Site Management Plan
Technical Report
Order WQ 2019-0001-DWQ

For

APN 219-041-012

Located at

3556 Lower Thomas Road
Miranda, California

June 2021

Prepared for:
Lower Thomas Road, LLC
WDID #1_12CC419107
APN 219-041-012
3556 Lower Thomas Rd, Miranda, CA

Prepared by:
Jack Skeahan, Project Scientist
Pacific Watershed Associates Inc.
P.O. Box 4433, Arcata, CA 95518
(707) 839-5130

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

I. INTRODUCTION AND PROJECT SUMMARY

Tier 1 and Tier 2 Dischargers enrolled in the State Water Resources Control Board (SWRCB) Cannabis Cultivation Policy Order WQ 2019-0001-DWQ, General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order) shall submit and implement a Site Management Plan (Plan) that describes how the Discharger is implementing the Best Practicable Treatment or Control (BPTC) measures listed in Attachment A of the State Water Resource Control Board's Cannabis Cultivation Policy (approved April 16, 2019). The Plan may include a schedule to achieve compliance, but all work must be completed by the onset of winter period each year. (The due date does not relieve a Discharger from implementing the interim soil stabilization BPTC measures described in Attachment A.)

This report documents Pacific Watershed Associate's (PWA) Site Management Plan (Plan) for Humboldt County APN 219-041-012, located at 3556 Lower Thomas Road, in Miranda, CA, as shown on Figure 1. This property is located approximately 4.3 miles southwest of Miranda, Humboldt County, CA, and hereinafter is referred to as the "Project Site."

The Project Site cultivator ("Discharger") has transferred enrollment in the North Coast Regional Water Quality Control Board (NCRWQCB) Order R1-2015-0023 to the State Water Resources Control Board (SWRCB) Cannabis Cultivation Policy Order WQ 2019-0001-DWQ, General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order). A Water Resource Protection Plan (WRPP) was prepared and delivered to the Discharger by PWA, based on our site inspections conducted on November 10, 2016 and May 18, 2017, and is included as a supplemental attachment to this document. Several remedial measures recommended in the WRPP to comply with the Standard Conditions of the Regional Water Quality Control Board's Order have already been implemented by the landowner.

Based on the total disturbance area, slopes of disturbed areas, and riparian setbacks, this Project Site falls within **Tier 1 High Risk** of the State Water Resources Control Board (SWRCB) Cannabis Cultivation Policy Order WQ 2019-0001-DWQ, General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order). Properties that fall into Tier 1 or 2 of the General Order are required to develop a Site Management Plan (Plan). This Plan has been developed for the Discharger based on multiple site inspections made by PWA on the Project Site and references the remedial actions identified in the existing WRPP pertaining to the Project Site. PWA's recommendations for any remediation or corrective actions are a result of water quality requirements under the General Order, including Best Practicable Treatment or Control (BPTCs) designed to meet those requirements. This Plan documents the findings of a site visit and inspection conducted on May 1, 2019, by PWA Staff Geologist Jack Skeahan, when a reconnaissance level investigation of the Project Site was conducted, and the conditions noted.

II. CERTIFICATIONS, LIMITATIONS AND CONDITIONS

This Plan has been reviewed by a California licensed professional geologist at PWA and all information herein, including treatment recommendations, are based on observations, data, and information collected by PWA staff.

This Plan has been prepared to: 1) provide specific BPTC measures to be utilized on the Project Site to minimize potential threats to water quality, 2) provide itemized remedial actions to be taken on the Project Site to correct existing or potential water quality threats or impacts and meet the general waste discharge requirements of the General Order, 3) provide a revised schedule for the implementation of the itemized remedial actions, and 4) provide implementation schedules for all Winterization and BPTC measures. The analysis and recommendations submitted in this Plan and attached WRPP are based on PWA's evaluation of the Project Site and activities which fall under the General Order.

In this Plan and attached WRPP, we have described the recent and current conditions of the Project Site and any water resource and water quality risk factors we observed during our site inspections. PWA is not responsible for problems or issues we did not observe on our site inspections, or for changes that have naturally occurred or been made to the Project Site after our site review. The interpretations and conclusions presented in this Plan are based on reconnaissance level site investigations of inherently limited scope. Observations are qualitative, or semi-quantitative, and confined to surface expressions of limited extent and artificial exposures of subsurface materials. Interpretations of problematic geologic, geomorphic or hydrologic features such as unstable hillslopes, erosional processes, and water quality threats are based on the information available at the time of our inspection and on the nature and distribution of existing features we observed on the Project Site.

A schedule of itemized remedial actions that are based on these observations is included with this Plan. The remedial actions provided in this Plan have been developed from professional opinions derived in accordance with current standards of professional practice and are valid as of the date of the most recent or most applicable field inspection. No other warranty, expressed or implied, is made. Furthermore, to ensure proper applicability to existing conditions, the information and remedial actions contained in this report shall be regularly reevaluated and it is the responsibility of the landowner and/or lessee operating under the General Order to ensure that no remedial actions or recommendations are inappropriately applied to conditions on the Project Site that have changed since the recommendations were developed.

If site conditions have changed for any reason, the Project Site should be reevaluated, and the Plan and associated recommendations revised and updated as required. These conditions include any changes in land management activities or Project Site conditions that have occurred since our site visit (regardless of what they are, how they occurred, or who performed them). Similarly, if the landowner/lessee uses portions of this Project Site not identified or covered under the current Plan, this Plan will need to be updated with the new information, including possible additions or changes to the recommended remedial or corrective actions and BPTCs.

The person, persons, business or other entity listed as the enrollee under the General Order is responsible for complying with all the requirements thereunder, including the WRPP and related

recommendations and requirements, regardless of who is operating or cultivating on that Project Site. If the enrollee is not the sole landowner and fails to comply with the Order and its requirements, the landowner or remaining landowners will automatically assume responsibility for the requirements therein, including all related penalties or actions brought by the SWRCB and/or NCRWQCB.

If at any time in the future the Project Site is to transfer ownership, it is the responsibility of the current owner(s), or their representative(s), to ensure that the information and recommendations contained herein are called to the attention of any future owner or agent for the Project Site. Unless this Plan is modified by the SWRCB or NCRWQCB, the findings and recommendations contained in this Plan shall be utilized as a tool while implementing the remedial actions. Necessary steps shall be taken to see that contractor(s) and subcontractor(s) carry out such recommendations in the field in accordance with the most current Plan and BPTC standards.

PWA will be responsible for the data, interpretations and recommendations developed by PWA, but will not be responsible for the interpretation by others of that information, for implementation of corrective actions by others, or for additional or modified work arising out of those plans, interpretations, and recommendations. PWA assumes no liability for the performance of other workers or suppliers while following PWA's recommendations in the Plan, unless PWA is under contract to perform or oversee those activities. Additionally, PWA is not responsible for changes in applicable or appropriate standards beyond our control, such as those arising from changes in legislation or regulations, or the broadening of knowledge which may invalidate or alter any of our findings or recommended actions.

Any Plan review or construction management services that may be needed or identified in the recommendations sections of this Plan are separate tasks from the preparation of this Plan and are not a part of the contract under which this Plan was prepared. If requested, additional PWA field inspections, surveys, Plan revisions/updates, project layout, design, permitting, construction oversight/management, or other related services arising from tasks described and recommended in the Plan may be performed under separate agreements requiring advance notice and contracting.

PWA's services consist of professional opinions and recommendations made in accordance with generally accepted principles and practices. No warranty, expressed or implied, or merchantability or fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings. This Plan, as written or as modified in writing, takes precedence over all other communication. If the client desires assurances against project failures, they shall obtain appropriate insurance through their own insurance broker or guarantor.

Prepared by:

Jack Skeahan, Project Scientist
Pacific Watershed Associates, Inc.
P.O. Box 4433, Arcata, California 95518

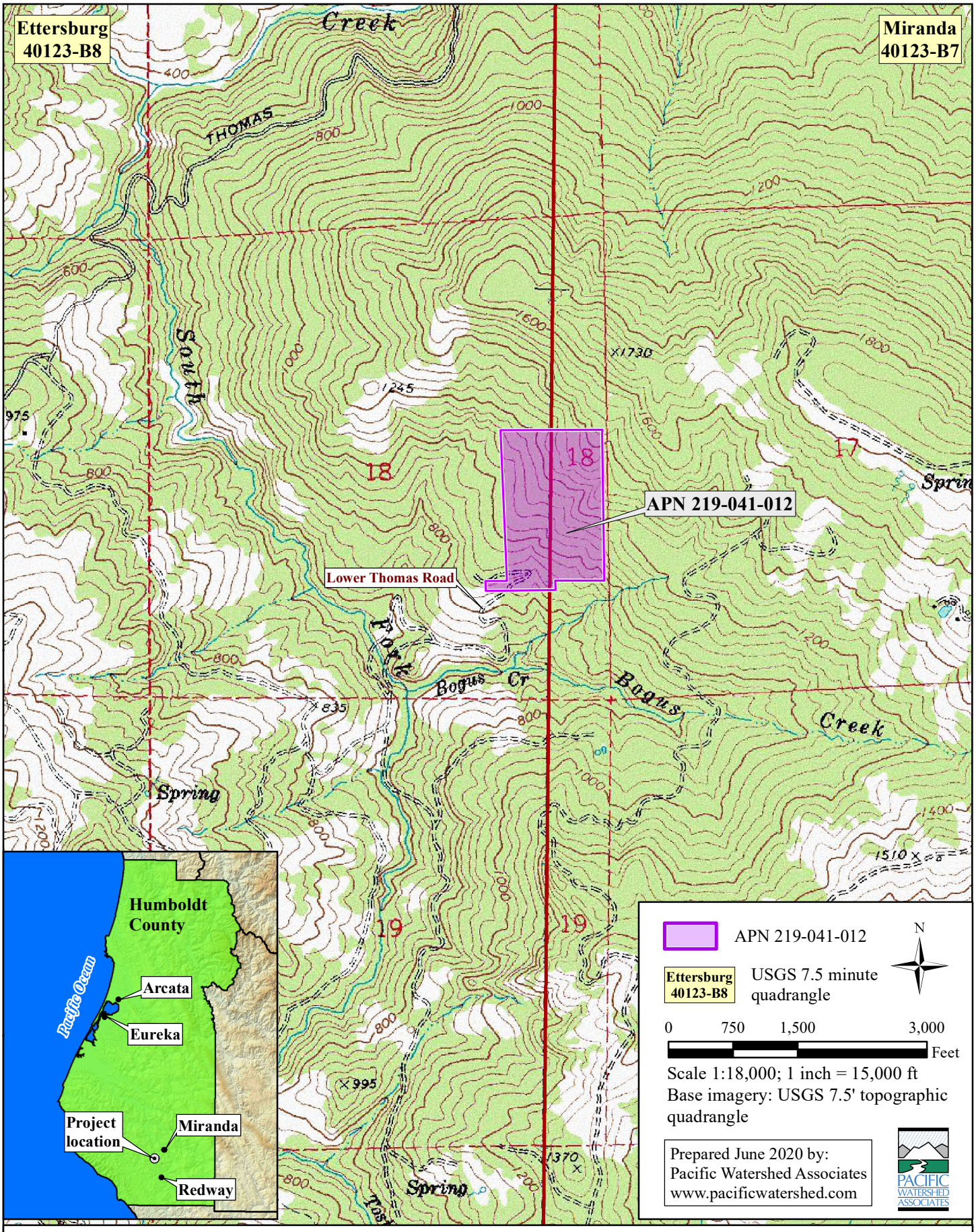


Figure 1. Site Management Plan Location Map for APN 219-041-012, located at 3556 Lower Thomas Road, Miranda, Humboldt County, California.

P:\GIS\5131

III. SITE MANAGEMENT PLAN – ORDER WQ 2019-0001-DWQ REQUIREMENTS

1.0 SEDIMENT DISCHARGE BPTC MEASURES

1.1 Site Characteristics

1.1.1 Site Map

See the attached site map, Figure 2, showing access roads, vehicle parking areas, streams, stream crossings, cultivation site(s), disturbed areas, buildings, and other relevant site features as applicable:

- for Region 1 dischargers: legacy waste discharge issues that exist on the property
- erosion prevention BPTC measures
- sediment control BPTC measures
- winterization (W) BPTC measures
- storage locations for: fertilizers and insecticides
- petroleum product storage locations
- trash/refuse storage locations
- onsite wastewater treatment system(s), including any domestic wastewater treatment, storage, or disposal area(s)

1.1.2 Access, Maintenance, and Storm Water

Describe the access road conditions including estimating vehicle traffic, road surface (e.g., paved, rocked, or bare ground), and maintenance activities. Describe how storm water is drained from the access road (e.g., crowned, out slope, armored ditch, culverts, rolling dips, etc.).

Approximately 0.59 miles of road (Driveway, Access Roads #1 - #4) was inspected on the Project Site. During the initial site inspection, roads on the Project Site were observed to have ruts and small gullies due to road segments lacking sufficient drainage features such as outsloping, rolling dips and/or ditch relief culverts (DRC). Access Road #2 had several sections of undrained road that concentrated runoff and caused minor surface erosion and sediment delivery to Stream Crossing #1 (SC #1). During the mid-season site inspection, PWA observed multiple water bars that were installed on Access Road #2 to provide temporary road drainage until permanent drainage features can be installed. Minor gullying has occurred on Access Road #4, however sediment delivery to surface waters was not observed. Vehicle traffic on the Project Site consists of the two (2) full time residents/employees, one (1) part time contractor, and occasional monthly visitors accessing various locations on the Project Site. An all-terrain vehicle (ATV) is used on a regular basis to access the upper garden area (Cultivation Area #1 – CA #1), the two northern 3,000-gallon water tanks, and Point of Diversion #2 (POD #2), as needed for maintenance (see Figure 2: Site Map). Refer to Appendix B: PWA Typical Drawings for road drainage feature construction.

A total of 0.2 miles of native-surfaced legacy road (Legacy Logging Road #1 and #2, Figure 2) was also inspected on the Project Site. The two legacy road segments are used infrequently to access the two northern 3,000-gallon water tanks and POD #2 for maintenance. These road segments experience very low use currently, and although few to no permanent road drainage structures exist on this road segment, no significant surface erosion or sediment delivery to nearby watercourses was observed.

1.1.3 Stream Crossings

Describe any vehicle stream crossing including the type of crossing (e.g., bridge, culvert, low water, etc.).

There are two stream crossings (SC #1 and SC #2) on the Project Site (Figure 2). SC #1 is located on Access Road #2 and has an adequately sized 36-inch diameter culvert based on drainage area calculations for the 100-year design storm and associated debris (Drainage area = 28 acres, Q_{100} discharge = 31 cfs). A single-post trash rack has been installed upstream of the culvert inlet to prevent potential culvert plugging. No additional treatments are recommended at this time. The Rational Method was used for determining the culvert size to address the 100-year peak streamflow for SC #1.

SC #2 is located on abandoned Legacy Logging Road #1 and is directly downstream of Point of Diversion #2 (POD #2, Figure 2). This stream crossing is mostly washed out although approximately 40 yd^3 of road fill remains. Due to the current and relatively stable condition of this stream crossing, the amount of potential disturbance associated with treating the site, and the low potential for significant erosion and sediment delivery; no treatments are recommended at this time.

If required in the future, any stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner, and Hagans, 2015), and the California Salmonid Stream Habitat Restoration Manual, Part X (Weaver et al., 2006).

1.1.3.1 Legacy Waste Discharge Issues for Region 1

For Region 1 Dischargers, identify, discuss, and locate on the site map any legacy waste discharge issues that exist on the property.

See Section 1.1.2., above, regarding the legacy road segments on the Project Site.

1.2 Sediment Erosion Prevention and Sediment Capture

Moderate risk Tier 1 or Tier 2 Dischargers are required to submit a Site Erosion and Sediment Control Plan. Those Dischargers may refer to that plan rather than repeat it here.

This Project Site is designated as a **Tier 1 High Risk** Discharger. Please refer to the *Disturbed Area Stabilization Plan* associated with the Project Site and Table 1, below, for corrective actions and recommended BPTCs regarding erosion prevention and sediment control related to disturbed areas within the riparian setbacks.

1.2.1 Erosion Prevention and Sediment Control Measures: BPTCs, Schedule, and Map

The description shall address physical BPTC measures, (e.g., placement of straw mulch, plastic covers, slope stabilization, soil binders, culvert outfall armoring, placement of /silt fences, fiber rolls, or settling ponds/areas, etc.) and biological BPTC measures (vegetation preservation/replacement, vegetated outfalls, hydro seeding, etc.).

Refer to Table 1, below, for a description of erosion prevention and sediment capture BPTC measures that have been or will be implemented to prevent or limit erosion and capture sediment that has been eroded. The table also includes an implementation schedule for BPTC measures that have not yet been implemented. Refer to the site map, Figure 2, for the location of erosion prevention and sediment control BPTC measures.

Specific erosion prevention and sediment control measures intended to prevent or limit erosion and capture sediment that has been eroded shall be implemented prior to the onset of each wet weather season and include the placement of straw mulch on bare soil areas as needed, planting of cover crops at cultivation areas, preservation/replacement of existing vegetative cover, indoor storage (or properly covered if stored outside) of bulk potting soil, and slope stabilization. These measures are already in practice or will be implemented as needed prior to the wet weather season at CA #1 and CA #2, stream crossings, road segments, and any additional areas on the Project Site with the potential to threaten water quality.

1.2.2 Maintenance Activities – Erosion Prevention and Sediment Control

1.2.2.1 Monitoring and Maintenance

Describe how the erosion prevention and sediment control BPTC measures will be monitored and maintained to protect water quality.

In general, the Project Site needs to be monitored throughout the year to identify any problems that might arise and to monitor the effectiveness of corrective actions when completed. Refer to Table 1 for recommendations relating to existing and proposed BPTC measures that will require monitoring and/or maintenance.

The goal of the monitoring is to ensure the original problem/feature has been effectively treated and that the causal mechanisms (ineffective road drainage, improperly designed stream crossings, etc.) are not continuing to threaten or cause water quality degradation. If additional deficiencies develop, or individual problems arise, then corrective actions must be implemented immediately.

Periodic inspections should include visual inspection of the site, including any management measures/practices, to ensure they are being implemented correctly and are functioning as expected. Inspections include photographic documentation of any controllable sediment discharge sites, as identified on the site map, and a visual inspection of those locations on the site where pollutants or wastes, if uncontained, could be transported into receiving waters, and those locations where runoff from roads or developed areas drains into or towards surface water.

At a minimum, sites shall be inspected at the following times to ensure timely identification of changed site conditions and to determine whether implementation of additional management measures is necessary to prevent or minimize discharges of waste or pollutants to surface water:

1) Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include photographic documentation, if possible.

2) Prior to October 15 to evaluate site preparedness for storm events and stormwater runoff.

3) Following the accumulation of 3 inches cumulative precipitation (starting September 1st) or by December 15th, whichever is sooner.

4) Following storm events that produce 0.5 inches in 24 hours or 1 inch within seven consecutive days of precipitation (Cannabis Cultivation Policy: Attachment A). Precipitation data can be obtained from the National Weather Service by entering the site zip code at http://www.srh.noaa.gov/forecast; Pick the nearest or most relevant zip code and then select the 3-day history that will also show precipitation totals.

1.2.2.2 Captured Sediment

Describe how any captured sediment will be either stabilized in place, excavated and stabilized on-site, or removed from the site.

In the event that any excess sediment is generated, all captured sediment will be stabilized and stored in a stable location onsite with no threat of delivery to surface waters. All applicable BPTC

measures will be implemented to prevent sediment mobilization and encourage revegetation and stabilization.

1.2.3 Erosion Control BPTC Measures – Interim and Long-term

Describe the interim soil stabilization, if applicable and long-term BPTC measures implemented to prevent sediment transport at each identified disturbed area(s) and improperly constructed features.

Please refer to the *Disturbed Area Stabilization Plan* associated with the Project Site and Table 1, below, for more information regarding interim and long-term erosion control BPTC measures and implementation schedules.

Table 1. Prioritized implementation schedule for Best Practicable Treatment or Controls (BPTC)

Schedule	Map Point or Location	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Appendix A - WRPP)
CA – Cultivation Area Disturbed Area – DA DRC – Ditch Relief Culvert OWTS – Onsite Wastewater Treatment System SC – Stream Crossing SW – Straw Wattle RD – Rolling Dip W – Winterization <E> – Existing <P> – Proposed		
		Cultivation Areas
Prior to Nov 15 Annually and ongoing	<P> BPTC/W; CA #1 – CA #2	1) Plastic tarps will be removed from hoop houses over the winter season. 2) Plant cover crops, tarp, or otherwise cover any growing medium in beds, pots, or piles to prevent nutrient leaching and transport. 3) Unless areas are naturally revegetated, seed and mulch all bare soil areas with 1) barley or wheat-based erosion control seed that does not contain Annual or Perennial Ryegrass and 2) weed-free straw. 4) All erosion control measures will be monitored during and after each storm event that produces at least 0.5 in/day or 1.0 in/week of precipitation and repaired or replaced as needed.
		Stream Crossings
10/15/2020 and ongoing	<P> BPTC/W; SC #1 – SC #2	1) Monitor and maintain culvert inlets/outlets and monitor stream crossings on a regular basis to ensure functionality and that erosion or sediment delivery to watercourses is not occurring. The two stream crossings on the Project Site do not require treatment at this time (see LSAA Notification No. 1600-2018-0284-R1).
		Roads
10/31/2020	<P> BPTC; RD <E> BPTC; RD <E> BPTC; DRC #1/SW	1) <P>: Install rolling dips at the locations shown on Figure 2 to hydrologically disconnect road segments from the stream network and mitigate erosion and sediment delivery. 2) <E>: Monitor and maintain existing rolling dips or other road drainage features, replacing/reshaping as needed to maintain functionality. 3) <E>: Monitor and maintain the existing DRC #1 inlet/outlet to ensure functionality and that erosion and sediment delivery to watercourses is not occurring. Monitor and maintain the straw wattle (fiber roll) installed around the inlet of DRC #1 to prevent fine-grained sediment delivery to surface waters.
10/15/2020 and ongoing	<P> BPTC; Legacy Logging Road #1 – #2	1) Monitor legacy logging roads. If surface erosion or sediment delivery to watercourses is observed, appropriate BPTCs, such as the installation of water bars, application of straw mulch, and a limited wet season vehicle use management plan, should be implemented to mitigate impacts on water quality

Schedule	Map Point or Location	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Appendix A - WRPP)
CA – Cultivation Area Disturbed Area – DA DRC – Ditch Relief Culvert OWTS – Onsite Wastewater Treatment System SC – Stream Crossing SW – Straw Wattle RD – Rolling Dip W – Winterization <E> – Existing <P> – Proposed		
		Disturbed Areas
Prior to Nov 15 Annually	<P> BPTC/W; DA	1) To reduce surface erosion, seed and mulch all bare soil areas with 1) barley or wheat-based erosion control seed that does not contain Annual or Perennial Ryegrass and 2) weed-free straw. 2) Implement additional BPTC measures at disturbed areas as needed to prevent erosion and sediment delivery to nearby watercourses.
		Fertilizer Storage
10/15/2020 and ongoing	<P> Fertilizer storage	1) Fertilizer containers should be stored under a roof (e.g., shipping container), off the ground, with adequate secondary containment. If stored or stockpiled outdoors, potting soils, compost, and fertilizers should be fully tarped or seeded in a stable location with runoff being diverted away from the storage area(s), so that there is no chance of nutrient leaching or delivery to surface waters. In addition, install a temporary perimeter sediment barrier (compost berms, temporary silt dikes, fiber rolls, silt fences, sandbags, gravel bags, or biofilter bags) surrounding the stockpile area.
		Trash/Refuse, and Domestic Wastewater
10/15/2020 and ongoing	Trash/ Refuse	1) Continue to collect and properly store household and cultivation-related wastes before disposing of these materials at an approved waste facility.
10/15/2021	OWTS & Portable (chemical) toilet	2) The Order requires one or more county-approved (permitted) OWTS on the Project Site. The two existing OWTS are currently in the permitting process and percolation tests have been conducted on the Project Site. Proof of permitting through the Humboldt County Division of Environmental Health (HCDEH) is required. Continue working towards getting the existing OWTS permitted on your property. 3) Continue utilizing the serviced portable toilet (or other county-approved system) until the existing OWTS can be permitted or a new OWTS can be designed, permitted, and constructed.
All BPTC measures will conform to the State Water Resources Control Board Order WQ 2019-0001-DWQ guidelines. All BPTC measures are outlined in Section 2 of Attachment A of the General Order.		

2.0 FERTILIZER, PESTICIDE, HERBICIDE, AND RODENTICIDE BPTC MEASURES

2.1 Summary Table

Provide a summary table that identifies the products used at the site, when they are delivered to the site, how they are stored, and used at the site. If products are not consumed during the growing season, describe how they are removed from the site or stored to prevent discharge over the winter season.

See the summary in Table 2, below, that identifies the products utilized onsite for cultivation purposes, when they are delivered to the site, and how they are stored and used at the site. Table 2 also describes how products are removed from the site or

stored to prevent discharge if they are not consumed before the winter season. The landowner reported no herbicide or rodenticide use on the Project Site.

2.2 Site Map

The site map, Figure 2, identifies the locations of fertilizer and pesticide storage.

Table 2. Fertilizer and Pesticide Storage and Use

Product		When Delivered	How Stored	How Used	How Products Are Removed from the Site or Stored to Prevent Discharge If They Are Not Consumed Before the Winter Season
FERTILIZERS	Compost	Purchased and delivered to the Project Site as needed by landowner.	Fertilizers and pesticides are stored inside a storage shed or tarped during the wet season.	Applied following the manufacturer's recommended application rates.	Empty containers and any unused fertilizers or pesticides are stored in the storage sheds and equipped with secondary containment. Empty containers are taken off property and recycled at an appropriate waste facility as needed.
	Compost Tea				
	Earthworm Castings				
	Rock Dust				
	Fish Bone Meal				
	Fish Hydroxylate				
PESTICTIDES	Pure Crop 1				
	Plant Therapy				

2.1 Bulk Fertilizers and Chemical Concentrates

Describe how bulk fertilizers and chemical concentrates are stored, mixed, applied, and how empty containers are disposed.

At the time of the PWA site inspection, fertilizer, potting soil, soil amendments, and any cultivation-related chemical not directly being used at CA #1 or CA #2 were being stored either indoors or covered when stored outdoors. The landowner has a mixing tank for compost tea and liquid fertilizer storage tanks. According to the landowner all fertilizers, amendments, and pesticides are applied at the manufacturer's recommended rate or less and usage is diminished or eliminated toward the end of the growing season. According to the landowner, custom blended soil amendments are delivered to the Project Site in bulk totes and tilled into the soil as recommended by the manufacturer. Empty containers (totes) are taken to a transfer station as needed and unused bulk amendments are stored in secondary containment in the storage shed. If fertilizers and amendments contain ammonium nitrate, they will be stored in separate locations away from petroleum products.

Nutrient containing amendments and all chemical materials should continue to be stored indoors or completely tarped outdoors during the rainy season. If tarped outdoors, chemicals should not be stored directly on the ground surface and surface runoff from precipitation should be diverted away from the storage area. At the completion of harvesting activities, all potting soil should be planted with a winter cover crop or consolidated as much as feasible and covered with plastic sheeting or tarps to prevent mobilization and leaching of any residual chemicals during the wet season.

2.2 Spill Prevention and Cleanup

The likelihood of chemical spills will be minimized by storing all fertilizers and other cultivation-related chemicals off the ground, in designated secondary containment, and in the enclosed structures or covered outdoor locations shown on Figure 2. In the event of a spill, cleanup will be initiated as quickly as possible after occurrence. In the event of spills on pavement or concrete, solid materials will be removed utilizing a broom/brush and pan or vacuum. Affected paved surfaces will be decontaminated using a mild detergent and water. Liquid chemical spills on pavement or concrete will be captured using absorbent materials. Spills of solid or liquid materials on soil will be cleaned by removal of the spilled materials and contaminated soil using a shovel and/or absorbent materials. Contaminated soil will be stored in a labeled sealed container and disposal of contaminated materials will be conducted in accordance with manufacturer's instructions and local regulations. A spill kit is located inside the storage shed nearby the yurt (Figure 2).

3.0 PETROLEUM PRODUCT BPTC MEASURES

3.1 Summary Table

Table 3, below, identifies the petroleum products utilized onsite for cultivation and other purposes, when they are delivered to the site, and how they are stored and used at the site.

3.2 Site Map

The site map, Figure 2, identifies petroleum product storage locations.

3.3 Handling

Describe how fuels, lubricants, and other petroleum products are stored, mixed, applied, and empty containers are disposed.

No more than 40 gallons of gasoline is stored on the Project Site at any given time. There are two (2) empty diesel tanks equipped with secondary containment basins and undercover, and the filler tubes have been padlocked to prevent inadvertent filling (Figure 2).

For more information regarding storage, application, and disposal of full and empty containers of petroleum products, see Table 3, below.

Table 3. Petroleum Product Storage and Use

Product Name	When Delivered	How Stored	How Used	How Products Are Removed from the Site or Stored to Prevent Discharge If They Are Not Consumed Before the Winter Season
Gasoline	Purchased and delivered to the Project Site as needed by landowner.	Secondarily contained and under cover in storage shed (Figure 2).	Backup generators, ATV, weed whacker, chipper and chain saw.	All petroleum products are used to completion or stored in secondary containment inside the storage sheds. According to the landowner, items brought to the Project Site towards the end of the season are limited to ensure little to no leftover product.
Diesel			Heavy equipment (Bobcat).	
Solar Batteries		Stored in the generator shed by the cabin or near the yurt in a solar battery box with a shingled roof (Figure 2).	Solar energy storage.	
Propane	Delivered to Project Site by Blue Star gas as needed.	Propane stored in three tanks throughout Project Site (Figure 2).	Used as backup power supply when solar energy system is not working.	

3.4 Spill Prevention and Cleanup

The likelihood of chemical spills will be minimized by storing all petroleum products off the ground, in designated secondary containment and in enclosed structures. In the event of a spill, cleanup will be initiated as quickly as possible after occurrence. Liquid petroleum spills on pavement or concrete will be captured using absorbent materials. Spills of liquid materials on soil will be cleaned by removal of the spilled materials and contaminated soil using a shovel and/or absorbent materials. Contaminated soil will be stored in a labeled sealed container. Disposal of contaminated materials will be conducted in accordance with manufacturer's instructions and local regulations. Spill prevention cleanup kits will be readily available and located where fuel is stored and where refueling occurs.

4.0 TRASH/REFUSE, AND DOMESTIC WASTEWATER BPTC MEASURES

4.1 Types, Containment, and Disposal of Trash/Refuse

Describe the types of trash/refuse that will be generated at the site. Describe how the material is contained and properly disposed of.

Trash and refuse typically includes domestic waste such as general household trash and organic materials. Cultivation related wastes include organic wastes (cannabis stems, leaves, roots, etc.), plastic pots and planting materials, plastic containers, and degraded plastic tarps. Organic waste is turned into compost and deposited into a

designated compost area shown on Figure 2. All stalks are chipped and used for soil building and/or reapplied to soil beds as mulch. Non-organic cultivation and domestic waste is stored in the trash trailer shown on Figure 2 and at other designated locations on the Project Site. Waste material is removed from the property on a regular basis and taken to the Redway Transfer Station or Recology Eel River Transfer Station in Fortuna. Household wastewater is generated onsite (cooking, cleaning, etc.) along with use of the portable toilets by the two (2) full time employees and any visitors.

4.1.1 Site Map

The site map, Figure 2, shows trash/refuse storage locations.

4.2 Domestic Wastewater Generation and Disposal

4.2.1 Domestic Wastewater Generation

Describe the number of employees, visitors, or residents at the site [per unit time].

There are two (2) full time employees that reside on the Project Site. A part-time contractor and a few visitors are onsite at various times throughout the year.

Describe the types of domestic wastewater generated at the site (e.g., household generated wastewater or chemical toilet).

Both domestic greywater and chemical toilet waste are generated at the Site.

