

CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 – NORTHERN REGION
619 Second Street
Eureka, CA 95501



STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2019-0135-R1
Unnamed Tributary to Kekawaka Creek, Tributary to the Upper
Mainstem Eel River

Bridget Carlson
Carlson Water Diversion and Stream Crossings Project
7 Encroachments

This Lake or Streambed Alteration Agreement (Agreement) is entered into between the California Department of Fish and Wildlife (CDFW) and Bridget Carlson (Permittee).

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on February 27, 2019 and revised on November 4, 2019, that the Permittee intends to complete the project described herein.

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

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

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

PROJECT LOCATION

The project to be completed is located within the Kekawaka watershed, approximately 1.5 miles southwest of the Heartwood Institute, County of Humboldt, State of California. The project is located in Section 11, T5S, R5E, Humboldt Base and Meridian; in the Jewett Creek U.S. Geological Survey 7.5-minute quadrangle; Assessor's Parcel Numbers 218-101-003, 218-101-002, and 218-091-006.

PROJECT DESCRIPTION

This Agreement relies on the Notification materials and a desk review without a CDFW site inspection.

The project is limited to 7 encroachments (Table 1). Two encroachments are for water diversion from unnamed tributaries to Kekawaka Creek. Water is diverted for domestic use and agricultural use. Work for the water diversion will include use and maintenance of the water diversion infrastructure. The 5 other proposed encroachments are to upgrade undersized stream crossings and realign a watercourse. Work for this encroachment will include excavation, removal of the failing crossings, replacement with new properly sized crossings, backfilling and compaction of fill.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
POD-1	40.03863734, -123.5894276	Point of Diversion (POD) diverts water from a stream for agricultural and domestic use.
POD-2	40.03609086, -123.5903943	Point of Diversion (POD) diverts water from a stream for agricultural and domestic use.
Crossing-1	40.03598824, -123.5885933	Replace fill crossing with minimum 24" diameter culvert.
Crossing-3	40.03556674, -123.5904572	Replace undersized crossing with a minimum 42" diameter culvert
Crossing-4	40.03578569, -123.5840638	Replace undersized crossing with a minimum 24" diameter culvert
Map Point-6	40.03517765, -123.5832793	A cultivation site has diverted the path of a stream and caused erosion. Realign the stream and remove approximately 20 cubic yards of fill.
Crossing-8	40.03727544, -123.5857893	Replace undersized double-barrel 18" culvert crossing with a minimum 60" diameter culvert.

This Agreement does not retroactively permit any constructed reservoirs (including "ponds"), stream crossings, water diversions, modifications to riparian buffers (as required by other entities), or other encroachments not described in Table 1.

Table 2. Features disclosed but not included as projects and are not covered under this Agreement

ID	Latitude/Longitude	Description
Pond 1	40.03770021, -123.5874502	Existing pond described as off-stream. The applicant pumps the entire capacity of the pond into tanks and bladders.
Pond 2 and Map Point 5	40.03548303, -123.5841710	Existing pond described as off-stream with a hydrologically connected spillway. The spillway has eroded through the northern embankment and deposited sediment in the stream above the inlet of crossing-4. Notification describes a project to remove the existing spillway and install an 18" culvert to convey water under the road to its native drainage east of the road. This work was not included as a LSA project with a fee and is not part of the covered activities of this Agreement. Should the work be done as described, it appears that this would substantially affect the bank of a stream and may deliver warm, invasive species laden water to the stream. It appears that notification would be required to conduct the work as described. Alternatively, the applicant may elect to construct a biowswale that hydrologically disconnects the pond and delivers pond overflow to a stable upland location away from the stream.
Well 1	40.03739959, -123.5899215	Well of unknown depth and date of installation. Yields < 1-gpm and are not utilized as a source of irrigation water

Well 2	40.03294320, -123.5848992	Well of unknown depth and date of installation. Yields < 1-gpm and are not utilized as a source of irrigation water
Crossing-2	40.03594970, -123.5890869	Existing 36-inch diameter culvert crossing described as functional and appropriately sized. Notification describes rock armoring of the outlet will require 8 cubic yards of fill and 120 square feet of disturbance and may require the loss of native grasses, forbs and ferns. This work was not included as a LSA project with a fee and is not part of the covered activities of this Agreement. Notification is required to comply with Fish and Game Code 1602.
Map Point 7	40.03713415, -123.5899696	Cultivation spoils removal. It is unclear by the notification if the bed, bank or channel of a stream has been or will be impacted by this activity.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include **Chinook Salmon** (*Oncorhynchus tshawytscha*), **Coho Salmon** (*O. kisutch*), **Steelhead Trout** (*O. mykiss*), **Western Brook Lamprey** (*Lampetra richardsoni*), **Pacific Lamprey** (*Entosphenus tridentatus*), **Southern Torrent Salamander** (*Rhyacotriton variegatus*), **Pacific Giant Salamander** (*Dicamptodon tenebrosus*), **Foothill Yellow-legged Frog** (*Rana boylei*), **Coastal Tailed Frog** (*Ascaphus truei*), **Western Pond Turtle** (*Actinemys marmorata marmorata*), amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species.

