CALIFORNIA DEPARTMENT OF FISH AND WILDLIFE
REGION 1 – NORTHERN REGION
619 2nd Street
Eureka, CA 95501

LAKE OR STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2019-0851-R1
Unnamed Tributaries to Chamise Creek, Tributary to the Eel River and the Pacific Ocean

Mark Finley
Finley Cal Fin Organics Water Diversion, Ponds, and Stream Crossings Project
26 Encroachments

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

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on October 24, 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 is located within the Eel River watershed, approximately 5.5 miles Southeast of the town of Harris, County of Humboldt, State of California; Assessor's Parcel Numbers 218-081-001, 218-081-002, 218-081-006, 218-091-005, and 218-051-008; latitude 40.0331 N and longitude -123.6027 W at the first point of diversion.

PROJECT DESCRIPTION

The project is limited to Twenty-six encroachments. Six encroachments are for water diversion from unnamed tributaries and springs to Chamise Creek. Water is diverted for irrigation from six separate springs. Work for the six water diversions will include use and maintenance of the water diversion infrastructure. Work for Ponds 5 & 7 will include

stream restoration. Work for Ponds 4 and 6 will either include modifications of the pond bottom, embankment, outlets, and spillways or decommissioning. The 16 other proposed encroachments are to upgrade, maintain, or decommission failing and undersized stream crossings. Work for these encroachments will include excavation, removal of the existing culverts, replacement with new properly sized crossings, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion. A CDFW site inspection occurred on January 21, 2020, and January 28, 2022.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
POD-1	40.0336, -123.6027	Water diversion/facility retrofit from a spring. No more than 5 gallons per minute cumulatively for PODs 1 and 5 and in accordance with measures 2.8, 2.9, & 2.10.
POD-2	40.0343, -123.5996	Water diversion/facility retrofit from a spring
POD-4	40.0371, -123.5979	Water diversion/facility retrofit from a spring
POD-5	40.0328, -123.6025	Water diversion/facility retrofit from a spring. No more than 5 gallons per minute cumulatively for PODs 1 and 5 and in accordance with measures 2.8, 2.9, & 2.10.
POD-6	40.0309, -123.6022	Water diversion/facility retrofit from a spring
POD-7	40.0385, -123.5946	Water diversion/facility retrofit from a spring
Pond 4	40.0364, -123.5965	Existing pond showing signs of instability. CDFW requests a Geologic Stability Analysis and an Engineers recommendation to stabilize the pond as needed or decommission pond.
Pond-5 Stream Restoration	40.0332, -123.6032	Render the pond incapable of storing water according to stream restoration measures 2.2 and 2.3. Provide a Stream Restoration Plan 90 days prior to implementation for CDFW review and approval.
Pond-6	40.0316, -123.6001	Existing pond showing signs of instability. CDFW requests a Geologic Stability Analysis and an Engineers recommendation to stabilize the pond as needed or decommission pond.
Pond 7 Decommissioned	40.0292, -123.6037	Remove debris from in slope swale to maintain adequate drainage along the flat. CE recommends grading to drain to prevent minor ponding and flow diversion toward river right abutment.
SC-1	40.0284, -123.6012	Existing 24” CMP will be replaced with a minimum 32” culvert.
SC-2	40.0293, -123.6021	Existing 36” CMP will be maintained.
SC-3	40.0296, -123.6007	Existing armored crossing on a seasonal road. Install a rocked ford.
SC-4	40.0295, -123.6022	Existing 30” CMP. Install a minimum 42” culvert.
SC-5	40.0301, -123.6019	Maintenance and upkeep of existing 24” culvert crossing.
SC-6	40.0312, -123.6019	Maintenance and upkeep of existing 24” culvert crossing.
SC-7	40.0315, -123.6018	Maintenance and upkeep of existing 24”culvert crossing.

SC-8	**40.0321, -123.6015**	**Maintenance and upkeep of existing 24" culvert crossing.**
SC-9	**40.0328, -123.6006**	**Maintenance and upkeep of existing 24" culvert crossing. Remove existing trash rack.**
SC-10	**40.0334, -123.6006**	**Maintenance and upkeep of existing 24" culvert crossing.**
SC-11	**40.0338, -123.6002**	**Maintenance and upkeep of existing 36" culvert crossing.**
SC-12	**40.0350, -123.5991**	**Maintenance and upkeep of existing 24" culvert crossing.**
SC-13	**40.0359, -123.5981**	**Maintenance and upkeep of existing 24" culvert crossing.**
SC-14	**40.0319, -123.6007**	**Maintenance and upkeep of existing 24" culvert crossing.**
SC-16	**400309, -123.6020**	**No formal conveyance structure. Install a seasonal rocked ford.**

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include Southern Torrent Salamander (*Rhyacotriton variegatus*), Coastal Giant Salamander *(Dicamptodon tenebrosus)*, Foothill Yellow-legged Frog *(Rana boylii),* Coastal Tailed Frog (*Ascaphus truei*), Northwest Pond Turtle (*Actinemys 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; and
- 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; and
- 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 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 that bypass flows and diversion rates 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.

