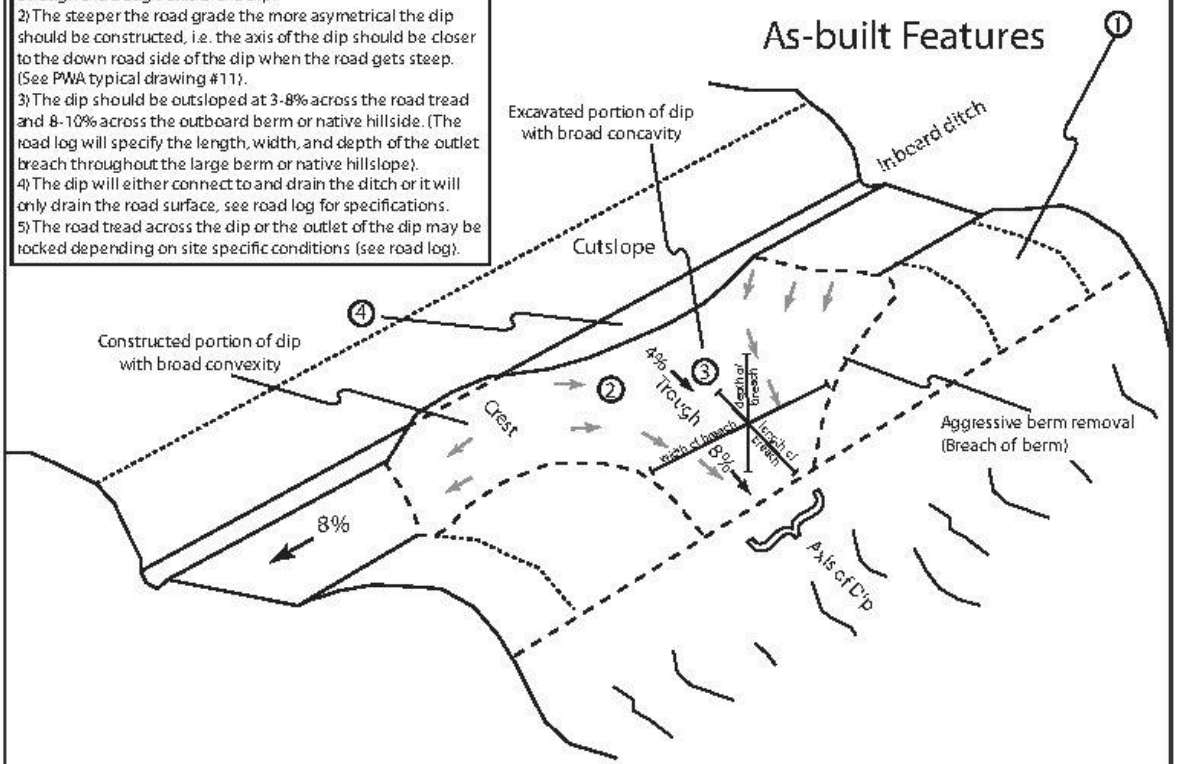
2) The steeper the road grade the more asymetrical the dip should be constructed, i.e. the axis of the dip should be closer to the down road side of the dip when the road gets steep. (See PWA typical drawing #11).

3) The dip should be outsloped at 3-8% across the road tread and 8-10% across the outboard berm or native hillside. (The road log will specify the length, width, and depth of the outlet breach throughout the large berm or native hillslope).

4) The dip will either connect to and drain the ditch or it will only drain the road surface, see road log for specifications.

5) The road tread across the dip or the outlet of the dip may be rocked depending on site specific conditions (see road log).