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

Impacts to water quality:

increased water temperature;
reduced instream flow;
temporary increase in fine sediment transport;

Impacts to bed, channel, or bank and direct effects on fish, wildlife, and their habitat:

loss or decline of riparian habitat;
direct impacts on benthic organisms;

Impacts to natural flow and effects on habitat structure and process:

cumulative effect when other diversions on the same stream are considered;
diversion of flow from activity site;
direct and/or incidental take;
indirect impacts;
impediment of up- or down-stream migration;
water quality degradation; and
damage to aquatic habitat and function.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

The Permittee shall meet each administrative requirement described below.

- 1.1 Documentation at Project Site. The Permittee shall make the Agreement, any extensions and amendments to the 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. The Permittee shall provide copies of the Agreement and any extensions and amendments to the Agreement to all persons who will be working on the project at the project site on behalf of the Permittee, including but not limited to contractors, subcontractors, inspectors, and monitors.
- 1.3 Notification of Conflicting Provisions. The Permittee shall notify CDFW if the Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact the Permittee to resolve any conflict.
- 1.4 Project Site Entry. The Permittee agrees to allow CDFW employees access to the Project site for the purpose of inspecting and/or monitoring the activities covered by this Agreement, provided CDFW: a) provides 24 hours advance notice; and b) allows the Permittee or representatives to participate in the inspection and/or monitoring. This condition does not apply to CDFW law enforcement personnel.
- 1.5 Applicable Permits. Land development or alterations may be subject to additional federal, state and local laws, regulations, and permitting requirements, including but not limited to the following:
 - The Clean Water Act (CWA) as implemented through permits, enforcement orders, and self-implementing requirements. When needed per the requirements of the CWA, the Permittee shall obtain a CWA section 404 (33 U.S.C. § 1344) permit from the United States Army Corps of Engineers (Army Corps) and a CWA section 401 (33 U.S.C. § 1341) water quality certification from the State Water Board or the Regional Water Board with jurisdiction.
 - The California Water Code as implemented through applicable water quality control plans (often referred to as Basin Plans), waste discharge requirements (WDRs) or waivers of WDRs, enforcement orders, and self-implementing requirements issued by the State Water Resources Control

Board (State Water Board) or Regional Water Quality Control Boards (Regional Water Boards).

- If cannabis cultivation occurs on the project parcel, the State Water Resources Control Board (SWRCB) requires enrollment in the Cannabis Cultivation General Order and compliance with the Cannabis Cultivation Policy - Principles and Guidelines for Cannabis Cultivation, available at: https://www.waterboards.ca.gov/water_issues/programs/cannabis/cannabis_policy.html
- All applicable state, city, county, or local regulations, ordinances, or license requirements including, but not limited to those for grading, construction, and building.
- All applicable requirements of the California Department of Forestry and Fire Protection (CAL FIRE), including the Board of Forestry.

1.6 Water Rights. This agreement does not constitute a valid water right. All water diversion facilities that the Permittee owns, operates, or controls shall be operated and maintained in accordance with current law and applicable water rights. Water rights are administered by the State Water Resources Control Board as described here:

https://www.waterboards.ca.gov/waterrights/water_issues/programs/registrations/.

1.7 Change of Conditions and Need to Cease Operations. If conditions arise, or change, in such a manner as to be considered deleterious by CDFW to the stream or wildlife, operations shall cease until corrective measures approved by CDFW are taken. This includes new information becoming available that indicates bypass flows, diversion rates or other measures provided in this Agreement are not providing adequate protection to keep aquatic life downstream in good condition or to avoid "take" or "incidental take" of federal or State listed species.

1.8 Notification Materials. Permittee's Notification of Lake or Streambed Alteration, together with all maps, plans, photographs, drawings, and all other supporting documents submitted with the Notification and received on February 27, 2019 and revised on November 4, 2020, is hereby incorporated by reference into this Agreement. Permittee shall conduct project activities within the work areas, and using the protective measures, described in the Notification and supporting documents, unless such project activities, work areas or protective measures are modified by the provisions of this Agreement, in which case the activities shall be conducted as described in this Agreement.