4.2.2 Domestic Wastewater Disposal

Describe how the domestic wastewater is disposed.

4.2.2.1 Permitted onsite wastewater treatment system (e.g., septic tank and leach lines).

There are reportedly two existing Onsite Wastewater Treatment Systems (OWTS) located in stable areas at the yurt and cabin; and are functioning properly according to the operator. The two existing OWTS are currently in the permitting process and percolation tests have been conducted on the Project Site. The exact location of the two leach fields and the septic tank for the yurt is not known and approximate locations based on communication with the operator are shown on Figure 2. System design specifications and the date of OWTS installation is also unknown. The location of the septic tank south of the cabin in the southwest corner of the parcel was observed during the initial Project Site inspection. Proof of permitting is required for both OWTS on the Project Site at all times.

4.2.2.2 Chemical toilets or holding tank. If so, provide the name of the servicing company and the frequency of service.

There is (1) chemical toilet on the Project Site, which is serviced as needed or once a month during the summer by Six Rivers Portable Toilets.

4.2.2.3 Outhouse, pit privy, or similar. Use of this alternative requires approval from the Regional Water Board Executive Officer; include the approval from the Executive Officer and any conditions imposed for use of this alternative.

There are no outhouses or pit privies on the Project Site.

4.2.3 Site Map

The site map, Figure 2, identifies the locations of any domestic wastewater treatment, storage, or disposal area(s).

5.0 WINTERIZATION BPTC MEASURES

5.1 Winterization Activities

Describe activities that will be performed to winterize the site and prevent discharges of waste. The description should address all the issues listed above.

The landowner will implement appropriate BPTCs to adequately contain the stockpiled potting soil and prevent mobilization and delivery to surface waters or groundwater.

Winterization measures applied to bare soil areas, garden areas, and cultivation areas may include the following: 1) removal of plastic covers on the small greenhouses; 2) turning and covering the soil beds with tarps; 3) mulching bare soil areas; 4) planting of cover crops; 5) planting of winter crops; 6) covering bulk soil piles and installing fiber rolls around the perimeter; and 7) disconnecting water lines not in use. If fertilizers and amendments contain ammonium nitrate, they will be stored in separate locations away from petroleum products. Any fertilizers, amendments, petroleum products, or other chemicals will be brought inside during the wet season and stored indoors or under tarps such that they are protected from the elements.

Please refer to Table 1, above, and Table 1 in the *Disturbed Area Stabilization Plan* associated with this Project Site for information regarding winterization activities and implementation schedules..

5.2 Maintenance of Drainage or Sediment Capture Features

Describe maintenance of all drainage or sediment capture features (e.g., drainage culverts, drainage trenches, settling ponds, etc.) to remove debris, soil blockages, and ensure adequate capacity exists.

Please refer to Table 1, above, and Table 1 in the *Disturbed Area Stabilization Plan* associated with this Project Site for more information regarding maintenance of drainage and sediment capture feature BPTCs and implementation schedules.

5.3 Revegetation

Describe any revegetation activities that will occur either at the beginning or end of the precipitation season.

Annual planting of cover crops on potting soil prior to the wet season will continue. Maintain existing vegetative cover on native surfaces. No land disturbance activities requiring winter revegetation are planned or anticipated, with the exception of any application of native erosion control seed or implementation of additional erosion or sediment control BPTCs, as needed, to protect water quality. Please refer to Table 1, above, and Table 1 in the *Disturbed Area Stabilization Plan* associated with this Project Site for information regarding revegetation activities and implementation schedules.

5.4 BPTC Measures That Cannot Be Completed Before Onset of Winter

If any BPTC measure cannot be completed before the onset of winter period, contact the Regional Water Board to establish a compliance schedule.

All BPTC measures are scheduled to be completed before the onset of winter period provided all applicable permits from regulatory agencies are obtained. If any BPTC measures cannot be implemented prior to the start of the winter season (obtaining permits for the existing OWTS for example) the Regional Water Board will be contacted, and a compliance schedule established. Refer to Table 1, above, and Table 1 in the *Disturbed Area Stabilization Plan* associated with this Project Site for information regarding a BPTC implementation schedule.

5.5 Legacy Waste Discharge Issues for Specific Regions

For Region 1 Dischargers, describe any activities that will be performed to address legacy waste discharge issues. Region 6 Dischargers should consult with Regional Water Board staff to confirm if any other activities in addition to BPTCs are necessary to address legacy waste discharge issues.

See Section 1.1.2. Access, Maintenance and Storm Water, for more information regarding any legacy waste discharge issues.

Figure 2. Site Management Plan Site Plan for APN 219-041-012, located at 3556 Lower Thomas Road, Miranda, Humboldt County, California.

IV. LEGALLY RESPONSIBLE PERSON CERTIFICATION/SIGNATURES

This Site Management Plan has been prepared by Pacific Watershed Associates on behalf of the Discharger.

"I have read and understand this Site Management Plan, including Section II – Certifications, Conditions and Limitations, and the associated attachments. I agree to comply with the requirements of the State Water Resources Control Board (SWRCB) Cannabis Cultivation Policy Order WQ 2019-0001-DWQ, General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (General Order), including the recommendations and actions listed in this Site Management Plan."

Name of Legally Responsible Person (LRP): _____

Title (owner, lessee, operator, etc.): _____

Signature: _____ Date: _____

Site Management Plan prepared by (if different from LRP): **Pacific Watershed Associates, Inc.**

Site Management Plan prepared and finalized on (date): June 29, 2021

Signature:  Date: June 29, 2021

APPENDIX A

Water Resources Protection Plan (WRPP) for

Humboldt County APN 219-041-012

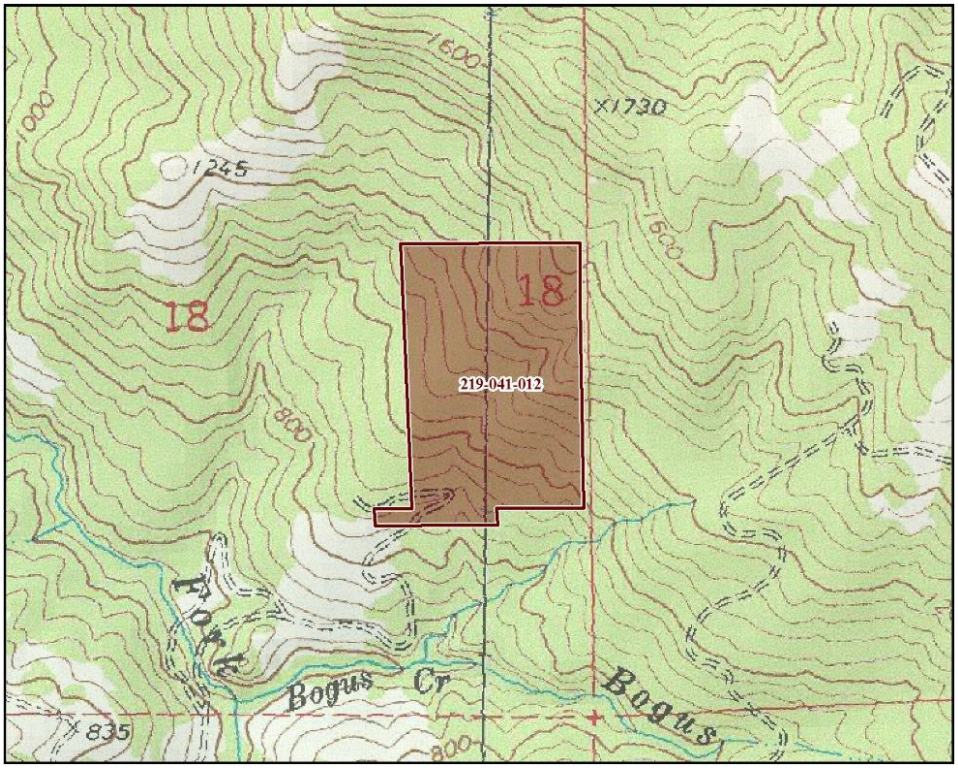
Water Resource Protection Plan (WRPP)

for

APN 219-041-012

Located at
3556 Lower Thomas Road
Miranda, California

May 2018



Prepared for:
WDID #1B16618CHUM
PWA ID #180101060404-5131
3556 Lower Thomas Road
Miranda, California

Prepared by:
Jack Skeahan, Staff Geologist
jacks@pacificwatershed.com
Pacific Watershed Associates Inc.
P.O. Box 4433, Arcata, CA 95518
(707) 839-5130

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF APPENDICES

Water Resource Protection Plan (WRPP)
APN 219-041-012
3556 Lower Thomas Road
Miranda, California

1.0 PROJECT SUMMARY

This report documents Pacific Watershed Associate's (PWA)[1] Water Resource Protection Plan (WRPP) for APN 219-041-012 located at 3556 Lower Thomas Road, Miranda, California as shown on Figure 1. This property is located approximately 3.8 miles southwest of Miranda, Humboldt County, CA, and hereinafter is referred to as the "Project Site." Based on either site conditions and/or total cultivation area, this Project Site falls within **Tier 2** of the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023, Waiver of Waste Discharge and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects ("Order"). Properties that fall into Tier 2 of the Order are required to develop a WRPP. Therefore, as required, this WRPP has been developed for you based on site inspections made by PWA on your property. PWA's recommendations for any remediation or corrective actions are a result of water quality requirements under the Order, including Best Management Practices (BMPs) designed to meet those requirements (Appendix A). This WRPP documents the findings of a site inspection conducted on November 10, 2016 by PWA Staff Geologist Jack Skeahan and Staff Biologist Margo Moorhouse, and a mid-season site inspection conducted on May 18, 2017 by PWA Staff Geologist Jack Skeahan, Staff Biologist Margo Moorhouse and Field Technician Greg Davis.

2.0 CERTIFICATIONS, LIMITATIONS AND CONDITIONS

This WRPP has been prepared by, and under the responsible charge of a California licensed geologist or certified licensed professional in erosion and sediment control at PWA and all information herein, including treatment recommendations, are based on observations, data and information collected by PWA staff.

This WRPP has been prepared to: 1) describe the general conditions of the property at the time of our inspection; 2) summarize the site conditions and how they relate to the NCRWQCB twelve (12) Standard Conditions of the Order; 3) provide recommendations for remediation and/or correction of existing or potential water quality threats or impacts; and 4) recommend work to be conducted on this property to meet the 12 Standard Conditions of the Order. The analysis and recommendations submitted in this WRPP are based on PWA's evaluation of the Project Site and your activities which fall under the Order.

In this WRPP we have described the current conditions of the property and any water resource and water quality risk factors we observed at the time of our site inspection. PWA is not responsible for problems or issues we did not observe on our site inspection, or for changes that have naturally occurred or been made to the property after our site review. The interpretations and conclusions

[1] PWA is an approved Third Party Program for the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023, Waiver of Waste Discharge and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects ("Order").

presented in this WRPP are based on a reconnaissance level site investigation of inherently limited scope. Observations are qualitative, or semi-quantitative, and confined to surface expressions of limited extent and artificial exposures of subsurface materials. Interpretations of problematic geologic, geomorphic or hydrologic features such as unstable hillslopes, erosional processes and water quality threats are based on the information available at the time of our inspection and on the nature and distribution of existing features we observed on the property.

We have also included recommendations for remediation and/or correction that are based on these observations. The recommendations included in this WRPP are professional opinions derived in accordance with current standards of professional practice, and are valid as of the date of field inspection. No other warranty, expressed or implied, is made. Furthermore, to ensure proper applicability to existing conditions, the information and recommendations contained in this report shall be regularly reevaluated and it is the responsibility of the landowner and/or lessee operating under the Order to ensure that no recommendations are inappropriately applied to conditions on the property that have changed since the recommendations were developed.

If site conditions have changed for any reason, the site should be reevaluated and the WRPP revised and updated as required. These conditions include any changes in land management activities or property conditions that have occurred since our site visit (regardless of what they are, how they occurred or who performed them). Similarly, if the landowner/lessee uses portions of this property not identified or covered under the current WRPP, this WRPP will need to be updated with the new information, including possible additions or changes to the recommended remedial or corrective actions and BMPs (Appendix A).

If the property owner has enrolled their property under the Order, they are responsible for complying with all the requirements thereunder, regardless of who is operating or cultivating on that property. If the property is being formally or informally leased to an operator, and the lessee has enrolled under the Order, then the lessee is responsible for complying with the Order's requirements, including the WRPP and related recommendations and requirements. If the lease expires or the lessee is not otherwise available or does not respond to information requests by the NCRWQCB or PWA, then the landowner automatically assumes responsibility under the Order for the requirements therein and for all related penalties or actions brought by the NCRWQCB.

If at any time in the future the property is to transfer ownership, it is the responsibility of the current owner, or their representatives, to ensure that the information and recommendations contained herein are called to the attention of any future owner or agent for the property. Unless this WRPP is modified by the NCRWQCB, or another approved Third Party Program representative, the findings and recommendations contained in this WRPP shall be utilized as a tool while implementing the recommendations made within this WRPP. Necessary steps shall be taken to see that contractor(s) and subcontractor(s) carry out such recommendations in the field in accordance with the most current WRPP and BMP standards.

As a Third Party Program, PWA will be responsible for the data, interpretations and recommendations developed by PWA, but will not be responsible for the interpretation by others of that information, for implementation of corrective actions by others, or for additional or modified work arising out of those plans, interpretations and recommendations. PWA assumes no liability for the performance of other workers or suppliers while following PWA's

recommendations in the WRPP, unless PWA is under contract to perform or oversee those activities. Additionally, PWA is not responsible for changes in applicable or appropriate standards beyond our control, such as those arising from changes in legislation or regulations, or the broadening of knowledge which may invalidate or alter any of our findings or recommended actions.

Any WRPP plan review or construction management services that may be needed or identified in the recommendations sections of this report are separate tasks from the preparation of this WRPP, and are not a part of the contract under which this WRPP was prepared. If requested, additional PWA field inspections, surveys, WRPP revisions/updates, project layout, design, permitting, construction oversight/management, or other related services arising from tasks described and recommended in the WRPP may be performed under separate agreements requiring advance notice and contracting.

PWA's services consist of professional opinions and recommendations made in accordance with generally accepted principles and practices. No warranty, expressed or implied, or merchantability or fitness, is made or intended in connection with our work, by the proposal for consulting or other services, or by the furnishing of oral or written reports or findings. If the client desires assurances against project failures, they shall obtain appropriate insurance through their own insurance broker or guarantor.

This WRPP is considered a living document and shall be updated at least annually, or sooner if conditions have changed or land management actions have been undertaken after our site inspection. As an official part of the Waiver Program, this WRPP (including all its text, appendices, maps and photos) shall remain onsite and available for NCRWQCB staff to inspect and review upon request.

Prepared by:

Jack Skeahan
Staff Geologist
Pacific Watershed Associates, Inc.
P.O. Box 4433, Arcata, California 95518

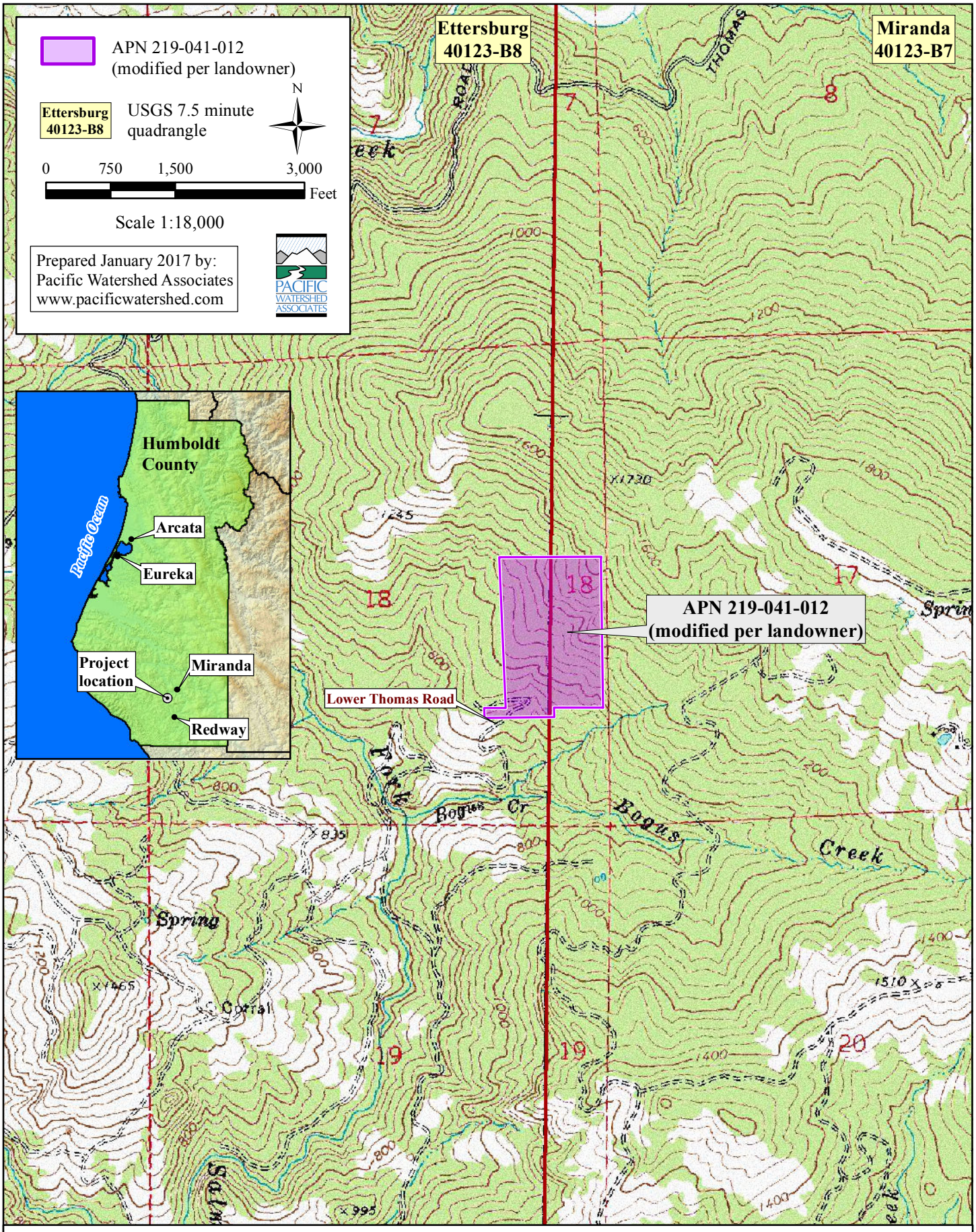


Figure 1. Location map for WDID #1B16618CHUM, APN 219-041-012, located at 3556 Lower Thomas Road, Miranda, Humboldt County, California.

P:\GIS\5131

3.0 INTRODUCTION

This Water Resource Protection Plan (WRPP) summarizes the results of Pacific Watershed Associate's (PWA) initial site visit, mid-season site inspection and subsequent analysis and documentation of site conditions on APN 219-041-012 located at 3556 Lower Thomas Road, Miranda, California, as shown on Figure 1 and hereinafter referred to as the "Project Site." The WRPP describes and addresses the required elements and compliance with the 12 Standard Conditions established by the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023 to protect water quality from cannabis cultivation and related activities (Order). PWA has identified certain areas where the Project Site does not fully meet all 12 of the Standard Conditions of the Order. Section 4, below, identifies and discusses each of the 12 Standard Conditions as related to your property with regard to compliance with the NCRWQCB's Order.

The WRPP contains the following required sections:

1. Legible map (Figure 2) depicting the required site elements and features associated with the 12 Standard Conditions of the Order;
2. Description of current site conditions, compliance with the 12 Standard Conditions, and prioritized remediation or corrective actions needed to bring the site into compliance with the requirements of the Order;
3. A monitoring and inspection plan to ensure BMPs used to protect and prevent impacts to water quality are being implemented as recommended by PWA (implementation monitoring), and that they are effective (effectiveness monitoring);
4. A water use plan, including water sources, water use and storage rights documentation, monthly water use documentation (quantity), and water conservation measures that are employed to prevent adverse impacts to water quality and water quantity in the watershed;
5. List of fertilizers and chemicals stored and used onsite, including a log of the frequency and quantity of these materials used.

4.0 STANDARD CONDITIONS CHECKLIST FOR APN 219-041-012 as of 11/10/2016 and 5/18/2017

The NCRWQCB has developed a set of 12 Standard Conditions that shall be followed and implemented to protect and improve water quality as required under the NCRWQCB's Order. For a property to become compliant with the Order, all 12 Standard Conditions must be fully satisfied.

The following section details the specific requirements listed and described in the Order for each of the 12 Standard Conditions. Each Standard Condition has from 1 to 6 sub-requirements (*listed in italic type*), each of which must be satisfied to protect water quality and comply with the Order. The checklist developed by PWA for your property indicates: 1) whether the Standard Condition or Standard Condition sub-requirement was adequately met as of the date of PWA's field inspection, 2) PWA's observations and comments related to the Standard Condition or Standard Condition sub-requirement, 3) whether a relevant photo has been taken and included in the WRPP, and 4) recommended corrective or remedial actions that need additional work to meet the requirements of the Order.

In Section 5 of this WRPP, PWA has provided a summary prioritized list (Table 1) of the recommended treatments and actions to be implemented by you to meet the requirements of the Order. PWA will consult with you to review the WRPP document and findings, and to set a preliminary schedule for implementation of the recommended measures for achieving compliance with the Order. Please note that some of the PWA recommended actions are based on regulatory requirements and deadlines, while others can be scheduled to fit the needs of both you and your property.

4.1 Standard Condition #1. Site Maintenance, Erosion Control and Drainage Features

a) Roads shall be maintained as appropriate (with adequate surfacing and drainage features) to avoid developing surface ruts, gullies, or surface erosion that results in sediment delivery to surface waters.

Meets condition? No

Observations/Comments: During the initial site inspection, roads on the Project Site were observed to have ruts and small gullies due to road segments lacking sufficient drainage features such as outsloping, rolling dips and ditch relief culverts (DRC). Access Road #2 had several sections of undrained road that concentrated runoff and caused surface erosion and sediment delivery to Stream Crossing #1 (SC #1) and other surface waters. During the mid-season site inspection, PWA observed multiple water bars had been installed on Access Road #2 to provide temporary road drainage until permanent drainage features can be installed. Minor gullying has occurred on Access Road #4, however sediment delivery to surface waters was not observed. Finally, much of the Project Site parcel is covered with second growth forests that likely conceal abandoned (legacy) forest roads used in past logging; these may or may not contain eroding or potential sediment sources that pose a threat to water quality.

Photos: MP #1: Photo 1a. MP #2: Photo 2a and 2b.

Corrective or remedial actions needed: Roads on the Project Site require the installation of multiple permanent road drainage structures (rolling dips and ditch relief culverts) to disconnect surface runoff from streams. See Figure 2 for proposed rolling dip locations. The installation of these drainage features is intended to disconnect concentrated road runoff that results in sediment delivery to surface waters at Road Surface Discharge Point #1 (RSDP #1) and RSDP #2. The proposed rolling dip location directly down-road of RSDP #2 is intended to disconnect road runoff that was observed to discharge upslope of the 1,010 gallon water tank. Although active sediment delivery to surface waters at this location was not observed, there is the potential for delivery to the Class II stream. Install additional rolling dips with adequate spacing intervals at any location where concentrated road runoff and gullying is observed.

Under the Order, all legacy roads on the Project Site are required to be inventoried and assessed for erosion sources and threats to water quality. There are significant second growth forest areas on the Project Site parcel. You will need to identify and map all legacy roads in these forested areas (if there are any) and conduct a rapid erosion assessment to identify existing or potential sediment sources or pollution threats, if any, along these routes. The most important sites to examine include road or skid trail crossings of stream channels and potentially unstable fillslopes where roads were built across steep hillslopes.

If existing or potential legacy sediment sources that could impact surface waters are identified in the field, they will need to be treated using erosion prevention and erosion control treatments (see Appendix A). Active sediment delivery was not observed on the few legacy logging roads we observed at the time of the Project Site inspections. Depending upon the proposed land use and whether the legacy logging roads are upgraded, decommissioned or not treated, appropriate road drainage features should be installed on these roads if active erosion and sediment delivery is observed.

Typical drawings included in Appendix H will provide guidance for proper road drainage feature construction. Ensure that the construction and outlet location of rolling dips allows dispersal and infiltration of collected road runoff. All rolling dips should be connected to the cutbank unless stated otherwise. If there is significant runoff collected in an inboard ditch, DRCs should be installed to drain the inboard ditch in addition to rolling dips which drain the road surface. PWA can assist with defining locations and with installation, if needed.

b) *Roads, driveways, trails, and other defined corridors for foot or vehicle traffic of any kind shall have adequate ditch relief drains or rolling dips and/or other measures to prevent or minimize erosion along the flow paths and at their respective outlets.*

Meets condition? No
Observations: See Standard Condition 4.1a observations and comments, above.
Photos: See Standard Condition 4.1a Monitoring Points and photos, above.
Corrective or remedial actions needed: See Standard Condition 4.1a corrective actions, above.

c) *Roads and other features shall be maintained so that surface runoff drains away from potentially unstable slopes or earthen fills. Where road runoff cannot be drained away from an unstable feature, an engineered structure or system shall be installed to ensure that surface flows will not cause slope failure.*

Meets condition? Yes
Observations/Comments: Concentrated road surface runoff was not observed to drain toward any potentially unstable slopes or earthen fills.
Photos: No
Corrective or remedial actions needed: None

d) *Roads, clearings, fill prisms, and terraced areas (cleared/developed areas with the potential for sediment erosion and transport) shall be maintained so that they are hydrologically disconnected, as feasible, from surface waters, including wetlands, ephemeral, intermittent and perennial streams.*

Meets condition? No
Observations: See Standard Condition 4.1a observations and comments, above.
Photos: See Standard Condition 4.1a Monitoring Points and photos, above.
Corrective or remedial actions needed: See Standard Condition 4.1a corrective actions, above.

e) Ditch relief drains, rolling dip outlets, and road pad or terrace surfaces shall be maintained to promote infiltration/dispersal of outflows and have no apparent erosion or evidence of soil transport to receiving waters.

Meets condition? No

Observations/Comments: The inlet of DRC #1 showed minimal aggradation of sediment and debris. This drainage structure was observed to receive low flow volumes, had been installed in a low gradient area with boards placed over the inlet to block windblown debris while allowing surface flow underneath. The outlet of DRC #1 also discharged onto a heavily vegetated, low gradient bench. Although sediment delivery was not observed at this location, due to the close proximity of the DRC outlet and flow path to the stream channel downslope of SC #1, this location should be monitored to verify future erosion and sediment delivery does not occur. Also see Standard Condition 4.1a observations and comments, above.

Photos: MP #3: Photo 3a and 3b. Also see Standard Condition 4.1a Monitoring Points and photos, above.

Corrective or remedial actions needed: Clean the inlet of DRC #1 and conduct regular inspections and maintenance to ensure conveyance of flow and debris, to prevent plugging and to monitor the potential for erosion below the outlet. Also see Standard Condition 4.1a corrective actions, above.

f) Stockpiled construction materials are stored in a location and manner so as to prevent their transport to receiving waters.

Meets condition? Yes

Observations/Comments: No stockpiled construction materials were observed on the Project Site with delivery potential to receiving waters.

Photos: No

Corrective or remedial actions needed: None

Standard Condition #1. - General comments and recommendations: Approximately 0.59 miles of road was inspected on the Project Site, comprised of a mid-slope driveway, multiple short access roads and two abandoned legacy logging roads. All roads occupy a mid-watershed location and PWA observed Access Roads #2, #3 and #4 exhibited surface erosion issues caused by a lack of road drainage structures and inadequate maintenance during the initial site inspection. During the mid-season site inspection, PWA observed that temporary road drainage features (waterbars) have been installed on Access Road #2 to mitigate erosion until permanent road drainage features can be installed.

4.2 Standard Condition #2. Stream Crossing Maintenance

a) Culverts and stream crossings shall be sized to pass the expected 100-year peak streamflow.

Meets condition? No

Observations/Comments: There is one culverted stream crossing (SC #1, Figure 2) on the Project Site that has an adequately sized 36-inch diameter culvert, based on drainage area calculations. A second stream crossing (SC #2, Figure 2) was observed on an abandoned legacy logging road directly downstream of Point of Diversion #2

(POD #2, Figure 2). This stream crossing is mostly washed out although approximately 40 yd^3 of road fill remains. Methods for determining culvert sizes to address the 100-year peak streamflow include the Rational Method, USGS Magnitude and Frequency Method and Flow Transference Method. All of the stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner, and Hagans, 2015), and the California Salmonid Stream Habitat Restoration Manual, Part X (Weaver et al., 2006).
Photos: MP #4: Photo 4a, 4b and 4c. MP #16: Photo 16a and 16b.
Corrective or remedial actions needed: When SC #1 is replaced to improve aquatic organism passage, ensure that the new culvert is appropriately sized to pass the expected 100-year peak streamflow. Based on communication with the client SC #2 and the associated road segment will be decommissioned to prevent further erosion and sediment delivery. A road-to-trail conversion from SC #2 may be a viable option to allow access to POD #2 for maintenance. If SC #2 is to be upgraded to a culverted stream crossing, a 30-inch diameter culvert is properly sized to pass the expected 100-year peak streamflow based on drainage area calculations.

b) *Culverts and stream crossings shall be designed and maintained to address debris associated with the expected 100-year peak streamflow.*

Meets condition? No
Observations/Comments: The one culverted stream crossing on the Project Site has an appropriately sized 36-inch diameter culvert to address debris associated with the expected 100-year peak streamflow. Stream Crossing #2 is a partially washed out unculverted fill crossing and due to a slightly constricted channel may require treatment to ensure debris is passed adequately. Also see Standard Condition 4.2a, above.
Photos: MP #4: Photo 4a.
Corrective or remedial actions needed: Although the culvert at SC #1 is appropriately sized and functioning to pass debris, due to the amount of woody debris and riparian vegetation observed upslope of the crossing a trash rack should be installed upstream of the culvert inlet to minimize plug potential. When SC #2 is decommissioned ensure that the channel width, or culvert diameter if upgraded, allows passage of debris associated with the expected 100-year peak streamflow. If SC #2 is upgraded to a culverted stream crossing a trash rack should be installed upstream of the culvert inlet due to the amount of woody debris and riparian vegetation observed. Also see Standard Condition 4.2a corrective or remedial actions, above. Typical drawings included in Appendix H provide guidance for proper trash rack installation.

c) *Culverts and stream crossings shall allow passage of all life stages of fish on fish-bearing or restorable streams, and allow passage of aquatic organisms on perennial or intermittent streams.*

Meets condition? No
Observations/Comments: The one culverted stream crossing on the Project Site (SC #1) has been installed high in the road fill with an armored fillslope and channel below the outlet. Due to the position of the outlet relative to the channel and outboard fillslope, this stream crossing appears to impede passage of aquatic organisms. Stream

Crossing #2 has a headcut at the inboard edge of the road which may impede passage of aquatic organisms.
Photos: MP #4: Photo 4a, 4b and 4c. MP #16: Photo 16b.
Corrective or remedial actions needed: Replace the existing culvert at SC #1 with a 36-inch diameter culvert installed at the natural stream grade and horizontally aligned with the natural stream channel to allow passage of aquatic organisms. When SC #2 is decommissioned ensure that the stream crossing will allow aquatic organism passage where possible. If SC #2 is upgraded to a culverted stream crossing ensure that the culvert is installed to allow passage of aquatic organisms. Also see Standard Condition 4.2a, above, for treatment recommendations regarding SC #2.

d) *Stream crossings shall be maintained so as to prevent or minimize erosion from exposed surfaces adjacent to, and in the channel and on the banks.*
Meets condition? No
Observations/Comments: There was some road surface and bank erosion observed at the one culverted stream crossing on the Project Site and it appears adequate maintenance was not being performed. Stream Crossing #2 is a partially washed out crossing on an abandoned legacy logging road and adequate maintenance has not been performed.
Photos: MP #1: Photo 1a. MP #16: Photo 16a and 16b.
Corrective or remedial actions needed: Monitor and perform adequate maintenance on SC #1 and SC #2 as needed to prevent or minimize erosion following appropriate BMPs listed in Appendix A. See Standard Condition 4.2a, above, for additional treatment recommendations regarding SC #2.

e) *Culverts shall align with the stream grade and natural stream channel at the inlet and outlet where feasible.*
Meets condition? No
Observations/Comments: The culverted stream crossing (SC #1) on the Project Site is not installed at grade but appears to be horizontally aligned with the natural stream channel. Stream flow was observed to go subsurface upstream of the inlet and emerging at the base of the outboard fillslope below the culvert outlet. Over time subsurface flow may undermine the culvert however the crossing appeared stable during the Project Site inspection.
Photos: MP #4: Photo 4a, 4b and 4c.
Corrective or remedial actions needed: Upgrade SC #1 with a properly installed 36-inch diameter culvert that aligns with the natural channel grade and stream alignment. Excavate aggraded material upslope of the culvert inlet down to the natural channel grade to ensure streamflow passes through the culvert and will not undermine the crossing. Due to the stability of the crossing at the present time, adequate culvert size, armored outboard fillslope and minimal erosion observed, replacement and realignment of the culvert is a moderately low priority. If SC #2 is upgraded to a culverted stream crossing ensure that the culvert is vertically and horizontally aligned with the natural stream channel where feasible. The stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner, and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver et al., 2006).

f) Stream crossings shall be maintained so as to prevent stream diversion in the event that the culvert/crossing is plugged, and critical dips shall be employed with all crossing installations where feasible.

