Received by HCP&BD
5/20/2024

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

For

APN 214-234-006

Located on

1 French Road
Miranda, California

January 2020

Prepared for:
Onedrop Agronomics
APN 214-234-006
WDID 1_12CC418871
P.O. Box 610, Fortuna, CA 95519

Prepared by:
Greg Davis, Staff Wetlands Scientist
Pacific Watershed Associates Inc.
P.O. Box 4433, Arcata, CA 95518
(707) 839-5130

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

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 Practical 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 214-234-006, located off 1 French Road, in Miranda, CA, as shown on Figure 1. This property is located approximately 4.5 miles north of Redway, 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 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 produced for the Discharger by Timberland Resource Consultants, based on site conditions as of July 16, 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 property falls within **Tier 2 Low 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 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 Practical Treatment or Control (BPTCs) designed to meet those requirements. This Plan documents the findings of the site visit and inspection conducted on April 16, 2019 by PWA Staff Geologist Michelle Robinson and Staff Wetlands Scientist Greg Davis, when a reconnaissance level investigation of the property was conducted and the conditions noted.

II. CERTIFICATIONS, LIMITATIONS AND CONDITIONS

This Plan has been prepared by, or under the responsible charge of, 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; and 3) provide a revised schedule for the implementation of the itemized remedial actions. 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 property 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 property.

We have also included a schedule of itemized remedial actions that are based on these observations. 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 property 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 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 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 property 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 property. 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 Plan 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:

Greg Davis, Staff Wetlands Scientist
Pacific Watershed Associates, Inc.
P.O. Box 4433, Arcata, California 95518
Plan finalized on date: January 10, 2020

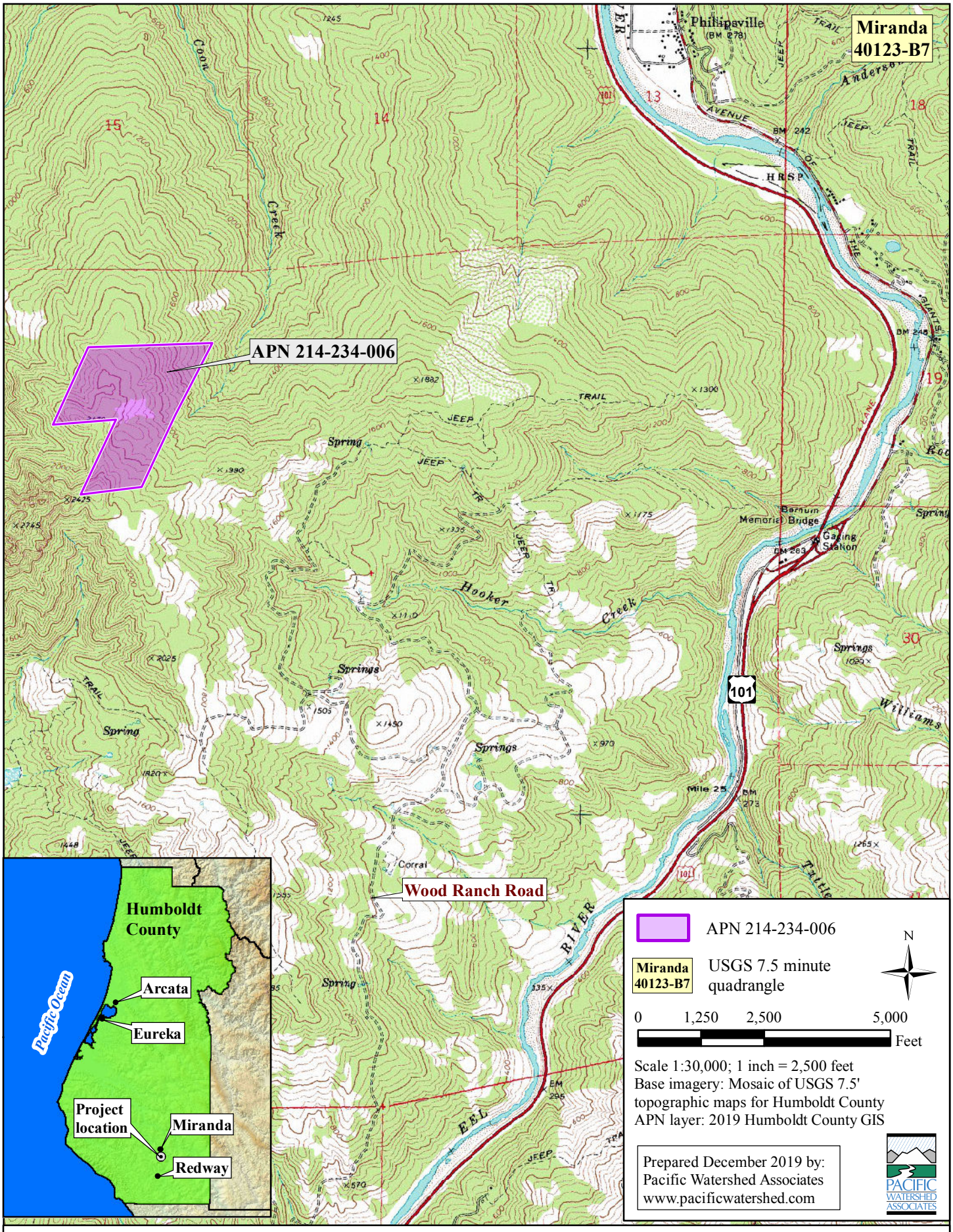


Figure 1. Site Management Plan Location Map for APN 214-234-006, Miranda, Humboldt County, California.

P:\GIS\5503\55031

II. 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
- winterization measures
- sediment control BPTC measures
- storage locations for: fertilizers, pesticides, herbicides, and rodenticides
- 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

In general, roads on the Project Site are in good condition. Multiple rolling dips and lead out ditches were installed in the past as part of the recommendations within the WRPP developed by Timberland Resource Consultants (see Appendix A). Currently, some of these features have lost functionality by either being worn down due to vehicle use or from subsequent road grading that has created small berms at the outboard edge of the road. The primary access roads, Roads 1 and 2, have been surfaced with locally derived, angular rock to reduce road related surface runoff and erosion.

A ditch relief culvert (DRC) was installed on Road 1 approximately 50 feet up the right road approach to Stream Crossing (SC) #1. This DRC disconnects the associated concentrated surface runoff from the right ditch and discharges flow away from Stream #2. Additionally, there are two DRC's along the alignment of Road 2 that disconnects the inboard ditch from SC #2 on the main access road (Road 1).

The main cultivation area and adjacent graded flat are native ground surfaces that disperse storm water through a vegetated ditch. A DRC was installed in the western edge of the cultivation area to convey storm water across the abandoned Legacy Road to the adjacent graded flat. The ditch follows the perimeter of the adjacent graded flat and disperses storm water into a forested area where water can infiltrate the soil well away from any surface water.

Fine sediment delivery to surface waters on the Project Site will be mitigated by repairing existing rolling dips on the road network to make them fully functional and installing additional rolling dips at mapped locations.

1.1.3 Stream Crossings

One spring crossing and two (2) stream crossings (SC) were identified on the Project Site as part of PWA's site inspection. Each of these crossings were included in the Lake or Streambed Alteration Agreement (LSAA) issued by the California Department of Fish and Wildlife (CDFW) in 2019 (see Appendix B).

Spring Crossing - An emergent spring is conveyed across the road fill at this location. There is a dip in the road that prevents the spring from diverting down the right approach, and there is minimal erosion on the road approaches and the heavily vegetated outboard fill face. Below the road, flow dissipates in the vegetation and emerges again at the origin of a Class III stream approximately 125 feet below the road.

An armored fill will be installed at this location by enhancing the dip through the road prism and excavating a small keyway in the outboard fill. Dimensions for the keyway will be approximately 10 feet wide at the top, 5 feet wide at the base, 1 foot deep, and 14 feet long. The keyway will be armored with 10 cubic yards of 0.5-1.0 foot diameter riprap to accommodate for seasonal spring flow and minimize erosion of the road fill.