2. Avoidance and Minimization Measures

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

Work Periods and Pre-project Notice

Work Period. All work, not including diversion of water, shall be confined to the period **June 15 through October 15** of each year. Work within the active channel of a stream shall be restricted to periods of **dry weather**. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease and all necessary erosion control measures shall be implemented prior to the onset of precipitation.

- 2.1 **CDFW Notification of Work Initiation and Completion.** The Permittee shall contact CDFW in writing within the 7-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW in writing no later than seven (7) days after the project is fully completed.

Notification of completion will include photographs of the completed work, erosion control measures, waste containment and disposal, and a summary of any CNDDDB submissions as required below.

- 2.2 **Work Period Modification.** If 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 by the CDFW representative who reviewed the project, or if unavailable, by emailing nicholas.simpson@wildlife.ca.gov. Requests shall be made in writing via email or letter. 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. The work period variance request should consider the effects of increased stream flows, rain delays, increased erosion control measures, limited access due to saturated soil conditions, and limited growth of erosion control grasses due to cool weather. 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 reserves the right to require additional measures to protect fish and wildlife resources as a condition for granting the variance. CDFW shall have ten (10) calendar days to review the proposed work period variance.

General Species Protection Measures

- 2.3 **No Equipment in Stream.** No heavy equipment shall be operated within the wetted channel when water is present and flowing. The Permittee shall notify CDFW if it determines that the use of equipment in the stream channel is required to complete a project.
- 2.4 **Fish and Aquatic Species.** If surface water is or becomes present during construction, the Permittee shall: a) have the Designated Biologist survey the site and adjacent area for fish, amphibians, and turtles three (3) days or less before

commencing project activities and b) if fish, amphibians, or turtles are detected, CDFW will be contacted and work shall not commence until authorized by a CDFW representative.

- 2.5 Maintain Passing of Fish Up and Down Stream. It is unlawful to construct or maintain in any stream any device or contrivance that prevents, impedes, or tends to prevent or impede, the passing of fish (as defined in FGC Section 45 "fish" means a wild fish, mollusk, crustacean, invertebrate, amphibian, or part, spawn, or ovum of any of those animals) up and down stream pursuant to FGC section 5901
- 2.6 Decontamination. The Permittee is responsible for ensuring all project personnel adhere to the latest version of the Northern Region California Department of Fish and Wildlife Aquatic Invasive Species Decontamination Protocol for all field gear and equipment that will be in contact with water. Heavy equipment and other motorized or mechanized equipment that comes in contact with water should generally follow watercraft decontamination protocols found in the AIS Decontamination Protocol.
<https://nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=92821&inline>
- 2.7 Staging and Storage. Staging and storage areas for equipment, materials, fuels, lubricants and solvents shall be located outside of the stream channel and banks. Stationary equipment such as motors, pumps, generators, compressors and welders, located adjacent to the stream, shall be positioned over drip-pans. Any equipment or vehicles driven and/or operated in proximity to the stream must be checked and maintained daily. Vehicles must be moved away from the stream prior to refueling and lubrication.
- 2.8 Allow Wildlife to Leave Unharmd. Permittee shall allow any wildlife encountered during the course of construction to leave the construction area unharmd. This Agreement does not allow for the trapping, capture, or relocation of any state or federally listed species.
- 2.9 Escape Ramp in Trench. At the end of each work day, Permittee shall place an escape ramp at each end of any open trench greater than 6-inches in depth and walls greater than 30 degrees 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.
- 2.10 Prohibition Against Use of Plastic Netting in Erosion Control Measures. Permittee shall not use temporary or permanent erosions control devices containing plastic netting, including photo- or bio-degradable plastic netting. Erosion control and landscaping specifications shall only allow only natural fiber for use in erosion control mats, blankets, and straw or fiber wattles.

- 2.11 Remove Temporary Flagging, Fencing, and Barriers. Permittee shall remove all temporary flagging, fencing, and/or barriers from the project site and vicinity of the stream upon completion of project activities.

Designated Biologist

- 2.12 Designated Biologist. At least thirty (30) days before initiating project activities requiring biological surveys, the Permittee shall submit to CDFW in writing the name, qualifications, business address, and contact information for a 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. In addition to these requirements, only Designated Biologists with a valid Scientific Collection Permit issued pursuant to FGC sections 1002 and 1002.5 will be approved and authorized to capture, handle, and relocate any species of fish and wildlife. The Designated Biologist shall be responsible for monitoring all project activities, avoidance measures, including any ground-disturbing activities in areas subject to this Agreement.
- 2.13 Designated Biologist Authority. To ensure compliance with the measures within this Agreement, the Designated Biologist shall have authority to immediately stop any activity that is not in compliance with this Agreement, and/or to order any reasonable measure to avoid the unauthorized take of Special Status Species. Neither the Designated Biologist nor CDFW shall be liable for any costs incurred in complying with the Measures within this Agreement, including cease-work orders issued by the CDFW.