Meets condition? Yes

Observations/Comments: Both stream crossings on the Project Site do not have diversion potential.

Photos: No

Corrective or remedial actions needed: When the culvert at SC #1 is upgraded, and if SC #2 is upgraded to a culverted stream crossing, ensure that the rebuilt crossings are constructed to prevent stream diversion in case of a plugged culvert or exceptionally high flood flow. This can be accomplished by adequately dipping the road through the crossings or installing a critical dip on the down road hinge line.

Standard Condition #2. - General comments and recommendations: Obtain all necessary agreements and permits prior to commencing work in any watercourse or at any stream crossing. These may include, but not be limited to: California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA) 1602, NCRWQCB Appendix D Tier 2 Surface Water Correction Workplan (SWCW) Notification and Army Corps of Engineers (ACOE) 404 Permit.

4.3 Standard Condition #3. Riparian and Wetland Protection and Management

a) For Tier 1 Dischargers, cultivation areas or associated facilities shall not be located within 200 feet of surface waters. While 200 foot buffers are preferred for Tier 2 sites, at a minimum, cultivation areas and associated facilities shall not be located or occur within 100 feet of any Class 1 or 2 watercourse or within 50 feet of any Class 3 water course or wetlands.

Meets condition? No

Observations/Comments: Under the Order, all cultivation areas AND associated facilities that are located within 50-feet of a Class III watercourse, or within 100-feet of a Class I or Class II watercourse are required to be removed from the buffer, and the site is to be restored. There are no provisions for exceptions, regardless of the level of their potential threat to water quality. Since domestic water is sourced from POD #1 this stream is categorized as a Class I stream and will require a 100-foot riparian buffer zone.

1. There are two 3,000-gallon water tanks and one 300-gallon water tank downslope of Cultivation Area #1 (CA #1) and near RSDP #2 that are within the 100-foot riparian setback required for a Class I stream (Figure 2).
2. A pile of plant stalks is located within the 100-foot riparian buffer zone of a Class I stream downslope of the water tanks mentioned above with the potential to enter surface waters.
3. A pile of plant stalks is located within the 50-foot riparian buffer zone of a Class III stream near the Pond Spillway Culvert outlet with the potential to enter surface waters.

4. A pile of plant stalks is located in close proximity to the Class II stream downslope of SC #1 and DRC #1 with the potential to enter surface waters.
5. A pile of plant stalks is located within the 100-foot riparian buffer zone of a Class II stream northeast of the drying sheds at CA #2 with the potential to enter surface waters.
6. The two drying sheds, a generator shed, the northeast portion of CA #2, and a pile of potting soil near DRC #1 are also located within the 100-foot riparian setback for a Class II stream.
7. During the mid-season site inspection, PWA observed that all small fuel cans were placed in an adequately sized secondary containment basin in one location. Although not a direct threat to water quality the location of the new secondary containment basin was located on the west side of the generator shed and within the 100-foot riparian buffer setback of the Class II stream.

The northeast portion of CA #2, the two drying sheds, the generator shed and the new secondary containment basin were observed to have minimal impact to the riparian buffer other than occupying a previously disturbed area. The slopes where these structures are located drains away from the Class II stream and aside from nutrient mobilization from overwatering or uncovered potting soil over the wet season, minimal impacts to water quality are expected. The generator shed currently has a concrete floor and will be equipped with adequate secondary containment until the shed is removed. Appropriate BMPs can be implemented at these locations to help mitigate potential threats to surface waters. PWA did not observe any other impacts to riparian areas as part of cultivation activities on this parcel.
Photos: MP #5: Photo 5a and 5b. MP #6: Photo 6a - 6d. MP #7, MP #9: Photo 7a. MP #8: Photo 8a. MP #10: Photo 10a. MP #11: Photo 11a. MP #15: Photo 15b.
Corrective or remedial actions needed: Under the Order, all cultivation areas and associated facilities that are located within 50-feet of a Class III watercourse, or within 100-feet of a Class I or Class II watercourse, are required to be removed from the buffer area, and the site is to be restored.

1. Relocate the two 3,000-gallon water tanks and one 300-gallon water tank to a suitable location outside of the 100-foot riparian buffer zone to the Class II watercourse. A proposed relocation area for these tanks was observed during the Project Site inspection that is outside of the riparian buffer zone and located in a stable area.
2. Collect and remove all plant stalks and any other cultivation-related waste at the four MP #6 locations, and any other location on the Project Site, and store indoors, fully tarp or dispose of appropriately outside of all 100-foot stream buffers and where there is no threat of delivery to surface waters or leaching to groundwater.
3. Potting soil located near the inlet of DRC #1 should be relocated outside of the riparian buffer zone and should also be tarped until relocation is complete to prevent nutrient mobilization over the wet season.
4. PWA recommends relocating the northeastern portion of CA #2, the two drying sheds, the generator shed and the pile of potting soil near DRC #1 that are located within the 100-foot riparian setback of the Class II watercourse.

5. Relocate the new secondary containment basin to a suitable location outside of the 100-foot riparian setback of the Class II watercourse.

All spent soils, cultivation-related waste and refuse at these areas should be removed and stored or recycled appropriately where they do not have the potential to pollute surface waters or leach nutrients into groundwater. Once all materials and structures have been removed, the disturbed buffer areas at all these sites should be seeded and mulched for erosion control and replanted with native riparian vegetation.

b) *Buffers shall be maintained at natural slope with native vegetation.*

Meets condition? No

Observations/Comments: The placement of the two 3,000-gallon water tanks and one 300-gallon water tank have minimally impacted native vegetation and required minor grading of the natural hillslope. The placement of structures and raised beds at CA #2 had occupied existing disturbed areas according to the landowner. The drying sheds upslope of CA #2 are on pier and post foundations and have minimal impact on the natural slope.

Photos: MP #5: Photo 5a and 5b. MP #7, MP #9: Photo 7a. MP #8: Photo 8a. MP #10: Photo 10a. MP #11: Photo 11a.

Corrective or remedial actions needed: After relocation of the two 3,000-gallon water tanks, one 300-gallon water tank, the northeastern portion of CA #2 and the additional items listed in Standard Condition 4.3a, above, PWA recommends seeding and mulching for erosion control and replanting the impacted area with native riparian vegetation.

c) *Buffers shall be of sufficient width to filter wastes from runoff discharging from production lands and associated facilities to all wetlands, streams, drainage ditches, or other conveyances.*

Meets condition? No

Observations/Comments: See Standard Condition 4.3a and 4.3b comments, above.

Photos: See Standard Condition 4.3a Monitoring Points and photos, above.

Corrective or remedial actions needed: See Standard Condition 4.3a and 4.3b corrective actions, above.

d) *Riparian and wetland areas shall be protected in a manner that maintains their essential functions, including temperature and microclimate control, filtration of sediment and other pollutants, nutrient cycling, woody debris recruitment, groundwater recharge, streambank stabilization, and flood peak attenuation and flood water storage.*

Meets condition? No

Observations/Comments: See Standard Condition 4.3a and 4.3b comments, above.

Photos: See Standard Condition 4.3a Monitoring Points and photos, above.

Corrective or remedial actions needed: See Standard Condition 4.3a and 4.3b corrective actions, above.

Standard Condition #3. - General comments and recommendations: Under current conditions, certain cultivation areas and/or other associate facilities on this Project Site do not meet the setback or buffer area requirements to be achieved and maintained under the

NCRWQCB WOWD Order (see Standard Condition 4.3a, above). However, if you are participating in the County Land Use planning and permitting process, Humboldt County Planning and Building Department (County) also requires that no infrastructure be moved at this time (until you receive your county land use permit and get approval from the county) to maintain consistency in the process of evaluating and approving a pending land use application on file for properties in Humboldt County.

The Schedule of Corrective Actions listed in Table 1 of this WRPP specifies the date by which cultivation areas and associated facilities now located within stream buffers should be removed from the riparian buffer areas. That WRPP Table 1 schedule and date of removal should be followed by everyone who is not a part of the County land use planning process.

If you are applying under County's land use permitting process and have been specifically directed not to remove or move infrastructure, the following interim measures shall be applied until its removal has been approved:

(1) Obtain a written note from the County stating that you are directed not to remove the infrastructure within stream buffer areas on the Project Site; keep that note with your WRPP.
(2) All cultivation waste and spent soils should be removed and stored outside the buffer areas during the winter period as per recommendations included elsewhere in this WRPP.
(3) All petroleum products, fertilizers, and other chemicals that are stored within the buffer area(s) must be moved to proper storage facilities outside stream buffers elsewhere on the Project Site, and as recommended elsewhere in the WRPP.
(4) Use timed or volume limited drip irrigation for all watering of cultivation areas that fall within stream buffer areas.
(5) Minimize soil disturbances and bare earth areas within these cultivation areas; seed and mulch all bare earth prior to October 31 each year.
(6) Maintain native grassy buffers and/or dense riparian vegetation between these cultivation areas and the potential receiving waterbody.
(7) Prior to October 31, planting beds and planting pots containing spent soils or amendments should be either 1) fully tarped or 2) planted with heavy cover crops during the wet season to minimize surface runoff and leaching of nutrients. If cover crops cannot be maintained due to cold weather, the beds/pots should be fully tarped.
(8) Regularly monitor the subject garden area and related facilities to assure the interim measures are effective and adaptively manage the area to minimize or eliminate surface runoff and potential impacts to water quality.

4.4 Standard Condition #4. Spoils Management

a) Spoils shall not be stored or placed in or where they can enter any surface water.

Meets condition? No

Observations/Comments: A pile of uncovered, partially cover cropped potting soil was located in close proximity to the inlet of DRC #1 with the potential to enter surface waters.

Photos: MP #11: Photo 11a.

Corrective or remedial actions needed: Relocate the pile of potting soil near the inlet of DRC #1. Once it is moved, tarp the pile or apply additional cover crops and install a straw wattle around the perimeter to prevent delivery to surface waters.

b) *Spoils shall be adequately contained or stabilized to prevent sediment delivery to surface waters.*

Meets condition? No
Observations/Comments: See Standard Condition 4.4a comment, above.
Photos: See Standard Condition 4.4a Monitoring Points and photos, above.
Corrective or remedial actions needed: See Standard Condition 4.4a corrective or remedial actions, above.

c) *Spoils generated through development or maintenance of roads, driveways, earthen fill pads, or other cleared or filled areas shall not be sidecast in any location where they can enter or be transported to surface waters.*

Meets condition? Yes
Observations/Comments: No spoils generated through development or maintenance of roads with the potential for delivery to surface waters were observed on the Project Site.
Photos: No
Corrective or remedial actions needed: None

4.5 Standard Condition #5. Water Storage and Use

a) *Size and scope of an operation shall be such that the amount of water used shall not adversely impact water quality and/or beneficial uses, including and in consideration with other water use operations, instream flow requirements and/or needs in the watershed, defined at the scale of a HUC 12 watershed or at a smaller hydrologic watershed as determined necessary by the Regional Water Board Executive Officer.*

Meets condition? Unknown
Observations/Comments: The client diverts surface water for domestic and irrigation uses from one POD located on a spring (POD #1; Figure 2) at the headwaters of a Class I stream. An off-stream pond that is fed by rain and spring flow is used for emergency fire protection and is not used for irrigation. Based on the 7,440 ft^2 cultivation area and the amount of water storage currently available (13,000 gallons) in water tanks, it appears that water storage generated during the rainy season is not sufficient for the landowner to forbear (not divert) during the dry season. Total water storage in tanks is estimated to be approximately 61,000 gallons short of that needed to supply dry season irrigation without diverting surface waters (see preliminary water budget analysis in General Comments and Recommendations, below). Additional water storage is needed. This preliminary Water Budget needs to be refined by water monitoring to determine how much additional storage is needed.
Photos: No
Corrective or remedial actions needed: Preliminary calculations indicate that additional water storage will be needed for this Project Site. A precise Water Budget should be developed and refined by water monitoring to quantify the exact volume of

water storage you will need for your operations so as to forbear and not divert surface waters during the low flow period from May 15 through October 31 each year. A Water Monitoring Plan will need to be implemented as you are required to measure and document all the surface water you divert, store and use in your operations. Install float valves on storage tanks to prevent overflow and install water monitoring flow meters on your surface water diversions and water tank distribution lines. The water data for this Project Site is required to be reported to the Water Board on or before each March 31 for the preceding calendar year. See Appendix D for water monitoring data forms.

b) *Water conservation measures shall be implemented. Examples include use of rainwater catchment systems or watering plants with a drip irrigation system rather than with a hose or sprinkler system.*

Meets condition? Yes
Observations/Comments: A drip irrigation system with timers is used on the Project Site for water conservation.
Photos: MP #14: Photo 14a.
Corrective or remedial actions needed: Additional water conservation measures should continue to be investigated and employed to minimize surface water diversion and use. These include: volume-limited drip irrigation; irrigation scheduling (watering in the early morning and evening), incorporating water holding amendments and native soil during the initial soil preparation at the start of the season; surface mulching pots and planting beds to minimize evaporation; and planting plants in the ground instead of in above-ground pots. Rainwater harvesting during the wet season should be evaluated and employed to limit or eventually completely eliminate surface water diversions during the dry season.

c) *For Tier 2 Dischargers, if possible, develop off-stream storage facilities to minimize surface water diversion during low flow periods.*

Meets condition? No
Observations/Comments: Based on the total size of the cultivation area and existing off-stream water storage, it appears that water storage is insufficient to minimize or eliminate surface water diversions during the dry season. Total water storage is estimated to be approximately 61,000 gallons short of that needed to supply dry season irrigation without diverting surface waters (see preliminary water budget analysis in General Comments and Recommendations, below). A rain and spring fed off-stream pond exists southeast of SC #1 that is used for emergency fire suppression and is not used for irrigation or domestic purposes at this time. PWA recommends researching the feasibility of using the off-stream pond to supplement irrigation water if possible.
Photos: No
Corrective or remedial actions needed: Develop and refine a Water Budget for your Project Site to determine if sufficient water storage volumes exist for all your water needs during the dry season. Evaluate the feasibility, designs, locations, and permitting requirements for adding substantial (≥61,000 gallons) additional water storage to meet dry season forbearance requirements, including rainwater fed rigid water tanks and/or one or more additional rainwater fed, off-stream ponds. Increase water storage to limit

diversion of surface flow to the winter months and completely eliminate diversions needed for irrigation activities during the dry season from May 15 through October 31.

d) Water is applied using no more than agronomic rates.

Meets condition? Unknown

Observations/Comments: According to the cultivator, water is applied sparingly due to water scarcity, though application was not observed during the Project Site inspections.

Photos: No

Corrective or remedial actions needed: To verify conformance with this Standard Condition, start measuring and recording your water usage using flow meters on a per plant basis, based on type and size of plant pot, full term versus short season (light deprivation) plant, and type of irrigation. Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration is avoided. This data will help you refine a Water Budget for your operation and determine agronomic rates of watering.

e) Diversion and/or storage of water from a stream should be conducted pursuant to a valid water right and in compliance with reporting requirements under Water Code section 5101.

Meets condition? No

Observations/Comments: The water used for irrigation on the Project Site is diverted from a spring at the headwaters of a Class I stream (POD #1, Figure 2). An Initial Statement of Diversion and Use (ISDU) application and a Small Irrigation Use (SIU) Registration has been submitted to the State Water Board - Division of Water Rights for this surface water diversion.

Photos: No

Corrective or remedial actions needed: Water diversion and water storage requires valid water rights documentation. As opposed to employing one or more surface water diversions and securing various water rights, consider obtaining irrigation water for your agricultural needs by developing rainwater capture systems to fill rigid water tanks and/or one or more off-stream, rainwater-fed ponds, or drilling a well.

Domestic water rights: If you plan to continue flow diversions for your domestic water needs, or to use the pond as a source of water for fire suppression, you will need to file, obtain, and maintain water rights for your parcel or provide other documentation of your legal water rights. Apply for the Small Domestic Use Appropriation (SDU) for the stream diversion to cover your domestic use requirements such as drinking, bathing, cooking and fire control. Appropriate domestic water rights applications to be filed with the State Water Resources Control Board (SWRCB) include:

• Small Domestic Use (SDU) Appropriation Registration
http://www.waterboards.ca.gov/waterrights/publications_forms/forms/docs/sdu_registration.pdf

Submit annual water diversion and use volumes to the NCRWQCB by March 31 for the preceding calendar year, and to the State Water Resources Control Board, Division of Water Rights (SWRCB, DWR) for supplemental reporting required for the Annual Statement of Diversion and Use (ISDU) by June 30 of each year.

Fish and Wildlife impacts: While not a true water right, if you are directly diverting water from a jurisdictional spring or stream, pumping water from a well, or capturing surface water in a pond, you will need to obtain a consultation with California Department of Fish and Wildlife (CDFW) staff to determine if you are required to file a CDFW Lake or Streambed Alteration Agreement (LSAA). The Agreement will be needed to cover your stream diversion, as well as the pond and the stream crossing upgrade treatments.

• Lake or Streambed Alteration Agreement (LSAA).
https://www.wildlife.ca.gov/Conservation/LSA

f) Water storage features, such as ponds, tanks, and other vessels shall be selected, sited, designed, and maintained so as to insure integrity and to prevent release into waters of the state in the event of a containment failure.

Meets condition? No

Observations/Comments: The off-stream pond located southeast of SC #1 shows minor signs of instability of the southwest portion of the pond embankment. Tension cracks were observed, however these are vegetated, appear inactive and show minimal offset. This pond was inherited from a previous landowner and has been in place for approximately eight years. It is not in use by the current landowners other than for emergency fire suppression, which technically makes it a source of domestic water supply, although PWA recommends considering whether the pond could be used as a source of irrigation water and storage. As mentioned in Standard Condition 4.5e, above, this water source will need to be included in the SDU application. The outlet of the pond spillway culvert is partially armored with rock but, due to the length of time the pond and pond spillway culvert has been in place and the amount of spring flow and rainwater collected in the pond, the flow path below the outlet should now be classified as a Class III stream. The outlet of the pond spillway culvert may deliver sediment to the Class II stream downslope of SC #1. The majority of the water storage tanks utilized on this Project Site are located on stable slopes far from any streams making it unlikely that water storage structure failures could result in delivery of runoff and eroded sediment to the stream network. The 3,000-gallon water tanks and the 300-gallon water tank downslope of CA #1 are located in close proximity to the Class I stream but have been installed on a stable pad. Regardless, their location within the 100-foot buffer to the stream requires that they be moved outside that buffer under the Order.

Photos: MP #12: Photo 12a and 12b. MP #13: Photo 13a and 13b.

Corrective or remedial actions needed: PWA recommends having the off-stream pond embankment, spillway culvert, culvert outlet and spillway inspected by a licensed and qualified engineer to determine the stability of the embankment, likelihood for catastrophic containment failure and to prescribe recommended treatments if needed. The outlet of the pond spillway culvert may need to be treated, such as installing

additional rock armoring at the outlet and channel below, to prevent further incision, sediment delivery and undermining of the pond embankment erosion below the outlet continues. A full-round downspout may need to be attached to the outlet of the pond spillway culvert to discharge pond overflow at or below the base of the pond embankment and rock armor may need to be installed at the culvert or downspout outlet as an energy dissipater. If pond upgrading or decommissioning is to occur, you must obtain all necessary permits prior to commencement of construction activities. You should continue to monitor the off-stream pond, pond embankment, and spillway culvert, culvert outlet and Class III channel below for further signs of instability or potential future erosion until a licensed engineer can inspect the site. If pond upgrading or decommissioning is to occur, obtain all necessary permits prior to commencement of construction activities (e.g., CDFW LSAA). The three (3) water tanks located at MP #5 will need to be moved out of the 100-foot stream buffer, and to a stable site where their potential rupture or failure would not impact any streams.

Standard Condition #5 - General comments and recommendations: Currently, the only source of water for both irrigation and domestic use is located on a spring (Figure 2) at the headwaters of a Class I stream. Currently on the Project Site there is 13,000 gallons of water storage capacity in hard plastic tanks. At this time it appears that the water storage capacity contained within this Project Site does not fully satisfy the demand that would be expected from the cultivation area (~7,440 ft^2) during the dry season (May 15th through October 31st). A formal Water Budget will be developed and refined by water monitoring to determine if water storage is adequate for dry season operation.

Based on water use estimates from the Humboldt County Planning and Building Department, adequate storage does not currently exist on the Project Site. These estimates suggest that 10 gallons of water is needed for every square foot of cultivation to observe the forbearance period. Based on the existing cultivation area of 7,440 ft^2, approximately 74,400 gallons of storage would be needed to observe the 150 day forbearance period. Using these estimates, the current amount of water storage (13,000 gallons) is not adequate for the size of the operation. Rough water use estimates provided by the client, however, suggest that approximately 97,200 gallons is needed for irrigation activities on the Project Site. This estimate still leaves the Project Site at a considerable deficit for filling summer irrigation needs. If water storage is not sufficient for current operations, then additional storage will need to be added so the diverter can completely forbear (not divert) during the dry season. In this way, as per the Order, it can then be assumed that water use will not impact downstream water quality or beneficial uses.

The stability of the off-stream pond embankment is not known, but potentially in question, at this time and the embankment should be inspected by a certified engineer. The outlet of the pond spillway culvert should also be evaluated for possible redesign and repairs, and then monitored to ensure no future erosion is occurring and the culvert and embankment are not being undermined.

The spring box at POD #2 is currently in use by the client for energy production and not for irrigation purposes. If the client decides to continue using this spring box for energy

production, the POD will need to be properly documented and registered with CDFW as a surface water diversion.

A LSAA will need to be submitted to the CDFW for the two surface water diversions, the pond, and prior to any stream crossing upgrade or decommissioning work that has been prescribed on the Project Site.

PWA highly recommends, and state agencies may require, that you install flow meters on your surface water diversion, water tanks, and/or on your distribution lines, to accurately document the timing and volume of your water diversion and use. The client will need to document the amount of surface water that is diverted, stored in tanks, and used for irrigation and other purposes through time. PWA has created a simple log sheet to help you monitor your water usage (see Appendix D).

4.6 Standard Condition #6. Irrigation Runoff

a) *Implementing water conservation measures, irrigating at agronomic rates, applying fertilizers at agronomic rates and applying chemicals according to the label specifications, and maintaining stable soil and growth media should serve to minimize the amount of runoff and the concentration of chemicals in that water. In the event that irrigation runoff occurs, measures shall be in place to treat/control/contain the runoff to minimize the pollutant loads in the discharge. Irrigation runoff shall be managed so that any entrained constituents, such as fertilizers, fine sediment and suspended organic particles, and other oxygen consuming materials are not discharged to nearby watercourses. Management practices include, but are not limited to, modifications to irrigation systems that reuse tailwater by constructing off-stream retention basins, and active (pumping) and or passive (gravity) tailwater recapture/redistribution systems. Care shall be taken to ensure that irrigation tailwater is not discharged towards or impounded over unstable features or landslides.*

Meets condition? Yes

Observations/Comments: No evidence of irrigation runoff exhibiting active delivery to nearby watercourses was observed on the Project Site. The greenhouse and raised beds at the eastern portion of CA #2 are in close proximity to a Class II stream and have the potential for nutrient mobilization and delivery to SC #1 via an inboard ditch in the event of excessive irrigation or runoff during the wet season. Appropriate BMPs should be implemented at these locations to protect water quality. Because irrigation is limited to a drip system and precise hand watering, there is a high degree of control. With the exception of the areas mentioned above at CA #2, the remaining cultivation areas are located greater than 100 feet away from the nearest stream. Any runoff that theoretically may occur at these locations could not travel far due to the low gradient topography and adequate vegetative buffer.

Photos: No

Corrective or remedial actions needed: Implement appropriate BMPs at the locations mentioned above at CA #2 to prevent nutrient delivery to surface waters in the event of excessive irrigation or runoff during the wet season.

Standard Condition #6 - General comments and recommendations: According to the Order, irrigation and fertilization shall occur at agronomic rates and chemicals shall be applied according to the label instructions and specifications. Agronomic rates are those rates of application of water, fertilizers and other amendments that are sufficient for utilization by the crop being grown, but not at a rate that would result in surface runoff or infiltration below the root zone of the crop being grown.

In the event that irrigation runoff occurs or could occur, you shall ensure that contaminated runoff does not enter nearby watercourses. This can be accomplished by constructing or designing containment measures, including sediment basins, berms, infiltration ditches and/or other Best Management Practices (BMPs), as needed, to contain and control surface runoff (see Appendix A).

4.7 Standard Condition #7. Fertilizers and Soil Amendments

a) *Fertilizers, potting soils, compost, and other soils and soil amendments shall be stored in locations and in a manner in which they cannot enter or be transported into surface waters and such that nutrients or other pollutants cannot be leached into groundwater.*

Meets condition? No

Observations/Comments: A pile of potting soil is stored near the inlet of DRC #1 with the potential to be transported to surface waters. The majority of fertilizers and amendments are stored inside a storage shed or tarped during the wet season, however, potting soil in planting beds and in above ground pots at both cultivation areas was observed with the potential for nutrient mobilization to surface waters or leaching into groundwater if left uncovered over the wet season.

Photos: MP #10: Photo 10a. MP #11: Photo 11a. MP #14: Photo 14a.

Corrective or remedial actions needed: Potting soil located near the inlet of DRC #1 should be relocated outside of the 100-foot riparian buffer zone and should also be tarped until relocation is complete to prevent nutrient mobilization. Spent potting soil located on the Project Site should be tarped or have heavy cover crops planted to prevent nutrient mobilization over the wet season. Any fertilizers, potting soils and soil amendments on the Project Site shall continue to be stored indoors, under a roof or tarped during the wet season.

b) *Fertilizers and soil amendments shall be applied and used per packaging instructions and/or at proper agronomic rates.*

Meets condition? Unknown

Observations/Comments: Based on verbal communication with the cultivator, the recommended application rates are being followed.

Photos: No

Corrective or remedial actions needed: To confirm compliance with this Standard Condition, you need to keep detailed records of the type, timing and volume of fertilizers and/or other soil amendments you use in your operations. They can be recorded on log sheets such as those provided in Appendix E. Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration is avoided.

c) Cultivation areas shall be maintained so as to prevent nutrients from leaving the site during the growing season and post-harvest.

Meets condition? No

Observations/Comments: See Standard Condition 4.7a observations and comments, above.

Photos: See Standard Condition 4.7a Monitoring Points and photos, above.

Corrective or remedial actions needed: To prevent nutrient mobilization or leaching, you should: 1) keep new or spent potting soils and amendments inside or under a roof, 2) tarp any soils or amendments that are kept outside over the wet season to prevent mobilization or leaching of nutrients, or 3) plant dense cover crops in spent pots, holes and beds to enrich soil and lock up nutrients. If dense cover crops cannot be kept alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients. Also see 4.7a corrective or remedial actions, above.

Standard Condition #7 - General comments and recommendations: Most of the fertilizers, potting soil and soil amendments on the Project Site were observed to be either stored indoors or covered when stored outdoors. Potting soil in raised beds, above ground pots and piled on the ground surface was observed to be left uncovered with the potential for mobilization or leaching of nutrients if not covered over the wet season. Fertilizers and amendments were applied according to packaging instructions, and usage is diminished or eliminated toward the end of the growing season.

Under the Order, you are required to keep track of the timing and volume of fertilizers and other soil amendments that are applied. This can be done using a simple log form we have provided in Appendix E.

Plant cover crops in spent pots and holes to enrich soil and lock up nutrients. If you plan to burn the plant stalks, you'll first need to obtain burn permits from CAL FIRE and the North Coast Unified Air Quality Management District (or relevant jurisdiction for your area). You can then incorporate the ash into the pots or planting holes prior to planting the cover crop to add minerals and recycle the ash.

Do not store fertilizers and/or soil amendments with petroleum products. See guidelines for hazardous material storage in Appendix G.

4.8 Standard Condition #8. Pesticides/Herbicides

a) At the present time, there are no pesticides or herbicides registered specifically for use directly on cannabis and the use of pesticides on cannabis plants has not been reviewed for safety, human health effects, or environmental impacts. Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use to include use on cannabis or exempt from registration requirements as a minimum risk pesticide under FIFRA section 25(b) and California Code of Regulations, title 3, section 6147. For the purpose of compliance with conditions of this

Order, any uses of pesticide products shall be consistent with product labelling and any products on the site shall be placed, used, and stored in a manner that ensures that they will not enter or be released into surface or ground waters.

Meets condition? Unknown

Observations/Comments: Pesticides and/or herbicides were not observed on the Project Site at the time of our inspection.

Photos: No

Corrective or remedial actions needed: All pesticides, herbicides and related materials (e.g., fungicides) must be used and applied consistent with product labeling. When present, these chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters.

To verify conformance with this Standard Condition, you are required to keep records of the type, timing and volume of pesticides, herbicides and related chemicals that are applied your operations. This can be done using a simple log form, such as the one included in Appendix F.

Additionally, for any pesticide use you must comply with any Pesticide Registration Requirements. See Appendix E2 included in the NCRWQCB Order, or on their web site at:
http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/150728_Appendix_E2_DPR_MJ%20Pesticide%20Handout.pdf

Standard Condition #8 - General comments and recommendations: For the health of the environment and your workers, you are encouraged to utilize organic or biologic controls, rather than highly toxic petro-chemicals, to prevent pest and mildew problems. Several safe alternatives are available.

All pesticides, herbicides and related materials (e.g., fungicides) must be used and applied consistent with product labeling. When present, these chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters.

Do not store pesticides/herbicides with petroleum products. See guidelines for hazardous material storage in Appendix G.

4.9 Standard Condition #9. Petroleum Products and other Chemicals

a) *Petroleum products and other liquid chemicals, including but not limited to diesel, biodiesel, gasoline, and oils shall be stored so as to prevent their spillage, discharge, or seepage into receiving waters. Storage tanks and containers must be of suitable material and construction to be compatible with the substance(s) stored and conditions of storage such as pressure and temperature.*

Meets condition? No

Observations/Comments: There are multiple small generators on the Project Site that lack adequate secondary containment. One of the generators is located in an enclosed

shed with a concrete floor within the riparian buffer zone of a Class II watercourse. The generator storage shed does not have a raised lip, spill pan or other adequate secondary containment structure in place. During the mid-season site inspection, PWA observed that all small fuel cans were placed in an adequately sized secondary containment basin near the generator shed. Note that when petroleum products are onsite they will need to be stored under cover, off the ground and in a secondary containment basin (tote, tub, basin, etc.) capable of containing the entire stored volume.

Photos: MP #8: Photo 8a. MP #15: Photo 15a and 15b.