SC #1 - A Class II stream with a 24-inch diameter plastic culvert. The culvert is adequately sized for the 100-year peak streamflow and associated debris (Table 1) and allows for the passage of aquatic organisms. The culvert has sufficient barrel extension at the outlet and no visible erosion downstream. The culvert is installed at the base of fill and is in-line with the natural channel. Additionally, both fillslopes are adequately rock armored.

No work within the bed and banks of the stream is proposed at this location.

SC #2 - Coon Creek, a Class II watercourse, is conveyed across the road through an armored fill crossing. The armored fill has an effective dip through the crossing that prevents the stream from diverting down the road. There is minimal erosion on the road approaches and a well armored outboard fill face. This crossing is not located within the parcel boundary of

the project site, but it utilized for access and will be considered a project as part of the Agreement with CDFW.

The crossing will be upgraded by installing a 36-inch diameter culvert in-line with the natural channel and at the base of fill. Riprap from the outboard fillslope will be staged during the crossing excavation to be repurposed for slope armoring and energy dissipation at the culvert outlet. Additionally, a critical dip will be installed on the downslope hingeline of the crossing to prevent diversion in the event the culvert plugs of fails.

All disturbed areas capable of delivering sediment to a watercourse will be seeded with barley or wheat-based erosion control seed not containing Annual or Perennial Ryegrass and mulched with weed-free straw at a rate no less than 50 lb/acre of seed and 4,000 lb/acre of straw. Any spoils generated during construction will be stored in a stable location and mulched to prevent surface erosion.

Methods for determining the 100-year design discharge include the Rational Method. The Rational Method is limited to watersheds less than 80 acres (Table 1).

Table 1. Crossing Recommendations[1, 2]

Crossing type	Existing culvert diameter (in)	Watershed area (acres)	Q100 – discharge estimate for 100-yr storm (cfs)	Recommended culvert diameter (in) at the 0.67 HW/D	Recommended treatment
Spring Crossing	Fill	1	1	18	Armored Fill
Stream Crossing (SC #1)	24	10	12	24	No Treatment
SC #2 (Coon Creek)	Armored Fill	12	14	36	Install 36-inch culvert

[1] Assumes mean annual precipitation of 62 inches, and a 0.35 runoff coefficient (C)
[2]The 100-year Return-Period precipitation data was sourced from:
http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_cont.html?bkmrk=ca

Culvert sizing recommendations in Table 1 were developed using the Rational Method based on the following equation:

Q_{100}= CIA

Where:
Q_{100}= predicted peak runoff from a 100-year runoff event (in cubic feet second)
C= runoff coefficient (percent of rainfall that becomes runoff)
I= uniform rate of rainfall intensity (inches/hour)
A= drainage area (in acres)

1.1.3.1 Legacy Waste Discharge Issues for Region 1

There is a legacy logging road west of the cultivation area that has been blocked off from use. The roadway has become vegetated from its abandoned use and does not have significant road drainage issues that would affect water quality. There are no stream crossings on the legacy logging road.

1.2 Sediment Erosion Prevention and Sediment Capture

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

Refer to Table 2, 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 Figure 2 for the location of erosion prevention and sediment control BPTC measures.

1.2.2 Maintenance Activities – Erosion Prevention and Sediment Control

1.2.2.1 Monitoring and Maintenance

All BPTC measures will be monitored following construction and/or a significant rainfall event. All BPTC measures will be maintained on a regular basis.

1.2.2.2 Captured Sediment

In the event that any excess sediment is generated, all captured sediment will be stabilized and stored in place.

1.2.3 Erosion Control BPTC Measures – Interim and Long-term

Please refer to Table 2 for more information regarding erosion control BPTC measures and implementation schedules.

Table 2. Prioritized Implementation Schedule for Best Practicable Treatment or Controls (BPTC).

Schedule	Map Point or Location	Summary of Corrective Actions/Recommendations
GH – Greenhouse RD – Rolling Dip RDNR – Rolling Dip Needs Repair SC – Stream Crossing W – Winterization <E> – Existing <P> – Proposed OWTS – Onsite Wastewater Treatment System		
Cultivation Area		
Nov 15 – Dec 15 Annually	<P> BPTC/W; Cultivation Area (GH #1-8)	1) Winter cover crops should be planted in the raised beds or tarped to prevent wind transport of soil.
Nov 15 – Dec 15 Annually as Needed	<P> BPTC/W; Graded Flat Adjacent to Cultivation Area	2) 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.
Roads		
8/15/2020	<E>/<P> BPTC; RD	1) Rolling dips should be installed at mapped locations along the main road to reduce hydrologic connectivity and sediment delivery to the stream network (See Figure 2). 2) Monitor and maintain all existing (functioning) rolling dips to ensure proper functioning. 3) Generally, road surfaces are rocky; however, roads should be rocked as needed to reduce surface erosion.
8/15/2020	<P> BPTC; RDNR	1) Repair the rolling dip at the mapped location to ensure it is functioning properly. See PWA Typical Drawings #10, #11, and #19A – C, for proper rolling dip construction designs (Appendix C).
OWTS		
12/15/2020	OWTS & Portable (chemical) toilets	1) The Order requires one or more county-approved (permitted) OWTS on the Project Site. Proof of permitting through the Humboldt County Division of Environmental Health (HCDEH) is required. Continue working towards getting an OWTS permitted and installed on your property. 2) Continue utilizing the serviced portable toilets (or other county approved systems) until the OWTS can be designed, permitted, and constructed.
4/15/2020	Domestic Water (Graywater)	1) Follow graywater guidelines and regulations described in Chapter 15 “Alternative Water Sources for Non-potable Applications” of the 2019 California Plumbing Code. 2) “Graywater” includes but is not limited to wastewater from bathtubs, showers, bathroom washbasins, clothes washing machines, and laundry tubs; but does not include wastewater from kitchen sinks or dishwashers.

Schedule	Map Point or Location	Summary of Corrective Actions/Recommendations
GH – Greenhouse RD – Rolling Dip RDNR – Rolling Dip Needs Repair SC – Stream Crossing W – Winterization <E> – Existing <P> – Proposed OWTS – Onsite Wastewater Treatment System		
Petroleum Products		
12/15/2020	<P> BPTC; Petroleum	1) Provide appropriate cover for the above ground fuel storage tank so that the secondary containment reservoir does not capture rainwater. 2) Keep spill prevention kits accessible to areas where petroleum products are used.
Stream Crossings		
Annually, prior to and after the rain season	BPTC/W; SC #1	1) Monitor and maintain (clean) all culvert inlets/outlets to prevent plugging.
9/20/2021	BPTC/W; Spring Crossing and SC #2	1) Implement the crossing upgrades as per the existing Streambed Alteration Agreement with CDFW. 2) Monitor and maintain (clean) the culvert inlet/outlet of SC #2 after construction to ensure proper functioning 3) Monitor the armored fill spring crossing for subsequent erosion post-implementation.
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, & RODENTICIDE BPTC MEASURES

2.1 Summary Table

The landowner only uses fertilizers and pesticides for cultivation purposes. No herbicides or rodenticides are used onsite. Table 3 identifies the products used at the site, 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 that all products are brought to the property as needed and are stored inside a 4 foot by 2-foot metal lockbox within the shop (Figure 2). The product mixes are typically made in 5-gallon buckets and applied with a sprayer on a weekly basis. Mixes are used in their entirety and the sprayers are rinsed clean. The materials are stored onsite during the winter in the same lockbox if any materials remain from the cultivation season. All plastic bottles generated from these products are recycled at a sanitation center in Eureka.