Special Status Species Avoidance and Minimization

- 2.14 Prohibition on Take of Listed Species. This agreement does not authorize the take or incidental take of any State or Federal listed threatened or endangered listed species. State Listed or Fully Protected Species include any native plant species listed as rare under the Native Plant Protection Act (Fish & G. Code, § 1900 et seq.; Cal. Code Regs., tit. 14, § 670.2); any species that is listed or is a candidate for listing under the California Endangered Species Act (Fish & G. Code, § 2080 et seq.; Cal. Code Regs., tit. 14, §§ 670.2, 670.5); or any fully protected species (Fish & G. Code, §§ 3511, 4700, 5050, 5515). The Permittee is required, as prescribed in these laws, to consult with the appropriate agency prior to commencement of the project.
- 2.15 Avoidance of Nesting Birds. Permittee shall avoid nests occurring within and near the project site pursuant to the Migratory Bird Treaty Act of 1918 and Fish and Game Code section 3503. Vegetation maintenance/removal as necessary within the scope of the project shall be confined to the period commencing **August 16**

and ending February 28, of any year in which this Agreement is valid, provided the work area is outside of the actively flowing stream. Vegetation maintenance/removal may continue during precipitation events provided stream flows have not risen into work areas and sediment delivery will not result.

- 2.16 **Nesting Bird Survey Before Commencement.** If vegetation removal or other project-related improvements that could impact nesting birds are scheduled during the nesting season (typically **March 1 to August 15**), a focused survey for active bird nests shall be conducted by a Designated Biologist within seven (7) days prior to the beginning to project-related activities. Surveys shall begin prior to sunrise and continue until vegetation and nests have been sufficiently observed. The results of the survey shall be submitted to CDFW by email prior within three (3) business days of survey completion. Survey results shall include a description of the area surveyed, time and date of surveys, ambient conditions, species observed, active nests observed, evidence of breeding behaviors (e.g., courtship, carrying nesting material or food, etc), and a description of any outstanding conditions that may have impacted survey results (e.g. weather conditions, excess noise, predators present, etc.) If an active nest is found, the Permittee shall immediately consult with CDFW and the United States Fish & Wildlife Service (FWS) regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and the Fish & Game Code of California, section 3503. If a lapse in project-related work of seven (7) days or longer occurs, another focused survey and if required, consultation with CDFW and FWS, will be required before project work can be reinitiated.
- 2.17 **Special-Status Plants.** If Special-Status plants (State listed and CNPS 1B.1 and 1B.2) may occur on the project site, the Designated Biologist shall conduct annual, focused surveys on the Project site during the bloom periods and before the implementation of Project-related activities. If populations of any of these species are found:
- 2.17.1 Fencing shall be installed a minimum of 100 feet from the location of special-status plants, and no Project activity will be permitted in the area occupied by special-status plants or the 100-foot buffer area around these plants.
 - 2.17.2 If special-status plant populations are found on the Project site and it is not feasible to avoid them during Project-related activities, the Project applicant shall consult with CDFW to determine if the project may be covered under this Agreement. Separate notification pursuant to FGC 1602 may be required in some instances.

Dewatering and Sediment Control

- 2.18 **Dewatering and Sediment Control Plan.** If flowing water is present or reasonably anticipated, the Permittee shall submit for approval a detailed dewatering or sediment control plan to CDFW for review and approval. Dewatering and sediment

control structures may include the use of a sandbag coffer dam or a water bladder dam. Within 15 days of receiving the dewatering plan, CDFW will review the proposed dewatering method, to approve the Plan or provide the requirements for that approval. Dewatering shall be conducted under the guidance of the Designated Biologist who shall have stop work authority over dewatering activities. The Permittee may not commence the dewatering of the stream without the explicit approval from CDFW. At minimum, diversion/dewatering plans shall include the following species protections:

- 2.18.1 Screen According to Existing Standards. In order to prevent impingement, the inlets of the dewatering pump structure shall be fitted with fish screens meeting the "fry-size" criteria of CDFW and the National Marine Fisheries Service (NMFS) before water is pumped from within the coffer dams.
- 2.18.2 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.
- 2.18.3 Maintain Water Quality. Permittee shall divert flow in a manner that prevents turbidity, siltation, or pollution and provides flows to downstream reaches. Flows to downstream reaches shall be provided during all times that the natural flow would have supported aquatic life. Said flows shall be sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion.
- 2.18.4 Restore Normal Flows. Permittee shall restore normal flows to the effected stream immediately upon completion of work at that location.