Corrective or remedial actions needed: Place any additional small fuel cans, generators, diesel tanks, gasoline powered garden equipment and any other items containing petroleum products not already stored properly in adequate secondary containment basins and store in a safe and secure location out of the elements and outside of any applicable riparian buffer zones. As the location of the new secondary containment basin is within the 100-foot riparian setback of a Class II stream PWA recommends relocating this item to a suitable location outside of the 100-foot riparian setback. Equip the generator shed at CA #2 with a raised lip around the entire perimeter or another adequate secondary containment structure, or use secondary containment for all sources of petroleum.

b) *Above ground storage tanks and containers shall be provided with a secondary means of containment for the entire capacity of the largest single container and sufficient freeboard to contain precipitation.*

Meets condition? No

Observations/Comments: Two 500-gallon above ground fuel tanks exist on the Project Site southeast of CA #1. These fuel tanks were inherited from a previous landowner, are not in use, and were reported to be empty. The tanks are properly contained in both an adequate secondary containment basin and within a partially enclosed shed. During the mid-season site inspection, PWA observed that both above ground fuel tanks were equipped with dated signs stating that they were not in use and the filler tubes equipped with padlocks to ensure they remain out of use. Also see Standard Condition 4.9a observations and comments, above.

Photos: Photo 17a and 17b. Photo 18a and 18b. Also see Standard Condition 4.9a Monitoring Point and photos, above.

Corrective or remedial actions needed: Although it is not specifically required by the Order, PWA recommends verifying that both tanks are empty or removing and properly disposing of the remaining fuel if they are not empty. The landowner should then modify the sign on each tank stating "Tank empty, not in use" along with the date the sign was posted. A new photograph of each modified sign posted on both tanks should also be taken as documentation. Alternatively, the tanks could be decommissioned and hauled to a licensed disposal facility. Also see Standard Condition 4.9a corrective actions, above.

c) *Dischargers shall ensure that diked areas are sufficiently impervious to contain discharged chemicals.*

Meets condition? Not applicable

Observations/Comments: No diked areas were observed on the Project Site.

Photos: No

Corrective or remedial actions needed: None

d) *Discharger(s) shall implement spill prevention, control, and countermeasures (SPCC) and have appropriate cleanup materials available onsite.*

Meets condition? Yes
Observations/Comments: A spill prevention cleanup kit has been obtained and is kept onsite to help clean up small spills.
Photos: Photo 19a.
Corrective or remedial actions needed: Keep the spill prevention cleanup kit readily available to clean up small spills. Spill kits should be located where fuel is stored and refueling occurs.

e) *Underground storage tanks 110 gallons and larger shall be registered with the appropriate County Health Department and comply with State and local requirements for leak detection, spill overflow, corrosion protection, and insurance coverage.*

Meets condition? Not applicable
Observations/Comments: No underground storage tanks were observed on the Project Site.
Photos: No
Corrective or remedial actions needed: None

Standard Condition #9 - General comments and recommendations: Place any additional fuel cans and generators not already stored properly in adequate secondary containment basins. Equip the generator shed near CA #2 with an adequate secondary containment basin. Note that when petroleum products are onsite they will need to be stored under cover, off the ground and in a secondary containment basin (tote, tub, basin, etc.).

The State of California requires an owner or operator of a facility to complete and submit a Hazardous Material Business Plan (HMBP) if the facility handles a hazardous material or mixture containing a hazardous material that has a quantity at any one time during the reporting year equal to or greater than: 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for compressed gas (propane) used for the cultivation operations. If at any time during the year your operations exceed any one of these quantities, you need to prepare and file a HMBP for your operation. Information regarding HMBPs can be found at http://ca-humboldtcounty.civicplus.com/DocumentCenter/Home/View/3224.

Additionally, while it is not explicitly stated in the Order, please note that the Humboldt County Division of Environmental Health (HCDEH) also requires that anyone that has over 55 gallons or more of any petroleum liquid at any time of the year, including fuels and waste oil, develop a HMBP.

Do not store petroleum products and/or chemicals with fertilizers, soil amendments and/or pesticides/herbicides. See guidelines for hazardous material storage in Appendix G.

4.10 Standard Condition #10. Cultivation-Related Wastes

a) Cultivation-related wastes including, but not limited to, empty soil/soil amendment/ fertilizer/pesticide bags and containers, empty plant pots or containers, dead or harvested plant waste, and spent growth medium shall, for as long as they remain on the site, be stored at locations where they will not enter or be blown into surface waters, and in a manner that ensures that residues and pollutants within those materials do not migrate or leach into surface water or groundwater.

Meets condition? No

Observations/Comments: Planting beds with spent soils, and at least one pile of potting soil near the inlet of DRC #1, were exposed to the weather and potentially subject to nutrient leaching and runoff during rain events. During the mid-season site inspection, PWA observed that cover crops had been planted in planting beds. The majority of plant waste from cultivation activities is reportedly burned on the Project Site near CA #1. A pile of plant stalks was observed to be discarded in close proximity to a Class II stream northeast of the 1,010 gallon water tank and another pile of plant stalks was observed directly south of the pond spillway culvert outlet. Other piles of plant stalks have been discarded northeast of the drying sheds at CA #2 and southwest of SC #1 in close proximity to a Class II stream. These piles of plant stalks are within the Class I and Class II riparian setbacks and have high potential for delivery to the stream network. Also see Standard Condition 4.4a observations and comments, above.

Photos: MP #6: Photo 6a - 6d. MP #10: Photo 10a. MP #11: Photo 11a. MP #14: Photo 14a.

Corrective or remedial actions needed: Tarp or otherwise cover spent plant stalks, root balls, planting beds and soil piles during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the groundwater. Alternatively, you could remove all spent soils at the end of the growing season and store the materials indoors or undercover during the off-season. Collect all plant waste material at the locations mentioned above and dispose of it properly where there is no threat of delivery to surface waters. Properly store all future cultivation-related waste material located on the Project Site and dispose of appropriately by either burning, shredding, composting or taking material to an appropriate waste disposal facility. Also see Standard Condition 4.4a corrective actions, above.

Standard Condition #10 - General comments and recommendations: We encourage you to chip or shred your plant stalks and compost them after harvest. If you burn the stalks, you must first obtain berm permits from CAL FIRE and the North Coast Unified Air Quality Management District (or other relevant jurisdiction for your area). You can then recycle the ash and add minerals to the soil by mixing the ash into your spent pots and plant holes prior to planting a cover crop at the end of the season. Any additional cultivation-related waste can be easily contained by keeping soils and garbage greater than 200 feet from drainage areas and on gentle slopes, tarping or otherwise covering soil piles, and/or by placing straw waddles or other containment structures around the perimeter of spoil piles. Organic cultivation-related waste should be recycled if possible, and inorganic wastes and garbage should be removed from the property on a regular basis and disposed of at an appropriate facility.

4.11 Standard Condition #11. Refuse and Human Waste

a) Disposal of domestic sewage shall meet applicable County health standards, local agency management plans and ordinances, and/or the Regional Water Board's Onsite Wastewater Treatment System (OWTS) policy, and shall not represent a threat to surface water or groundwater.

Meets condition? No

Observations/Comments: There are reportedly two existing Onsite Wastewater Treatment Systems (OWTS) located in stable areas and functioning properly according to the operator. The permitting status of both of the existing OWTS, whether they are properly sized or designed for the existing residences and usage, when they were installed and by whom, and the exact locations of the two leach fields and the septic tank for the yurt is not known at this time. The location of the OWTS near the yurt on Figure 2 is an approximate location based on conversations with the operator. The location of the septic tank south of the cabin was observed during the initial Project Site inspection. An outhouse also exists on the Project Site, south of the cabin, which is not in use according to the landowner.

Photos: No

Corrective or remedial actions needed: The Order requires a County-permitted or approved OWTS. Proof of permitting is required and you should keep your OWTS permits with this WRPP for possible future inspection. Since the permitting status of the two existing OWTS is not known, PWA recommends you contact the Humboldt County Division of Environmental Health (HCDEH) to determine if the existing waste water treatment systems (OWTS) are already permitted.

If either OWTS is unpermitted you can: 1) seek retroactive permitting from Humboldt County Division of Environmental Health, or 2) design and install one or more new, permitted OWTS. Additional field investigations may be required to determine the size of the existing OWTS, if it is correctly constructed, and to verify that they are adequate for the maximum level of use and current site conditions. To secure a permit for an existing system you will probably need to conduct the necessary system inspections and subsurface investigations and improve the existing systems (if possible and necessary) to meet the HCDEH standards required to obtain a retroactive permit for each of the existing OWTS.

If one or both systems cannot be retroactively permitted, PWA recommends you work with a professional to start the permit process to site, design and install one or more permitted septic systems. You may be required to conduct wet weather testing and onsite investigations to site, design and install newly permitted OWTS for each of the residences on the Project Site. Either way, the systems must be designed to serve the number of residents and workers that will be present on the Project Site when your cultivation-related operations are at their peak.

PWA recommends that the outhouse located on the Project Site be fully decommissioned by filling in the pit and removing toilet infrastructure.

If new Onsite Wastewater Treatment Systems are needed in these locations, utilize one or more serviced portable toilets (or other county approved system) until the new OWTSs can be designed, constructed and permitted. Keep the servicing records for these toilets.

b) *Refuse and garbage shall be stored in a location and manner that prevents its discharge to receiving waters and prevents any leachate or contact water from entering or percolating to receiving waters.*

Meets condition? Yes
Observations/Comments: Garbage and refuse was observed to be stored properly and securely at the time of the Project Site inspection.
Photos: No
Corrective or remedial actions needed: Continue to store all garbage and refuse in lidded cans or the trash trailer at a safe and secure location where the threat to waters of the state is eliminated. PWA recommends you dispose of existing garbage and refuse in a timely manner at an approved waste disposal facility.

c) *Garbage and refuse shall be disposed of at an appropriate waste disposal location.*

Meets condition? Yes
Observations/Comments: According to the client the garbage and refuse generated onsite is disposed of at an appropriate waste disposal location.
Photos: No
Corrective or remedial actions needed: PWA recommends that the client continue to dispose of existing garbage and refuse in a timely manner and at an approved waste disposal facility.

Standard Condition #11 - General comments and recommendations: At the current time the permitting status of the two existing OWTS is not known. PWA recommends contacting the HCDEH to determine if the OWTS are permitted. If the existing OWTS are not permitted PWA recommends conducting septic system inspections and subsurface investigations to determine if the two OWTS can be retroactively permitted. Conduct wet weather testing and site investigations to site, design and install permitted systems if the existing OWTS cannot be permitted and cannot be improved to meet the standards of the HCDEH. Continue to store garbage and refuse in lidded cans at a safe and secure location and dispose of in a timely manner at an approved waste disposal facility.

4.12 Standard Condition #12. Remediation/Cleanup/Restoration

a) *Remediation/cleanup/restoration activities may include, but are not limited to, removal of fill from watercourses, stream restoration, riparian vegetation planting and maintenance, soil stabilization, erosion control, upgrading stream crossings, road outsloping and rolling dip installation where safe and suitable, installing ditch relief culverts and overside drains, removing berms, stabilizing unstable areas, reshaping cutbanks, and rocking native-surfaced roads. Restoration and cleanup conditions and provisions generally apply to Tier 3 sites, however owners/operators of Tier 1 or 2 sites may identify or propose water*

resource improvement or enhancement projects such as stream restoration or riparian planting with native vegetation and, for such projects, these conditions apply similarly.

Appendix A accompanying the NCRWQCB Order, (and Appendix A in your WRPP), *includes environmental protection and mitigation measures that apply to cleanup activities such as: temporal limitations on construction; limitations on earthmoving and construction equipment; guidelines for removal of plants and revegetation; conditions for erosion control, limitations on work in streams, riparian and wetland areas; and other measures.*

These protection and mitigation measures have been developed to prevent or reduce the environmental impacts and represent minimum, enforceable standards by which cleanup activities shall be conducted under this Order.

Meets condition? Yes
Observations/Comments: See general comments below.
Photos: No
Corrective or remedial actions needed: None

Standard Condition #12 - General comments and recommendations: It is PWA's opinion that the Project Site is currently compliant with this condition. All needed corrective actions are addressed in Standard Conditions 1 through 11, above.

5.0 PRIORITIZED CORRECTIVE ACTIONS AND SCHEDULE TO REACH FULL COMPLIANCE

The following check list should be followed to become fully compliant with the Order. Please see the detailed comments and recommendations above for a more complete description of the problems and the needed corrective actions and monitoring requirements.

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
1 – Site Maintenance, Erosion Control and Drainage Features	1a	Moderate	Oct. 15, 2019	- Under the Order, all legacy roads on the Project Site are required to be inventoried and assessed for erosion sources and threats to water quality. The most important sites to examine include road or skid trail crossings of stream channels and potentially unstable fillslopes where roads were built across steep hillslopes. This can be done by walking the Class II watercourse to see if there are any other crossings that have not completely eroded yet and may need treatment. - If existing or potential legacy sediment sources that could impact surface waters are identified in the field, they will need to be treated using erosion prevention and erosion control treatments (see Appendix A).		
	1a, b, d	Moderate-High	Oct. 15, 2019	- Roads on the Project Site require the installation of multiple road drainage structures (rolling dips and ditch relief culverts) to disconnect surface runoff from streams. See Figure 2 for locations, including treatments to address Road Surface Discharge Point #1 (RSDP #1) and RSDP #2. See Section 4.1, above for details. - Install additional rolling dips with adequate spacing intervals at any location where concentrated road runoff and gullying is observed. - Typical drawings included in Appendix H will provide guidance for proper road drainage feature construction. Ensure that the construction and outlet location of rolling dips allows dispersal and infiltration of collected road runoff. All rolling dips should be connected to the cutbank unless stated otherwise. If there is significant runoff collected in an inboard ditch, DRCs should be installed to drain the inboard ditch in addition to rolling dips which drain the road surface.	MP #1, Photo 1a MP #2, Photo 2a, 2b	
	1e	Moderate-High	Oct. 15, 2018 and continuing	Clean the inlet of DRC #1 and conduct regular inspections and maintenance to ensure conveyance of flow and debris, to prevent plugging and to monitor the potential for erosion below the outlet. Also see Standard Condition 4.1a corrective actions.	MP #1, Photo 1a MP #2, Photo 2a, 2b MP #3, Photo 3a, 3b	
2 – Stream Crossing Maintenance	2a	Moderate	Oct. 15, 2020	- If SC #2 is treated ensure that the channel width (if decommissioned) or culvert diameter (if upgraded) of SC #2 is appropriately sized for the expected 100-year peak streamflow.	MP #4, Photo 4a MP #16, Photo 16a, 16b	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	2b	Moderate	Oct. 15, 2020	- Although the culvert at SC #1 is appropriately sized and functioning to pass debris, due to the amount of woody debris and riparian vegetation observed upslope of the crossing a trash rack should be installed upstream of the culvert inlet to minimize plug potential. - If SC #2 is treated ensure that the channel width (if decommissioned) or culvert diameter (if upgraded) of SC #2 allows passage of debris associated with the expected 100-year peak streamflow. - If SC #2 is upgraded to a culverted stream crossing a trash rack should be installed upstream of the culvert inlet due to the amount of woody debris and riparian vegetation observed. - Typical drawings included in Appendix H provide guidance for proper trash rack installation.	MP #4, Photo 4a MP #16, Photo 16a, 16b	
	2c	Moderate	Oct. 15, 2020	- Replace the existing culvert at SC #1 with a 36-inch diameter culvert installed at the natural stream grade and horizontally aligned with the natural stream channel to allow passage of aquatic organisms. - If SC #2 is decommissioned ensure that the stream crossing will allow aquatic organism passage where possible. If SC #2 is upgraded to a culverted stream crossing ensure that the culvert is installed to allow passage of aquatic organisms. - Also see Standard Condition 4.2a, above, for treatment recommendations regarding SC #2.	MP #4, Photo 4a, 4b, 4c MP #16, Photo 16b	
	2d	Moderate	Oct. 15, 2018 and continuing	Monitor and perform adequate maintenance on SC #1 and SC #2 as needed to prevent or minimize erosion following appropriate BMPs listed in Appendix A. See Standard Condition 4.2a, above, for additional treatment recommendations regarding SC #2.	MP #1, Photo 1a, MP #16, Photo 16a, 16b	
	2e	Moderate	Oct. 15, 2020	- Upgrade SC #1 with a properly installed 36-inch diameter culvert aligned with the natural channel grade and stream alignment, and employing standard installation specifications (see below). - Excavate aggraded material upslope of the culvert inlet down to the natural channel grade to ensure streamflow passes through the culvert and will not undermine the crossing. - Due to the stability of the crossing at the present time, adequate culvert size, armored outboard fillslope and minimal erosion observed, replacement and realignment of the culvert is a moderate or moderately-low priority. - If SC #2 is upgraded to a culverted stream crossing ensure that the culvert is vertically and horizontally aligned with the natural stream channel where feasible. - The stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner, and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver et al., 2006).	MP #4, Photo 4a, 4b, 4c	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	2f	High	Oct. 15, 2020	When the culvert at SC #1 is upgraded, and if SC #2 is upgraded to a culverted stream crossing, ensure that the rebuilt crossings are constructed to prevent stream diversion in case of a plugged culvert or exceptionally high flood flow. This can be accomplished by adequately dipping the road through the crossings or installing a critical dip on the down road hinge line.	--	
	2	High	Prior to any stream crossing work	Obtain all necessary agreements and permits prior to commencing work in any watercourse or at any stream crossing. These may include, but not be limited to: California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA) 1602, NCRWQCB Appendix D Tier 2 Surface Water Correction Workplan Notification, and Army Corps of Engineers (ACOE) 404 Permit.	--	
3 – Riparian and Wetland Protection and Management	3a, b, c, d	High	Oct. 31, 2019	- Under the Order, all cultivation areas and associated facilities that are located within 50-feet of a Class III watercourse, or within 100-feet of a Class I or Class II watercourse, are required to be removed from the buffer area, and the site is to be restored. Before you move these cultivation areas and/or associated facilities, and if you are applying under to Humboldt County for a land use permit for your operations, you should read and follow recommendations in ***Standard Condition 3, General Comments and Recommendations*** in this WRPP. - Relocate the two 3,000-gallon water tanks and one 300-gallon water tank to a suitable location outside of the 100-foot riparian buffer zone to the Class II watercourse. A proposed relocation area for these tanks was observed during the Project Site inspection that is outside of the riparian buffer zone and located in a stable area. - Collect and remove all plant stalks and any other cultivation-related waste at the four MP #6 locations, and any other location on the Project Site, and store indoors, fully tarp or dispose of appropriately outside of all 100-foot stream buffers and where there is no threat of delivery to surface waters or leaching to groundwater. - Potting soil located near the inlet of DRC #1 should be relocated outside of the riparian buffer zone and should also be tarped until relocation is complete to prevent nutrient mobilization over the wet season. - PWA recommends relocating the northeastern portion of CA #2, the two drying sheds, the generator shed and the pile of potting soil near DRC #1 that are located within the 100-foot riparian setback of the Class II watercourse. - Relocate the new secondary containment basin to a suitable location outside of the 100-foot riparian setback of the Class II watercourse. - All spent soils, cultivation-related waste and refuse at these areas should be removed and stored or recycled appropriately where they do not have the potential to pollute surface waters or leach nutrients into groundwater. - Once all materials and structures have been removed, the disturbed buffer areas at all these sites should be seeded and mulched for erosion control and replanted with native riparian vegetation.	MP #5, Photo 5a, 5b MP #6, Photo 6a - 6d MP #7, MP #9, Photo 7a MP #8, Photo 8a MP #10, Photo 10a MP #11, Photo 11a MP #15, Photo 15b	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	3b	Moderate	Oct. 31, 2019	After relocation of the two 3,000-gallon water tanks, one 300-gallon water tank, the northeastern portion of CA #2 and the additional items listed in Standard Condition 4.3a, above, PWA recommends seeding and mulching for erosion control and replanting the impacted area with native riparian vegetation.	MP #5, Photo 5a, 5b MP #7, MP #9, Photo 7a MP #8, Photo 8a MP #10, Photo 10a MP #11, Photo 11a	
4 – Spoils Management	4a, b	High	Oct. 15, 2018	Relocate the pile of potting soil near the inlet of DRC #1. Once moved, tarp the pile or plant cover crops by October 15 and install a straw wattle around the perimeter to prevent delivery to surface waters.	MP #11, Photo 11a	
5 – Water Use	5a, c	Moderate	Dec.31, 2018 and annually	Refine the preliminary Water Budget for the Project Site to more accurately determine annual water needs and required storage volumes needed for forbearance from May 15th - October 31st.	--	
	5a	Moderate	May 15, 2018 and then continuing	Implement a Water Monitoring Plan on the Project Site: - Install float valves on storage tanks to prevent overflow. - Install water monitoring flow meters on your surface water diversions and water tank distribution lines. - Under the Order you are required to monitor and record the timing and volume of surface water diversions, water storage and water use using log sheets such as those provided in Appendix D.	--	
	5b	Moderate	May 15, 2018 and then continuing	- Increase the use of water saving strategies, such as volume-limited drip irrigation systems, irrigation scheduling, incorporating water holding amendments and native soil during soil preparation, top mulching planting beds and pots to minimize evaporation, and planting plants in the ground instead of above ground pots or raised beds. - Rainwater harvesting during the wet season should be evaluated and employed to limit or completely eliminate surface water diversion during the dry season.	MP #14, Photo 14a	
	5c	High	Oct. 31, 2018	Evaluate the feasibility, designs, locations, and permitting requirements for adding substantial (≥61,000 gallons) additional water storage to meet dry season forbearance requirements, including rainwater fed rigid water tanks and/or one or more additional rainwater fed, off-stream ponds.	--	
	5c	High	Oct. 31, 2020	Increase water storage, using rainwater fed tanks and/or ponds, to limit diversion of surface flow to the winter months and completely eliminate diversions needed for irrigation activities during the dry season from May 15 through October 31.	--	
	5d	Moderate	May 15, 2018 or prior to irrigation	- To verify conformance with this Standard Condition, start measuring and recording your average water usage on a per plant basis, based on type and size of plant pot, full term versus short season (light deprivation) plant, and type of irrigation, in order to develop and refine a Water Budget for your operation.	--	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
			activities and then continuing	- Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration is avoided.		
	5e	High	File SDU by Aug. 31, 2018, or sooner	- As opposed to employing one or more surface water diversions and securing various water rights, consider obtaining irrigation water for your agricultural needs by developing rainwater capture systems to fill rigid water tanks and/or one or more off-stream, rainwater-fed ponds, or drilling a well. - Apply for the Small Domestic Use Appropriation (SDU) for the stream diversion and the pond to cover your domestic use requirements such as drinking, bathing, cooking and fire control.	--	
	5e	High	Report annually by June 30 & by Mar. 31	- Submit annual water use volumes to the State Water Resources Control Board, Division of Water Rights (SWRCB-DWR) by June 30 of each year. - Submit water diversion and water use data to the NCRWQCB annually by March 31 for the previous calendar year.	--	
	5f	High	Sept. 15, 2019	- PWA recommends having the off-stream pond embankment inspected by a certified engineer to determine the stability and safety of the embankment. - The stability of the off-stream pond spillway culvert should be evaluated by a qualified engineer for possible redesign and repairs. - If failure is imminent, urgent repairs should be completed after notifying permitting agencies and obtaining clearances. - Monitor the off-stream pond, embankment, spillway culvert and Class III stream channel for further signs of instability or continued erosion.	MP #12, Photo 12a, 12b MP #13, Photo 13a, 13b	
	5f	High	Oct. 15, 2020	- Implement corrective actions when and as recommended by the engineer. - Perform outlet and channel treatments to minimize or prevent further incision, sediment delivery, and undermining of the pond embankment. - A full-round downspout should be attached to the outlet of the pond spillway culvert to discharge pond overflow at or below the base of the pond embankment. Add rock armor at the downspout outlet to dissipate flow energy. - If pond upgrading or decommissioning is to occur, obtain all necessary permits prior to commencement of construction activities (e.g., CDFW LSAA, NCRWQCB SWCW Notification).	MP #12, Photo 12a, 12b MP #13, Photo 13a, 13b	
	5	High	Aug. 31, 2019, or sooner	A LSAA and NCRWQCB SWCW Notification will need to be submitted to the CDFW for the two surface water diversions, the pond and the two stream crossings prior to any proposed instream or stream crossing work on the Project Site.	--	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
7 - Fertilizer and Amendment Use	7a	High	Oct. 15, 2018 and continuing	- Potting soil located near the inlet of DRC #1 should be relocated outside of the 100-foot riparian buffer zone and should also be tarped until relocation is complete to prevent nutrient mobilization over the wet season. - Spent potting soil located on the Project Site should be tarped or have heavy cover crops planted to prevent nutrient mobilization over the wet season. - Any fertilizers, potting soils and soil amendments on the Project Site shall continue to be stored under a roof or tarped during the wet season.	MP #10, Photo 10a MP #11, Photo 11a MP #14, Photo 14a	
	7b	Moderate	May 15, 2018 and continuing	To confirm compliance with this Standard Condition, you must keep detailed records of the type, timing and volume of fertilizers and/or soil amendments you use in your operations. They can be recorded on log sheets such as those provided in Appendix E.	--	
	7c	Moderate-High	Oct. 31, 2018 and then annually	- To prevent nutrient mobilization or leaching: 1) keep new or spent potting soils and amendments inside or under a roof; 2) tarp any soils or amendments that are kept outside over the wet season to prevent mobilization or leaching of nutrients; or 3) plant dense cover crops in spent pots, holes and beds to enrich soil and lock up nutrients. If dense cover crops cannot be kept alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients.	MP #10, Photo 10a MP #11, Photo 11a MP #14, Photo 14a	
8 – Pesticides and Herbicides	8	Moderate	May 15, 2018 and continuing	To verify conformance with this Standard Condition, you are required to keep records of the type, timing and volume of pesticides, herbicides and related chemicals that are applied your operations. This can be done using a simple log form, such as the one included in Appendix F.	--	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
9 – Petroleum Products and Other Chemicals	9a, b	High	July 31, 2018	- Place any additional small fuel cans, generators, diesel tanks, gasoline powered garden equipment and any other items containing petroleum products not already stored properly in adequate secondary containment basins and store in a safe and secure location out of the elements and outside of any applicable riparian buffer zones. - As the location of the new secondary containment basin is within the 100-foot riparian setback of a Class II stream PWA recommends relocating this item to a suitable location outside of the 100-foot riparian setback. - Equip the generator shed at CA #2 with a raised lip around the entire perimeter or another adequate secondary containment structure, or use secondary containment for all sources of petroleum. - Although it is not specifically required by the Order, PWA recommends verifying that both tanks are empty or removing and properly disposing of the remaining fuel if they are not empty. - The landowner should then modify the sign on each tank stating "Tank empty, not in use" along with the date the sign was posted. - A new photograph of each modified sign posted on both tanks should also be taken as documentation. - Alternatively, the tanks could be decommissioned and hauled to a licensed disposal facility.	MP #8, Photo 8a MP #15, Photo 15a, 15b Photo 17a, 17b Photo 18a, 18b	
	9	High	July 1, 2018, or whenever threshold is met	- If you have 55 gallons or more fuel at any one time of the year, you must prepare a Hazardous Material Business Plan (HMBP) for the Project Site (see Standard Condition 10 for additional details). - Do not store petroleum products and/or other hazardous chemicals with fertilizers, soil amendments and/or pesticides/herbicides. See guidelines for hazardous material storage in Appendix G.	--	
10 – Cultivation-Related Waste	10	High	Oct. 15, 2018 and then annually	- Tarp or otherwise cover spent plant stalks, root balls, planting beds and pots, and soil piles during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the groundwater. - Alternatively, remove all spent soils at the end of the growing season and store the materials indoors or undercover during the off-season. - Collect all plant waste material at the locations mentioned in Standard Condition 4.10 Observations and Comments, above, and dispose of properly where there is no threat of delivery to surface waters. - Properly store all future cultivation-related waste material located on the Project Site and dispose of appropriately by either burning, shredding, composting or taking material to an appropriate waste disposal facility. Also see Standard Condition 4.4a corrective actions, above.	MP #6, Photo 6a - 6d MP #10, Photo 10a MP #11, Photo 11a MP #14, Photo 14a	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
11 – Refuse and Human Waste	11a	High	Sept. 30, 2018	Contact the HCDEH to determine the permitting status of both OWTS systems on the Project Site.	--	
	11a	High	Retro-active permit by Dec. 31, 2019; If new OWTS is needed, install by Dec. 31, 2020	- If the existing OWTS are not permitted, 1) conduct the necessary system inspections and subsurface investigations and improve the existing systems (if possible and necessary) to meet the HCDEH standards required to obtain a retroactive permit for each of the existing OWTS. - If the existing OWTS cannot be retroactively permitted, conduct wet weather testing and onsite investigations to site, design and install newly permitted OWTS for each of the residences on the Project Site. The systems must be designed to serve the number of residents and workers that will be present on the Project Site when your cultivation-related operations are at their peak.	--	
	11a	High	Oct. 31, 2018	- If new OWTS are needed in these locations, utilize one or more serviced portable toilets (or other county approved system) until the new OWTSs can be designed, constructed and permitted. Keep the servicing records onsite for these toilets. - PWA recommends that the outhouse located on the Project Site be fully decommissioned by filling in the pit and removing toilet infrastructure.	--	

6.0 MONITORING AND INSPECTION PLAN

Under the Order, sites are required to be monitored and inspected periodically to ensure conformance with the 12 Standard Conditions. In most cases, inspections and records of inspections identify conditions that have been corrected and are now in compliance; conditions that remain in compliance; and conditions that have changed and may no longer be in compliance with the Order. An inspection and monitoring plan is used to document these conditions, identify problems and make corrections using best management practices (BMPs) to protect water quality (Appendix A).

Monitoring Plan – Please refer to Appendix B and Figure 2 to review the monitoring plan and specific monitoring points for which you are responsible.

Monitoring guidelines and reporting standards have been created by the NCRWQCB as part of the Order. Monitoring of the Project Site includes visual inspection and photographic documentation of each feature of interest listed on the Project Site map, with new photographic documentation recorded with any notable changes to the feature of interest.

Site inspection schedule - According to the NCRWQCB, periodic inspections should include visual inspection of the site, including any management measures/practices, to ensure they are being implemented correctly and are functioning as expected. Inspections include photographic documentation of any controllable sediment discharge sites, as identified on the site map, and a visual inspection of those locations on the site where pollutants or wastes, if uncontained, could be transported into receiving waters, and those locations where runoff from roads or developed areas drains into or towards surface water.

At a minimum, sites shall be inspected at the following times to ensure timely identification of changed site conditions and to determine whether implementation of additional management measures is necessary to prevent or minimize discharges of waste or pollutants to surface water:

1) Before and after any significant alteration or upgrade to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include photographic documentation, with photo records to be kept onsite.
2) Prior to October 15th to evaluate site preparedness for storm events and stormwater runoff.
3) Following the accumulation of 3 inches cumulative precipitation (starting September 1st) or by December 15th, whichever is sooner.
4) Following any rainfall event with an intensity of 3 inches precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service by entering the site zip code at http://www.srh.noaa.gov/forecast; Pick the nearest or most relevant zip code and then select the 3 day history that will also show precipitation totals.

Inspection and Monitoring Checklist – Appendix B contains a checklist data form that will be used by the landowner and/or operator to: 1) document inspection dates, 2) document visual and photographic inspection results, 3) describe remediation and management measures that are being applied, 4) identify new problems and their treatments, and 5) document the progress and effectiveness of implementing remedial and corrective measures that are needed to meet the 12 Standard Conditions, as outlined in this WRPP. Appendix C contains photo documentation of your monitoring points and will need to be updated as corrective treatments are implemented and treatments are monitored and evaluated over time.

Annual Reporting – An Annual Report is to be submitted directly to the NCRWQCB or to PWA (through our 3rd Party Program). The information in the annual reporting form must be submitted by March 31st of each year. The reported information is to be reflective of current site conditions, and includes monitoring data and tasks accomplished to protect water quality. Among other things, the report includes such items as the reporting of monthly monitoring data collected during the year (e.g., chemical use, water diversions, water storage, water use, etc.), management measures (BMPs) applied during the year and their effectiveness, and tasks accomplished during the year towards meeting each of the 12 Standard Conditions identified as deficient in this WRPP.