Table 3. 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	General Hydroponics 3 Part (micro/grow/bloom)	Bought and delivered personally as needed	Nutrient closet in shop	Applied twice a week through a 1/2" drip line at 1 gal/hr at plant sites for roughly 30/40 minutes via 1500 gallon tanks	Excess nutrients left over at the end of the season are taken to a storage unit for the winter
	Vegbloom Shine (phosphorous/potassium bloom booster)				
	Aurora Nutrients Infinity				
	Botanicare (cal/mg)				
	Canna Rhizotonic				
	Granular Mycorrhizae				
	Powdered Gypsum				
	Powdered Seaweed				
PESTICIDES	Lost Coast Plant Therapy	Bought and delivered personally as needed	Metal lockbox in shop	Mixed in 5 gallon bucket and applied with sprayer	If products are not used to completion before onset of winter, they are stored a metal lockbox within the shop
	Dr. Zymes				
	Triact				
	Suffoil				
	Azaguard				
	PFR 97				
	Mycotrol WP				

2.2 Site Map

Figure 2 identifies the metal building, "Shop," as the location of fertilizer and pesticide storage.

2.3 Bulk Fertilizers and Chemical Concentrates

All fertilizers and soil amendments are applied throughout the growing season. Any excess fertilizers or amendments are stored inside a metal nutrient closet within the shop. All empty containers are disposed of at Humboldt Waste Management Authority in Eureka.

2.4 Spill Prevention and Cleanup

The likelihood of chemical spills will be minimized by storing all fertilizers, pesticides, and herbicides off of the ground and in designated enclosed containers and structures. 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 labelled sealed container. Disposal of contaminated materials will be conducted in accordance with manufacturer's instructions and local regulations.

3.0 PETROLEUM PRODUCT BPTC MEASURES

3.1 Summary Table

Table 4 identifies the petroleum products used, when they are delivered, and how they are stored and used at the site.

3.2 Site Map

Figure 2 identifies petroleum product storage locations.

3.3 Handling

Please refer to Table 4 for more information regarding petroleum delivery, storage, and application. Refer to Table 2 for specific BPTC measures for handling and storage of petroleum products onsite.

3.4 Spill Prevention and Cleanup

The likelihood of petroleum spills will be minimized by storing all petroleum off of the ground and in designated enclosed containers and structures. 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 labelled 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.

Table 4. 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
Unleaded Gasoline	Bought and delivered personally as needed	Stored in small gas cans	Used to power generators for well pump and irrigation system	All empty gas cans are stored in the shop. Fuel is stored in the above ground tank, which is tarped for cover before the winter season.
Diesel Fuel	Delivered to the site every 6 weeks	Stored in a 1000-gallon diesel tank with a secondary containment basin on a concrete slab	Used to power the shop via 70 kW generator	If diesel fuel is not used in its entirety at the end of the cultivation season, it is left in the 1000-gallon tank
Propane	Refilled by propane delivery service twice a year. Smaller tanks are filled and brought on site as needed	Stored in two 5000-gallon tanks adjacent to the shop on concrete slabs and in 5, 10, and 25-gallon tanks	Used to heat the shop and greenhouses	Propane remains in the above ground tanks if they are not consumed before the winter.

4.0 TRASH/REFUSE, AND DOMESTIC WASTEWATER BPTC MEASURES

4.1 Types, Containment, and Disposal of Trash/Refuse

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. Trash and refuse are stored outside of the shop in garbage cans organized for recycling and weekly or biweekly trash pick-up by the cultivation crew. When full, trash is taken to the Humboldt Waste Management Authority in Eureka.

4.1.1 Site Map

Refer to Figure 2 for trash/refuse storage locations.

4.2 Domestic Wastewater Generation and Disposal

Refer to Table 2 for specific BPTC measures and implementation schedules for domestic wastewater generation and disposal.

4.2.1 Domestic Wastewater Generation

There are 2-4 employees at the Project Site during the cultivation season that contribute to domestic wastewater generation. There is a utility sink, as well as a hand washing station, outside of the shop.

4.2.2 Domestic Wastewater Disposal

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

Currently, the Project Site does not have an onsite wastewater treatment system. Building plans have been submitted for approval of a leach field. A septic tank is already in the ground and plans from an engineer with the Department of Environmental Health are in development for the addition of an ADA bathroom to the shop.

PWA recommends that you continue plans to site, design, and install one or more permitted onsite wastewater treatment systems (OWTS). The OWTS must be designed to serve the maximum number of residents and workers that will be present at the Project Site when your cultivation-related operations are at their peak.

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

An ADA portable chemical toilet is on the property year-round outside of the shop. During the cultivation season, two additional chemical toilets are brought onto the Project Site for employees, which are serviced weekly or biweekly depending on available of the service company.

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 similar facilities on the Project Site.

4.2.3 Site Map

Figure 2 identifies the location of the portable toilet onsite near the shop.

5.0 WINTERIZATION BPTC MEASURES

5.1 Winterization Activities

At the end of the season the greenhouses have their covers removed and all cultivation-related waste is taken off-site to be composted. Raised beds contain and prevent mobilization of soil in the Cultivation Area.

Proposed winterization activities include the application of straw mulch and erosion control seed on the graded pad adjacent to the cultivation area, tarping or planting cover crops on the raised beds, covering the above ground diesel tank, and monitoring all culvert inlets and outlets to ensure they are open and free of debris.

Please refer to Table 2 for information regarding winterization activities and implementation schedules.

5.2 Maintenance of Drainage or Sediment Capture Features

Please refer to Table 2 for information regarding winterizations activities and implementation schedules.

5.3 Revegetation

No land disturbance activities requiring winter revegetation is planned or anticipated.

5.4 BPTC Measures That Cannot Be Completed Before Onset of Winter

Please refer to Table 2 for information regarding winterizations activities and implementation schedules.

5.5 Legacy Waste Discharge Issues for Specific Regions

There are no legacy waste discharge issues at the Project Site.