Vegetation Management

- 2.19 Riparian Buffers. Riparian buffers shall be not be modified, unless authorized by CDFW in writing.
- 2.20 Minimum Vegetation Removal. No native riparian vegetation shall be removed from the bank of the stream, except where authorized by CDFW. Permittee shall limit the disturbance or removal of native vegetation to the minimum necessary to achieve design guidelines and standards for the Authorized Activity. Permittee shall take precautions to avoid damage to vegetation outside the work area.
- 2.21 Vegetation Maintenance. Permittee shall limit vegetation management (e.g., trimming, pruning, or limbing) and removal for the purpose of Authorized Activity to the use of hand tools. Vegetation management shall not include treatment with herbicides.
- 2.22 Invasive Plant Species. Permittee shall not plant, seed or otherwise introduce invasive plant species within the Project area. Invasive plant species include those

identified in the California Invasive Plant Council's inventory database, which is accessible at: <https://www.cal-ipc.org/plants/inventory/>.

Water Diversion

- 2.23 Maximum Diversion Rate. The maximum instantaneous diversion rate from the water intake shall not exceed **three (3) gallons per minute (gpm)** at any time.
- 2.24 Bypass Flow. The Permittee shall pass **80% of the flow** at all times to keep all aquatic species including fish and other aquatic life in good condition below the POD.
- 2.25 Agricultural Use Forbearance Period. The applicant shall forbear agricultural related diversions from **April 1st through October 31**.
- 2.26 Seasonal Diversion Minimization. No more than **150 gallons in any one day** shall be diverted (intended for household domestic use) cumulatively from POD-1 and POD-2 during the low flow season from **May 15 to October 31** of each year. Water shall be diverted only if the Permittee can adhere to the maximum diversion rate and bypass flow conditions of this Agreement.
- 2.27 Measurement of Diverted Flow. Permittee shall install and maintain an adequate measuring device for measuring the instantaneous and cumulative rate of diversion. This measurement shall begin as soon as this Agreement is signed by the Permittee. The device shall be installed within the flow of diverted water. The Permittee shall maintain records of diversion, and provide information including, but not limited to the following:
- 2.27.1 A log including the date, time and quantity of water diverted from the POD.
- 2.27.2 The amount of water used per day for cannabis cultivation separated out from the amount of water used for other irrigation purposes and other uses of water (e.g., domestic use or fire protection).
- 2.27.3 Permittee shall make available for review at the request of CDFW the diversion records required by the SWRCB Cannabis Cultivation Policy.

Water Diversion Infrastructure

- 2.28 Intake Structure. No polluting materials (e.g., particle board, plastic sheeting, bentonite) shall be used to construct or screen, or cover the diversion intake structure.
- 2.29 Intake Structure Placement. Infrastructure installed in the streambed (e.g. spring box) shall not exceed 10% of the active channel width and shall not be located in

the deepest portion of the channel. The depth of the intake shall be no greater than one foot (12 inches) below the streambed.

2.30 Intake Screening. The Permittee shall regularly inspect, clean, and maintain screens in good condition.

2.30.1 The water intake screens shall be securely attached (e.g., threaded or clamped) to the intake line and have a minimum wetted area of 0.25 square feet.

2.30.2 A water intake screen with round openings shall not exceed 3/32-inch diameter; a screen with square openings shall not exceed 3/32-inch measured diagonally; and a screen with slotted openings shall not exceed 0.069 inches in width. Slots must be evenly distributed on the screen area.

2.30.3 The water intake screen may be constructed of any rigid material, perforated, woven, or slotted and should have a minimum of 27% open area. Stainless steel or other corrosion-resistant material is recommended to reduce clogging due to corrosion. Care should be taken not to use materials deemed deleterious to aquatic species.

2.30.4 The screen shall be designed to distribute the flow uniformly over the entire screen area.

2.31 Intake Shall Not Impede Aquatic Species Passage. The water diversion structures shall be designed, constructed, and maintained such that they do not constitute a barrier to upstream or downstream movement of aquatic life.

2.32 Intake Maintenance. Intakes shall be kept in good repair. Intakes shall be inspected periodically and kept clean and free of accumulated algae, leaves or other debris, which could block portions of the screen surface and increase approach velocities at any point on the screen. No part of screen surfaces shall be obstructed.

2.33 Exclusionary Devices. Permittee shall keep the diversion-related structures covered at all times to prevent the entrance and entrapment of amphibians and other wildlife.

2.34 Diversion Intake Removal. Permittee shall plug, cap, block (e.g., with a shut-off valve located near the source), or remove all intakes when no water diversion is planned for a period of one week or longer.