As-built Features



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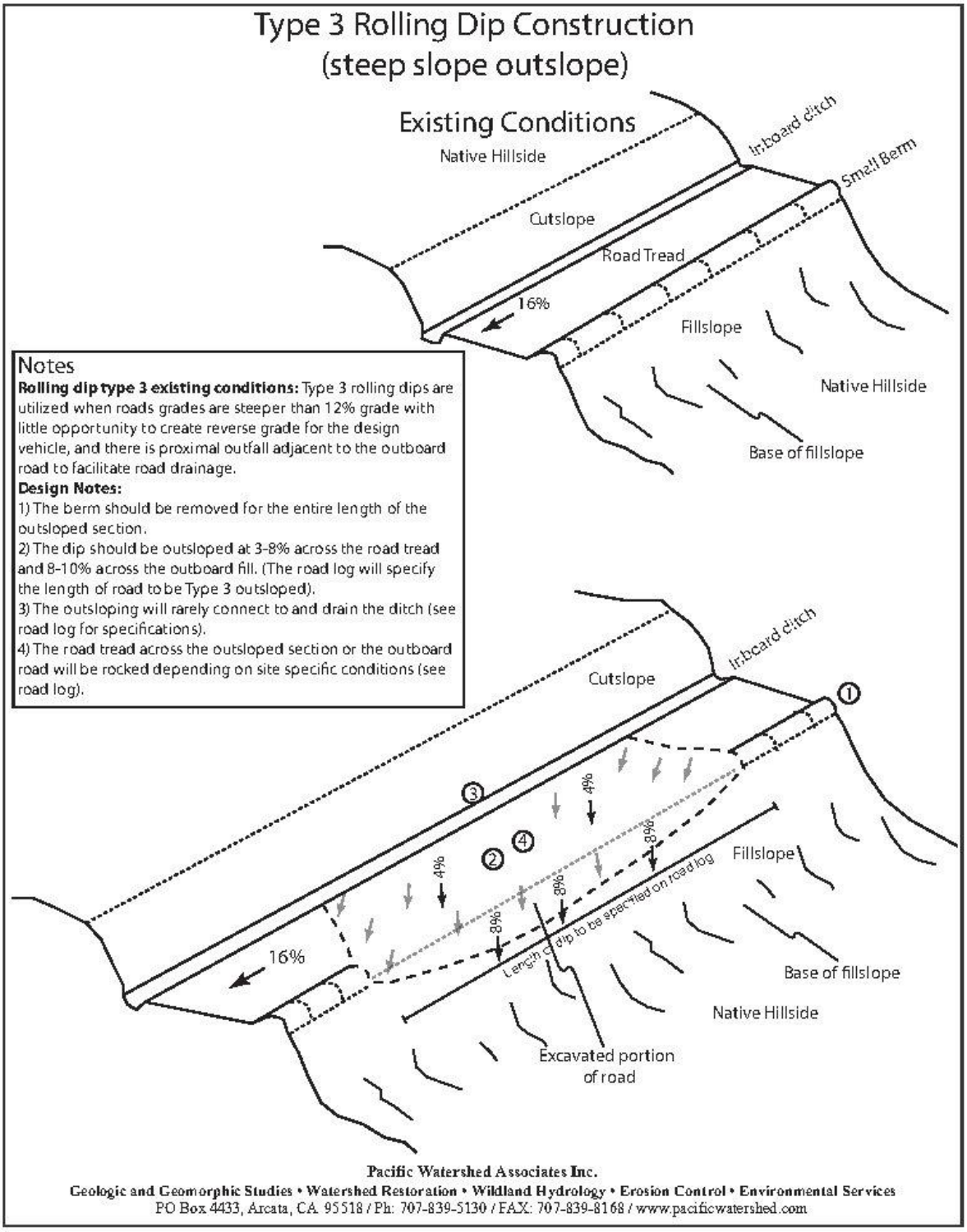
PWA Typical Drawing #19b

Type 3 Rolling Dip Construction
(steep slope outslope)



Notes

Rolling dip type 3 existing conditions: Type 3 rolling dips are utilized when roads grades are steeper than 12% grade with little opportunity to create reverse grade for the design vehicle, and there is proximal outfall adjacent to the outboard road to facilitate road drainage.

Design Notes:

1) The berm should be removed for the entire length of the outsloped section.
2) The dip should be outsloped at 3-8% across the road tread and 8-10% across the outboard fill. (The road log will specify the length of road to be Type 3 outsloped).
3) The outsloping will rarely connect to and drain the ditch (see road log for specifications).
4) The road tread across the outsloped section or the outboard road will be rocked depending on site specific conditions (see road log).