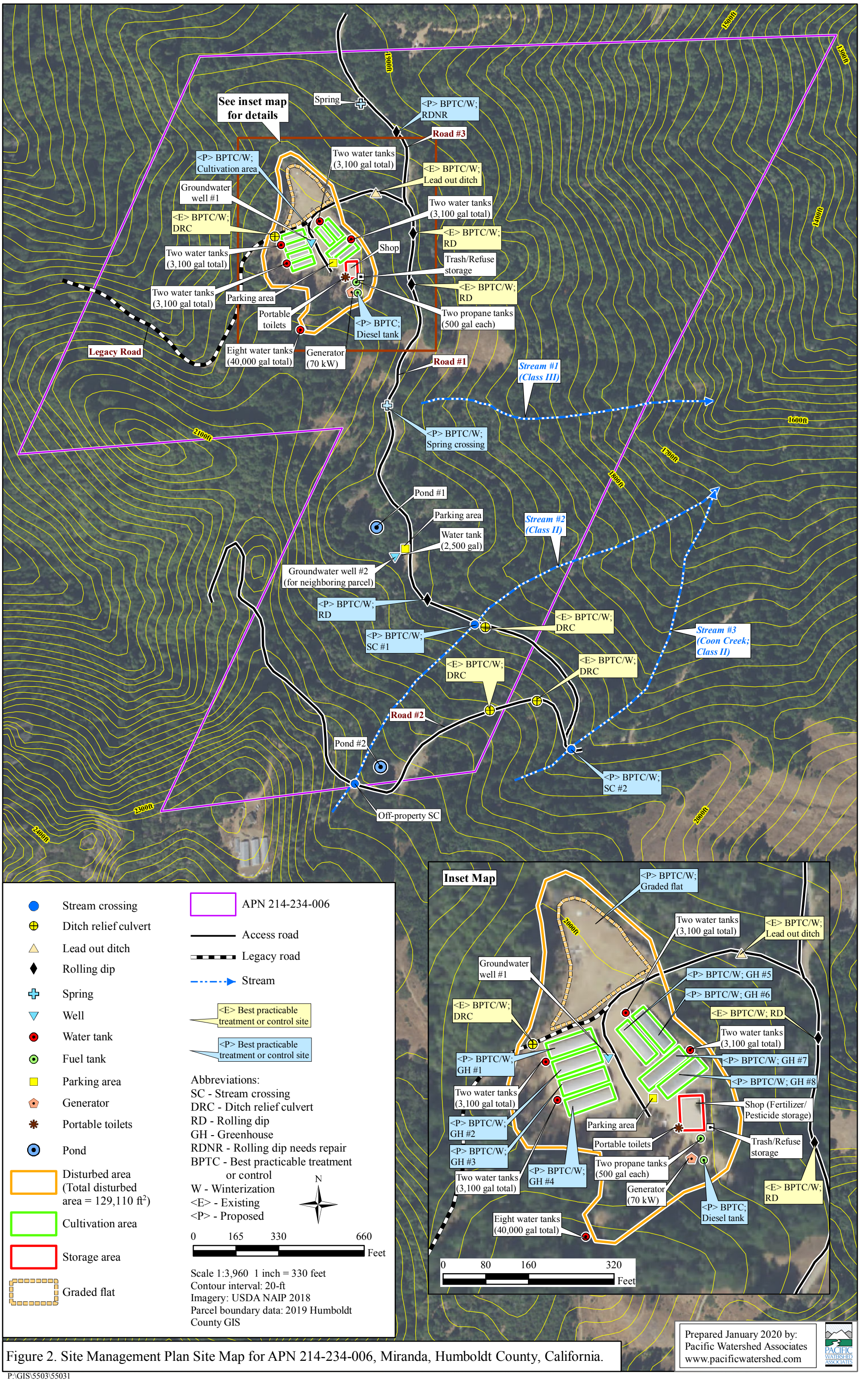


Figure 2. Site Management Plan Site Map for APN 214-234-006, Miranda, Humboldt County, California.

P:\GIS\5503\55031

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."

"I certify under penalty of law that I have personally examined and am familiar with the information submitted in this document and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment."

Name of Legally Responsible Person (LRP): _____

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

Signature: _____ Date: _____

APPENDIX A

Water Resources Protection Plan (WRPP) for Kevin Bourque

Humboldt County APN **214-234-006**.

Water Resource Protection Plan

APN 214-234-06

Submitted to:

California Regional Water Quality Control Board

North Coast Region

5550 Skylane Boulevard, Suite A

Santa Rosa, California 95403

Prepared by:

Timberland Resource Consultants

165 South Fortuna Blvd

Fortuna, CA 95540

07-16-2016

Purpose

This Water Resource Protection Plan (WRPP) has been prepared on behalf of the property owner, Kevin Bourque, by agreement and in response to the California Water Code Section 13260(a), which requires that any person discharging waste or proposing to discharge waste within any region that could affect the quality of the waters of the state, other than into a community sewer system, shall file with the appropriate regional water board a Report of Waste Discharge (ROWD) containing such information and data as may be required by the Regional Water Board. The Regional Water Board may waive the requirements of Water Code section 13260 for specific types of discharges if the waiver is consistent with the Basin Plan and in the public interest. Any waiver is conditional and may be terminated at any time. A waiver should include monitoring requirements to verify the adequacy and effectiveness of the waiver's conditions. Order R1-2015-0023 conditionally waives the requirement to file a ROWD for discharges and associated activities described in finding 4.

Scope of Report

Order No. R1-2015-0023 states that "Tier 2 Dischargers and Tier 3 Dischargers who intend to cultivate cannabis before, during, or following site cleanup activities shall develop and implement a water resource protection plan that contains the elements listed and addressed below. Dischargers must keep this plan on site, and produce it upon request by Regional Water Board staff. Management practices shall be properly designed and installed, and assessed periodically for effectiveness. If a management measure is found to be ineffective, the plan must be adapted and implemented to incorporate new or additional management practices to meet standard conditions. Dischargers shall certify annually to the Regional Water Board individually or through an approved third party program that the plan is being implemented and is effectively protecting water quality, and report on progress in implementing site improvements intended to bring the site into compliance with all conditions of this Order."

Methods

The methods used to develop this WRPP include both field and office components. The office component consisted of reviewing soil maps (California Cooperative Soil-Vegetation Survey), CGS Geomorphic Features Map (North Coast Watersheds Mapping, DMG CD 99-002, 1999). The field component included identifying and accurately mapping all watercourses, wet areas, and wetlands located downstream of the cultivation areas, associated facilities, and all appurtenant roads accessing such areas. An accurate location of the Waters of the State is necessary to make an assessment of whether potential and existing erosion sites/pollution sites have the potential to discharge waste to an area that could affect waters of the State (including groundwater). Next, all cultivation areas, associated facilities, and all appurtenant roads accessing such areas were assessed for discharges and related controllable water quality factors from the activities listed in Order R1-2015-0023, Finding 4a-j. The field assessment also included an evaluation and

determination of compliance with the Standard Conditions per Provision I.B of Order No. R1-2015-0023. The water resource protection plans required under Tier 2 are meant to describe the specific measures a discharger implements to achieve compliance with standard conditions. Therefore, all required components of the water resource protection plan per Provision I.B of Order No. R1-2015-0023 were physically inspected and evaluated. A comprehensive summary of each Standard Condition as it relates to the subject property is appended.

Methods (Cont.

Identified Sites Requiring Remediation

Unique Map Point(s)	Map Point Description	Associated Standard Condition	Temporary BMP	Permanent BMP	Treatment Priority	Time Schedule for completion of Permanent BMP	Completion Date
Road Pt. 01 GPS 905 N 40 11.383' W 123 49.640'	Secondary road	A.1.a.	N/A	Placement of rolling dip to convey surface drainage.	2	10/15/16	
Road Pt. 02 GPS 912 N 40 11.418' W 123 49.541'	Main Road	A.1.a.	N/A	Placement of rolling dip to convey surface drainage.	2	10/15/16	
Cultivation Site to Road Site #3 GPS 873 and 922 N 40 11.403' W 123 49.583 N 40 11.421' W 123 49.530	Cultivation Site to Road Site #3	A.1.a	N/A	Reshape and application of surface rock along 150' of access road	2	10/15/16	

Road Pt. 03 GPS 922 N 40 11.421' W 123 49.530	Main Road	A.1.a.	N/A	Placement of rolling dip to convey surface drainage.	2	10/15/16	
Road Pt 04. GPS 913-914 N 40 11.387 W 123 49.502 N 40 11.377 W123 49.505	Main Road	A.1.a.	N/A	Saturated and muddy road conditions during winter months. Application of 6" of surface rock for approximately 70'.	2	10/15/16	
Road Pt. 05 GPS 915 N 40 11.347 W 123 49.503	Main Road	A.1.a.	N/A	Placement of rolling dip to convey surface drainage.	2	10/15/16	
Road Pt. 07 GPS 919 N 40 11.144' W 123 49.449'	Main Road	A.2.a.	N/A	Placement of an 18"-20' ditch relief culvert prior to drainage channel to ensure hydrological disconnection	2	10/15/16	
Erosion Site #1 GPS 884-887,889, 901,905 & 934 N 40 11.360' W 123 49.548' N 40 11.391' W 123 49.559'	Sloped Bank surrounding the cultivation area	A.1.a	N/A	Application of appropriate erosion control seed prior to the first one inch precipitation event is required to reestablish vegetation cover on approximately .5 acres. Burning of slash pile and reseeding of location.	2	10/15/16	
Erosion Site #2 GPS 884-887 N 40 11.360' W 123 49.548' N 40 11.358' W 123 49.586'	Ditch drainage culvert	A.2.a	N/A	Armoring of 12"-40' culvert on the inlet and outlet headwall.	2	10/15/16	

GPS 802-Multiple N 40 11.386 W 123 49.614	Greenhouses	A.6.a	N/A	Convert from a hand watering to drip irrigation system	4	10/15/2020	
GPS 908 N 40 11.415 W 123 49.600'	Storage/Spoils Facility	A.4.a	N/A	Construction of permanent infrastructure to adequately store soil, organic fertilizer and petroleum based products	3	10/15/2020	
Port a Potty GPS 905 N 40 11.383' W 123 49.640'	Human Waste	A.11.a	N/A	Relocation of bathroom facilities away from seasonal channel during the winter months	2	10/15/16	
Secondary Road GPS 905 N 40 11.383' W 123 49.640'	Refuse	A.11.a	N/A	Removal of cultivation related refuse to prevent from entering watercourses	3		

Coordinates associated with sites UTM 10 NAD 83

Treat Priority: The time frame for treatment of each specific site.