1.4 Adherence to Existing Authorizations. 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.

1.5 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.

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

1.7 CDFW Notification of Work Initiation and Completion. 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. Subsequently, the Permittee shall notify CDFW no later than seven (7) days after the project is fully completed.

1.8 Agreement Compliance. The proposed work shall comply with all measures included in this Agreement. **Failure to comply with these measures may result in suspension or revocation of 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.

2.1 Permitted Project Activities. Except where otherwise stipulated in this Agreement, all work shall be in accordance with the Permittee Notification received on October 24, 2019, with revisions received on September 15, 2020, and December 1, 2021, together with all maps, BMP's, photographs, drawings, and other supporting documents submitted with the Notification.

2.2 Incidental Take. This Agreement does not allow for the "take," or "incidental take" of any federal or State listed threatened or endangered listed species.

Project Timing

2.3 Work Period. All of work, not including authorized diversion of water, shall be confined to the period **June 1 through October 31** 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.

2.4 Work Completion. The proposed work **shall be completed by prior to the expiration of this Agreement's term**. A notice of completed work, including photographs of each site, shall be submitted to CDFW within seven (7) days of project completion.

2.5 Extension of the Work Period. If weather conditions permit, and the Permittee wishes to extend the work period before June 1 or after October 31, a written request shall be made to CDFW at least five (5) working days before the proposed work period variance. Written approval (letter or e-mail) for the proposed time extension must be received from CDFW prior to activities beginning before June 1 or continuing past October 31.

2.6 Avoidance of Nesting Birds. Fish and Game Code sections 3503 and 3503.5 prohibits the taking or destroying of native bird's nests or eggs. Vegetation maintenance or removal (e.g., clearing and grubbing) shall occur between September 1 and March 15. Removal areas should be managed once cleared to reduce nesting potential during the breeding season.

Vegetation Management

2.7 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.

Water Diversion

Cannabis Irrigation

2.8 Maximum Diversion Rate. The maximum instantaneous diversion rate from the water intake shall not exceed **five (5) gallons per minute** (gpm) at any time. **No more than 5 gallons per minute cumulatively for PODs 1 and 5 and in accordance with measures 2.8, 2.9, & 2.10.**

2.9 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 point of diversion.

2.10 Seasonal Diversion Forbearance – Cannabis Irrigation. No water shall be diverted during the low flow season from **April 1 to November 15** of each year.

2.11 Measurement of Diverted Flow. Permittee shall install and maintain an adequate measuring device (i.e., flow totalizer) 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 in-line flow of diverted water. The Permittee shall maintain records of diversion, and provide information including, but not limited to the following:

2.11.1 The date diversion occurred.

2.11.2 The amount of water used per week 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).

2.11.3 At CDFW's request, Permittee shall make available for review any diversion records required by the State Water Resources Control Board Cannabis Cultivation Policy.

2.12 Water Management Plan. The Permittee shall submit a Water Management Plan no later than **sixty days** from the time this Agreement is made final that describes how compliance will be achieved under this Agreement. The Water Management Plan shall include details on location of water lines and connectivity to water storage, location of water storage facilities, water conservation, or other relevant

material to maintain water needs in coordination with seasonal diversion minimization and/or forbearance and bypass flow requirements. The Water Management Plan shall include a brief narrative describing water use on the property, including measurement of water use and photographs of the water flow totalizer at the beginning and end of each season, photographs to support the narrative, and water use calculations to ensure compliance with this Agreement.

Water Diversion Facility

2.13 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.

2.14 Intake Structure Placement. Infrastructure installed in the streambed (e.g., cistern or spring box) shall not exceed 20 percent 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 six inches below the streambed. The diversion shall be located no less than 25 feet from the spring head (i.e., emergence of surface water).

Non-fish Bearing Streams

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

2.15.1 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.

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

2.16 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.

2.17 Exclusionary Devices. Permittee shall keep the diversion structures (e.g., cistern) covered at all times to prevent the entrance and entrapment of amphibians and other wildlife.

2.18 Seasonal Diversion Disconnection – Cannabis Irrigation. Permittee shall disconnect all water lines from the point of diversion (e.g., cistern, spring box, etc.) and water storage facilities at the end of each diversion season. All water lines shall be removed from the active channel.

2.19 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

2.20 Water Storage. All water storage facilities (WSF; e.g., reservoirs, storage tanks, and bladders tanks) should be located outside bed, bank, or channel of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent entry by wildlife. Permittee shall cease all water diversion at the point of diversion when WSFs are filled to capacity.

2.21 Storage Maintenance. Water storage facilities 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 water storage facilities and infrastructure used to divert water to storage and repair any leaks.

2.22 Reservoirs/Ponds. Shall be appropriately designed, sized, and managed to contain any diverted water in addition to precipitation and storm water runoff, without overtopping.

2.23 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.

2.24 Water Conservation. The Permittee shall make best efforts to minimize water use, and to follow best practices for water conservation and management.