2.35 Heavy Equipment Use. No heavy equipment shall be used in the excavation or replacement of the existing water diversion structure. The Permittee shall use hand tools or other low impact methods of removal/replacement. All project

materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

Diversion to Storage

- 2.36 Water Storage. All water storage facilities (WSFs) (e.g., reservoirs, storage tanks, mix tanks, and bladders tanks) shall be located outside the active 100-year floodplain and outside the top of bank of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent potential entry by wildlife. Permittee shall cease all water diversion at the POD when WSFs are filled to capacity.
- 2.37 Water Storage Maintenance. WSFs shall have a float valve to shut off the diversion when tanks are full to prevent overflow. Water shall not leak, overflow, or overtop WSFs at any time. Permittee shall regularly inspect all WSFs and infrastructure used to divert water to storage and use and repair any leaks.
- 2.38 Water Conservation. The Permittee shall make best efforts to minimize water use, and to follow best practices for water conservation and management.
- 2.39 Limitations on Impoundment and Use of Diverted Water. The Permittee shall impound and use water in accordance with a valid water right, including any limitations on when water may be impounded and used, the purpose for which it may be impounded and used, and the location(s) where water may be impounded and used.

Stream Crossings

- 2.40 Road Approaches. The Permittee shall treat road approaches to new or re-constructed permanent crossings to minimize erosion and sediment delivery to the watercourse. Permittee shall ensure road approaches are hydrologically disconnected to the maximum extent feasible to prevent sediment from entering the crossing site, including when a Stream Crossing is being constructed or reconstructed. Road approaches shall be armored from the crossing for a minimum of *50 feet in both directions*, or to the nearest effective water bar or point where road drainage does not drain to the crossing, with durable, clean, screened, angular rock.
- 2.41 Excavated Fill. Excavated fill material shall be placed in upland locations where it cannot deliver to a watercourse. To minimize the potential for material to enter the watercourse during the winter period, all excavated and relocated fill material shall be tractor contoured (to drain water) and tractor compacted to effectively incorporate and stabilize loose material into existing road and/or landing features.
- 2.42 Runoff from Steep Areas. The Permittee shall make preparations 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 shall be placed and maintained until the threat of erosion ceases. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.

- 2.43 No Equipment in Wetted Areas. No heavy equipment shall enter the wetted stream channel.
- 2.44 Fill Materials. No fill material, other than clean rock, shall be placed in the stream channel.
- 2.45 Material Sizing. Rock shall be sized to withstand washout from high stream flows and extend above the ordinary high-water level.
- 2.46 Crossing Maintenance. The Permittee shall provide site maintenance for the life of the structures, including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable. Permanent culverts shall be maintained and kept open year-round. The Permittee is responsible for such maintenance as long as the culvert remains in the stream.
- 2.47 Armoring. The placement of armoring shall be confined to the work period when the stream is dry or at its lowest flow.
- 2.48 Armoring Placement. Rock armoring shall not constrict the natural stream channel width and shall be keyed into a footing trench with a depth sufficient to prevent instability.

Culvert Installation

- 2.49 Permanent Culvert Sizing. Permanent culverts shall be sized to accommodate the estimated 100-year flood flow [i.e. ≥ 1.0 times the width of the bankfull channel width or the 100-year flood size, whichever is greater], including debris, culvert embedding, and sediment loads.
- 2.50 Critical Dips. Where diversion potential exists, a critical dip shall be installed to direct flood flow over the crossing fill and back into the channel. Critical dips shall be constructed to accommodate the entire estimated 100-year flood flow and may be installed by lowering the existing fill over the crossing or by constructing a deep, broad rolling dip over the crossing surface to prevent flood flow from diverting down the road.
- 2.51 Culvert Materials in High Fire Zones. If the project is located in a high to very high Fire Hazard Severity Zone as designated by CAL FIRE, CDFW recommends culvert materials consist of corrugated metal pipe. Use of High-Density Polyethylene pipe is discouraged. <https://osfm.fire.ca.gov/divisions/wildfire-prevention-planning-engineering/wildland-hazards-building-codes/fire-hazard-severity-zones-maps/>

- 2.52 Fill Material. Existing fill material in the crossing shall be excavated down vertically to the approximate original channel and outwards horizontally to the approximate crossing hinge points (transition between naturally occurring soil and remnant temporary crossing fill material) to remove any potential unstable debris and voids in the older fill prism.
- 2.53 Culvert Grade. Culvert shall be installed to grade (not perched or suspended), aligned with the natural stream channel, and extend lengthwise completely beyond the toe of fill. If culvert cannot be set to grade, it shall be oriented in the lower third of the fill face, and a downspout or energy dissipator (such as boulders, rip-rap, or rocks) shall be installed above or below the outfall as needed to effectively control stream bed, channel, or bank erosion (scouring, headcutting, or downcutting). The Permittee shall ensure basins are not constructed and channels are not be widened at culvert inlets.
- 2.54 Culvert Bed. Culvert bed shall be composed of either compacted rock-free soil or crushed gravel. Bedding beneath the culvert shall provide for even distribution of the load over the length of the pipe, and allow for natural settling and compaction to help the pipe settle into a straight profile. The crossing backfill materials shall be free of rocks, limbs, or other debris that could allow water to seep around the pipe, and shall be compacted. No geotextile fabric shall be placed in the culvert bed, streambed, bank or channel.
- 2.55 Culvert Armoring. Culvert inlet, outlet (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.