(1) Indicates a very high priority with treatment being planned to occur immediately.

(2) Indicates a high priority site with treatment to occur prior to the start of the winter period (Nov. 15).

(3) Indicates a moderate priority with treatment being planned to occur within a year 1, or prior to the winter period (Nov. 15) of the 2nd season of operations.

(4) Indicates a low priority with treatment being planned to occur in the shortest time possible, but no later than the expiration of this Order (five years).

Identified Sites Not Requiring Mitigation

Site	Description	Planned Monitoring

Monitoring Plan

Tier 2 Dischargers shall include a monitoring element in the water resource protection plan that at a minimum provides for periodic inspection of the site, checklist to confirm placement and efficacy of management measures, and document progress on any plan elements subject to a time schedule. Tier 2 Dischargers shall submit an annual report (Appendix C) by March 31 of each year that documents implementation and effectiveness of management measures during the previous year. Tier 2 annual reporting is a function that may be provided through an approved third party program.

Monitoring of the site includes visual inspection and photographic documentation of each feature of interest listed on the site map, with new photographic documentation recorded with any notable changes to the feature of interest. At a minimum, all site features must be monitored annually, to provide the basis for completion of the annual re-certification process. Additionally, sites shall be monitored at the following times to ensure timely identification of changed site conditions and to determine whether implementation of additional management measures is necessary to iteratively prevent, minimize, and mitigate discharges of waste to surface water: 1) just prior to October 15 to evaluate site preparedness for storm events and storm water runoff, 2) following the accumulation of 3" total precipitation or by November 15, whichever is sooner, and 3) following any rainfall event with an intensity of 3" precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service Forecast Office (e.g. by entering the zip code of the parcel location at http://www.srh.noaa.gov/forecast).

Inspection Personnel Contact Information:

Todd Golder

Timberland Resource Consultants

165 South Fortuna Blvd, Fortuna CA 95540

707-601-7014

Monitoring Plan Reporting Requirements

Order No. R1-2015-0023, Appendix C must be submitted to the Regional Water Board or approved third party program upon initial enrollment in the Order (NOI) and annually thereafter by March 31. Forms submitted to the Regional Water Board shall be submitted electronically to northcoast@waterboards.ca.gov. If electronic submission is infeasible, hard copies can be submitted to: North Coast Regional Water Quality Control Board, 5550 Skylane Boulevard, Suite A, Santa Rosa, CA 95403.

Water Resource Protection Plan

Assessment of Standard Conditions

APN 214-234-06

Assessment of Standard Conditions consisted of field examinations in the summer of 2016. The examination evaluated areas near, and areas with the potential to directly impact, watercourses for sensitive conditions including, but not limited to, existing and proposed roads, skid trails and landings, unstable and erodible watercourse banks, unstable upslope areas, debris, jam potential, inadequate flow capacity, changeable channels, overflow channels, flood prone areas, and riparian zones. Field examinations also evaluated all roads and trails on the property, developed areas, cultivation sites, and any structures and facilities appurtenant to cultivation on the property. Anywhere the Standard Conditions are not met on the property, descriptions of the assessments and the prescribed treatments are outlined following each associated section below.

Summary of Standard Conditions Compliance

1. Site maintenance, erosion control, and drainage features Y☐/N☒
2. Stream crossing maintenance Y☐/N☒
3. Riparian and wetland protection and management Y☒/N☐
4. Spoils management Y☐/N☒
5. Water storage and use Y☒/N☐
6. Irrigation runoff Y☒/N☐
7. Fertilizers and soil amendments Y☒/N☐
8. Pesticides and herbicides? Y☒/N☐
9. Petroleum products and other chemicals Y☒/N☐
10. Cultivation-related wastes Y☒/N☐
11. Refuse and human waste Y☐/N☒

A. Standard Conditions, Applicable to all Dischargers

1. Site maintenance, erosion control and drainage features

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.

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

Road Site #1: GPS 905

Runoff associated with road surface and adjacent ground disturbance is encouraging rill formation and sediment delivering down slope.

Placement of rolling dip to convey water off of road surface

Road Site #2: GPS 873,912

Precipitation runoff and vehicular traffic resulting in chronic surface erosion and subsequent uneven/confined road surface. Sediment not entering watercourse. Reshape and application of 6" surface rock on 150' from cultivation area to Road Site #3

Road Site #3: GPS 922
Beginning of rill formation from surface runoff.

Placement of rolling dip to convey water off of road

Road Site #4:GPS 913-914
Surface runoff accumulates along road segment causing saturated and muddy conditions during winter months. Outlets at this point, evidence of significant sediment dispersal on outboard road side.

Application of 6" of surface rock for approximately 70'.

Road Site #5:GPS 915
Placement of one (1) rolling dip to convey water away from road surface.

Quarry Location:GPS 916

Potential surface rock source for road improvement activities.

Seasonal Pond Location- GPS 918

Located on the west side of the main access road. Pond fills during winter months, but draws down during late spring. No sediment delivery from inventoried road occurring.

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.

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 not hydrologically connected[1], as feasible, from surface waters, including wetlands, ephemeral, intermittent and perennial streams.

Connected roads are road segments that deliver road surface runoff, via the ditch or road surface, to a stream crossing or to a connected drain that occurs within the high delivery potential portion of the active road network. A connected drain is defined as any cross-drain culvert, water bar, rolling dip, or ditch-out that appears to deliver runoff to a defined channel. A drain is considered connected if there is evidence of surface flow connection from the road to a defined channel or if the outlet has eroded a channel that extends from the road to a defined channel. (http://www.forestsandfish.com/documents/Road_Mgmt_Survey.pdf)

Due to the steepness of surrounding slopes, rill *formation is expected during the next* precipitation season (GPS 884-887,889, 901,905 & 934).

Application of appropriate erosion control seed prior to the first one inch precipitation event is required to reestablish vegetation cover. A native/introduced perennial seed mix consisting of Regreen, California broom, Blue wild rye, Orchard grass and subclover is recommended. Seed mix with appropriate pounds per acre can be developed upon request.

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.

During the clearing and shaping of the area, a ditch was excavated on the west side of the cultivation area to drain water that ponds during precipitation events. A 12"-40' HDPE pipe was placed to drain rainwater towards the north side of property. Neither the inlet or outlet of culvert have been rocked. Along with the reseeding of the

slope, rip rap application will occur prior to the precipitation season to ensure protection of headwall.

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

Stockpile of greenhouse construction material (GPS 905) including plastic, metal and wood along lower access road on the outboard side. Material could eventually transport to nearby water course.

All erosion related sites shall be monitored prior to and following prescribed treatments.

2. Stream Crossing Maintenance

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

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

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.

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.

Culverts shall align with the stream grade and natural stream channel at the inlet and outlet where feasible.[2]

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.[3]

[2] At a minimum, the culvert shall be aligned at the inlet. If infeasible to align the culvert outlet with the stream grade or channel, outlet armoring or equivalently effective means may be applied.

[3] If infeasible to install a critical dip, an alternative solution may be chosen.

Road Site #6:GPS 917

Existing rocked ford on well armored road functioning appropriately. No treatment necessary.

Road Site #7:GPS 919

Existing 18"-20' CMP culvert draining both a seasonal channel and inboard ditch. Culvert appropriately sized for 100 year storm event.

According to California Board of Forestry and Fire Protection 2013 Road Rules and Technical Addendum No. 5- Guidance on Hydrological Disconnection, road drainage, minimization of diversion potential and high risk crossings policy 14CCR923.5(a)-(i)[943.5(a)-(i),963.5(a)-(i), the inboard ditch hydrology must be dispersed prior to entering seasonal drainage. Placement of 18"-20' culvert upslope to separate out the drainage systems.

Road Site #8:GPS 921

Existing rocked ford on well armored road functioning appropriately. No treatment necessary.