2.25 State Water Code. This Agreement does not constitute a valid water right. The Permittee shall comply with State Water Code sections 5100 and 1200 et seq. as appropriate for the water diversion and water storage.

Reservoirs

2.26 No Stocking. Stocking of fish, wildlife, or plant of any kind, in any stream, lake or wetland (i.e., Waters of the State), shall be prohibited without written permission from CDFW pursuant to section 6400 of the FGC.

2.27 Invasive Species Management for Reservoirs. Permittee shall implement an Invasive Species Management Plan (ISMP) prepared by a qualified Biologist for any existing or proposed reservoir. The plan shall include, at a minimum, annual

seasonally appropriate surveys of invasive aquatic species (i.e., baseline surveys), focused on American bullfrog (*Lithobates catesbeianus*) and Centrarchid fish. The baseline surveys will form the basis to measure success of the ISMP. The qualified Biologist shall coordinate with CDFW to develop eradication measures appropriate for the identified invasive aquatic species based on site specific conditions. An annual monitoring report shall be prepared and submitted to CDFW.

2.27.1 Bullfrog Management Plan. If American bullfrogs are observed, they shall be appropriately controlled, with the goal of population eradication, including but not limited to, annual multi-effort direct removal of all life stages, using various techniques (e.g., air rifle, gigging, trapping, seining, and draining of reservoirs) to break reproduction. The bullfrog management plan must be site specific, and the goal shall be eradication of the population. If at any time additional invasive aquatic species are detected, Permittee shall submit an updated ISMP for Reservoirs to CDFW for review and approval.

2.28 Off-Stream Reservoirs. Should be appropriately designed, sized, and managed to contain any diverted water in addition to precipitation and storm water runoff, without overtopping. The Permittee should install an overflow spillway that will withstand a 100-year flood event, designed with a dispersal mechanism, or low-impact design, that discourages channelization and promotes dispersal and infiltration of flows to prevent surface overflow from reaching any stream, lake or wetland (i.e., Waters of the State). The spillway should be designed and placed to allow for a minimum of two feet of freeboard.

2.29 Seasonal Diversion Minimization. To minimize adverse impacts to native pond breeding amphibians (when present) the following diversion minimizations apply: from November 1 to March 31, the Permittee shall divert water at a rate no greater than the rate of water flowing into the pond (i.e., water diversion shall not decrease the pond depth). From April 1 – September 1, when native larval amphibians are present, the Permittee shall cease diverting water once the pond volume is one third of the maximum pond volume. To comply with this measure; the Permittee shall establish a fixed visual marker(s) (e.g., stage plate) in the pond as a reference for water level thresholds.

2.30 Wildlife Entrapment Prevention. The Permittee shall install several exit ramps to prevent wildlife entrapment, or document existing exit ramps **within one (1) year** from the date this Agreement is executed. Exit ramps shall be installed at no greater than 2:1 slope, securely fixed at the upslope end, made of solid material (e.g., compacted earth or wood). A notice of completed work, with supplemental pictures, shall be submitted to CDFW with the Project Inspection Report.

Stream Crossings

2.31 Stream Protection. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other deleterious material from project activities shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

2.32 Equipment Maintenance. Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants, or hydraulic fluids shall not take place within stream bed, channel, and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment shall not be stored within stream bed, channel, and bank.

2.33 Hazardous Spills. If at any time any material which could be hazardous or toxic to aquatic life enters a stream, the Permittee shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550, and immediately initiate clean-up activities. Permittee shall notify CDFW at 707-445-6493 and consulted regarding clean-up procedures as soon as practicable, but no later than 24 hours after the spill.

2.34 Prohibition of Live Stream Work. No work is authorized in a live flowing stream. All work shall be conducted when the stream is dry. Permittee shall notify CDFW if it determines that work in a live flowing stream is required to complete a project and will submit a dewatering plan.

2.35 Dewatering.

2.35.1 Stream Diversion. Only when work in a flowing stream is unavoidable (e.g., perennial streams), prior to the start of construction, Permittee shall isolate the work area from the flowing stream. To isolate the work area, water-tight cofferdams shall be constructed upstream and downstream of the work area, and water diverted through a suitably sized pipe. Water shall be diverted from upstream of the upstream cofferdam, and discharge downstream of the downstream cofferdam. Cofferdams and the stream diversion system shall remain in place and functional throughout the construction period. Cofferdams or stream diversions that fail for any reason shall be repaired immediately.

2.35.2 Maintain Aquatic Life. When any cofferdam 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 obstruction pursuant to Fish and Game Code §5937.

2.35.3 Stranded Aquatic Life. The Permittee shall check daily for stranded aquatic

life as the water level in the dewatering area drops. All reasonable efforts shall be made to capture and move all stranded aquatic life observed in the dewatered areas. Capture methods may include hand nets, dip nets, buckets, and/or by hand. Captured aquatic life shall be released immediately in the closest suitable aquatic habitat adjacent to the work site. Permittee shall submit detailed information regarding species that were stranded and relocated with the Project Inspection Report.