7.0 WATER USE PLAN

Requirements - According to the Order, a Water Use Plan (WUP) shall record water source, relevant water right documentation, and amount used monthly. All water sources shall be recorded, including alternative sources such as rain catchment and groundwater, and/or hauled water. Other elements of the WUP will include:

- Developing a Water Budget for determining the timing and volume of actual water use on the site. Water related data will be summarized monthly for the preceding month.
- Designing and implementing water conservation measures to reduce water diversion and water use.
- Calculating water storage requirements needed to support cultivation activities during the dry season, and implementing those required storage measures.

The Water Use Plan must also describe water conservation measures and document your approach to ensure that the quantity and timing of water use is not impacting water quality objectives and beneficial uses (including cumulative impacts based on other operations using water in the same watershed). Water use will only be presumed to not adversely impact water quality under one of the following scenarios:

- No surface water diversions occur from May 15th to October 31st.
- Water diversions are made pursuant to a local plan that is protective of instream beneficial uses.
- Other options that may affect water quality: (e.g., percent of flow present in stream; minimum allowable riffle depth; streamflow gage at bottom of Class I stream; AB2121 equations; CDFW instream flow recommendations; promulgated flow objective in Basin Plan; etc.).

Site Water Use Plan -The record of activities, accomplishments and water monitoring results for the Water Use Plan for this site will be logged and recorded in data tables and site records (data forms) included in Appendix D of this WRPP. These will be tracked and kept up-to-date by the landowner or cultivator of the site.

Water Storage and Forbearance – The ultimate goal of the applicant is to accumulate enough water storage capacity to forebear the entire period from May 15th to October 31st. This will ensure the timing of water use is not impacting water quality objectives and beneficial uses. There is 13,000 gallons of water storage, all in tanks, currently on the Project Site. Based on the size of the cultivation area (7,440 ft^2) it does not appear that there is adequate storage to avoid surface water diversions during the dry season from May 15th through October 31st. Based on water use

estimates from the Humboldt County Planning and Building Department, adequate storage does not currently exist on the Project Site. These estimates suggest that 10 gallons of water is needed for every square foot of cultivation to observe the forbearance period. Based on the existing cultivation area of 7,440 ft^2, 74,400 gallons of water storage would be needed to observe the 150 day forbearance period. Using these estimates, the current amount of water storage (13,000 gallons) is not adequate for the size of the operation. Rough water use estimates provided by the client, however, suggest that approximately 97,200 gallons is needed for irrigation activities on the Project Site. Regardless, considerable additional water storage will be required if you are to forbear (not divert) during the dry summer season. An off-stream pond exists on the Project Site that is used for fire suppression and not for irrigation but use of this pond should be considered as a source of irrigation water and additional storage if feasible.

Water Conservation - Water conservation measures currently practiced include the use of a timed drip irrigation system and controlled hand watering. We suggest growing many of the plants in-ground (as compared to above ground pots) and watering late in the afternoon or evening to minimize water loss through evaporation and maximize water up-take by the plants. Starting this year, new water conserving techniques and equipment will be utilized and tested to evaluate their effectiveness and efficiency. Test and deploy volume limited drip emitters, top mulching, and incorporating water holding amendments and native soil during the initial soil preparation at the start of the season.

Water sources and use - Though two streams and an off-stream pond are located within the Project Site parcel, the water used for irrigation activities comes from a surface water diversion at the headwaters of a Class I stream (POD #1) identified in Figure 2. Rainwater harvesting should be evaluated and employed where possible to limit surface water diversion during the dry season. When and if new ponds are approved and constructed, or many new tanks are installed, they should be designed to be off-stream and rainwater-fed so your operations will have minimal or no impact on downstream water quality and aquatic habitat, especially during the dry summer months.

At this time, the client has a rough estimate of the amount of water that is used monthly or annually on this Project Site for irrigation purposes. Based on our preliminary water use estimate and water budget, it appears at least an additional 61,000 gallons of water storage is needed for you to entirely forbear for irrigation activities during the dry season. It will be important for you to keep accurate records of your water diversion, storage and use so this storage volume can be more precisely defined, and so this water data can be reported each year, as required by the NCRWQCB and SWRCB-DWR. The more frequently and accurately water use is recorded, the better you will understand the water uses and needs of your farm, the value of water conservation, and the volume of water storage that is needed for you to forbear (not divert) during the dry summer growing season.

Over the course of the current and future season, water use should be documented using the log forms supplied to you by PWA, attached in Appendix D. The landowner will apply for additional water rights for the existing diversion, and CDFW will be contacted for the required LSAA agreement.

8.0 LIST OF CHEMICALS

The WRPP must contain a list of chemicals being stored onsite, in addition to quantities used and frequency of application. These include fertilizers/soil amendments, pesticides, herbicides, fungicides, petroleum products and other chemicals used in, or associated with, your cultivation activities and related operations.

Because this is the first year of enrollment, information regarding chemical use and storage is deficient or anecdotal. Appendixes E and F contain monitoring forms that should be used to list the chemical inventory record over time, as supplies are added to the site and used during the growing season. The landowner or operator will use these forms to track the types, storage volumes, timing of application, and volume of use of these products throughout the year. The initial chemicals and amendment list that may be used and stored onsite include:

Fertilizers and amendments:
Compost: 5 cubic yards
Earthworm Castings: 4 cubic yards
Compost Tea: 600 gallons per week
Rock Dust: 20 pounds
Fish Bone Meal: 14 pounds
Fish Hydroxylate: 25 gallons

Pesticides, Herbicides, and Fungicides:
Azatrol

Petroleum and Other Chemicals:
Gasoline
Motor oil
Propane
Solar batteries

9.0 LANDOWNER/LESSEE CERTIFICATION/SIGNATURES

This Water Resource Protection Plan (WRPP) has been prepared by Pacific Watershed Associates, an approved Third Party Program acting on behalf of the North Coast Regional Water Quality Control Board (NCRWQCB).

"I have read and understand this WRPP, including Section 2.0 – Certifications, Conditions and Limitations. I agree to comply with the requirements of the California Regional Water Quality Control Board North Coast Region Order No. 2015-0023 (Waiver of Waste Discharge Requirements and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects in the North Coast Region), including the recommendations and actions listed in this WRPP."

Name of Legally Responsible Person (LRP): Corynne Kovacs

Title (owner, lessee, operator, etc.): Micah Anderson

Signature: Corynne Kovacs Date: 5/15/18

WRPP prepared by (if different from LRP): **Pacific Watershed Associates, Inc.**

WRPP prepared and finalized on (date): 5/15/18

Signature: _____

Date: 5/15/18

APPENDIX B

PWA Typical Drawings

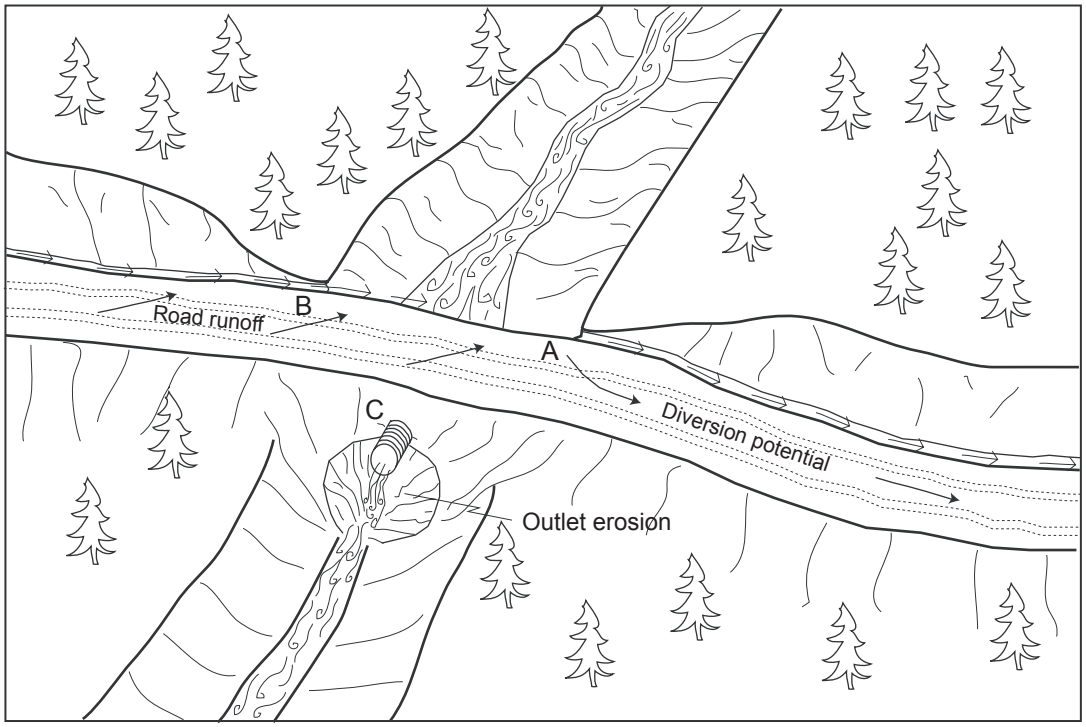
Typical Problems and Applied Treatments for a Non-fish Bearing Upgraded Stream Crossing

Problem condition (before)

A - Diversion potential

B - Road surface and ditch drain to stream

C - Undersized culvert high in fill with outlet erosion

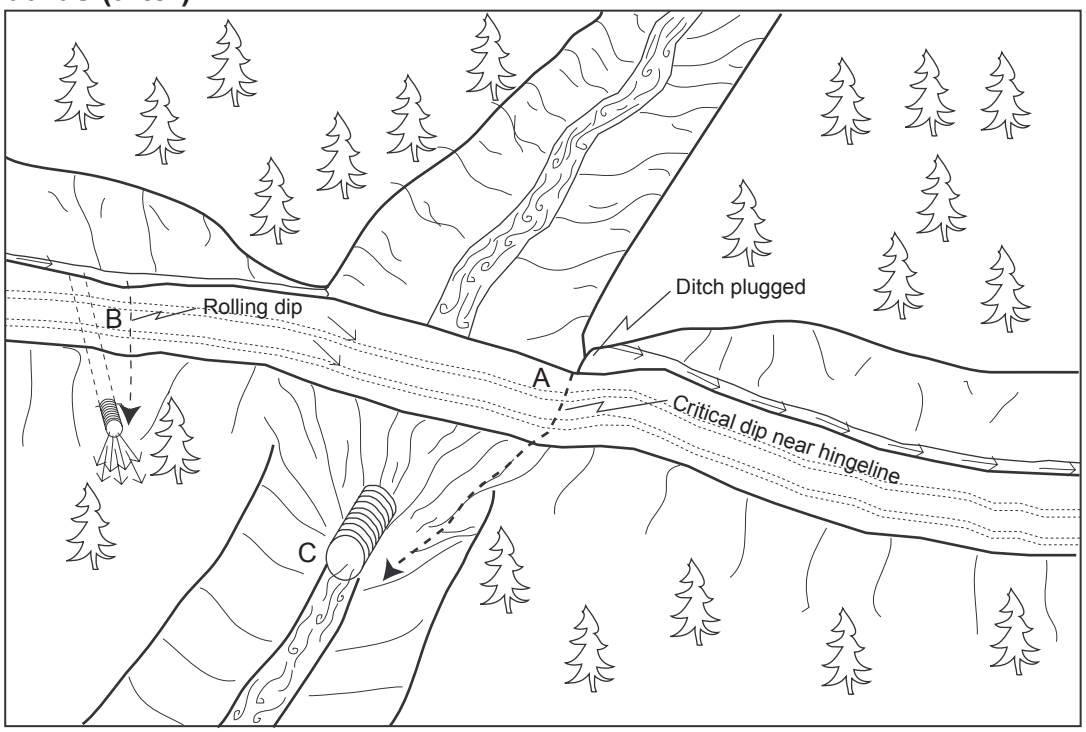


Treatment standards (after)

A - No diversion potential with critical dip installed near hingeline

B - Road surface and ditch disconnected from stream by rolling dip and ditch relief culvert

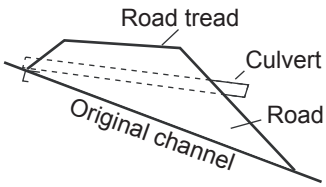
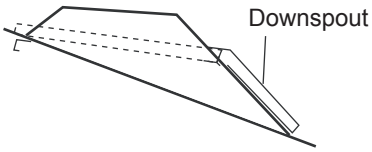
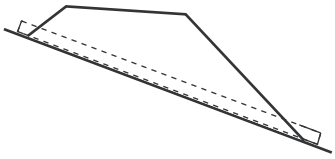
C - 100-year culvert set at base of fill



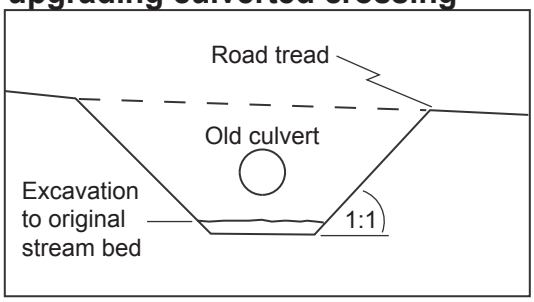
Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

PWA Typical Drawing #1a

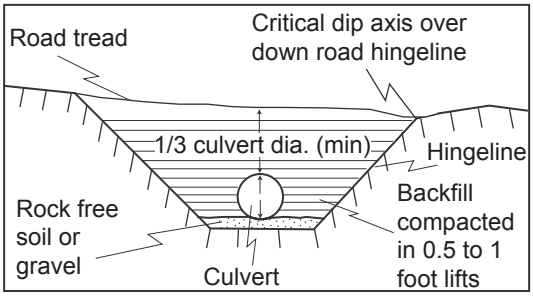
Typical Design of a Non-fish Bearing Culverted Stream Crossing

Existing	Upgraded	Upgraded (preferred)
		
1. Culvert not placed at channel grade. 2. culvert does not extend past base of fill.	1. Culvert not placed at channel grade. 2. Downspout added to extend outlet past road fill.	1. Culvert placed at channel grade. 2. Culvert inlet and outlet rest on, or partially in, the originial streambed.

Excavation in preparation for upgrading culverted crossing



Upgraded stream crossing culvert installation



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

Stream crossing culvert Installation

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

Erosion control measures for culvert replacement

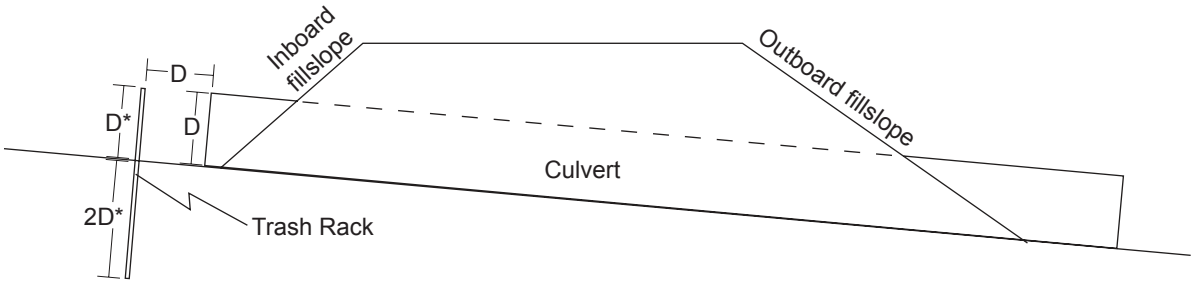
Both mechanical and vegetative measures will be employed to minimize accelerated erosion from stream crossing and ditch relief culvert upgrading. Erosion control measures implemented will be evaluated on a site by site basis. Erosion control measures include but are not limited to:

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

Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Design of a Single-post Culvert Inlet Trash Rack

Cross section view



D - Culvert diameter

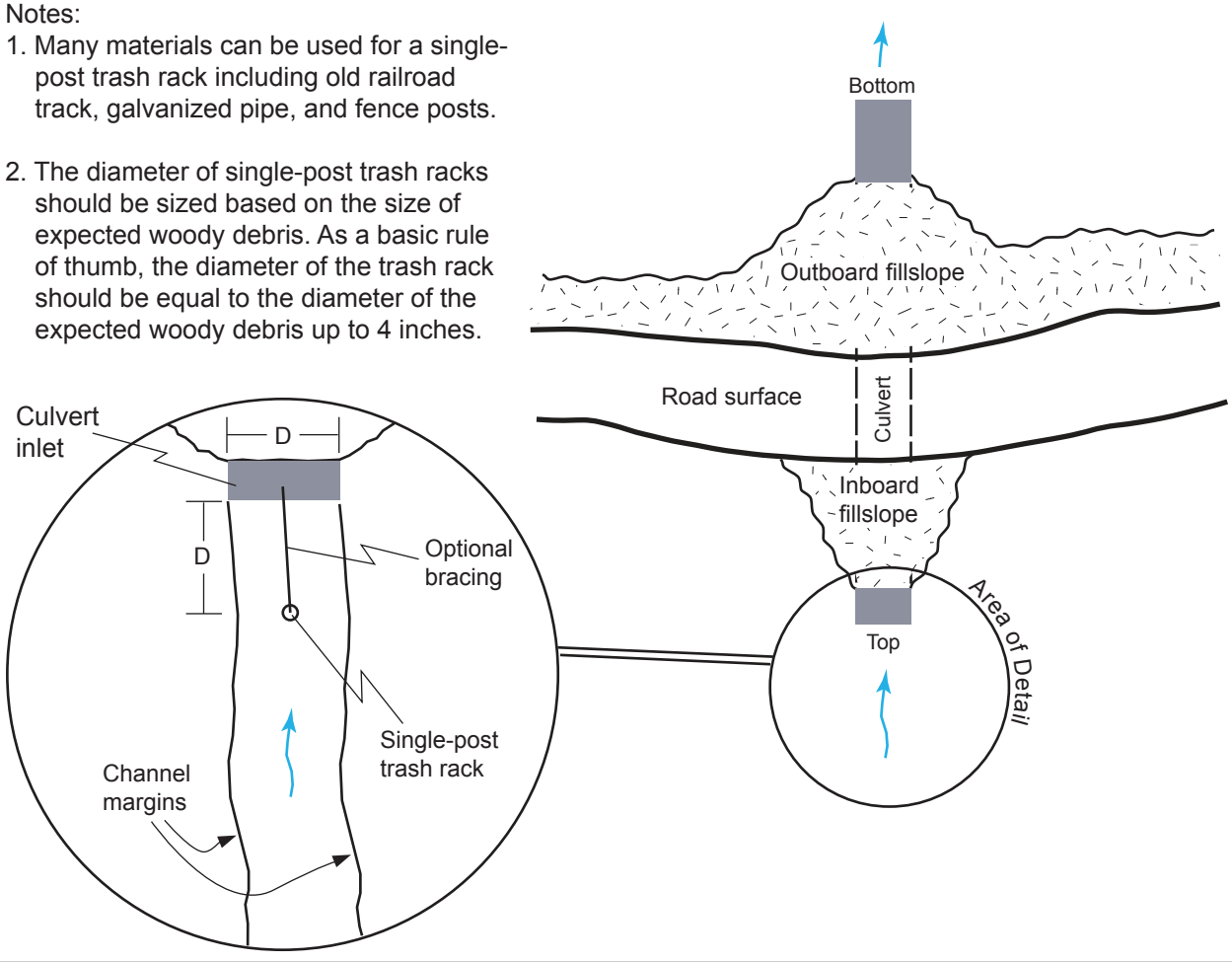
D* - If the culvert is designed for the 100-year peak storm flow, the trash rack height above the streambed should equal D.
If the culvert is undersized, then the trash rack needs to be extended vertically above the streambed to match or exceed the expected headwall height.

Plan view

Notes:

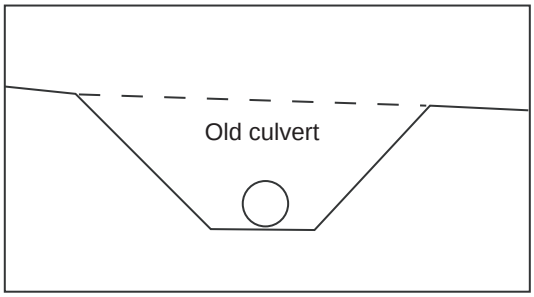
1. Many materials can be used for a single-post trash rack including old railroad track, galvanized pipe, and fence posts.

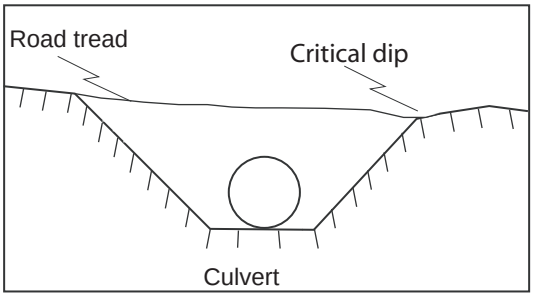
2. The diameter of single-post trash racks should be sized based on the size of expected woody debris. As a basic rule of thumb, the diameter of the trash rack should be equal to the diameter of the expected woody debris up to 4 inches.



Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Design of Upgraded Stream Crossings



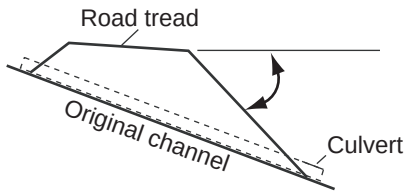
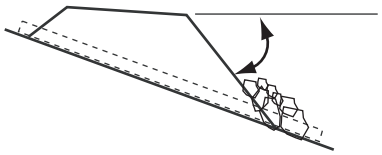
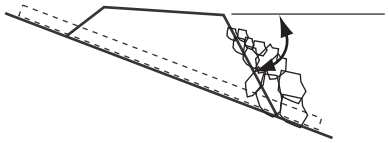


Stream crossing culvert Installation

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

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

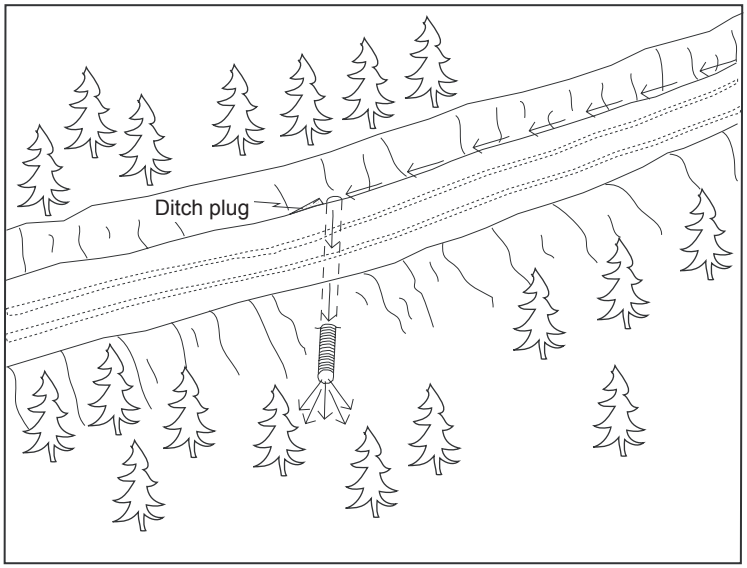
Armoring fill faces

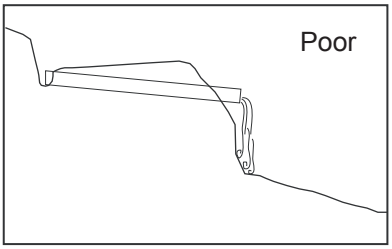
Fill angles ≤ 2:1	Fill angles (between 2:1 & 1.5:1)	Fill angles steeper than 1.5:1
 No rock armor needed	 Armor 1/4 up fill face	 Armor 3/4 way up fill face

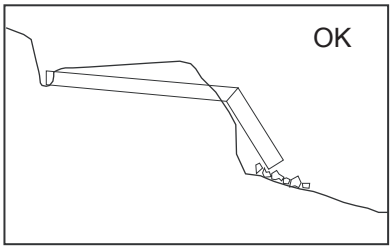
Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

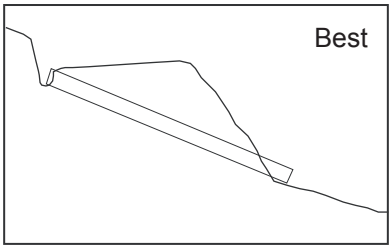
PWA Typical Drawing #4

Typical Ditch Relief Culvert Installation







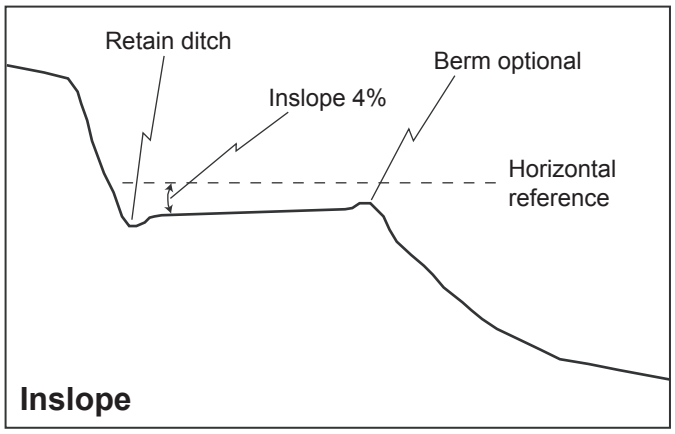


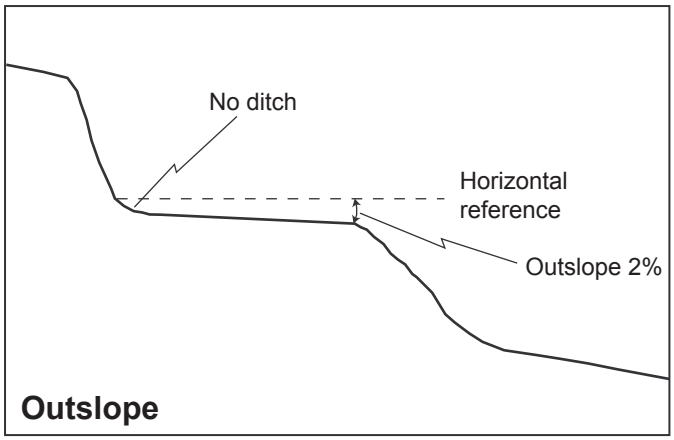
Ditch relief culvert installation

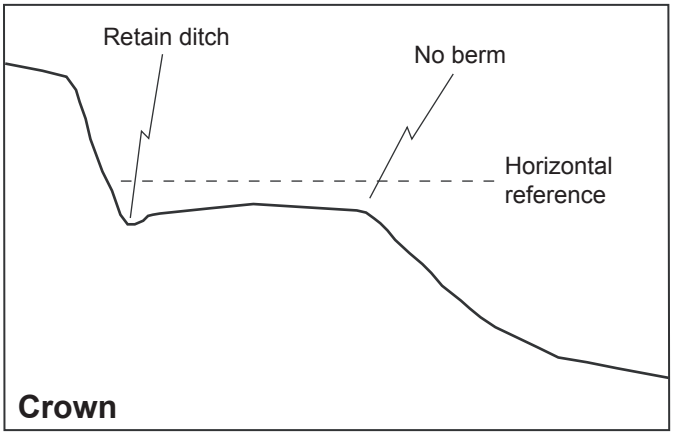
1) The same basic steps followed for stream crossing installation shall be employed.
2) Culverts shall be installed at a 30 degree angle to the ditch to lessen the chance of inlet erosion and plugging.
3) Culverts shall be seated on the natural slope or at a minimum depth of 5 feet at the outside edge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

Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Designs for Using Road Shape to Control Road Runoff



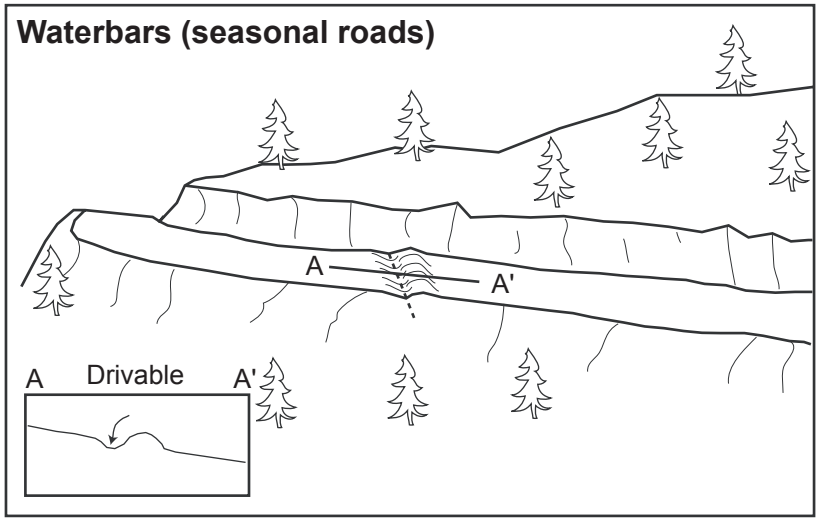


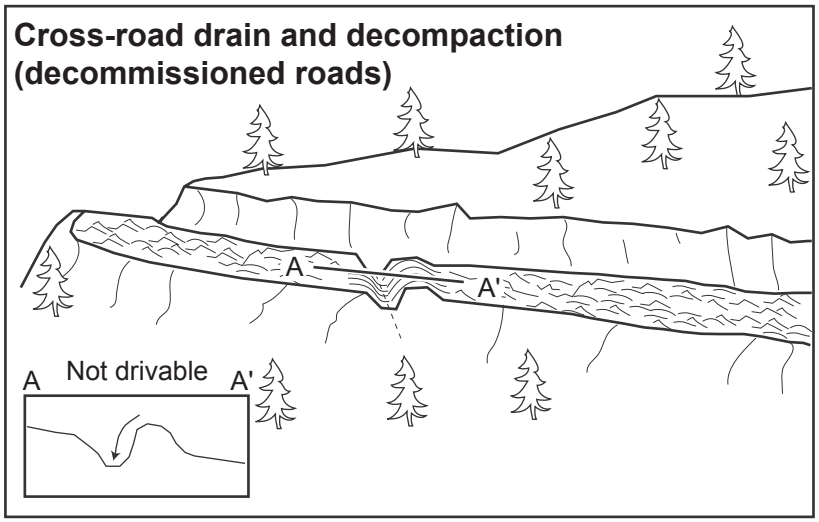


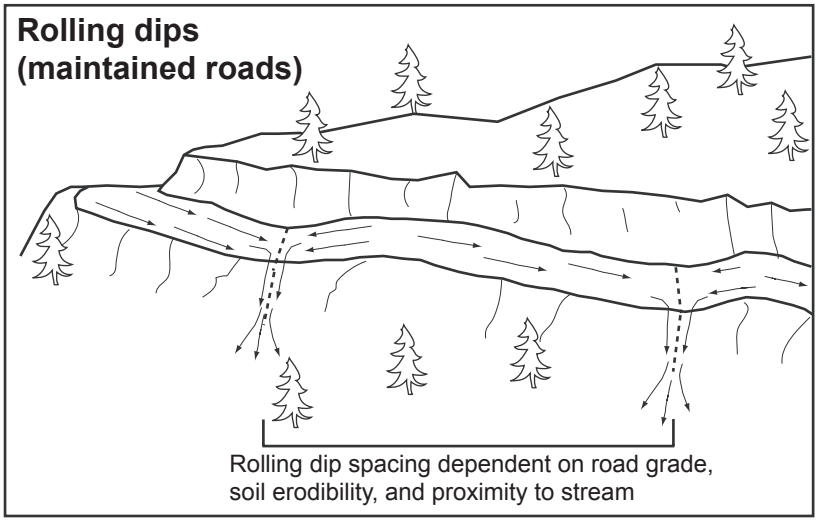
Outsloping Pitch for Roads Up to 8% Grade		
Road grade	**Unsurfaced roads**	**Surfaced roads**
4% or less	3/8" per foot	1/2" per foot
5%	1/2" per foot	5/8" per foot
6%	5/8" per foot	3/4" per foot
7%	3/4" per foot	7/8" per foot
8% or more	1" per foot	1 1/4" per foot

Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Methods for Dispersing Road Surface Runoff with Waterbars, Cross-road Drains, and Rolling Dips

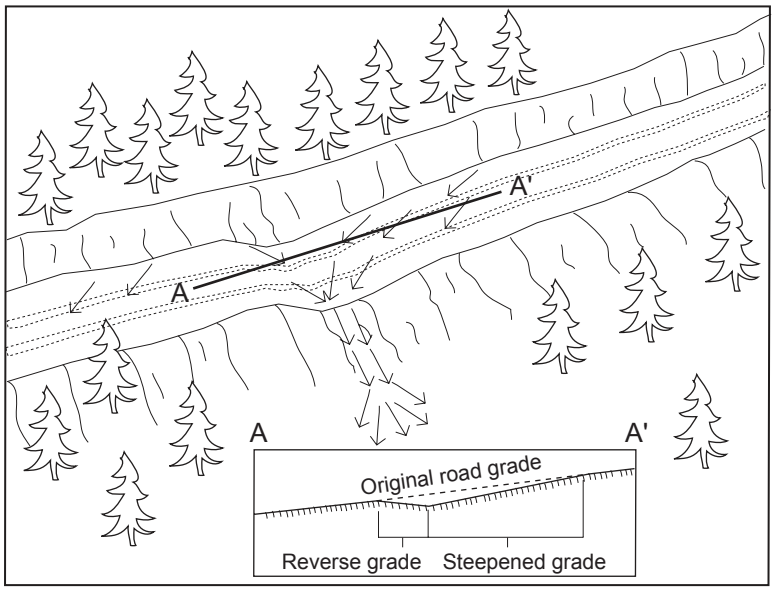






Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Road Surface Drainage by Rolling Dips



Rolling dip installation:

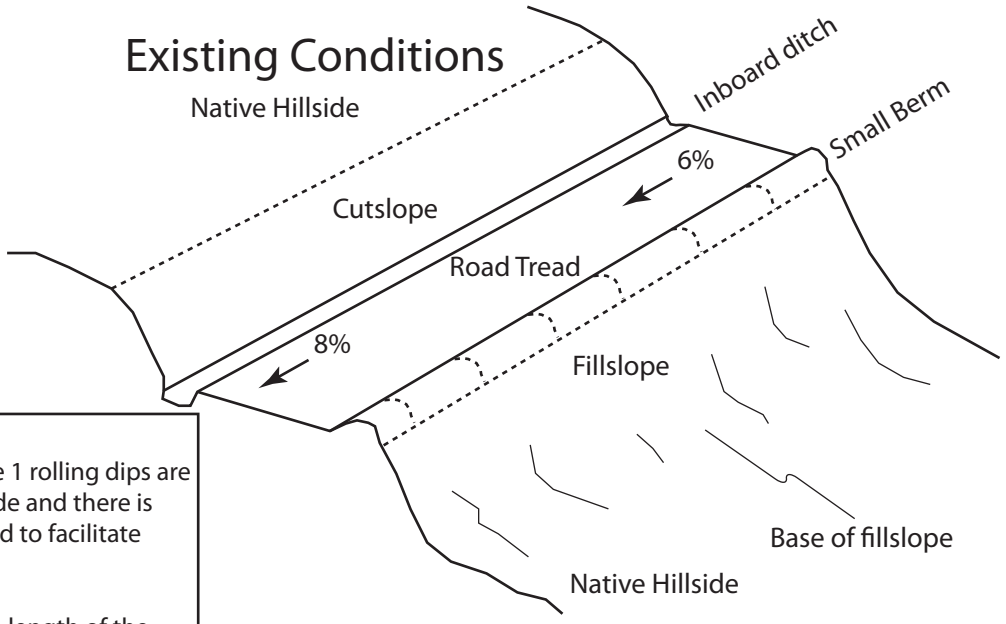
1. Rolling dips will be installed in the roadbed as needed to drain the road surface.
2. Rolling dips will be sloped either into the ditch or to the outside of the road edge as required to properly drain the road.
3. Rolling dips are usually built at 30 to 45 degree angles to the road alignment with cross road grade of at least 1% greater than the grade of the road.
4. Excavation for the dips will be done with a medium-size bulldozer or similar equipment.
5. Excavation of the dips will begin 50 to 100 feet up road from where the axis of the dip is planned as per guidelines established in the rolling dip dimensions table.
6. Material will be progressively excavated from the roadbed, steepening the grade unitl the axis is reached.
7. The depth of the dip will be determined by the grade of the road (see table below).
8. On the down road side of the rolling dip axis, a grade change will be installed to prevent the runoff from continuing down the road (see figure above).
9. The rise in the reverse grade will be carried for about 10 to 20 feet and then return to the original slope.
10. The transition from axis to bottom, through rising grade to falling grade, will be in a road distance of at least 15 to 30 feet.

Table of rolling dip dimensions by road grade

Road grade %	**Upslope approach distance** (from up road start to trough) ft	**Reverse grade distance** (from trough to crest) ft	**Depth at trough outlet** (below average road grade) ft	**Depth at trough inlet** (below average road grade) ft
<6	55	15 - 20	0.9	0.3
8	65	15 - 20	1.0	0.2
10	75	15 - 20	1.1	0.01
12	85	20 - 25	1.2	0.01
>12	100	20 - 25	1.3	0.01

Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Standard (Type 1) Rolling Dip Construction



Notes

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

Design Notes:

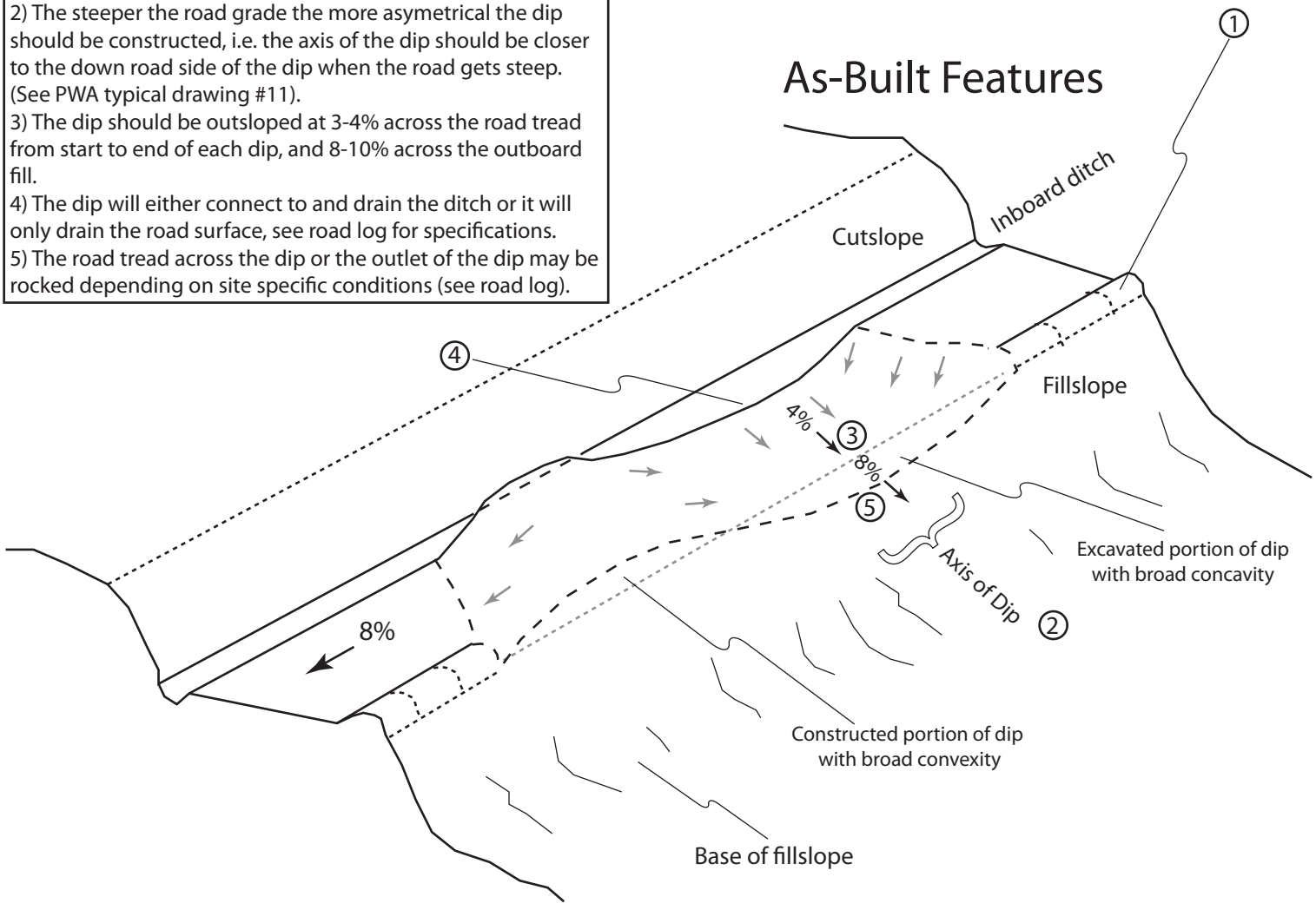
1) The berm should be removed for the entire length of the dip.

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

3) The dip should be outsloped at 3-4% across the road tread from start to end of each dip, and 8-10% across the outboard fill.

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

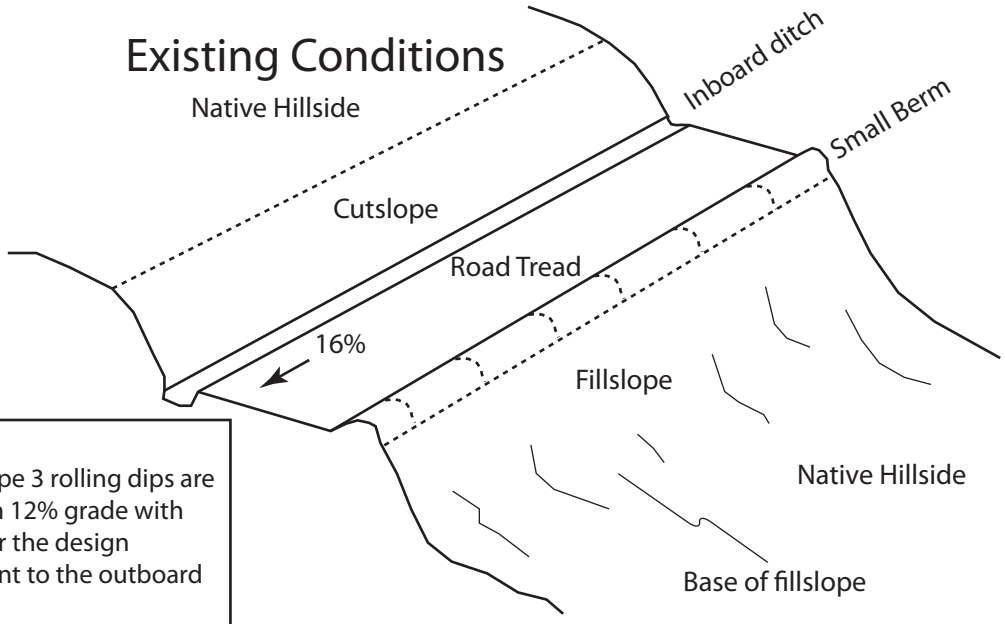
5) The road tread across the dip or the outlet of the dip may be rocked depending on site specific conditions (see road log).



Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

PWA Typical Drawing #19a

Type 3 Rolling Dip Construction
(steep slope outslope)



Notes

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

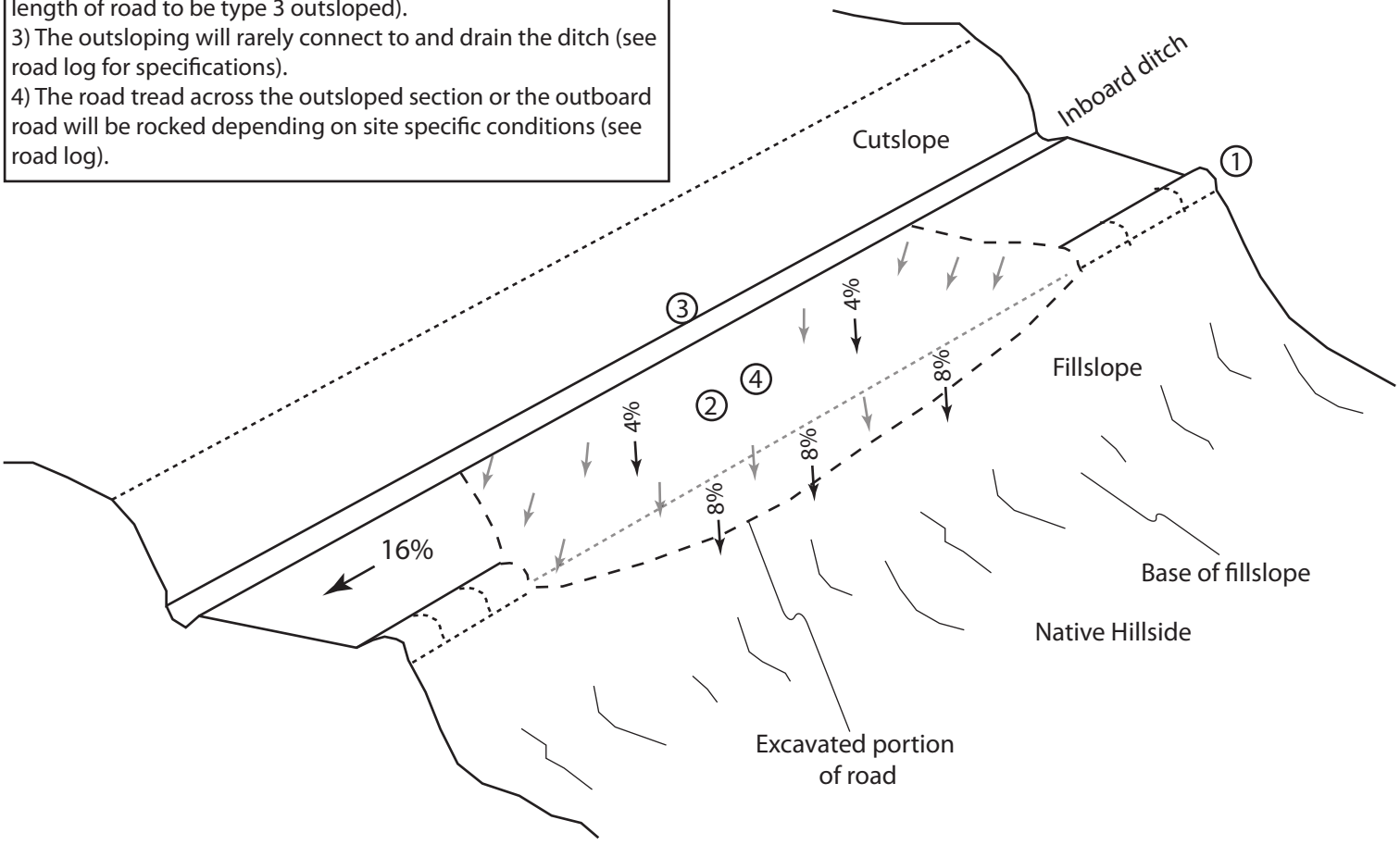
Design Notes:

1) The berm should be removed for the entire length of the outsloped section.

2) The dip should be outsloped at 2-4% across the road tread and 4-8% across the outboard fill. (The road log will specify the length of road to be type 3 outsloped).

3) The outsloping will rarely connect to and drain the ditch (see road log for specifications).

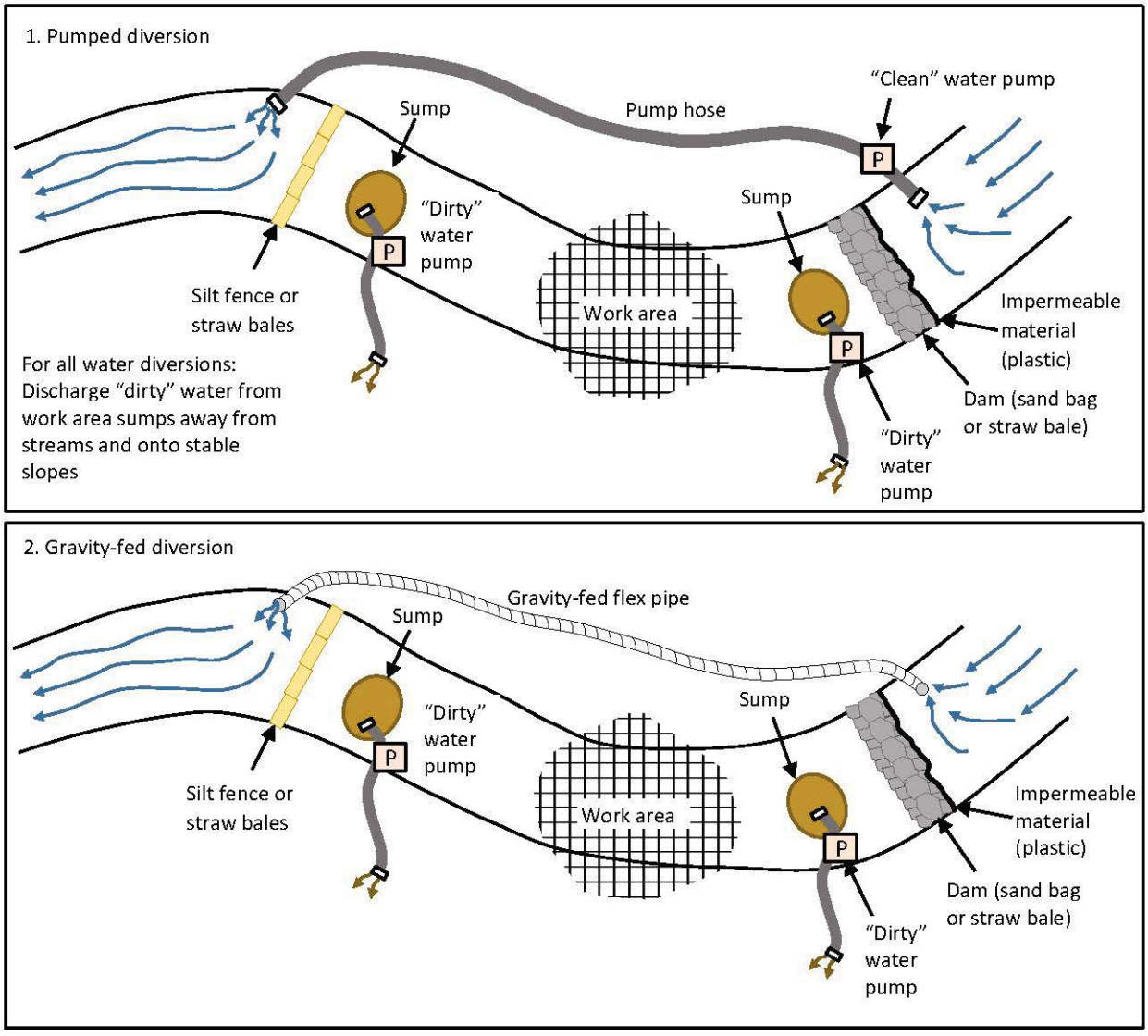
4) The road tread across the outsloped section or the outboard road will be rocked depending on site specific conditions (see road log).



Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

PWA Typical Drawing #19c

Typical Design for De-watering Streams



Stream crossing de-watering

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

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

APPENDIX C

Streamside Management Area Setback Reduction Memorandum

Humboldt County APN 219-041-012

STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION MEMORANDUM

Date: April 19th, 2021

To: Cliff Johnson
Planner -Cannabis Services Division
County of Humboldt
3015 H Street
Eureka, CA 95501

From: Mason London, MS Biology
Principal Biologist
Naiad Biological Consulting
PO Box 121
Samoa, CA 95564

on Behalf of: Lower Thomas Road, LLC
3556 Lower Thomas Rd
Miranda, CA 95553

RE: Streamside Management Area Setback Reduction Determination APN: 219-041-012

This memorandum describes the biological assessment and determination of a Streamside Management Area Setback Reduction on the parcel with the APN: 219-041-012 to allow for preexisting structures to be utilized.

ASSESSOR'S QUALIFICATIONS

This Streamside Management Area Setback Reduction Determination was conducted by Mason London. Mason is the primary biological consultant of Naiad Biological Consulting. Mason holds a Master of Science Degree in Biology with a concentration in aquatic ecology from Humboldt State University. His thesis work focused on the ecological functionality of intermittent and perennial streams by use of benthic macroinvertebrates as indicators of stream health. He is trained in CDFW's Surface Water Ambient Monitoring Program (SWAMP) protocol and has surveyed streams of varying size and magnitude throughout Northern California. Mason was a lead Research Scientist with the Humboldt State University River Institute for 3 years where we led field crews gathering pertinent data for the California State Water Resource Control Board's Hydrogeomorphic Classification of California North Coast Streams project and helped develop a Riparian and Stream Monitoring program on Lower Rush Creek in the Mono Lake Basin. Recently Mason has conducted field work through Naiad Biological Consulting to validate a model created by the Southern California Coastal Water Research Project for the classification of stream types on behalf of the Environmental Protection Agency. Aside from Mason's extensive hydraulic and aquatic research experience, he also has over 11 years of experience working professionally as a botanist, wildlife biologist, aquatic ecological research scientist, and has instructed ecological field and classroom courses at the university level.

STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION PURPOSE

The Streamside Management Area (SMA) Setback Reduction Determination of APN: 219-041-012 was conducted as a measure to address a request from the client on behalf of the County of Humboldt regarding any biological concerns for allowing the reduced setback of an SMA to occur. The client is

seeking a special permit to allow for the continued use of two pre-existing drying and curing buildings and segment of the road system located within the SMA setback of a Class II watercourse (Map 2).

According to the Humboldt County Code's *Streamside Management Areas and Wetland Ordinance*, a property's "…streamside management area may be reduced or eliminated where the County determines, based on specific factual findings, that: [t]he mapping of the SMA is not accurate, there are no in-channel wetland characteristics or off-channel riparian vegetation, or the reduction will not significantly affect the biological resources of the SMA on the property," (Section 314 - 61.1.7.6.3[1]).

Furthermore, the Humboldt County Code states that "[w] here an existing site does not conform to one (1) or more performance standards or eligibility criteria, or cannot comply with local, State, or Federal regulatory requirements, reconfiguration of the cultivation site and associated infrastructure may be permitted; provided, that the reconfiguration results in an improvement in the environmental resources of the site, and the site is brought into compliance with the requirements of this section.

A biological resource protection plan must be included. The plan shall be prepared by a qualified professional and evaluate whether prior unpermitted development or disturbance has occurred within a streamside management area, sensitive plant community, or area of similar biological sensitivity," (Section 314 – 55.4.12.11 *Existing Site Reconfiguration*)

A biological survey to assess impact of the area in questions was therefore conducted to determine if any significant affect to biological recourses would occur by the County of Humboldt allowing for a reduction in SMA to occur.

GEOGRAPHIC SETTING AND PREEXISTING CONDITIONS

The area in question for the SMA reduction request is located at 3556 Lower Thomas Road, Miranda, California 95553 and is approximately 3.80 air miles southwest of Miranda, California. The SMA in question is surrounding an unnamed Class II watercourse (Photo 1 & 2). According to the Humboldt County Code, SMAs are defined as "…a natural resource area along both sides of streams containing the channel and adjacent land. SMAs do not include watercourses consisting entirely of a manmade drainage ditch, or other manmade drainage device, construction, or system," (Section 314 - 61.1.7.6). This Class II watercourse flows into Bogus Creek, which is a tributary of South Fork Salmon Creek, which is a tributary of Salmon Creek, which is a tributary of the South Fork Eel River which is a tributary of the Eel River which is a coastal river draining into the Pacific Ocean approximately 40.00 air miles northwest of the parcel near Lolita, California (Map 1). The center location of the parcel is 40°11'58.9"N 123°52'38.2"W.

The infrastructure in question to be allowed to remain within the SMA are two pre-existing drying and curing buildings that have been in the current location since prior to 2021 (Photo 3). An outdoor cultivate area and a 476 sq ft nursery were previously located within the boundaries of the SMA near the location of the two pre-existing buildings, but have already been removed as a result of the SMA boundaries. No new development or construction is proposed to occur within the SMA at this site.

The habitat within the SMA is composed of a mixed hardwood and coniferous forest, typical of southern Humboldt. Dominant tree species observed were Douglas fir (*Pseudotsuga menziesii*), California bay

[1] **Humboldt County Code:** https://humboldt.county.codes/Code/314-61

laurel (*Umbellularia californica*), tanoak (*Notholithocarpus densiflorus*), and black oak (*Quercus kelloggii*). Dominant subspecies within the understory of the SMA include poison oak (*Toxicodendron diversilobum*), sword fern (*Polystichum munitum*), redwood sorrel (*Oxalis oregana*), honeysuckle (*Lonicera spp*.), sanicle (*Sanicula spp.*), mint (*Mentha spp*.), wild rose (*Rosa spp*.), and wild strawberries (*Fragaria vesca*). Not all species observed within this habitat were recorded since this site visit was not conducted as a protocol-level botanical survey. The species mentioned here are to give a generalization of the habitat community, and the dominant disturbed habitat quality.

ASSESSMENT METHODS

Field Survey

A site visit was conducted by Mason London on April 2, 2020, between 930 and 1100, as a measure to assess the current conditions of the SMA, the infrastructure requested to remain within the SMA, and identify any current or future impacts to biological resources and sensitive habitats in association of the infrastructure to the SMA.

This site investigation was conducted by traversing the parcel on foot and documenting the current habitat features (Map 3). The site visit and biological survey also was conducted to observe the overall habitat quality and to create educated assumptions about past habitat modification. In this regard, habitat quality directly relates to the distribution of biological resources (i.e., special-status species) in space and influences of the potential for resource acquisition. Habitat modification, both positive and/or negative, refers to the changes in habitat quality, which can induce changes in species acquisition of resources.

The goal of the investigation was not to conduct a complete botanical field survey for special-status plant species, but rather a focused survey to determine suitable habitat for potential species within the habitats present within the Study Area, and document any of these species' occurrences. A focused survey is an on-site survey that is limited in scope, content, length and designed to gather information on a specific issue(s). The habitats of potential likelihood of occurrence were surveyed based on predetermined features. Only habitats that were determined to be potentially impacted by the SMA setback reduction were investigated for the presence of the focal special-status species. Therefore, a meandering, or wandering transect, approach to the survey was implemented in order to cover all habitats that could potentially harbor the listed species currently in bloom (Map 3). Since the focused survey targeted special-status species, not all species encountered were documented.

A laser TruPluse 200X was used in the field to make all measurements. True buffers and setbacks, used in all of the maps associated with this memorandum were generated with GIS software out of the field.

ASSESSMENT CONCLUSIONS

Streamside Management Area Setback Reduction Determination

Based on the observations made during the site visit, there are no anticipated impacts to the SMA by allowing the current infrastructure to remain within the SMA boundary. As a result of these buildings being in this location for over nine (9) years, there are no foreseeable impacts that will occur to the SMA that would not have already taken place since no new development or construction is proposed. Furthermore, it is anticipated that if these buildings were to be removed, likely impacts to the Class II watercourse and

other associated aquatic resources would be from sediment movement from the footprint of the deconstructed site, and potential noise disturbance to nearby wildlife from the demolition process.

If these buildings were to be removed, drying and curing building would have to be constructed at a different onsite location, which would result in new and unnecessary disturbance to the surrounding environment. Since these buildings are already present in this location, it would be environmentally superior to consolidate impact and disturbance to the land and environment, and leave them where they currently are.

As a result of the foundation of these buildings being post and pier (Photo 4), noncontaminated surface runoff towards the Class II watercourse in response to storm events is able to still occur without impediment by the buildings.

No special-status species within the area surrounding the pre-existing infrastructure were observed during the focused survey and no special status species are anticipated to be impacted by allowing the SMA setback reduction to occur since no new activities are proposed.

It is therefore determined that the two pre-existing buildings can remain within the SMA and be utilized for curing and drying and will have no further impact to the SMA in which is currently resides in.

Recommendations

Recommendations to avoid further disturbance to the SMA, nearby watercourse, and the respective aquatic resources is to have the client completely clean up and remove all loose material related to the cannabis cultivation operation on site within the SMA and specifically surrounding the pre-existing buildings. This means to no longer utilize the elevated space underneath the pre-existing buildings for storage (Photo 5). This will minimize and avoid any potential materials from having an impact to the surrounding SMA and/or entering the watercourse nearby.

If any other development or disturbance to the property occurs within or without of the SMA, the client should follow the Best Practicable Treatment or Control (BPTC) and Best Management Practices (BMP) as presented by the Stater Water Resource Control Board Cannabis General Order (Appendix C). BBTC and BMP are designed to prevent, minimize, and control the discharge of waste and pollutants associated with site operations and maintenance for the aforementioned project. Many of these BMP are considered enforceable conditions under the State Water Resources Control Board Cannabis General Order No. WQ 2017-0023-DWQ.

STATEMENT OF LIMIATION

The data and findings presented in this memorandum are valid to the extent that they represent habitat analysis, observed potential impacts, and/or actual sightings of the species described. The conclusions outlined in this memorandum are based on one (1) site visit and may not be seasonally appropriate for all conclusive results.

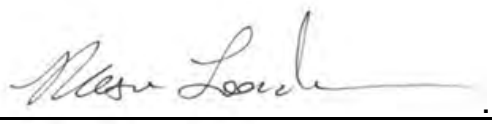
Deficiencies in these findings may result from the following:

- The botanical survey conducted at the time of the site visit investigation was not conducted as a protocol-level survey, but rather a focused survey to target specific know special-status species that have the potential to occur within the area and specifically within the SMA habitat.

- The parcel boundaries displayed in the maps created for this memorandum do not represent a boundary survey. Parcel and property lines shown within these maps are approximated and were acquired from Humboldt County Web GIS, and any errors within these boundaries are a result of errors in Humboldt County's GIS database.
- This memorandum is not intended to be a complete biological survey report for special-status species, but rather an assessment to determine impacts associated with the approval of a SMA setback reduction based on present and projected biological conditions and outcomes.
- It has been assumed that there is no new development or construction proposed within the SMA boundary on the parcel.
- The biological resource buffers and setbacks presented in this memorandum, and presented in Map 2 & 3, only represent buffers to biological resources and do not included cultural resources (i.e. historical landmarks and/or cemeteries). Additional buffers and setbacks may be required for cultural resources.

The opinions, conclusions and recommendations in this memorandum are based on assumptions made by Naiad Biological Consulting staff members when undertaking services and preparing the memorandum. As a result of this memorandum being an assessment, and not a protocol-level survey, Naiad Biological Consulting expressly disclaims responsibility for any error in, or omission from, this memorandum arising from or in connection with any of the assumptions and determinations being incorrect.

Certification: I hereby certify that the statements furnished in this report present the data and information required for this biological evaluation, and that the facts, statements, and information presented are true and correct to the best of my knowledge and belief.

X  .

Mason London, MS Biology

Naiad Biological Consulting Principal Biologist
PO Box 121
Samoa, CA 95564
naiadbiological@gmail.com

Appendix A

Photo Documentation

STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION MEMORANDUM

Lower Thomas Road, LLC

Assessor Parcel Number (APN):
APN: 219 – 041 –012

April 2021

Naiad Biological Consulting

Photo 1. The Class II watercourse within the SMA approximately 30 feet from the nearest edge of the preexisting structures.

Photo 2. The Class II watercourse within the SMA approximately 30 feet from the nearest edge of the preexisting structures.

Photo 3. The two pre-existing drying and curing buildings in question to be allowed to remain within the SMA.

Photo 4. The post and pier foundation of the pre-existing drying and curing buildings.