3. Riparian and Wetland Protection and Management

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 I or II watercourse or within 50 feet of any Class III watercourse or wetlands. The Regional Water Board 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 minimum, cultivation areas and associated facilities shall not be located or occur within 100 feet of any Class I or II watercourse or within 50 feet of any Class III watercourse or wetlands. The Regional Water Board or its or its Executive Officer may apply additional or alternative[4] conditions on enrollment, including site-specific riparian buffers and other BMPs beyond those identified in water resource protection plans to ensure water quality protection.

[4] Alternative site-specific riparian buffers that are equally protective of water quality may be necessary to accommodate existing permanent structures or other types of structures that cannot be relocated.

Buffers shall be maintained at natural slope with native vegetation.

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. 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.

This standard condition is being met at this time.

4. Spoils Management

Spoils[5] shall not be stored or placed in or where they can enter any surface water.

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

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.

The intent is to recycle the soil in the short term with the long term plan to construct a metal frame structure to store the cultivation spoils. Photo shows the general proximity of the structure (GPS 883).

Slash material generated from cleared area stored on the side slope will be burned and reseeded in the fall.

[5] Spoils are waste earthen or organic materials generated through grading or excavation, or waste plant growth media or soil amendments. Spoils include but are not limited to soils, slash, bark, sawdust, potting soils, rock, and fertilizers.

5. Water Storage and Use

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 by operations, instream flow requirements and/or needs in the watershed, defined at the scale of a HUC-12[6] watershed or at a smaller hydrologic watershed as determined necessary by the Regional Water Board Executive Officer.

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.

For Tier 2 Dischargers, if possible, develop off-stream storage facilities to minimize surface water diversion during low flow periods.
Water is applied using no more than agronomic rates.[7]

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.
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.

The landowner currently obtains water from an existing permitted agricultural well (GPS 815). The well is approximately 250' deep. Well is used for both domestic and agricultural purposes. The well does not have a water meter at this time, but the delivery pipe has a meter installed. The intent is to have water meter installed on the well.

Water is delivered to eight (8) 5000 gallon tanks (GPS 888) by a gas generator and conveyed by a 1" ADS Polyflex Potable Grade (IPS) pipe. From the storage tanks water can be directed two ways:

[6] See definition and link to maps at: http://water.usgs.gov/GIS/huc.html

[7] "Agronomic rates" is defined as the rates of fertilizer and irrigation water that a plant needs to enhance soil productivity and provide the crop or forage growth with needed nutrients for optimum health and growth, without having any excess water or nutrient percolate beyond the root zone.

1) Water can be delivered directly to greenhouses with a 11/2" pipe which reduces to a 1" at the water meter.
2) Water can be directed from storage tanks to a 1500 gallon mixing tank (GPS 889)
In addition, a 305 gallon mixing tank (GPS 923) is located on flat near the greenhouses.

Eight (8) 5000 gallon storage tanks= 40,000 gallon storage

1500 gallon mixing tank

305 gallon mixing tank

There are no surface water diversions occurring on the property. The tanks are in locations that they will not impact any waterbody if tanks were to fail.

Standard condition is being met at this time.

6. Irrigation Runoff

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.

The current irrigation system is hand handwatering. The long term goal is to implement a drip irrigation system within raised beds which should not produce runoff. Given the flat topography and distance to watercourse there should be no hydrological connectivity between irrigation and watercourse.

7. Fertilizers and Soil Amendments

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.

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

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

The landowner plans on storing soil amendments/organic fertilizers within fabric and metal structure in the short term. Long term plans include a metal structure that will store all organic fertilizers, soil and amendments where they can be protected during the winter months. Soil used in raised beds is Royal Gold-Kings Mix. Royal Gold Kings Mix is a well-aerated, moderately amended coco peat blend.

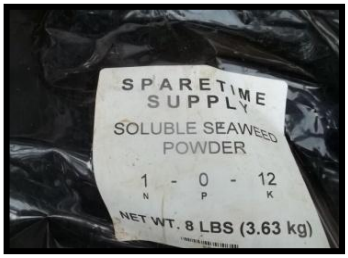
Organic Liquid soil amendments are added to mixing tank and applied once a week 500 gallons are applied to three (3) greenhouses, followed by an additional 500 gallons for the remaining three (3) greenhouses. 1000 gallons are applied once a week to six (6) greenhouses. All label instructions are followed.

PHUP

N0.00% – P0.00% – K45.00%

pH Up is a strong alkali formula for raising pH.

Soluble Seaweed Powder



N1.00% – P0.00% – K12.00%

Soluble Seaweed Powder promotes early root growth and helps create lush foliage. Introducing kelp to a fertilizer program helps improve overall plant health and vigor.

Earth Juice SeaBlast- Bloom

N3.00% – P26.00% – K22.00%

Water-Soluble Plant Food with seaweed, fossilized guano, steamed bone meal and micronutrients.

Flowering and fruiting plants

Earth Juice Sugar Peak Grand Finale

N0.00% – P6.00% – K4.00%

Natural- molasses based liquid formulations

Finishing/Ripening formula that will assist and serve to maximize the production of essential oils, resins, fragrances and yields of determinate flowering and fruiting plants.

8. Pesticides/Herbicides

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 labeling 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.

The landowner states that he uses no pesticides/herbicides. Standard condition is being met at this time.

9. Petroleum products and other chemicals

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.

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.

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

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

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.

Operation is run off of Honda Generator utilizing gasoline. Currently fuel for generator when not in use is stored under the fabric and metal roof located at GPS 897.

This standard condition is being met at this time.

10. Cultivation-related wastes

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[8] 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.

Please see Spoils documentation. This standard condition is being met at this time.

11. Refuse and human waste

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.

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.

[8] Plant waste may also be composted, subject to the same restrictions cited above for cultivation-related waste storage.

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

Garbage and refuse is regularly hauled to Eel River Resource Recovery's located in Fortuna. Human waste disposal systems consist of port-a-potty located near constructed drainage channel (GPS 908).

This standard condition is being met at this time.

12. Remediation/Cleanup/Restoration

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 B accompanying this Order 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.

Mitigation measures are listed in the Water Resource Protection Plan and also noted above in the document.

APPENDIX B

Lake or Streambed Alteration Agreement (LSAA)

Humboldt County APN **214-234-006**.

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

STREAMBED ALTERATION AGREEMENT
NOTIFICATION NO. 1600-2019-0542-R1
Unnamed Tributaries to Coon Creek, Tributary to South Fork Eel River, Tributary to the Eel River and the Pacific Ocean

Kevin Bourque
Bourque Stream Crossings Project
3 Encroachments

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

RECITALS

WHEREAS, pursuant to Fish and Game Code (FGC) section 1602, the Permittee initially notified CDFW on July 28, 2019, revised on August 16, 2019, that the Permittee intends to complete the project described herein.

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

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

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

PROJECT LOCATION

The project to be completed is located within the South Fork Eel River watershed, approximately 2.5 miles SW of the town of Phillipsville, County of Humboldt, State of California. The project is located in Section 22, T3S, R3E, Humboldt Base and Meridian; in the Miranda U.S. Geological Survey 7.5-minute quadrangle; Humboldt County Assessor's Parcel Numbers 214-234-006 and 214-233-009.

PROJECT DESCRIPTION

The project is limited to three encroachments (Table 1) to provide appropriate stream crossing infrastructure within the Coon Creek sub-basin, tributary to South Fork Eel River. Work for these encroachments will include excavation, installation of

appropriately designed crossings, backfilling and compaction of fill, and rock armoring as necessary to minimize erosion.

Table 1. Project Encroachments with Description

ID	Latitude/Longitude	Description
Crossing-1	40.188058, -123.825393	Upgrade existing rocked ford with an appropriate crossing, as specified in the Notification.
Crossing-2	40.185744, -123.824153	Use and maintenance of existing 24" diameter culvert.
Crossing-3	40.184461, -123.822822	Upgrade existing rocked ford with minimum 36" diameter culvert.