2.35.4 Minimize Turbidity and Siltation. Permittee shall use only clean (washed), non-erodible materials, such as rock or sandbags that do not contain soil or fine sediment, to construct any temporary stream flow bypass. Permittee shall divert stream flow around the work site in a manner that minimizes turbidity and siltation and does not result in erosion or scour downstream of the diversion.

2.35.5 Remove any Materials upon Completion. Permittee shall remove all materials used for the temporary stream flow bypass after the Authorized Activity is completed.

2.35.6 Restore Normal Flows. Permittee shall restore normal flows to the effected stream immediately upon completion of work at that location.

2.36 Excavated Fill. Excavated fill material shall be placed in a stable upland location where it cannot deliver to a stream or wetland. To minimize the potential for material to enter the watercourse during the winter period, all excavated and relocated fill material shall be contoured (to drain water) and compacted to effectively incorporate and stabilize loose material into existing road and/or landing features.

2.37 Runoff from Steep Areas. The Permittee shall ensure that runoff (concentrated flow) from steep, erodible surfaces will be slowed and 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 bars shall be placed on dirt roads, heavy equipment tracks, or other work trails to control erosion.

2.38 Culvert Installation.

2.38.1 If the project is located in a moderate to very high Fire Hazard Severity Zone as designated by CAL FIRE, culvert materials should consist of corrugated metal pipe (CMP). Use of High-Density Polyethylene (HDPE) pipe is not recommended.

2.38.2 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.

2.38.3 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 appropriately-sized energy dissipator (e.g., boulders, riprap, or rocks) shall be installed above or below the outfall as needed to effectively prevent stream bed, channel, or bank erosion (scouring, headcutting, or downcutting). The Permittee shall ensure basins are not constructed, and channels shall not be widened at culvert inlets.

2.38.4 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 culvert and allow for natural settling and compaction to help the culvert seat 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 culvert and shall be compacted.

2.38.5 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.

2.38.6 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.

2.39 Crossing Maintenace

2.39.1 The placement of armoring shall be confined to the work period when the stream is dry or at its lowest flow.

2.39.2 No heavy equipment shall enter the wetted stream channel.

2.39.3 No fill material, other than clean (washed) rock, shall be placed in the stream channel.

2.39.4 Rock shall be sized to withstand washout from high stream flows and extend above the ordinary high-water level.

2.39.5 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.

2.40 Road Approaches. The Permittee shall treat road approaches to new or re-constructed permanent stream crossings to minimize erosion and sediment delivery to the stream. Permittee shall ensure road approaches are hydrologically disconnected to the maximum extent feasible to prevent sediment from entering the stream crossing site, including when a stream crossing is being constructed or reconstructed. Road approaches shall be armored from the stream crossing to the nearest effective water bar or point where road drainage does not drain to the stream crossing, with durable rock.

2.41 Ford Crossing, Armored Fill and Vented Crossings.

2.41.1 Ford crossings, and armored and vented crossings, are considered permanent watercourse encroachments and shall accommodate the 100-year flood flow plus associated sediment and debris.

2.41.2 Hydrologically connected road approaches to ford crossings, and armored and vented crossings, shall be rocked and maintained to avoid delivery of fine sediment to the watercourse below.

2.41.3 Ford crossings, and armored and vented crossings, shall be maintained as necessary to avoid delivery of fine sediment to the watercourse below.

2.41.4 Ford crossings, and armored and vented crossings, shall be sufficiently out sloped to minimize aggradation of suspended sediments at the crossing.

2.41.5 The lowest point of ford crossings, and armored and vented crossings, shall be constructed within or directly over the original stream channel, to the extent feasible, in order to contain high flows up to twice bank-full and to avoid diversion potential.

2.41.6 Armor material shall be comprised of durable angular screened quarry rock of sufficient size and placement to minimize mobilization during a 100-year storm event.

2.41.7 If maximum fill heights exceed 15 feet or fills exceed 500 cubic yards of fill, rock sizing, armoring thickness, chute width and chute depth shall be calculated and sized using the nomograph provided in Figure 23 of Cafferata et al (2017).

2.41.8 Stream crossing spillway fill slopes shall be armored from the roadbed to the natural channel in a manner sufficient to prevent significant scour or removal of armor during high flows. Scour is expected through road surface rock cap.

Stream Restoration, Pond Assessment, and Pond Decommissioning

2.42 Stream Restoration Plan: Pond-5. The Permittee shall submit a Stream Restoration Plan for Pond 5 to CDFW prior to conducting remediation activities. The Stream Restoration Plan shall detail the dimensions and slopes of the stream channel to be remediated. The Stream Restoration Plan shall describe any material utilized to restore the channel to a natural condition. The Stream Restoration Plan shall include a revegetation plan for remediation of the impacted channel reach.