Photo 5. All loose material related to the cannabis cultivation operation on site within the SMA, underneath the buildings, and surrounding the pre-existing buildings should be removed and properly stored.

Appendix B

Maps

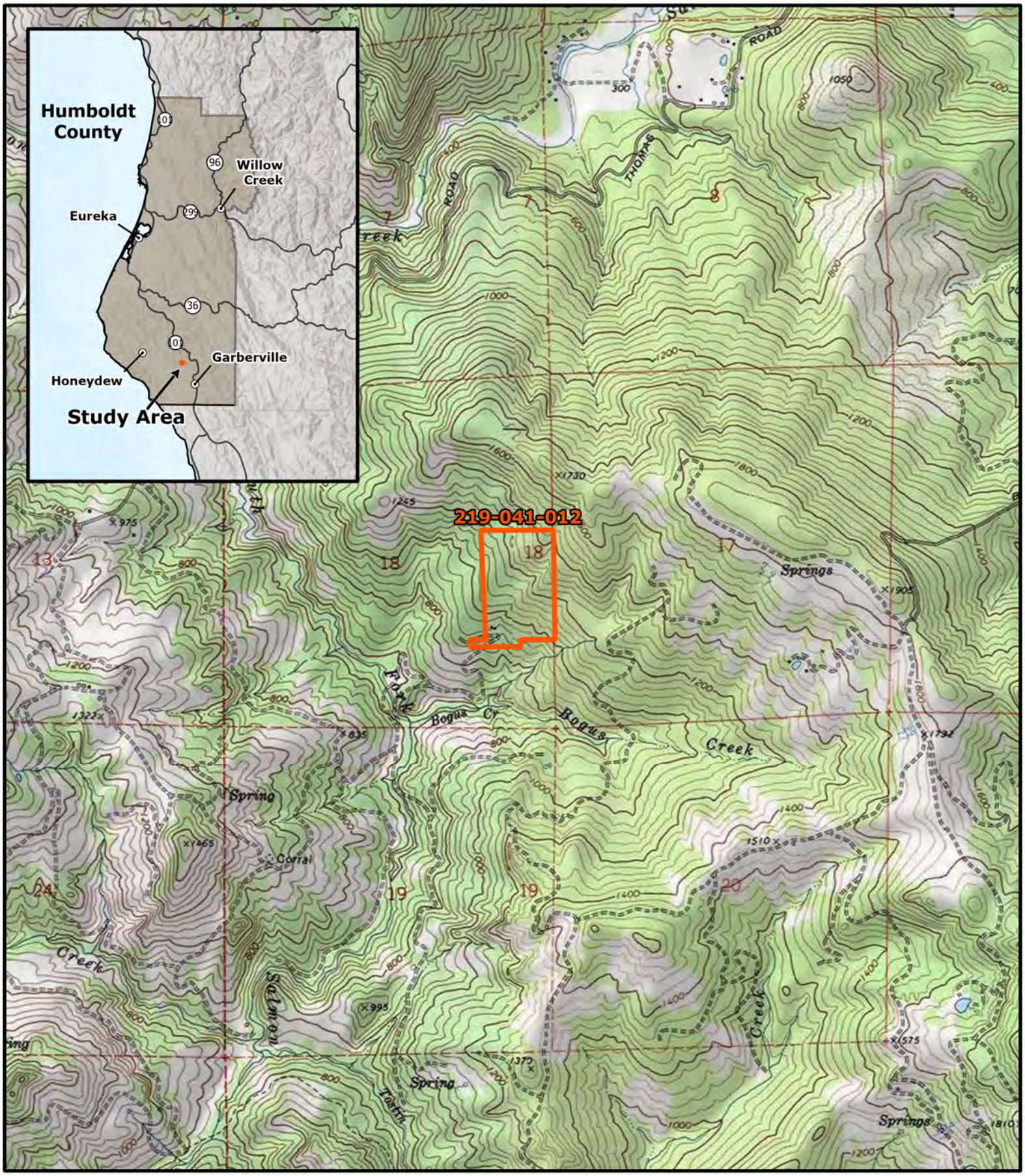
STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION MEMORANDUM

Lower Thomas Road, LLC

Assessor Parcel Number (APN):
APN: 219 – 041 –012

April 2021

Naiad Biological Consulting



Lower Thomas Road, LLC
3556 Lower Thomas Rd
Miranda, CA 95553
APN: 219-041-012

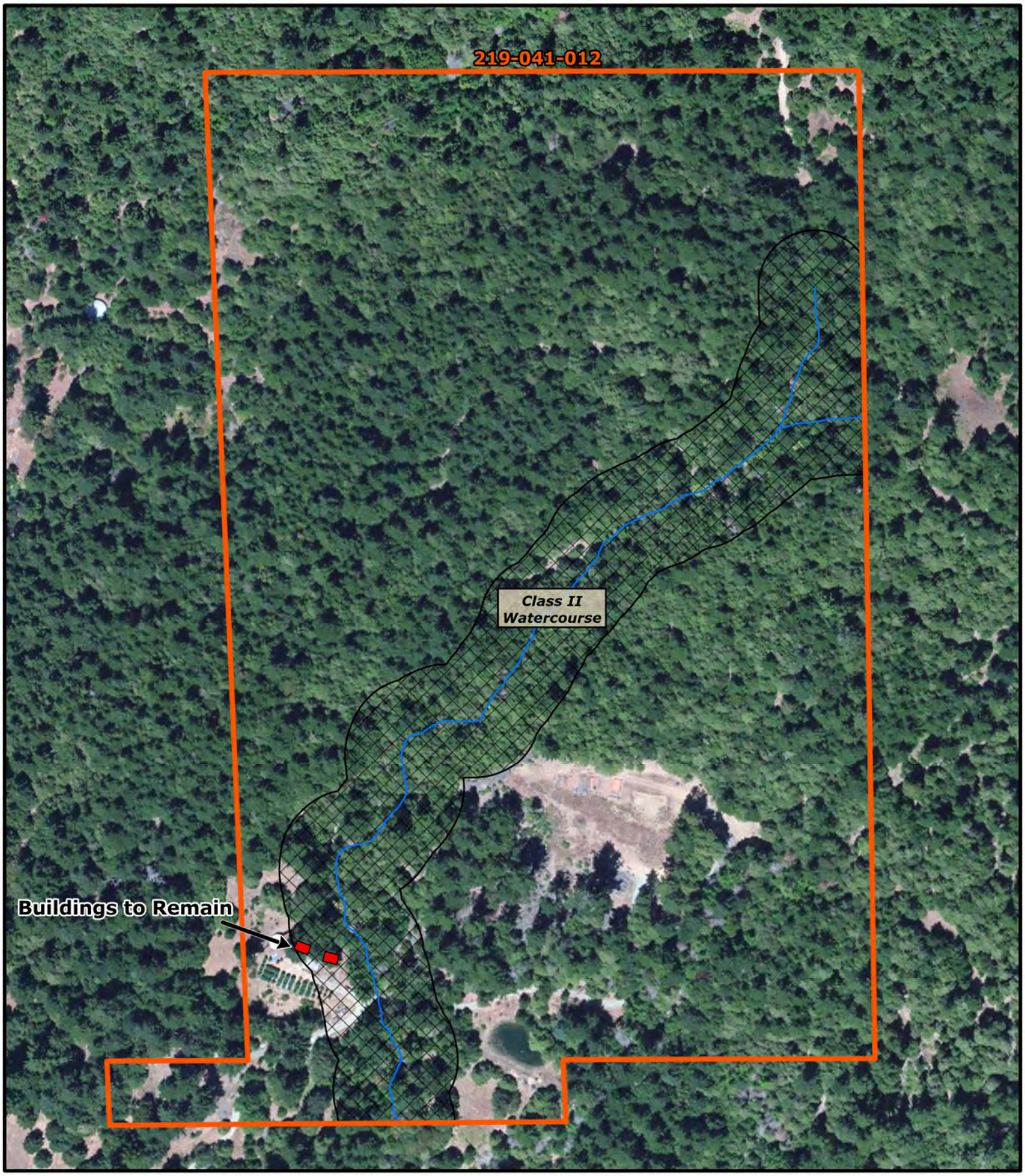
MAP 1: SITE LOCATION MAP

Scale: 1:24,000

0 1,000 2,000 4,000 Feet

Source: Ettersburg 7.5-Minute USGS Quadrangle

Naiad Biological Consulting



Class II Watercourse
Aquatic Resource Buffer
Drying and Curing Buildings

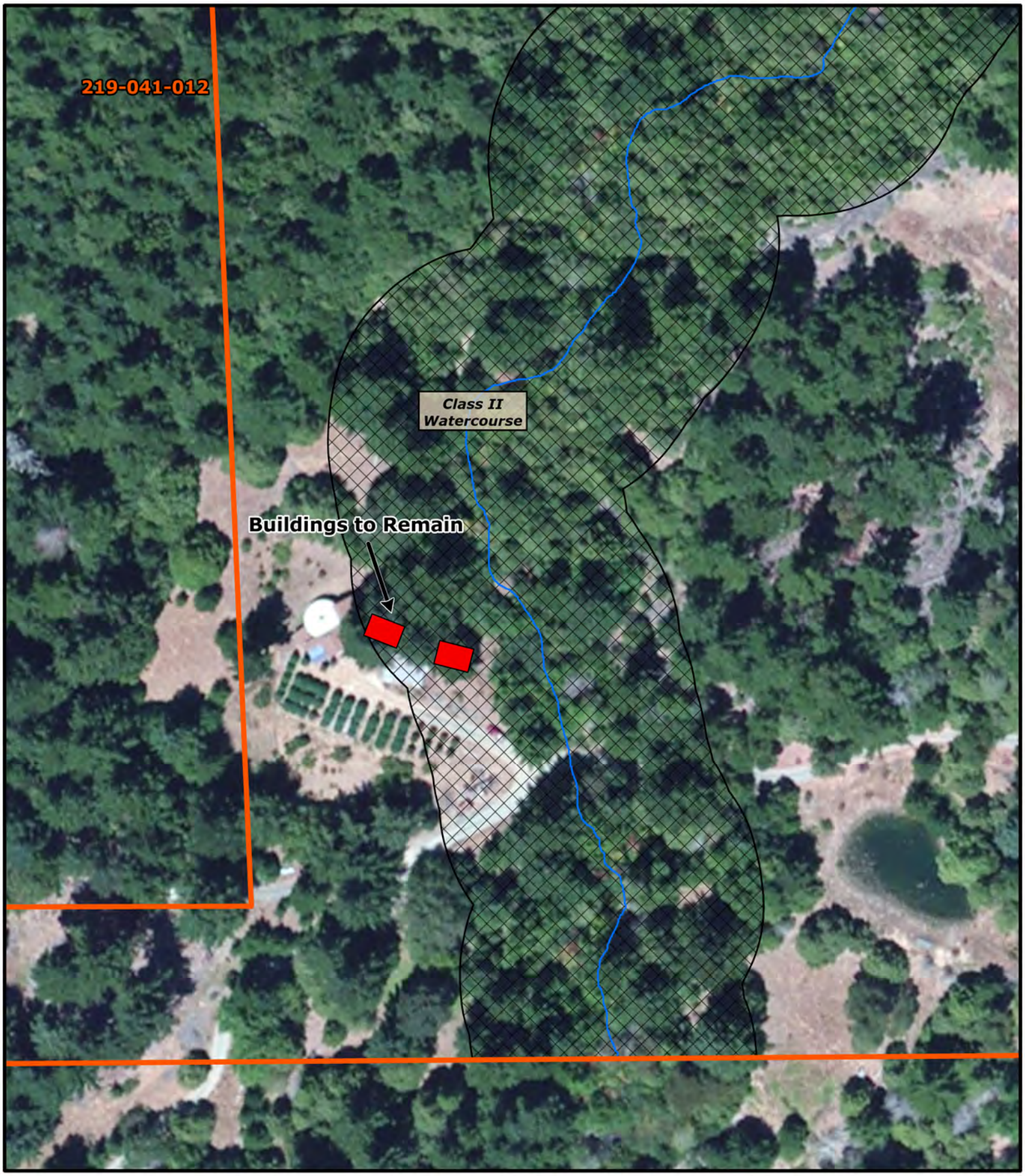
MAP 2a: SMA Setback Overview

Scale: 1:2,657

0 100 200 400 Feet

Source: Ettersburg 7.5-Minute USGS Quadrangle

Naiad Biological Consulting



Class II Watercourse
Aquatic Resource Buffer
Drying and Curing Buildings

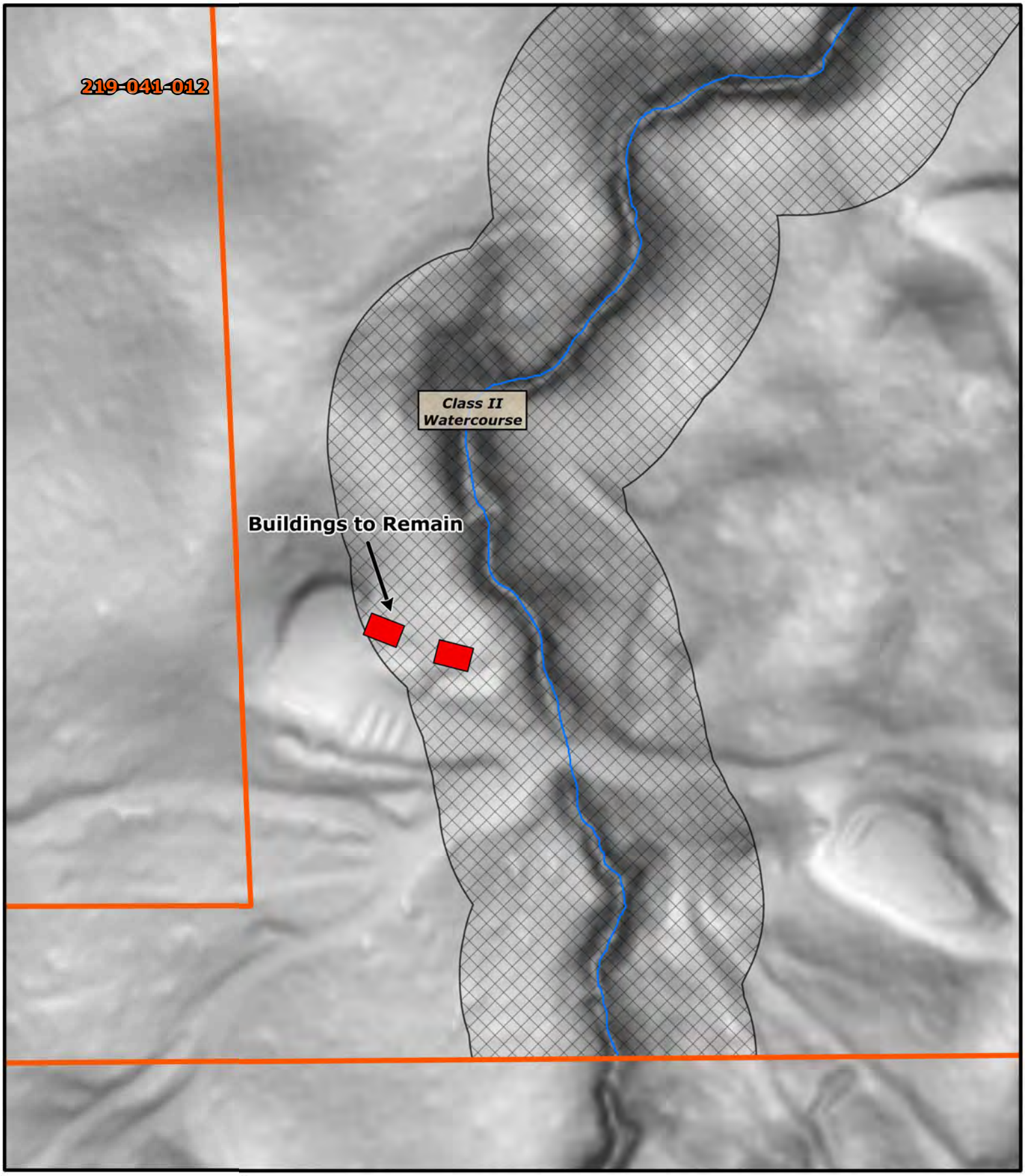
MAP 2b: SMA Setback

Scale: 1:1,088

0 40 80 160 Feet

Source: Ettersburg 7.5-Minute USGS Quadrangle

Naiad Biological Consulting



Class II Watercourse
Aquatic Resource Buffer
Drying and Curing Buildings

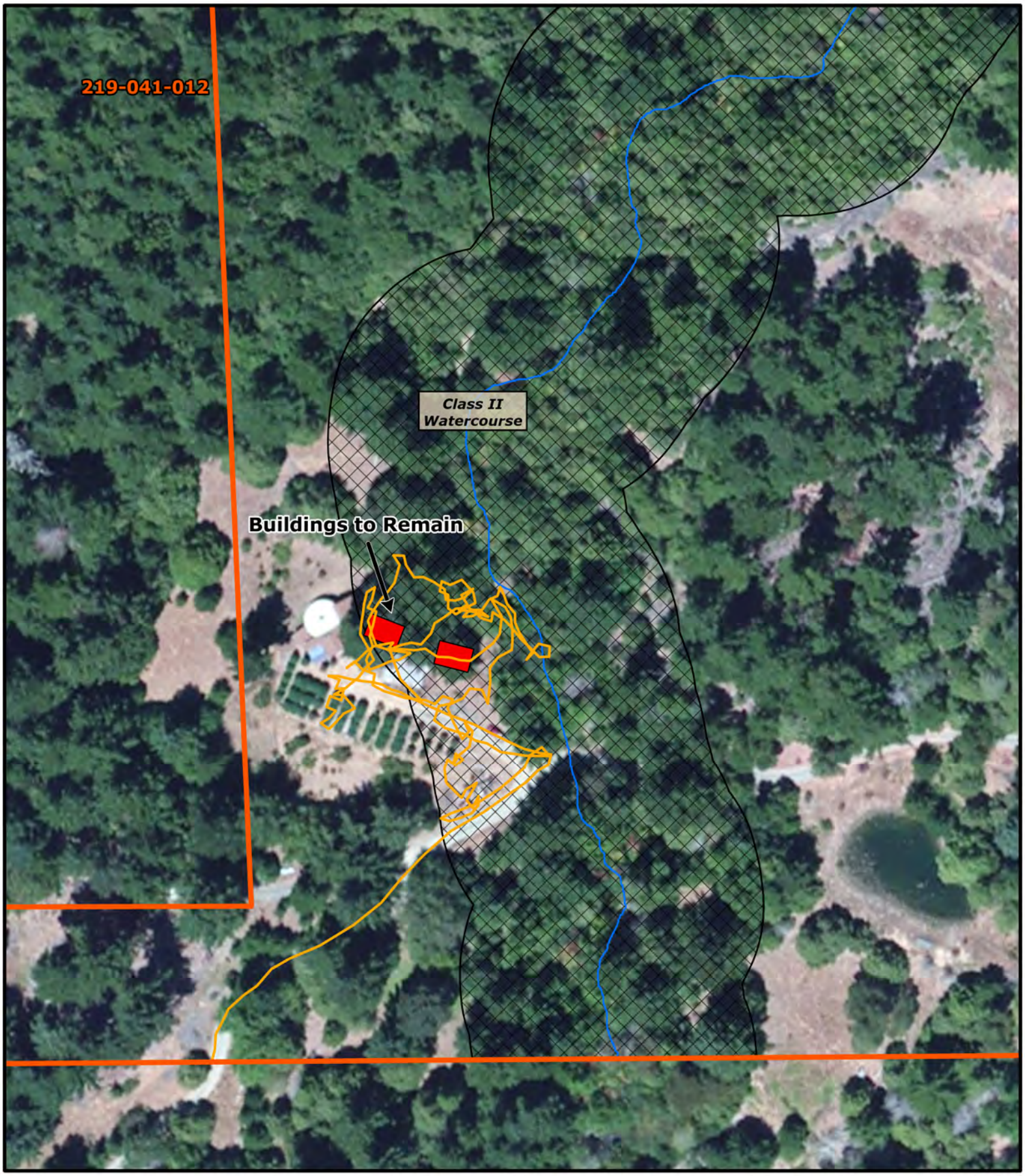
MAP2c: SMA Setback Lidar Visualization

Scale: 1:1,088

0 50 100 200 Feet

Source: Ettersburg 7.5-Minute USGS Quadrangle

Naiad Biological Consulting



Biological Survey Path (4/2/21)
Class II Watercourse
Aquatic Resource Buffer
Drying and Curing Buildings

MAP 3: Biological Survey Path

Scale: 1:1,088

0 50 100 200 Feet

Source: Ettersburg 7.5-Minute USGS Quadrangle

Naiad Biological Consulting

Appendix C

Best Practicable Treatment or Control (BPTC) and Best Management Practices (BMP)

STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION MEMORANDUM

Lower Thomas Road, LLC

Assessor Parcel Number (APN):
APN: 219 – 041 –012

April 2021

Naiad Biological Consulting

Cannabis Cultivation

Best Practicable Treatment or Control (BPTC) and Best Management Practices (BMP)

Adapted from

State Water Resources Control Board Cannabis General Order WQ 2017-0023-DWQ Attachment A

BBTCs and BMPs are designed to prevent, minimize, and control the discharge of waste and pollutants associated with site operations and maintenance for the aforementioned project. Many of these BMPs are considered enforceable conditions under State Water Resources Control Board *Cannabis* General Order No. WQ 2017-0023-DWQ.

No.	TERM
Land Development and Maintenance, Erosion Control, and Drainage Features	
Limitations on Earthmoving	
1.	Landowners shall not conduct grading activities for land development or alteration on slopes exceeding 50 percent grade, or as restricted by local county or city permits, ordinances, or regulations for grading, or agriculture; whichever is more stringent shall apply. The grading prohibition on slopes exceeding 50 percent does not apply to site mitigation or remediation if the landowner is issued separate WDRs or an enforcement order for the activity by the Regional Water Board Executive Officer.
2.	Finished cut and fill slopes, including side slopes between terraces, shall not exceed slopes of 50 percent and should conform to the natural pre-grade slope whenever possible.
3.	Landowners shall not drive or operate vehicles or equipment within the riparian setbacks or within waters of the state unless authorized under 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board. This requirement does not prohibit driving on established, maintained access roads that are in compliance with this various agency standards.
4.	Land development and access road construction shall be designed by qualified professionals. Landowners shall conduct all construction or land development activities to minimize grading, soil disturbance, and disturbance to aquatic and terrestrial habitat.
5.	The landowner shall control all dust related to operation activities to ensure dust does not produce sediment-laden runoff. The landowner shall implement dust control measures, including, but not limited to, pre-watering of excavation or grading sites, use of water trucks, track-out prevention, washing down vehicles or equipment before leaving a site, and prohibiting land disturbance activities when instantaneous wind speeds (gusts) exceed 25 miles per hour. Landowners shall grade access roads in dry weather while moisture is still present in soil to minimize dust and to achieve design soil compaction, or when needed use a water truck to control dust and soil moisture.
Construction Equipment Use and Limitations	
6.	Landowners shall employ spill control and containment practices to prevent the discharge of fuels, oils, solvents and other chemicals to soils and waters of the state.

7.	Landowners shall stage and store equipment, materials, fuels, lubricants, solvents, or hazardous or toxic materials in locations that minimize the potential for discharge to waters of the state. At a minimum, the following measures shall be implemented: 1. Designate an area outside the riparian setback for equipment storage, short-term maintenance, and refueling. Landowner shall not conduct any maintenance activity or refuel equipment in any location where the petroleum products or other pollutants may enter waters of the state as per Fish and Game Code section 5650 (a)(1). 2. Frequently inspect equipment and vehicles for leaks. 3. Immediately clean up leaks, drips, and spills. Except for emergency repairs that are necessary for safe transport of equipment or vehicles to an appropriate repair facility, equipment or vehicle repairs, maintenance, and washing onsite is prohibited. 4. If emergency repairs generate waste fluids, ensure they are contained and properly disposed or recycled off-site. 5. Properly dispose of all construction debris off-site. 6. Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. Sweep up, contain, and properly dispose of spilled dry materials.
Erosion Control	
8.	The landowner shall use appropriate erosion control measures to minimize erosion of disturbed areas, potting soil, or bulk soil amendments to prevent discharges of waste. Fill soil shall not be placed where it may discharge into surface water. If used, weed-free straw mulch shall be applied at a rate of two tons per acre of exposed soils and, if warranted by site conditions, shall be secured to the ground.
9.	The landowner shall not plant or seed noxious weeds. Prohibited plant species include those identified in the California Invasive Pest Plant Council's database, available at: www.cal-ipc.org/paf/. Locally native, non-invasive, and non-persistent grass species may be used for temporary erosion control benefits to stabilize disturbed land and prevent exposure of disturbed land to rainfall.
10.	Landowners shall incorporate erosion control and sediment detention devices and materials into the design, work schedule, and implementation of the project activities. The erosion prevention and sediment capture measures shall be effective in protecting water quality. • Interim erosion prevention and sediment capture measures shall be implemented within seven days of completion of grading and land disturbance activities, and shall consist of erosion prevention measures and sediment capture measures including: o Erosion prevention measures are required for any earthwork that uses heavy equipment (e.g., bulldozer, compactor, excavator, etc.). Erosion prevention measures may include surface contouring, slope roughening, and upslope storm water diversion. Other types of erosion prevention measures may include mulching, hydroseeding, tarp placement, revegetation, and rock slope protection. o Sediment capture measures include the implementation of measures such as gravel bag berms, fiber rolls, straw bale barriers, properly installed silt fences, and sediment settling basins. • Long-term erosion prevention and sediment capture measures shall be implemented as soon as possible and prior to the onset of fall and winter precipitation. Long-term measures may include the use of heavy equipment to reconfigure access roads or improve access road drainage, installation of properly-sized culverts, gravel placement on steeper grades, and stabilization of previously disturbed land. • Maintenance of all erosion protection and sediment capture measures is required year round. Early monitoring allows for identification of problem areas or underperforming erosion or sediment control measures. Verification of the effectiveness of all erosion prevention and sediment capture measures is required as part of winterization activities.
11.	Landowners shall only use geotextiles, fiber rolls, and other erosion control measures made of loose-weave mesh (e.g., jute, coconut (coir) fiber, or from other products without welded weaves). To minimize the risk of ensnaring and strangling wildlife, Landowners shall not use synthetic (e.g., plastic or nylon) monofilament netting materials for erosion control for any project activities. This prohibition includes photo- or bio-degradable plastic netting.

12.	Cultivation sites constructed on or near slopes with a slope greater than or equal to 30 percent shall be inspected for indications of instability. Indications of instability include the occurrence of slope failures at nearby similar sites, weak soil layers, geologic bedding parallel to slope surface, hillside creep (trees, fence posts, etc. leaning downslope), tension cracks in the slope surface, bulging soil at the base of the slope, and groundwater discharge from the slope. If indicators of instability are present, the landowner shall consult with a qualified professional to design measures to stabilize the slope to prevent sediment discharge to surface waters.
13.	For areas outside of riparian setbacks or for upland areas, Landowners shall ensure that rock placed for slope protection is the minimum amount necessary and is part of a design that provides for native plant revegetation. If retaining walls or other structures are required to provide slope stability, they shall be designed by a qualified professional.
14.	Landowners shall monitor erosion control measures during and after each storm event that produces at least 0.5 in/day or 1.0 inch/7 days of precipitation, and repair or replace, as needed, ineffective erosion control measures immediately.
Access Road/Land Development and Drainage	
15.	Access roads shall be constructed consistent with the requirements of California Code of Regulations Title 14, Chapter 4. The Road Handbook describes how to implement the regulations and is available at <http://www.pacificwatershed.com/PWA-publications- library>. Existing access roads shall be upgraded to comply with the Road Handbook.
16.	Landowners shall obtain all required permits and approvals prior to the construction of any access road constructed for project activities. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), CDFW LSA Agreement, and county or local agency permits.
17.	Landowners shall ensure that all access roads are hydrologically disconnected to receiving waters to the extent possible by installing disconnecting drainage features, increasing the frequency of (inside) ditch drain relief as needed, constructing out-sloped roads, constructing energy dissipating structures, avoiding concentrating flows in unstable areas, and performing inspection and maintenance as needed to optimize the access road performance.
18.	New access road alignments should be constructed with grades (slopes) of 3- to 8- percent, or less, wherever possible. Forest access roads should generally be kept below 12-percent except for short pitches of 500 feet or less where road slopes may go up to 20- percent. These steeper access road slopes should be paved or rock surfaced and equipped with adequate drainage. Existing access roads that do not comply with these limits shall be inspected by a qualified professional to determine if improvements are needed.
19.	Landowners shall decommission or relocate existing roads away from riparian setbacks whenever possible. Roads that are proposed for decommissioning shall be abandoned and left in a condition that provides for long-term, maintenance-free function of drainage and erosion controls. Abandoned roads shall be blocked to prevent unauthorized vehicle traffic.
20.	If site conditions prohibit drainage structures (including rolling dips and ditch-relief culverts) at adequate intervals to avoid erosion, the landowner shall use bioengineering techniques[12] as the preferred measure to minimize erosion (e.g., live fascines). If bioengineering cannot be used, then engineering fixes such as armoring (e.g., rock of adequate size and depth to remain in place under traffic and flow conditions) and velocity dissipaters (e.g., gravel-filled “pillows” in an inside ditch to trap sediment) may be used for problem sites. The maximum distance between water breaks shall not exceed those defined in the Road Handbook.
21.	Landowners shall have a qualified professional design the optimal access road alignment, surfacing, drainage, maintenance requirements, and spoils handling procedures.
22.	Landowners shall ensure that access road surfacing, especially within a segment leading to a waterbody, is sufficient to minimize sediment delivery to the wetland or waterbody and maximize access road integrity. Road surfacing may include pavement, chip-seal, lignin, rock, or other material appropriate for timing and nature of use. All access roads that will be used for winter or wet weather hauling/traffic shall be surfaced. Steeper access road grades require higher quality rock (e.g., crushed angular versus river-run) to remain in place. The use of asphalt grindings is prohibited.
23.	Landowners shall install erosion control measures on all access road approaches to surface water diversion sites to reduce the generation and transport of sediment to streams.

24.	Landowners shall ensure that access roads are out-sloped whenever possible to promote even drainage of the access road surface, prevent the concentration of storm water flow within an inboard or inside ditch, and to minimize disruption of the natural sheet flow pattern off a hill slope to a stream.
25.	If unable to eliminate inboard or inside ditches, the landowner shall ensure adequate ditch relief culverts to prevent down-cutting of the ditch and to reduce water runoff concentration, velocity, and erosion. Ditches shall be designed and maintained as recommended by a qualified professional. To avoid point-source discharges, inboard ditches and ditch relief culverts shall be discharged onto vegetated or armored slopes that are designed to dissipate and prevent runoff channelization. Inboard ditches and ditch relief culverts shall be designed to ensure discharges into natural stream channels or watercourses are prevented.
26.	Landowners shall ensure that access roads are not allowed to develop or show evidence of significant surface rutting or gullying. Landowners shall use water bars and rolling dips as designed by a qualified professional to minimize access road surface erosion and dissipate runoff.
27.	Landowners shall only grade ditches when necessary to prevent erosion of the ditch, undermining of the banks, or exposure of the toe of the cut slope to erosion. Landowners shall not remove more vegetation than necessary to keep water moving, as vegetation prevents scour and filters out sediment.
28.	Access road storm water drainage structures shall not discharge onto unstable slopes, earthen fills, or directly to a waterbody. Drainage structures shall discharge onto stable areas with straw bales, slash, vegetation, and/or rock riprap.
29.	Sediment control devices (e.g., check dams, sand/gravel bag barriers, etc.) shall be used when it is not practical to disperse storm water before discharge to a waterbody. Where potential discharge to a wetland or waterbody exists (e.g., within 200 feet of a waterbody) access road surface drainage shall be filtered through vegetation, slash, other appropriate material, or settled into a depression with an outlet with adequate drainage. Sediment basins shall be engineered and properly sized to allow sediment settling, spillway stability, and maintenance activities.
Drainage Culverts (See also Watercourse Crossings)	
30.	Landowners shall regularly inspect ditch-relief culverts and clear them of any debris or sediment. To reduce ditch-relief culvert plugging by debris, Landowners shall use 15- to 24-inch diameter pipes, at minimum. In forested areas with a potential for woody debris, a minimum 18-inch diameter pipe shall be used to reduce clogging. Ditch relief culverts shall be designed by a qualified professional based on site-specific conditions.
31.	Landowners shall ensure that all permanent watercourse crossings that are constructed or reconstructed are capable of accommodating the estimated 100-year flood flow, including debris and sediment loads. Watercourse crossings shall be designed and sized by a qualified professional.
Cleanup, Restoration, and Mitigation	
32.	Landowners shall limit disturbance to existing grades and vegetation to the actual site of the cleanup or remediation and any necessary access routes.
33.	Landowners shall avoid damage to native riparian vegetation. All exposed or disturbed land and access points within the stream and riparian setback with damaged vegetation shall be restored with regional native vegetation of similar native species. Riparian trees over four inches diameter at breast height shall be replaced by similar native species at a ratio of three to one (3:1). Restored areas must be mulched, using at least 2 to 4 inches of weed-free, clean straw or similar biodegradable mulch over the seeded area. Mulching shall be completed within 30 days after land disturbance activities in the areas cease. Revegetation planting shall occur at a seasonally appropriate time until vegetation is restored to pre-operation or pre-Legacy condition or better. Landowners shall stabilize and restore any temporary work areas with native vegetation to pre-operation or pre-Legacy conditions or better. Vegetation shall be planted at an adequate density and variety to control surface erosion and re-generate a diverse composition of regional native vegetation of similar native species.
34.	Landowners shall avoid damage to oak woodlands. Landowner shall plant three oak trees for every one oak tree damaged or removed. Trees may be planted in groves in order to maximize wildlife benefits and shall be native to the local county.