The Permittee disclosed two ponds. Pond #1, located at approximately 40.186845, -123.825573, was identified as a natural sag-pond, lacking a formal spillway. The Notification stated the pond is not utilized by the landowner and is naturally drained by infiltration and evaporation. Pond #2, located at approximately 40.184155, -123.825290, was identified as a spring-fed pond, lacking a formal spillway. The Notification stated the pond is not utilized for irrigation and acts as water storage for fire suppression. An impoundment is an ongoing and continuous diversion subject to F&GC 1602, regardless of use. Pond maintenance and/or changes in use shall be covered under a major amendment or a separate Agreement.

The Permittee disclosed two groundwater wells located at approximately 40.189765, -123.826462 and 40.186443, -123.825267. CDFW did not evaluate hydraulic connection of the wells to surface water, nor was a hydrogeologic evaluation prepared by a licensed geologist provided for CDFW review.

No other projects that may be subject to FGC1602 were disclosed. This Agreement does not retroactively permit any stream crossings, water diversions or other encroachments not described in Table 1.

PROJECT IMPACTS

Existing fish or wildlife resources the project could substantially adversely affect include: onsite Foothill Yellow-legged Frog (*Rana boylii*), Coastal Giant Salamander (*Dicamptodon tenebrosus*), Southern Torrent Salamander (*Rhyacotriton variegatus*) and amphibians, reptiles, aquatic invertebrates, mammals, birds, and other aquatic and riparian species; and downstream Chinook Salmon (*Oncorhynchus tshawytscha*), Coho Salmon (*O. kisutch*), and Steelhead Trout (*O. mykiss*).

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

Impacts to water quality:
temporary increase in fine sediment transport;

Impacts to bed, channel, or bank and direct effects on fish, wildlife, and their habitat:
loss or decline of riparian habitat;
direct impacts on benthic organisms;

Impacts to natural flow and effects on habitat structure and process:
direct and/or incidental take;
indirect impacts;
impediment of up- or down-stream migration;
water quality degradation; and
damage to aquatic habitat and function.

MEASURES TO PROTECT FISH AND WILDLIFE RESOURCES

1. Administrative Measures

The Permittee shall meet each administrative requirement described below.

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

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

1.3 Notification of Conflicting Provisions. The Permittee shall notify CDFW if the Permittee determines or learns that a provision in the Agreement might conflict with a provision imposed on the project by another local, state, or federal agency. In that event, CDFW shall contact the Permittee to resolve any conflict.

1.4 Project Site Entry. The Permittee agrees to allow CDFW employees access to any property it owns and/or manages for the purpose of inspecting and/or monitoring the activities covered by this Agreement, provided CDFW: a) provides 24 hours advance notice; and b) allows the Permittee or representatives to participate in the inspection and/or monitoring. This condition does not apply to CDFW enforcement personnel. As a result of field inspection, CDFW may require that additional measures be applied to specific activities to protect sensitive biological resources. Such measures may be amended into this Agreement with the agreement of both parties, or if an exception to authorized activities is identified, Permittee may be asked to submit separate written notification to CDFW Northern Region.

1.5 Adherence to Existing Authorizations. All water diversion facilities that the Permittee owns, operates, or controls shall be operated and maintained in accordance with current law and applicable water rights.

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

1.7 CDFW Notification of Work Initiation and Completion. The Permittee shall contact CDFW within the 7-day period preceding the beginning of work permitted by this Agreement. Information to be disclosed shall include Agreement number, and the anticipated start date. Subsequently, the Permittee shall notify CDFW no later than seven (7) days after the project is fully completed. **Notification of completion will include photographs of the completed work, erosion control measures, waste containment and disposal, and a summary of any CNDDB submissions as required below.**

1.8 Notification to the California Natural Diversity Database. If any special status species are observed at any time during the project, a qualified Biologist shall submit California Natural Diversity Data Base (CNDDB) forms to the CNDDB within five (5) working days of the sightings. A summary of CNDDB submissions shall be included with the completion notification. Forms and instructions for submissions to the CNDDB may be found at: https://www.wildlife.ca.gov/Data/CNDDB/Submitting-Data.

2. Avoidance and Minimization Measures

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

2.1 Permitted Project Activities. Except where otherwise stipulated in this Agreement, all work shall be in accordance with Permittee Notification, together with all maps, Best Management Practices (BMPs), photographs, drawings, and other supporting documents submitted with the Notification and received on June 28, 2019, with revisions received on August 16, 2019.

2.2 Listed Species. This Agreement does not allow for the take, or incidental take of any state or federal listed threatened, endangered, or candidate species. No direct or indirect impacts shall occur to any threatened or endangered species as a result of implementing the project or the project's activities. If the project could result in the "take" of a state listed threatened or endangered species, the Permittee has

the responsibility to obtain from CDFW, a California Endangered Species Act Permit (CESA section 2081).

2.3 Foothill Yellow-Legged Frog (FYLF) Avoidance. To avoid take of FYLF during its CESA candidacy period, the Permittee shall:

A. Conduct a Pre-Construction Survey. Within 3-5 days prior to entering or working at the Project Site when water is present, a qualified biologist shall examine the project site to determine the presence/absence of standing or flowing water, and the presence and/or the potential for presence of FYLF adults, juveniles, tadpoles or egg masses within the project area and 150 feet upstream and downstream. Prior to commencing work, Permittee shall provide to CDFW for review preconstruction survey notes and observations.

1. If FYLF are found during the pre-construction survey, Permittee shall:

    a) Consult CDFW immediately by either telephone or e-mail and provide a short description of observations, including a count of individuals and the life stage(s), conditions at the site, and other aquatic species observed; and

    b) Either propose site-specific mitigation measures that will be utilized to avoid take, or obtain an Incidental Take Permit (ITP) if take of FYLF cannot be avoided. Instream work shall not commence until CDFW has provided written approval of the proposed avoidance measures or an ITP has been issued.

2. If no FYLFs are found during the pre-construction survey and no surface water is present in the project area, work may commence without further surveys.

3. If no FYLFs are found but surface water is present during the pre-construction survey, *or if surface water becomes present at any time during the work period*, a qualified biologist shall survey the work site each day before commencement of work activities where equipment and/or materials may come in contact with FYLFs, streams, or riparian habitat.

4. If FYLFs are observed at any time during the construction season, work in the immediate area shall be halted, CDFW immediately consulted, and conservation measures developed and agreed to by CDFW prior to recommencing work.

B. Qualified Biologist. A qualified biologist is an individual who is experienced in construction level biological monitoring, knowledgeable in the biology, natural history, habits and behaviors of the FYLF, and who is able to recognize all age classes of FYLF relative to other amphibians in the project area. A qualified

biologist shall have academic and professional experience in biological sciences or resource management activities. At least 15 days prior to commencement of Project-related surveys for FYLFs, Permittee shall provide to CDFW for review and approval the names and qualifications of individuals requesting qualified biologist status.

C. Decontamination. The Permittee is responsible for ensuring all project personnel adhere to the latest version of the Northern Region California Department of Fish and Wildlife Aquatic Invasive Species Decontamination Protocol for all field gear and equipment that will be in contact with water or FYLFs. Heavy equipment and other motorized or mechanized equipment that comes in contact with water should generally follow watercraft decontamination protocols found in the AIS Decontamination Protocol.

2.4 Nesting Birds. Actively nesting birds and their nests shall not be disturbed by project activities. If vegetation removal is necessary during the nesting season of protected raptors and migratory birds (**March 1 through August 15**), the Permittee shall notify CDFW of proposed work and a focused survey for bird nests and/or nesting behavior shall be conducted by a qualified biologist within seven days prior to the beginning of project-related activities. Surveys should encompass the area up to 50 feet from disturbance to account for songbirds, and up to 250 feet from disturbance for raptors. If a nest is found or suspected to be present, Permittee shall consult with CDFW regarding appropriate action to comply with the Migratory Bird Treaty Act of 1918 and Fish and Game Code. If a lapse in project-related work of seven days or longer occurs, another focused survey, and if required, consultation with CDFW shall be required before project work can be reinitiated.