2.43 Revegetation Plan: Pond-5. The Permittee shall submit a revegetation plan for Pond-5 with the Stream Restoration Plan to CDFW for review and approval prior to implementation of riparian habitat restoration activities. The Revegetation Plan shall, at a minimum, include the following:

2.43.1 The identification of the area and vegetation types that will be restored.

2.43.2 A planting design and palette appropriate to the vegetation type, cover, stratum, and level of biodiversity (i.e., species richness and composition). Use of a reference site is recommended.

2.43.3 Use regionally appropriate native plants for a riparian vegetation type. The derivation of plant material such as containers, plugs, cuttings, divisions, or seeds from coastal areas of Humboldt, Del Norte, and Mendocino Counties within 30 miles of the coast. All native seed material shall be from the North Coast ecoregion (Humboldt, Mendocino, Sonoma, or Del Norte Counties), if practical. If quantities are not able to be satisfied from these collection sites, propagules may be obtained from other counties in Northern California with pending approval from a restoration ecologist or botanist.

2.43.4 Cuttings of willows, cottonwoods conducted when dormant. Collection of cuttings within an area dispersed to maintain genetic and sexual diversity, and to avoid adversely impact existing riparian vegetation. Cuttings hydrated between harvesting and planting (e.g., soak cuttings in water several days to a week to stimulate rooting prior to planting). Cuttings planted to depth of 75 percent of their length with buds pointing up and bottom of cutting in moist soil or water.

2.43.5 Planting conducted after the first seasonal rains have saturated soils beyond the first several inches (November/December) and before April.

2.43.6 Measurable success criteria based on plant survival, density, or cover.

2.43.7 Monitoring conducted for a minimum of five years to determine whether the revegetation goals and objectives have been met. Remedial measures if

revegetation goals and objectives are not met.

2.43.8 Annual status reports on the revegetation efforts shall be submitted to CDFW in the by **October 31 of each year** following initial planting for the length of the monitoring period.

2.44 Pond Stability Analysis: Pond-4 and Pond-6. Ponds 4 and 6 shall be inspected for stability including submission of a **Geologic Stability Report** and the engineering recommendations for any retrofits to stabilize or treat the ponds as needed. Submission of these reports shall occur prior to December 31, 2022.

2.45 Project Inspection. The Project shall be inspected by a California licensed engineer, or other qualified professional with appropriate license or qualifications, to ensure the stream crossings were constructed, ponds decommissioned, and crossings were implemented as designed. A copy of the **Project Inspection Report**, including photographs of each site, shall be submitted to CDFW within 90 days of completion of this project.

Erosion Control and Pollution

2.46 Erosion Control. Permittee shall use erosion control measures throughout all work phases where sediment runoff could enter a stream, lake, or wetland (i.e., Waters of the State).

2.47 Seed and Mulch. Upon completion of construction operations and/or the onset of wet weather, Permittee shall stabilize exposed soil areas within the work area by applying mulch and seed. Permittee shall utilize vegetative (e.g., seeding) or other non-vegetative methods such as jute mat, coir mat, wood chip mat, straw mat or wattle, straw mulch, native duff (leaves, needles, fine twigs, etc.), or lopped native slash to protect and stabilize soils. Straw mulching shall utilize at least 2 to 4 inches of clean straw (such as rice, barley, wheat) or weed-free straw. Seeding shall use regional native seed or non-native seed that is known not to persist or spread [e.g., barley (*Hordeum vulgare*), or wheat (*Triticum aestivum*)]. No known invasive grass seed such as annual or perennial ryegrass (*Lolium multiflorum or L. perenne*, which are now referred to as *Festuca perennis*), shall be used.

2.48 Erosion and Sediment Barriers. Permittee shall monitor and maintain all erosion and sediment barriers in good operating condition throughout the work period and the following rainy season, defined herein to mean **October 31 through June 1**. Maintenance includes, but is not limited to, removal of accumulated sediment and/or replacement of damaged sediment fencing, coir logs, coir rolls, and/or straw bale barriers. If the sediment barrier fails to function as designed, Permittee shall employ corrective measures, and notify CDFW immediately.

2.49 Prohibition on Use of Monofilament Netting. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not use any erosion control materials that

contain synthetic (e.g., plastic or nylon) monofilament netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.

2.50 Site Maintenance. Permittee shall be responsible for site maintenance including, but not limited to, re-establishing erosion control to minimize surface erosion and ensuring drainage structures and stream banks remain sufficiently stable.

2.51 Cover Spoil Piles. Permittee shall have readily available erosion control materials such as wattles, natural fiber mats, or plastic sheeting, to cover and contain exposed spoil piles and exposed areas to prevent sediment from eroding into a stream, lake, or wetland (i.e., Waters of the State). Permittee shall apply and secure these materials prior to rain events to prevent loose soils from entering a stream, lake, or wetland (i.e., Waters of the State).

2.52 No Dumping. Permittee shall not deposit, permit to pass into, or place where it can pass into a stream, lake, or wetland (i.e., Waters of the State) any material deleterious to fish and wildlife, or abandon, dispose of, or throw away within 150 feet of a stream, lake, or wetland (i.e., Waters of the State) any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

3. Reporting Measures

Permittee shall meet each reporting requirement described below. All reports shall be submitted by e-mail to CDFW at R1LSAEureka@wildlife.ca.gov.