Stream Realignment

- 2.1 When stream crossings and fills are removed, all fill shall be excavated down to the original stream channel and outwards, horizontally, as wide as or wider than the natural channel to form a channel as close as feasible to the natural stream grade and alignment. The restored stream bank slopes shall be no steeper than a 2:1 slope (horizontal: vertical) or natural slope. Restored slopes shall be stabilized to prevent slumping and to minimize soil erosion that could lead to sediment deposition into Waters of the State.

Erosion and Sediment Control

- 2.2 Erosion Control. Erosion control measures shall be utilized throughout all phases of operation where sediment runoff from exposed slopes threatens to enter waters of the State. Erosion control measures, such as, silt fences, straw hay bales, gravel or rock lined ditches, water check bars, and broadcasted straw shall be used where ever sediment has the potential to leave the work site and enter the stream.

- 2.3 Silt Laden Runoff. At no time shall silt laden runoff be allowed to enter the stream or directed to where it may enter the stream. Silt control structures shall be monitored for effectiveness and shall be repaired or replaced as needed.
- 2.4 Disposal and Removal of Material. All removed spoils and construction debris shall be moved outside the work area prior to inundation by water. Spoil sites shall not be located within the stream channel or areas that may be subjected to stream flows, where spoil may be washed back into a stream, or where it may impact streambed habitat, aquatic or riparian vegetation. All removed material shall be disposed of according to State and local laws and ordinances.

Equipment and Vehicles

- 2.5 Operating Equipment and Vehicle Leaks. Any equipment or vehicles driven and/or operated within or adjacent to the stream shall be checked and maintained daily to prevent leaks of materials that could be deleterious to aquatic and terrestrial life or riparian habitat.
- 2.6 Stationary Equipment Leaks. Stationary equipment such as motors, pumps, generators, and welders, located within or adjacent to the stream shall be positioned over drip pans. Stationary heavy equipment shall have suitable containment to handle a catastrophic spill/leak.
- 2.7 Equipment Storage. Staging and storage areas for equipment, materials, fuels, lubricants and solvents, shall be located outside of the stream channel and banks.
- 2.8 Stockpiled Materials. Building materials and/or construction equipment shall not be stockpiled or stored where they may be washed into the water or cover aquatic or riparian vegetation. Stockpiles shall be covered when half inch (0.5") or more precipitation within a 48-hour or greater period and/or when a rain event with 30 percent or greater probability of precipitation is forecasted. Permittee shall monitor the National Weather Service (NWS) 72-hour forecast for the project area.

Debris Materials and Waste

- 2.9 Waste Containment and Disposal. Permittee shall contain all refuse in enclosed, wildlife proof, storage containers, at all times, and relocate refuse to an authorized waste management facility, in compliance with State and local laws, on a regular and ongoing basis. All refuse shall be removed from the site and properly disposed of, at the close of the cultivation season and/or when the parcel is no longer in use.
- 2.10 No Dumping. Permittee and all contractors, subcontractors, and employees shall not dump any litter or construction debris within the stream, or where it may pass into the stream.

- 2.11 Pick Up Debris. Permittee shall pick up all debris and waste daily.
- 2.12 Wash Water. Water containing mud, silt, or other pollutants from equipment washing or other activities, shall not be allowed to enter a lake or flowing stream or placed in locations that may be subjected to high storm flows.

Toxic and Hazardous Materials

- 2.13 Toxic Materials. Any hazardous or toxic materials that could be deleterious to aquatic life that could be washed into the stream or its tributaries shall be contained in water tight containers or removed from the project site.
- 2.14 Hazardous Substances. Permittee shall ensure that debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement and concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to any life stage of fish and wildlife or their habitat (includes food sources) does not enter the riparian setback or waters of the state, pursuant to FGC Section 5650. Permittee shall immediately remove any of these materials placed within, or where they may enter, a stream or lake or other waters of the state.
- 2.15 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 shall be prevented from contaminating the soil and/or entering the waters of the State.