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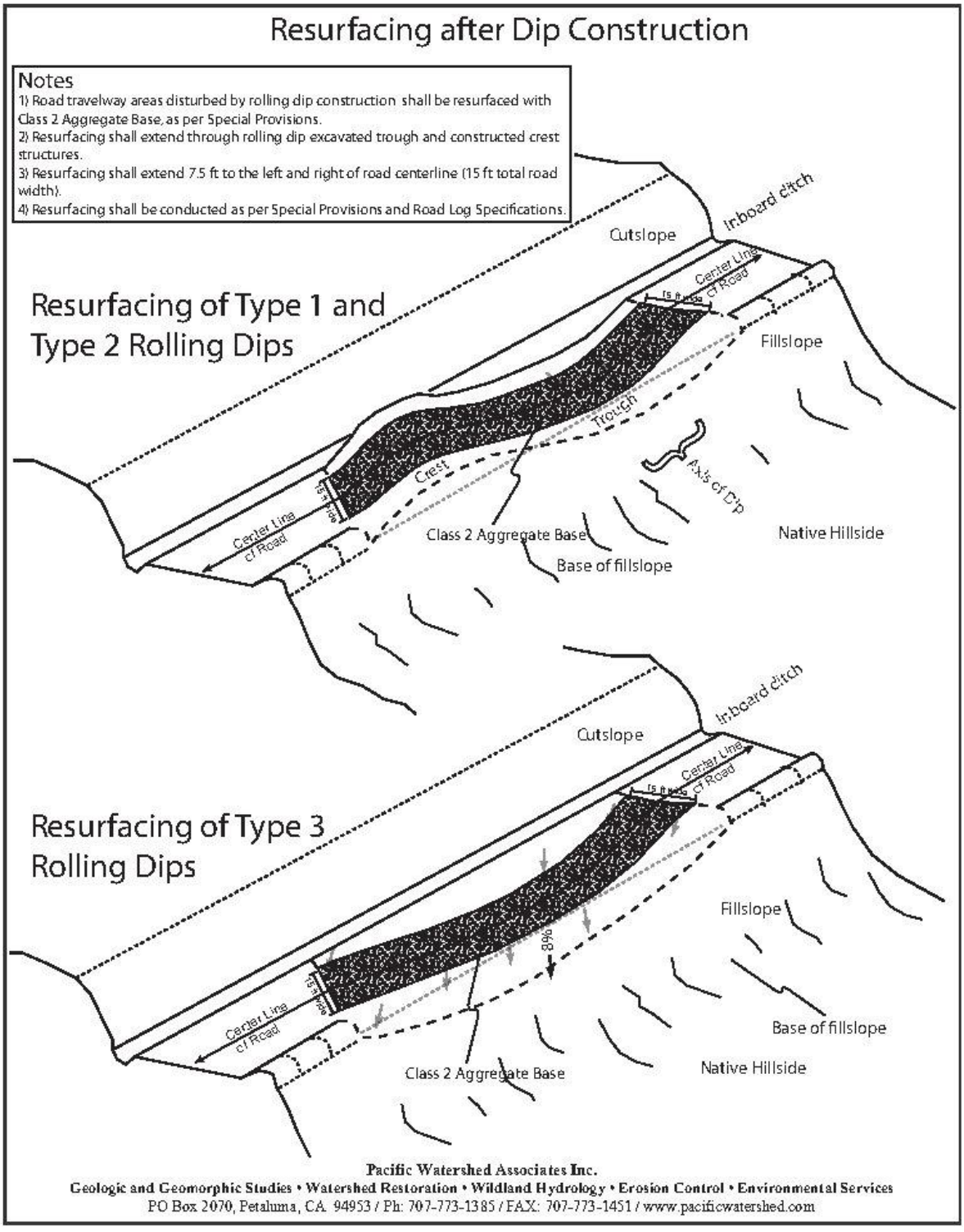
PWA Typical Drawing #19c



Typical Drawing #22