3.1 Notice of Work Initiation. The Permittee shall contact CDFW within the seven-day period preceding the beginning of work permitted by this Agreement (condition 1.7). Information to be disclosed shall include Agreement number, and the anticipated start date.

3.2 Work Completion. The proposed work **shall be completed by prior to the expiration of this Agreement's term**. A notice of completed work (condition 2.4), with supplemental photos, shall be submitted to CDFW **within seven (7) days** of project completion.

3.3 Measurement of Diverted Flow. Copies of the **Water Diversion Records** (condition 2.11) shall be submitted to CDFW no later than **March 31** of each year beginning in **2023**.

3.4 Water Management Plan. The Permittee shall submit a **Water Management Plan** (condition 2.12) within **60 days** from the effective date of this agreement.

3.5 Invasive Species Management for Reservoirs. The Permittee shall submit all required documents described in the Invasive Species Management for Reservoirs (condition 2.27) including subsection 2.27.1, **Bullfrog Management Plan** no later than **December 31** of each year.

3.6 Stream Restoration Plan. The Permittee shall provide a **Stream Restoration Plan** (conditions 2.42) for Pond-5 90 days prior to planned implementation for CDFW review and approval.

3.7 Revegetation Plan. The Permittee shall provide a **Revegetation Plan** (conditions 2.43) for Pond-5 90 days prior to planned implementation for CDFW review and approval.

3.8 Geologic Stability Analysis. The Permittee shall submit a **Geologic Stability Report** and engineering recommendations (condition 2.44) to CDFW for Ponds 4 and 6 no later than **December 31, 2022**.

3.9 Project Inspection. The Permittee shall submit the **Project Inspection Report** (condition 2.45) to CDFW.

CONTACT INFORMATION

Written communication the Permittee or CDFW submits to the other shall be delivered to the address below unless the Permittee or CDFW specifies otherwise.

To Permittee:

Mark Finley
Cal Fin Organics LCC
P.O. Box 632
Whitethorn, California 95589
707-287-6385
finlark@gmail.com

To CDFW:

Department of Fish and Wildlife
Northern Region
619 2nd Street
Eureka, California 95501
R1LSAEureka@wildlife.ca.gov
Attn: Lake and Streambed Alteration Program
Notification #1600-2019-0851-R1

LIABILITY

The 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 the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and subcontractors, 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.

This Agreement does not relieve the Permittee or any person acting on behalf of the Permittee, including its officers, employees, representatives, agents, or contractors and

subcontractors, from complying with other applicable statutes in the FGC including, but not limited to, FGC sections 2050 *et seq*. (threatened and endangered species), 3503 (bird nests and eggs), 3503.5 (birds of prey), 5650 (water pollution), 5652 (refuse disposal into water), 5901 (fish passage), 5937 (sufficient water for fish), and 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(b), the 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, the 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 1605(b) through (e).

If the Permittee fails to submit a request to extend the Agreement prior to its expiration, the Permittee must submit a new notification and notification fee before beginning or continuing the project the Agreement covers (FGC section 1605(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 the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

This Agreement shall **expire five 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(a)(2) requires.

EXHIBIT

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

Exhibit A. Bull Frog Management Plan

AUTHORITY

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

AUTHORIZATION

This Agreement authorizes only the project described herein. If the Permittee begins or completes a project different from the project the Agreement authorizes, the 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 Mark Finley

Mark Finley

FOR DEPARTMENT OF FISH AND WILDLIFE

DocuSigned by:
Rebecca Garwood
B5D12ECE94324AF...

04/20/2022

Rebecca Garwood
Environmental Program Manager

EXHIBIT A.

BULLFROG MONITORING AND MANAGEMENT PLAN FOR 1600-2019-0851-R1

GENERAL BULLFROG INFORMATION

The American bullfrog (*Lithobates catesbeianus* = *Rana catesbeiana*); hereafter bullfrog, is an invasive non-native species in California and poses a significant threat to California's native fish and wildlife resources. Bullfrogs were introduced in California over 100 years ago from eastern parts of the United States as a food supply but have since caused substantial ecological consequences. Bullfrogs are considered highly invasive and are well documented to prey upon a variety of fish and wildlife species, including some that are rare, threatened, and endangered. Human modifications to the environment provide favorable conditions to bullfrogs such as artificially created agricultural ponds, canals, and ditches where warm, still water occurs. As a result, bullfrogs have spread throughout California.

Efforts to control bullfrogs have been met with varying degrees of success because: 1) bullfrogs can be difficult to detect, and go dormant from fall through winter, 2) bullfrogs often take cover in difficult areas to manage (e.g. dense vegetation), 3) they can travel long distances to colonize and re-colonize areas, 4) they have high reproductive output, 5) they are weary and readily flee perceived threats, and 6) they can survive physical trauma remarkably well. CDFW scientific staff recognizes there is an urgent and immediate need to develop improved bullfrog management strategies to protect California's diverse fish, wildlife, and plant resources, and the habitats upon which they depend, for their ecological values and for their use and enjoyment by the public. Public support and implementation of bullfrog control in California is an important conservation strategy that will help protect natural resources for future generations.