35.	Landowners shall develop a revegetation plan for: • All exposed or disturbed riparian vegetation areas, • any oak trees that are damaged or removed, and • temporary work areas. Landowners shall develop a monitoring plan that evaluates the revegetation plan for five years. Landowners shall maintain annual inspections for the purpose of assessing an 85 percent survival and growth of revegetated areas within a five-year period. The presence of exposed soil shall be documented for three years following revegetation work. If the revegetation results in less than an 85 percent success rate, the unsuccessful vegetation areas shall be replanted. Landowners shall identify the location and extent of exposed soil associated with the site; pre- and post-revegetation work photos; diagram of all areas revegetated, the planting methods, and plants used; and an assessment of the success of the revegetation program. Landowners shall maintain a copy of the revegetation plan and monitoring results onsite and make them available, upon request, to Water Boards staff or authorized representatives. An electronic copy of monitoring results is acceptable in Portable Document Format (PDF).
36.	Landowners shall revegetate soil exposed as a result of project activities with native vegetation by live planting, seed casting, or hydroseeding within seven days of exposure.
37.	Landowners shall prevent the spread or introduction of exotic plant species to the maximum extent possible by cleaning equipment before delivery to the Site and before removal, restoring land disturbance with appropriate native species, and post-project activities monitoring and control of exotic species.
Stream Crossing Installation and Maintenance	
Limitations on Work in Watercourses and Permanently Ponded Areas	
38.	Landowners shall obtain all applicable permits and approvals prior to doing any work in or around waterbodies or within the riparian setbacks. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), and a CDFW LSA Agreement.
39.	Landowners shall avoid or minimize temporary stream crossings. When necessary, temporary stream crossings shall be located in areas where erosion potential and damage to the existing habitat is low. Landowners shall avoid areas where runoff from access roadway side slopes and natural hillsides will drain and flow into the temporary crossing. Temporary stream crossings that impede fish passage are strictly prohibited on permanent or seasonal fish-bearing streams.
40.	Landowners shall avoid or minimize use of heavy equipment[13] in a watercourse. If use is unavoidable, heavy equipment may only travel or work in a waterbody with a rocky or cobbled channel. Wood, rubber, or clean native rock temporary work pads shall be used on the channel bottom prior to use of heavy equipment to protect channel bed and preserve channel morphology. Temporary work pads and other channel protection shall be removed as soon as possible once the use of heavy equipment is complete.
41.	Landowners shall avoid or minimize work in or near a stream, creek, river, lake, pond, or other waterbody. If work in a waterbody cannot be avoided, activities and associated workspace shall be isolated from flowing water by directing the water around the work site. If water is present, then the landowner shall develop a site-specific plan prepared by a qualified professional. The plan shall consider partial or full stream diversion and dewatering. The plan shall consider the use of coffer dams upstream and downstream of the work site and the diversion of all flow from upstream of the upstream dam to downstream of the downstream dam, through a suitably sized pipe with intake screens that protect and prevent impacts to fish and wildlife. Project activities and associated work shall be performed outside the waterbody from the top of the bank to the maximum extent possible.
Temporary Watercourse Diversion and Dewatering: All Live Watercourses	
42.	Landowners shall ensure that coffer dams are constructed prior to commencing work and as close as practicable upstream and downstream of the work area. Cofferdam construction using offsite materials, such as clean gravel bags or inflatable dams, is preferred. Thick plastic may be used to minimize leakage but shall be completely removed and properly disposed of upon work completion. If the coffer dams or stream diversion fail, the landowner shall repair them immediately.

43.	When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, the landowner shall allow sufficient water at all times to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code section 5937.
44.	If possible, gravity flow is the preferred method of water diversion. If a pump is used, the landowner shall ensure that the pump is operated at the rate of flow that passes through the site. Pumping rates shall not dewater or impound water on the upstream side of the coffer dam. When diversion pipe is used it shall be protected from project activities and maintained to prevent debris blockage.
45.	Landowners shall only divert water such that water does not scour the channel bed or banks at the downstream end. Landowner shall divert flow in a manner that prevents turbidity, siltation, and pollution and provides flows to downstream reaches. Landowners shall provide flows to downstream reaches during all times that the natural flow would have supported aquatic life. Flows shall be of sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Block netting and intake screens shall be sized to protect and prevent impacts to fish and wildlife.
46.	Once water has been diverted around the work area, Landowners may dewater the site to provide an adequately dry work area. Any muddy or otherwise contaminated water shall be pumped to a settling tank, dewatering filter bag, or upland area, or to another location approved by CDFW or the appropriate Regional Water Board Executive Officer prior to re-entering the watercourse.
47.	Upon completion of work, Landowners shall immediately remove the flow diversion structure in a manner that allows flow to resume with a minimum of disturbance to the channel substrate and that minimizes the generation of turbidity.
Watercourse Crossings	
48.	Landowners shall ensure that watercourse crossings are designed by a qualified professional.
49.	Landowners shall ensure that all access road watercourse crossing structures allow for the unrestricted passage of water and shall be designed to accommodate the estimated 100-year flood flow and associated debris (based upon an assessment of the streams potential to generate debris during high flow events). Consult CAL FIRE 100-year Watercourse Crossings document for examples and design calculations, available at: http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20(final-a).pdf.
50.	Landowners shall ensure that watercourse crossings allow migration of aquatic life during all life stages supported or potentially supported by that stream reach. Design measures shall be incorporated to ensure water depth and velocity does not inhibit migration of aquatic life. Any access road crossing structure on watercourses that supports fish shall be constructed for the unrestricted passage of fish at all life stages, and should use the following design guidelines: • CDFW's *Culvert Criteria for Fish Passage;* • CDFW's *Salmonid Stream Habitat Restoration Manual, Volume 2, Part IX: Fish Passage Evaluation at Stream Crossings; and* • National Marine Fisheries Service, Southwest Region *Guidelines for Salmonid Passage at Stream Crossings.*
51.	Landowners shall conduct regular inspection and maintenance of stream crossings to ensure crossings are not blocked by debris. Refer to California Board of Forestry Technical Rule No. 5 available at: http://www.calforests.org/wp- content/uploads/2013/10/Adopted-TRA5.pdf.
52.	Landowners shall only use rock fords for temporary seasonal crossings on small watercourses where aquatic life passage is not required during the time period of use. Rock fords shall be oriented perpendicular to the flow of the watercourse and designed to maintain the range of surface flows that occur in the watercourse. When constructed, rock shall be sized to withstand the range of flow events that occur at the crossing and rock shall be maintained at the rock ford to completely cover the channel bed and bank surfaces to minimize soil compaction, rutting, and erosion. Rock must extend on either side of the ford up to the break in slope. The use of rock fords as watercourse crossings for all-weather access road use is prohibited.
53.	Landowners shall ensure that culverts used at watercourse crossings are designed to direct flow and debris toward the inlet (e.g., use of wing-walls, pipe beveling, rock armoring, etc.) to prevent erosion of road fill, debris blocking the culvert, and watercourses from eroding a new channel.

54.	Landowners shall regularly inspect and maintain the condition of access roads, access road drainage features, and watercourse crossings. At a minimum, Landowners shall perform inspections prior to the onset of fall and winter precipitation and following storm events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation. Landowners are required to perform all of the following maintenance: • Remove any wood debris that may restrict flow in a culvert. • Remove sediment that impacts access road or drainage feature performance. • Place any removed sediment in a location outside the riparian setbacks and stabilize the sediment. • Maintain records of access road and drainage feature maintenance and consider redesigning the access road to improve performance and reduce maintenance needs.
55.	Landowners shall compact access road crossing approaches and fill slopes during installation and shall stabilize them with rock or other appropriate surface protection to minimize surface erosion. When possible, Landowners shall ensure that access roads over culverts are equipped with a critical dip to ensure that, if the culvert becomes blocked or plugged, water can flow over the access road surface without washing away the fill prism. Access road crossings where specific conditions do not allow for a critical dip or in areas with potential for significant debris accumulation, shall include additional measures such as emergency overflow culverts or oversized culverts that are designed by a qualified professional.
56.	Landowners shall ensure that culverts used at watercourse crossings are: 1) installed parallel to the watercourse alignment to the extent possible, 2) of sufficient length to extend beyond stabilized fill/sidecast material, and 3) embedded or installed at the same level and gradient of the streambed in which they are being placed to prevent erosion.
Soil Disposal and Spoils Management	
57.	Landowners shall store soil, construction, and waste materials outside the riparian setback except as needed for immediate construction needs. Such materials shall not be stored in locations of known slope instability or where the storage of construction or waste material could reduce slope stability.
58.	Landowners shall separate large organic material (e.g., roots, woody debris, etc.) from soil materials. Landowners shall either place the large organic material in long-term, upland storage sites, or properly dispose of these materials offsite.
59.	Landowners shall store erodible soil, soil amendments, and spoil piles to prevent sediment discharges in storm water. Storage practices may include use of tarps, upslope land contouring to divert surface flow around the material, or use of sediment control devices (e.g., silt fences, straw wattles, etc.).
60.	Landowners shall contour and stabilize stored spoils to mimic natural slope contours and drainage patterns (as appropriate) to reduce the potential for fill saturation and slope failure.
61.	For soil disposal sites Landowners shall: • revegetate soil disposal sites with a mix of native plant species, • cover the seeded and planted areas with mulched straw at a rate of two tons per acre, and • apply non-synthetic netting or similar erosion control fabric (e.g., jute) on slopes greater than 2:1 if the site is erodible.
62.	Landowners shall haul away and properly dispose of excess soil and other debris as needed to prevent discharge to waters of the state.
Riparian and Wetland Protection and Management	
63.	Landowners shall not disturb aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under a CWA section 404 permit, CWA section 401 certification, Regional Water Board WDRs (when applicable), or a CDFW LSA Agreement.
64.	Landowners shall maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharge.
Water Storage and Use	
Water Supply, Diversion, and Storage	

65.	Landowners shall only install, maintain, and destroy wells in compliance with county, city, and local ordinances and with California Well Standards as stipulated in California Department of Water Resources Bulletins 74-90 and 74-81.
66.	All water diversions for project activities from a surface stream, subterranean stream flowing through a known and definite channel (e.g., groundwater well diversions from subsurface stream flows), or other surface waterbody are subject to the surface water Numeric and Narrative Instream Flow Requirements. This includes lakes, ponds, and springs (unless the spring is deemed exempt by the Deputy Director). See Section 3. Numeric and Narrative Instream Flow Requirements of this Attachment A for more information.
67.	Groundwater diversions may be subject to additional requirements, such as a forbearance period, if the State Water Board determines those requirements are reasonably necessary.
68.	Landowners are encouraged to use appropriate rainwater catchment systems to collect from impermeable surfaces (e.g., roof tops, etc.) during the wet season and store storm water in tanks, bladders, or off-stream engineered reservoirs to reduce the need for surface water or groundwater diversions.
69.	Landowners shall not divert surface water unless it is diverted in accordance with an existing water right that specifies, as appropriate, the source, location of the point of diversion, purpose of use, place of use, and quantity and season of diversion. Landowners shall maintain documentation of the water right at the project site. Documentation of the water right shall be available for review and inspection by the Water Boards, CDFW, and any other authorized representatives of the Water Boards or CDFW.
70.	Landowners shall ensure that all water diversion facilities are designed, constructed, and maintained so they do not prevent, impede, or tend to prevent the passing of fish, as defined by Fish and Game Code section 45, upstream or downstream, as required by Fish and Game Code section 5901. This includes but is not limited to the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream aquatic life movement and migration. Landowners shall allow sufficient water at all times to pass past the point of diversion to keep in good condition any fish that may be planted or exist below the point of diversion as defined by Fish and Game Code section 5937. Landowners shall not divert water in a manner contrary to or inconsistent with these Requirements.
71.	Landowners issued an SIUR by the State Water Board shall not divert surface water unless in compliance with all additional SIUR conditions required by CDFW.
72.	Water diversion facilities shall include satisfactory means for bypassing water to satisfy downstream prior rights and any requirements of policies for water quality control, water quality control plans, water quality certifications, waste discharge requirements, or other local, state or federal instream flow requirements. Landowners shall not divert in a manner that results in injury to holders of legal downstream senior rights. Landowners may be required to curtail diversions should diversion result in injury to holders of legal downstream senior water rights or interfere with maintenance of downstream instream flow requirements.
73.	Fuel powered (e.g., gas, diesel, etc.) diversion pumps shall be located in a stable and secure location outside of the riparian setbacks unless authorized under a 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board. Use of non-fuel powered diversion pumps (solar, electric, gravity, etc.) is encouraged. In all cases, all pumps shall: 1. be properly maintained, 2. have suitable containment to ensure any spills or leaks do not enter surface waterbodies or groundwater, and 3. have sufficient overhead cover to prevent exposure of equipment to precipitation.
74.	No water shall be diverted unless the landowner is operating the water diversion facility with a CDFW-approved water-intake screen (e.g. fish screen). The water intake screen shall be designed and maintained in accordance with screening criteria approved by CDFW. The screen shall prevent wildlife from entering the diversion intake and becoming entrapped. The landowner shall contact the regional CDFW Office, LSA Program for information on screening criteria for diversion(s).[15] The landowner shall provide evidence that demonstrates that the water intake screen is in good condition whenever requested by the Water Boards or CDFW. Points of re-diversion from off-stream storage facilities that are open to the environment shall have a water intake screen, as required by CDFW.
75.	Landowners shall inspect, maintain, and clean water intake screens and bypass appurtenances as directed by CDFW to ensure proper operation for the protection of fish and wildlife.

76.	Landowners shall not obstruct, alter, dam, or divert all or any portion of a natural watercourse prior to obtaining all applicable permits and approvals. Permits may include a valid water right, 404/401 CWA permits, a CDFW LSA Agreement, coverage under a water quality certification, or site-specific WDRs issued by the Regional Water Board.
77.	Landowners shall plug, block, cap, disconnect, or remove the diversion intake associated with project activities during the surface water forbearance period, unless the diversion intake is used for other beneficial uses, to ensure no water is diverted during that time.
78.	Landowners shall not divert from a surface water or from a subterranean stream for the project site at a rate more than a maximum instantaneous diversion rate of 10 gallons per minute, unless authorized under an existing appropriative water right.
82.	Onstream storage reservoirs are prohibited unless either: · The landowner has an existing water right with irrigation as a designated use, issued prior to October 31, 2017, that authorizes the onstream storage reservoir, or · The landowner obtains an appropriative water right permit with irrigation as a designated use prior to diverting water from an onstream storage reservoir for the project site. Landowners with a pending application or an unpermitted onstream storage reservoir shall not divert for project activities until the landowner has obtain a valid water right.
83.	Landowners are encouraged to install separate storage systems for water diverted for irrigation and water diverted for any other beneficial uses,[16] or otherwise shall install separate measuring devices to quantify diversion to and from each storage facility, including the quantity of water diverted and the quantity, place, and purpose of use (e.g., crop irrigation, domestic, etc.) for the stored water.
84.	The landowner shall install and maintain a measuring device(s) for surface water or subterranean stream diversions. The measuring device shall be, at a minimum equivalent to the requirements for direct diversions greater than 10 acre-feet per year in California Code of Regulations, Title 23, Division 3, Chapter 2.7. The measuring device(s) shall be located as close to the point of diversion as reasonable. Landowners shall maintain daily diversion records for water diverted. Landowners shall maintain separate records that document the amount of water used for project activities separated out from the amount of water used for other irrigation purposes and other beneficial uses of water (e.g., domestic, fire protection, etc.). Landowners shall maintain daily diversion records at the site and shall make the records available for review or by request by the Water Boards CDFW, or any other authorized representatives of the Water Boards or CDFW. Daily diversion records shall be retained for a minimum of five years. Compliance with this term is required for any surface water diversion, even those under 10 acre-feet per year.
85.	The State Water Board intends to develop and implement a basin-wide program for real- time electronic monitoring and reporting of diversions, withdrawals, releases and streamflow in a standardized format if and when resources become available. Such real- time reporting will be required upon a showing by the State Water Board that the program and the infrastructure are in place to accept real-time electronic reports. Implementation of the reporting requirements shall not necessitate amendment to this Requirement.
86.	Landowners shall not use off-stream storage reservoirs and ponds to store water for irrigation unless they are sited and designed or approved by a qualified professional in compliance with Division of Safety of Dams (DSOD), county, and/or city requirements, as applicable. If the DSOD, county, and/or city do not have established requirements they shall be designed consistent with the Natural Resource Conservation Service National Engineering Manual. Reservoirs shall be designed with an adequate overflow outlet that is protected and promotes the dispersal and infiltration of flow and prevents channelization. All off-stream storage reservoirs and ponds shall be designed, managed, and maintained to accommodate average annual winter period precipitation and storm water inputs to reduce the potential for overflow. Landowners shall plant native vegetation along the perimeter of the reservoir in locations where it does not impact the structural integrity of the reservoir berm or spillway. The landowner shall control vegetation around the reservoir berm and spillway to allow for visual inspection of berm and spillway condition and control burrowing animals as necessary.

87.	Landowners shall implement an invasive species management plan prepared by a Qualified Biologist for any existing or proposed water storage facilities that are open to the environment. The plan shall include, at a minimum, an annual survey for bullfrogs and other invasive aquatic species. If bullfrogs or other invasive aquatic species are identified, eradication measures shall be implemented under the direction of a qualified biologist, if appropriate after consultation with CDFW (pursuant to Fish and Game Code section 6400). Eradication methods can be direct or indirect. Direct methods may include hand- held dip net, hook and line, lights, spears, gigs, or fish tackle under a fishing license (pursuant to Fish and Game Code section 6855). An indirect method may involve seasonally timed complete dewatering and a drying period of the off-stream storage facility under a Permit to Destroy Harmful Species (pursuant to Fish and Game Code section 5501) issued by CDFW.
88.	Water storage bladders are not encouraged for long-term use. If bladders are used, the landowner shall ensure that the bladder is designed and properly installed to store water and that the bladder is sited to minimize the potential for water to flow into a watercourse in the event of a catastrophic failure. If a storage bladder has been previously used, the landowner shall carefully inspect the bladder to confirm its integrity and confirm the absence of any interior residual chemicals prior to resuming use. Landowners shall periodically inspect water storage bladders and containment features to ensure integrity. Water storage bladders shall be properly disposed of or recycled and not resold when assurance of structural integrity is no longer guaranteed.
89.	Landowners shall not use water storage bladders unless the bladder is safely contained within a secondary containment system with sufficient capacity to capture 110 percent of a bladder's maximum possible contents in the event of bladder failure (i.e., 110 percent of bladder's capacity). Secondary containment systems shall be of sufficient strength and stability to withstand the forces of released contents in the event of catastrophic bladder failure. In addition, secondary containment systems that are open to the environment shall be designed and maintained with sufficient capacity to accommodate precipitation and storm water inputs from a 25-year, 24-hour storm event.
90.	Landowners shall not cause or allow any overflow from off-stream water storage facilities that are closed to the environment (e.g., tanks and bladders) if the off-stream facilities are served by a diversion from surface water or groundwater. Landowners shall regularly inspect for and repair all leaks of the diversion and storage system.
91.	Water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment shall not be located in a riparian setback or next to equipment that generates heat. Landowners shall place water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment in areas that allow for ease of installation, access, maintenance, and minimize road development.
92.	Landowners shall install vertical and horizontal tanks according to manufacturer's specifications and shall place tanks on properly compacted soil that is free of rocks and sharp objects and capable of bearing the weight of the tank and its maximum contents with minimal settlement. Tanks shall not be located in areas of slope instability. Landowners shall install water storage tanks capable of containing more than 8,000 gallons only on a reinforced concrete pad providing adequate support and enough space to attach a tank restraint system (anchor using the molded-in tie down lugs with moderate tension, being careful not to over-tighten) per the recommendations of a qualified professional.
93.	To prevent rupture or overflow and runoff, Landowners shall only use water storage tanks and bladders equipped with a float valve, or equivalent device, to shut off diversion when storage systems are full. Landowners shall install any other measures necessary to prevent overflow of storage systems to prevent runoff and the diversion of more water than can be used and/or stored.
94.	Landowners shall ensure that all vents and other openings on water storage tanks are designed to prevent the entry and/or entrapment of wildlife.
95.	Landowners shall retain, for a minimum of five years, appropriate documentation for any hauled water[18] used for irrigation. Documentation for hauled water shall include, for each delivery, all of the following: 1. A receipt that shows the date of delivery and the name, address, license plate number, and license plate issuing state for the water hauler, 2. A copy of the Water Hauler's License (California Health and Safety Code section 111120), 3. A copy of proof of the Water Hauler's water right, groundwater well, or other authorization to take water, and the location of the water source, and 4. The quantity of water delivered or picked up from a water source, in gallons. Documentation shall be made available, upon request, to Water Boards or CDFW staff and any other authorized representatives of the Water Boards or CDFW.

Water Conservation and Use	
96.	Landowners shall regularly inspect their entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks.
97.	Landowners shall use weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss.
98.	Landowners shall implement water conserving irrigation methods (e.g., drip or trickle irrigation, micro-spray, or hydroponics).
99.	Landowners shall maintain daily records of all water used for irrigation. Daily records may be calculated by the use of a measuring device or, if known, by calculating the irrigation system rates and duration of time watered (e.g., irrigating for one hour twice per day using 50 half-gallon drips equates to 50 gallons per day (1*2*50*0.5) of water used for irrigation). Landowners shall retain, for a minimum of 5 years, irrigation records at the site and shall make all irrigation records available for review by the Water Boards, CDFW and any other authorized representatives of the Water Boards or CDFW.
Irrigation Runoff	
100.	Landowners shall regularly inspect for leaks in mainlines[19], laterals[20], in irrigation connections, sprinkler heads, or at the ends of drip tape and feeder lines and immediately repair any leaks found upon detection.
101.	The irrigation system shall be designed to include redundancy (e.g., safety valves) in the event that leaks occur, so that waste of water and runoff is prevented and minimized.
102.	Landowners shall regularly replace worn, outdated, or inefficient irrigation system components and equipment to ensure a properly functioning, leak-free irrigation system at all times.
103.	Landowners shall minimize irrigation deep percolation[21] by applying irrigation water at agronomic rates.
Fertilizers, Pesticides, and Petroleum Products	
104.	Landowners shall not mix, prepare, over apply, or dispose of agricultural chemicals/products (e.g., fertilizers, pesticides, and other chemicals as defined in the applicable water quality control plan) in any location where they could enter the riparian setback or waters of the state. The use of agricultural chemicals inconsistently with product labeling, storage instructions, or DPR requirements for pesticide applications is prohibited. Disposal of unused product and containers shall be consistent with labels.
105.	Landowners shall keep and use absorbent materials designated for spill containment and spill cleanup equipment on-site for use in an accidental spill of fertilizers, petroleum products, hazardous materials, and other substances which may degrade waters of the state. The landowner shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and immediately initiate cleanup activities for all spills that could enter a waterbody or degrade groundwater.
106.	Landowners shall establish and use a separate storage area for pesticides, and fertilizers, and another storage area for petroleum or other liquid chemicals (including diesel, gasoline, oils, etc.). All such storage areas shall comply with the riparian setback Requirements, be in a secured location in compliance with label instructions, outside of areas of known slope instability, and be protected from accidental ignition, weather, and wildlife. All storage areas shall have appropriate secondary containment structures, as necessary, to protect water quality and prevent spillage, mixing, discharge, or seepage. Storage tanks and containers must be of suitable material and construction to be compatible with the substances stored and conditions of storage, such as pressure and temperature.
107.	Throughout the wet season, Landowners shall ensure that any temporary storage areas have a permanent cover and side-wind protection or be covered during non-working days and prior to and during rain events.
108.	Landowners shall only use hazardous materials in a manner consistent with the product's label.
109.	Landowners shall only keep hazardous materials in their original containers with labels intact and shall store hazardous materials to prevent exposure to sunlight, excessive heat, and precipitation. Landowners shall provide secondary containment for hazardous materials to prevent possible exposure to the environment. Disposal of unused hazardous materials and containers shall be consistent with the label.

110.	Landowners shall only mix, prepare, apply, or load hazardous materials outside of the riparian setbacks.
111.	Landowners shall not apply agricultural chemicals within 48 hours of a predicted rainfall event of 0.25 inches or greater with a probability greater than 50-percent. In the Lake Tahoe Hydrologic Unit, Landowners shall not apply agricultural chemicals within 48 hours of any weather pattern that is forecast to have a 30 percent or greater chance of precipitation greater than 0.1 inch per 24 hours. This requirement may be updated based on amendments to the Lahontan Regional Water Board construction storm water general order.
Fertilizers and Soils	
112.	To minimize infiltration and water quality degradation, Landowners shall irrigate and apply fertilizer to consistent with the crop need (i.e., agronomic rate).
113.	When used, Landowners shall apply nitrogen to cultivation areas consistent with crop need (i.e., agronomic rate). Landowners shall not apply nitrogen at a rate that may result in a discharge to surface water or groundwater that causes or contributes to exceedance of water quality objectives, and no greater than 319 pounds/acre/year unless plant tissue analysis performed by a qualified individual demonstrates the need for additional nitrogen application. The analysis shall be performed by an agricultural laboratory certified by the State Water Board's Environmental Laboratory Accreditation Program.
114.	Landowners shall ensure that potting soil or soil amendments, when not in use, are placed and stored with covers, when needed, to protect from rainfall and erosion, to prevent discharge to waters of the state, and to minimize leaching of waste constituents into groundwater.
Pesticides and Herbicides	
115.	Landowners shall not apply restricted materials, including restricted pesticides, or allow restricted materials to be stored at the site.
116.	Landowners shall implement integrated pest management strategies where possible to reduce the need and use of pesticides and the potential for discharges to waters of the state.
Petroleum Products and Other Chemicals	
117.	Landowners shall only refuel vehicles or equipment outside of riparian setbacks. Landowners shall inspect all equipment using oil, hydraulic fluid, or petroleum products for leaks prior to use and shall monitor equipment for leakage. Stationary equipment (e.g., motors, pumps, generators, etc.) and vehicles not in use shall be located outside of riparian setbacks. Spill and containment equipment (e.g., oil spill booms, sorbent pads, etc.) shall be stored onsite at all locations where equipment is used or staged.
118.	Landowners shall store petroleum, petroleum products, and similar fluids in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain.
119.	Use of an underground storage tank(s) for the storage of petroleum products is allowed if compliant with all applicable federal, state, and local laws; regulations; and permitting requirements.
Cultivation-Related Waste	
120.	Landowners shall contain and regularly remove all debris and trash associated with cultivation activities from the cultivation site. Landowners shall only dispose of debris and trash at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Landowners shall not allow litter, plastic, or similar debris to enter the riparian setback or waters of the state. Plant material may be disposed of onsite in compliance with any applicable CDFA license conditions.
121.	Landowners shall only dispose or reuse spent growth medium (e.g., soil and other organic media) in a manner that prevents discharge of soil and residual nutrients and chemicals to the riparian setback or waters of the state. Spent growth medium shall be covered with plastic sheeting or stored in water tight dumpsters prior to proper disposal or reuse. Spent growth medium should be disposed of at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Proper reuse of spent growth medium may include incorporation into garden beds or spreading on a stable surface and revegetating the surface with native plants. Landowners shall use erosion control techniques, as needed, for any reused or stored spent growth medium to prevent polluted runoff.

Refuse and Domestic Waste	
122.	Landowners 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 contaminate soil or enter the riparian setback or waters of the state.
123.	Landowners shall not dispose of domestic wastewater unless it meets applicable local agency and/or Regional Water Board requirements. Landowners shall ensure that human or animal waste is disposed of properly. Landowners shall ensure onsite wastewater treatment systems (e.g., septic system) are permitted by the local agency or applicable Regional Water Board.
124.	If used, chemical toilets or holding tanks shall be maintained in a manner appropriate for the frequency and conditions of usage, sited in stable locations, and comply with the riparian setback Requirements.
Winterization	
125.	Landowners shall implement all applicable Erosion Control and Soil Disposal and Spoils Management Requirements in addition to the Winterization Requirements below by the onset of the winter period.
126.	Landowners shall block or otherwise close any temporary access roads to all motorized vehicles no later than the onset of the winter period each year.
127.	Landowners shall not operate heavy equipment of any kind at the site during the winter period, unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction.
128.	Landowners shall apply linear sediment controls (e.g., silt fences, wattles, etc.) along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow length at the frequency specified below.

Slope (percent)	Sheet Flow Length Not to Exceed (feet)
0 – 25	20
25 – 50	15
>50	10

129.	Landowners shall maintain all culverts, drop inlets, trash racks and similar devices to ensure they are not blocked by debris or sediment. The outflow of culverts shall be inspected to ensure erosion is not undermining the culvert. Culverts shall be inspected prior to the onset of fall and winter precipitation and following precipitation events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation to determine if maintenance or cleaning is required.
130.	Landowners shall stabilize all disturbed areas and construction entrances and exits to control erosion and sediment discharges from land disturbance.
131.	Landowners shall cover and berm all loose stockpiled construction materials (e.g., soil, spoils, aggregate, etc.) that are not actively (scheduled for use within 48 hours) being used as needed to prevent erosion by storm water. The landowner shall have adequate cover and berm materials available onsite if the weather forecast indicates a probability of precipitation.
132.	Landowners shall apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to waters of the state.
133.	As part of the winterization plan approval process, the Regional Water Board may require Landowners to implement additional site-specific erosion and sediment control requirements if the implementation of the Requirements in this section do not adequately protect water quality.

Appendix D

Project Update

STREAMSIDE MANAGEMENT AREA SETBACK REDUCTION MEMORANDUM

Lower Thomas Road, LLC

Assessor Parcel Number (APN):
APN: 219 – 041 –012

April 2021

Naiad Biological Consulting

April 26, 2021

PROJECT UPDATE

The client has executed the recommendations presented in the SMA Setback Reduction Memorandum, which were explained during the site visit which took place on April 2nd, 2021. The client has already removed all loose material related to the cannabis cultivation operation on site within the SMA and specifically surrounding the pre-existing buildings. This was done to minimize and avoid any potential materials from having an impact to the surrounding SMA and/or entering the watercourse nearby. No further recommendations to avoid impact and disturbance to biological resources are recommended at this time to allow for the SMA setback reduction.

Below is photographic evidence of this recommendation being satisfied by the client.