Spills and Emergencies

- 2.16 Spill Clean Up Equipment. Clean up equipment such as extra boom, absorbent pads, skimmers, shall be on site prior to the start of work within the stream zone.
- 2.17 Spill Cleanup. Permittee shall begin the cleanup of all spills immediately. CDFW shall be notified immediately by the Permittee of any spills and shall be consulted regarding cleanup procedures. The Permittee shall have all spill clean-up equipment on site during construction.
- 2.18 Spill Containment. All activities performed in or near a stream shall have absorbent materials designated for spill containment and clean-up activities on-site for use in an accidental spill. The Permittee shall immediately notify the California Emergency Management Agency at 1-800-852-7550 and immediately initiate the clean-up activities. CDFW shall be notified by the Permittee and consulted regarding clean-up procedures.

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

- 3.1 CDFW Notification of Work Initiation. The Permittee shall contact CDFW within the seven-day period **preceding the beginning of work** permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date.
- 3.2 Work Completion. The proposed work shall be completed by no later than **October 15, 2021. Notification of completion will include photographs of the completed work, erosion control measures, waste containment and disposal, and a summary of any CNDDDB submissions** and shall be submitted to CDFW, LSA program at 619 Second Street, Eureka, CA 95501 **within seven (7) days** of project completion.
- 3.3 Measurement of Diverted Flow. Copies of the **Water Diversion Records** shall be submitted to CDFW, LSA Program at 619 Second Street, Eureka, CA 95501 no later than **March 31** of each year beginning in **2021**, to report the preceding year's diversion.
- 3.4 Notification to the California Natural Diversity Database. If any special status species are observed at any time during the project, the Designated Biologist shall submit California Natural Diversity Data Base (CNDDDB) forms to the CNDDDB within five (5) working days of the sightings. A summary of CNDDDB submissions shall be included with the completion notification. Forms and instructions for submissions to the CNDDDB may be found at:
<https://www.wildlife.ca.gov/Data/CNDDDB/Submitting-Data>.

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:

Bridget Carlson
1271 Evergreen St #2 Box 110
Redway, California 95560

To Contact:

Chris Carroll
165 South Fortuna Blvd
Fortuna, California 95540
707-725-1897
carroll@timberlandresource.com

To CDFW:

Department of Fish and Wildlife
Northern Region
619 Second Street
Eureka, California 95501
Attn: Lake and Streambed Alteration Program
Notification #1600-2019-0135-R1

LIABILITY

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

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

SUSPENSION AND REVOCATION

CDFW may suspend or revoke in its entirety this Agreement if it determines that the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, is not in compliance with the Agreement.

Before CDFW suspends or revokes the Agreement, it shall provide the 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 the Permittee an opportunity to correct any deficiency before CDFW suspends or revokes the Agreement, and include instructions to the 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 the Agreement precludes CDFW from pursuing an enforcement action against the Permittee instead of, or in addition to, suspending or revoking the Agreement.

Nothing in the 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, or 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 FGC including, but not limited to, FGC 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 the Agreement authorizes the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, to trespass.

AMENDMENT

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

The Permittee may amend the Agreement at any time during its term, provided the amendment is mutually agreed to in writing by CDFW and the Permittee. To request an amendment, the 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 the Agreement to another entity shall not be valid or effective, unless the transfer or assignment is requested by the Permittee in writing, as specified below, and thereafter CDFW approves the transfer or assignment in writing.

The transfer or assignment of the Agreement to another entity shall constitute a minor amendment, and therefore to request a transfer or assignment, the 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 FGC section 1605, subdivision (b), Permittee may request one extension of the Agreement, provided the request is made prior to the expiration of the 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 FGC section 1605, subdivisions (b) through (e).

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

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after the Permittee signature; 2) after CDFW complies with all applicable requirements under CEQA; and 3) after payment of the applicable FGC section 711.4 filing fee listed at

<https://www.wildlife.ca.gov/Conservation/CEQA/Fees>.

TERM

This Agreement shall **expire five (5) years** from date of execution, unless it is terminated or extended before then. All provisions in the Agreement shall remain in force throughout its term. The Permittee shall remain responsible for implementing any provisions specified herein to protect fish and wildlife resources after the Agreement expires or is terminated, as FGC section 1605, subdivision (a)(2) requires.

AUTHORITY

If the person signing the 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.

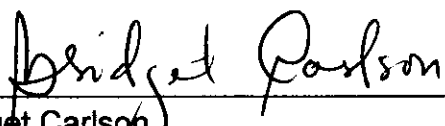
AUTHORIZATION

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

CONCURRENCE

The undersigned accepts and agrees to comply with all provisions contained herein.

FOR BRIDGET CARLSON



Bridget Carlson

1/20/21

Date

FOR DEPARTMENT OF FISH AND WILDLIFE

Cheri Sanville
Senior Environmental Scientist Supervisor

Date