MONITORING

The Project reservoir(s) shall be monitored for bullfrog presence on an annual basis with a minimum of five total surveys, no less than two weeks apart, throughout the months of May-July

- All pond survey effort must be made by a person knowledgeable in bullfrog identification (see Appendix A for reference photos);
- Survey efforts shall include listening for bullfrog calls and slowly walking the complete perimeter of the pond at night* (dusk or later) while shining a flashlight to detect movement and eye-shine

If bullfrogs are not detected upon completion of five total surveys, or at any other time of the year incidentally, removal efforts are not required that year.

*Day time monitoring can also be conducted to aid detection but is not required under this plan.

SUCCESS CRITERIA

The level of effort needed to successfully manage bullfrog populations varies with infestation levels. This plan shall be considered successfully implemented if sufficient effort is provided to prevent adult bullfrogs from reproducing in the reservoir(s) each year, and no bullfrog life-stages can be detected. Bullfrogs are capable of traveling long distances over-land, and on-going

efforts will be required to ensure dispersing bullfrogs do not colonize the reservoir(s) at a future time.

OPTIONS FOR MANAGEMENT

Two management methods may by employed for controlling bullfrogs under this plan and include:

- Manual direct removal
- Reservoir de-watering (Hydro-modification)

Implementing both reservoir de-watering and manual direct removal is currently believed to be the most effective method of managing bullfrog infestations. For reservoirs that are heavily infested with juvenile bullfrogs and/or tadpoles, reservoir dewatering may be necessary to break the bullfrog's life cycle and prevent on-going reproduction. Prior to conducting reservoir dewatering activities, please coordinate with CDFW Environmental Scientist Christine Hahn Vertical at Christine.HahnVertical@wildlife.ca.gov

Direct Removal

All direct removal efforts must be made by a person knowledgeable in bullfrog identification.

- Removal efforts must occur during, but are not limited to the active/breeding season, occurring May – July;
- A minimum of ***five*** efforts throughout the season are considered necessary;
- Direct removal efforts are typically most effective when conducted at night with use of lights but can also be conducted during the day;
- Direct removal must include working the entire perimeter of the reservoir;
- A rubber raft or small boat may be necessary to successfully remove some individuals;
- A team of two individuals or more is often helpful, one person for shining lights and/or operating a boat and the other person to perform removal efforts;
- Bullfrog tadpoles must be removed and dispatched and must not be relocated or kept as pets.

Management Authorization

Take of bullfrogs is specifically allowed in the California Code of Regulations (CCR), Title 14 (T-14) section 5.05(a)(28), under the authority of a sport fishing license. There is no daily bag limit, possession limit or hour restriction, but bullfrogs can only be taken by hand, hand-held dip net, hook and line, lights, spears, gigs, grabs, paddles, bow and arrow or fish tackle.

Alternatively, FGC Section 5501 allows CDFW, as limited by the commission, to issue a permit to destroy fish that are harmful to other wildlife. The regulations have addressed this under Section CCR T-14 226.5 Issuance of Permits to Destroy Harmful Species of Fish in Private Waters for Management Purposes. This allows CDFW to issue free permits to destroy harmful aquatic species by seining and draining.

Pond Dewatering

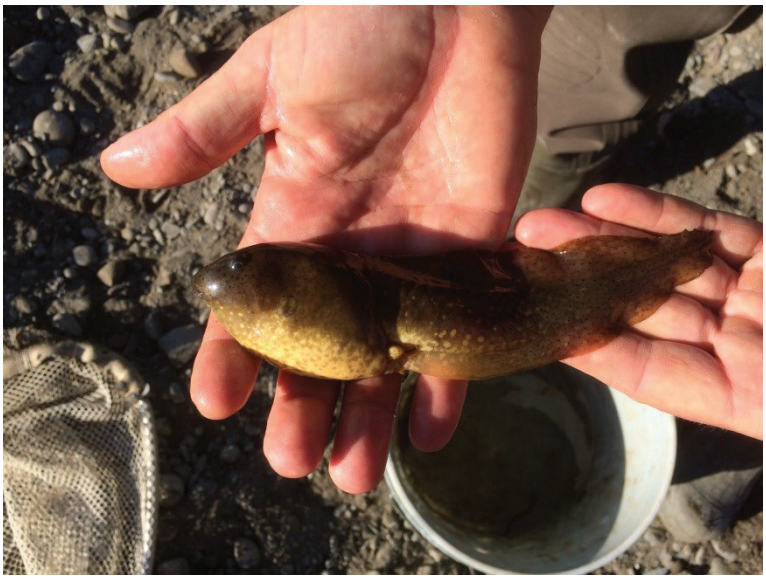
Pond dewatering may be appropriate if the reservoir can be successfully dewatered without adversely affecting stream resources. Careful planning and coordination with CDFW, is necessary to ensure potential impacts to stream resources can be addressed, prior to commencing pond draining. Discharge of polluted water to waters of the state may require permitting from other agencies with permitting authority, such as the Regional Water Quality Control Board.

In general, bullfrog tadpoles require two years to develop into frogs, whereas native amphibians only require one year. Therefore, draining a reservoir every year is intended to interrupt bullfrog tadpole development, dramatically decrease bullfrog populations and allow for reduced efforts as a measure of adaptive management. Typically, in Northern California, reservoir draining should occur in September through October to avoid impacts to sensitive native amphibian and fishery resources. While draining occurs, direct removal efforts should be employed as described above if possible.

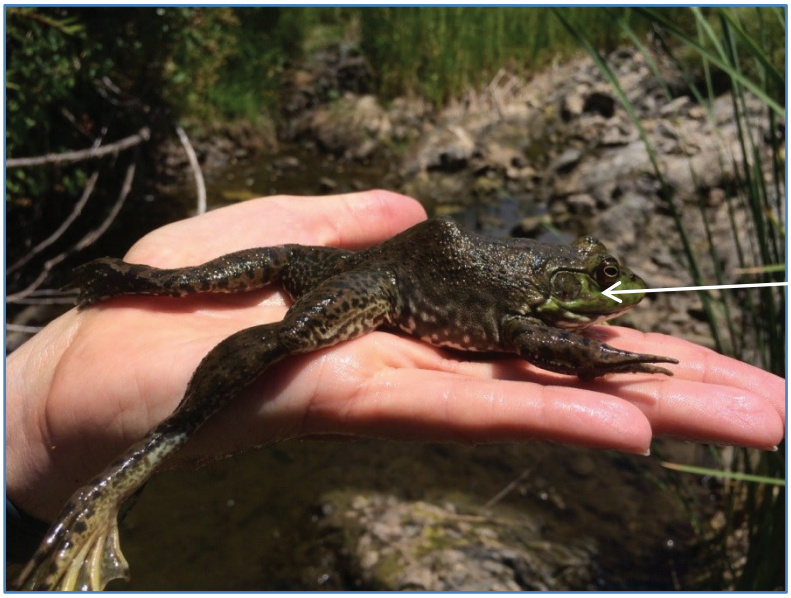
REPORTING

A written log shall be kept of monitoring and management efforts and shall be provided to CDFW **each year** by December 31. The written log shall include: 1) date and time of each monitoring and management effort, 2) approximate number of each bullfrog life stage detected and/or removed per effort, and 3) amount of time spent for each monitoring and management effort.

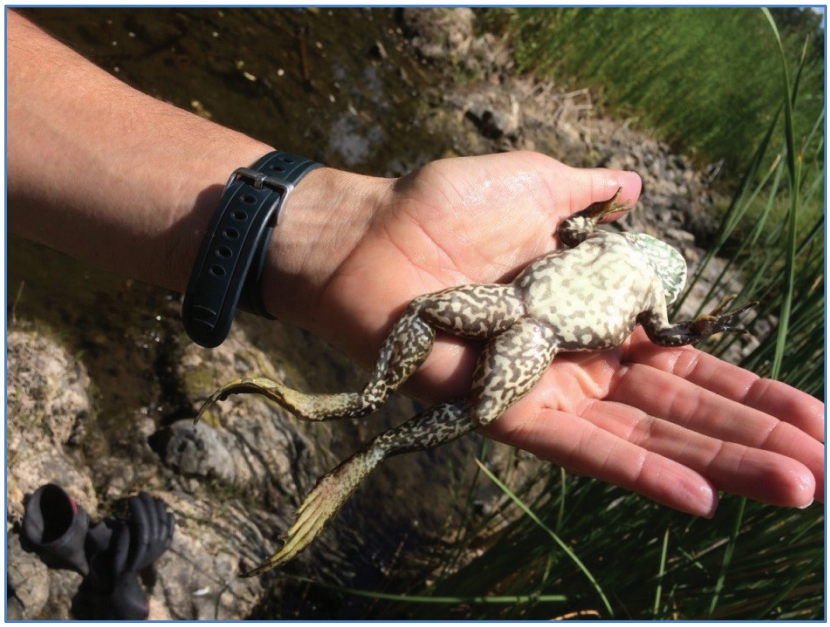
APPENDIX A. BULLFROG REFERENCE PHOTOS



This is a photo of a Bullfrog tadpole. (Photo taken by Mike van Hattem).



The photos shown in this Appendix demonstrate a medium sized adult bullfrog that was removed from Ten Mile Creek, Mendocino County. Note the bullfrog has a large tympanum, (circular ear drum shown with an arrow) and **does not** have distinct ridges along its back (dorsolateral folds). Photo taken by Wes Stokes.



The bullfrog has somewhat distinct mottling and **the underside of the bullfrog's hind legs are not shaded pink or red.**