2.5 Cannabis Cultivation Policy. If Cannabis cultivation occurs on the project parcel, Permittee shall comply with all requirements of the State Water Resource Control Board (SWRCB) Cannabis Cultivation Policy - Principles and Guidelines for Cannabis Cultivation (Cannabis Policy), dated April 16, 2019, or the latest version.

Project Timing

2.6 Work Period. All work, not including diversion of water, shall be confined to the period **June 15 through October 15** of each year. Work within the active channel of a stream shall be restricted to periods of **dry weather**. Precipitation forecasts and potential increases in stream flow shall be considered when planning construction activities. Construction activities shall cease and all necessary erosion control measures shall be implemented prior to the onset of precipitation. Limited vegetation removal may occur outside of this work period as per Measure 2.4.

2.7 Extension of the Work Period. If weather conditions permit, and the Permittee wishes to extend the work period after October 15, a written request shall be made

to CDFW **at least 10-working days before the proposed work period variance**. Written approval (letter or e-mail) for the proposed time extension must be received from CDFW prior to activities continuing past October 15.

2.8 Work Completion. The proposed work shall be completed by no later than **October 15, 2021**. Extensions to this date may be granted on a case by case basis as a minor amendment requested at least 30 days prior to this date. Failure to complete work by this date may result in suspension or revocation of this Agreement. A notice of completed work, including photographs of each site, shall be submitted to CDFW within seven (7) days of project completion.

Vegetation Management

2.9 Prohibited Plant Species. Permittee shall not plant, seed or otherwise introduce invasive plant species within the Project area. Prohibited invasive plant species include those identified in the California Invasive Plant Council's inventory database, which is accessible at: https://www.cal-ipc.org/plants/inventory/.

2.10 Minimum Vegetation Removal. Permittee shall limit the disturbance or removal of native vegetation to the minimum necessary to achieve design guidelines and standards for the Authorized Activity. Permittee shall take precautions to avoid damage to vegetation outside the work area.

2.11 Vegetation Maintenance. Permittee shall limit vegetation management (e.g., trimming, pruning, or limbing) and removal for the purpose of stream crossing or diversion infrastructure placement/maintenance to the use of hand tools. Vegetation management shall not include treatment with herbicides.

General Stream Protection Measures

2.12 Fish and Aquatic Amphibians. If possible, work shall be conducted when the affected stream channel is void of surface water. If surface water is present during construction, the Permittee shall: a) have a biologist or other qualified professional survey the site and adjacent area for fish, amphibians, and turtles three days or less before commencing project activities and b) if fish, amphibians, or turtles are detected, CDFW's Jonathan Hollis will be contacted by phone or email at (707) 441-5842 or Jonathan.Hollis@wildlife.ca.gov and work shall not commence until authorized by CDFW.

2.13 Stream Protection. No debris, soil, silt, sand, bark, slash, sawdust, rubbish, cement or concrete washings, oil or petroleum products, or other material deleterious to fish, plant life, mammals or bird life shall be allowed to enter into or be placed where it may be washed by rainfall or runoff into the stream.

2.14 No Dumping. Permittee shall not deposit, permit to pass into, or place where it can pass into a stream, lake, or other Waters of the State any material deleterious to

fish and wildlife, or abandon, dispose of, or throw away within 150 feet of a stream, lake, or other Waters of the State any cans, bottles, garbage, motor vehicle or parts thereof, rubbish, litter, refuse, waste, debris, or the viscera or carcass of any dead mammal, or the carcass of any dead bird.

2.15 Equipment Maintenance. Refueling of machinery or heavy equipment, or adding or draining oil, lubricants, coolants or hydraulic fluids shall not take place within stream bed, channel and bank. All such fluids and containers shall be disposed of properly off-site. Heavy equipment used or stored within stream bed, channel and bank shall use drip pans or other devices (e.g., absorbent blankets, sheet barriers or other materials) as needed to prevent soil and water contamination.

2.16 Hazardous Spills. Any material, which could be hazardous or toxic to aquatic life and enters a stream (i.e. a piece of equipment tipping-over in a stream and dumping oil, fuel or hydraulic fluid), the Permittee shall immediately notify the California Emergency Management Agency State Warning Center at 1-800-852-7550, and immediately initiate clean-up activities. CDFW shall be notified by the Permittee within 24 hours at 707-445-6493 and consulted regarding clean-up procedures.

2.17 Clean-up. Structures and associated materials not designed to withstand high seasonal flows shall be removed to areas above the ordinary high water mark before such flows occur or the end of the yearly work period, whichever comes first. All project materials and debris shall be removed from the project site and properly disposed of off-site upon project completion.

2.18 Erosion Control Measures

2.18.1 Seed and Mulch. Upon completion of construction operations and/or the onset of wet weather, Permittee shall stabilize exposed soil areas within the work area by applying mulch and seed. Permittee shall restore all exposed or disturbed areas and access points within the stream and riparian zone by applying local native and weed free erosion control grass seeds. Locally native wildflower and/or shrub seeds may also be included in the seed mix. Permittee shall mulch restored areas using at least two to four inches of weed-free clean straw or similar biodegradable mulch over the seeded area. Alternately, Permittee may cover seeding with jute netting, coconut fiber blanket, or similar non-synthetic monofilament netting erosion control blanket.

2.18.2 Erosion and Sediment Barriers. Permittee shall monitor and maintain all erosion and sediment barriers in good operating condition throughout the work period and the following rainy season, defined herein to mean October 15 through June 15. Maintenance includes, but is not limited to, removal of accumulated sediment, replacement of damaged sediment fencing, coir rolls/logs and/or straw bale dikes and ensuring drainage

structures and altered streambeds and banks remain sufficiently armored and/or stable. If the sediment barrier fails to retain sediment, Permittee shall employ corrective measures, and notify the department immediately.

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

2.18.4 Prohibition on Use of Monofilament Netting. To minimize the risk of ensnaring and strangling wildlife, Permittee shall not use any erosion control materials that contain synthetic (e.g., plastic or nylon) monofilament netting, including photo- or biodegradable plastic netting. Geotextiles, fiber rolls, and other erosion control measures shall be made of loose-weave mesh, such as jute, hemp, coconut (coir) fiber, or other products without welded weaves.

2.19 Waste Containment and Disposal. Permittee shall contain all operation associated refuse in enclosed, wildlife proof, storage containers, at all times, and relocate refuse to an authorized waste management facility, in compliance with State and local laws, on a regular and ongoing basis. All refuse shall be removed from the site and properly disposed of, at the close of the cultivation season and/or when the parcel is no longer in use.

Water Storage

2.20 Water Storage. All water storage facilities (WSFs) (e.g., reservoirs, storage tanks, mix tanks, and bladders tanks) must be located outside the active 100-year floodplain and outside the top of bank of a stream. Covers/lids shall be securely affixed to water tanks at all times to prevent potential entry by wildlife. Permittee shall cease all water diversion at the point of diversion when WSFs are filled to capacity.

2.21 Water Storage Maintenance. WSFs shall have a float valve to shut off the diversion when tanks are full to prevent overflow. Water shall not leak, overflow, or overtop WSFs at any time. Permittee shall regularly inspect all WSFs and infrastructure used to divert water to storage and use and repair any leaks.

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

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

registration is found at:
https://www.waterboards.ca.gov/waterrights/water_issues/programs/registrations/

Reservoirs

2.24 No Stocking. Stocking of fish, wildlife, or plant of any kind, in any Waters of the State, including reservoirs, shall be prohibited without written permission from the department pursuant to Section 6400 of the Fish and Game Code.

2.25 Invasive Species Management for Reservoirs. Permittee shall implement an invasive species management plan prepared by a Biologist for any existing or proposed reservoir. The plan shall include, at a minimum, an annual survey for invasive aquatic species, including the American bullfrog (*Lithobates catesbeianus* = *Rana catesbeiana)*. The Biologist, if appropriate, shall implement eradication measures if invasive aquatic species are identified as part of the survey.

2.25.1 Bullfrog Management Plan. If bullfrogs are observed, they shall be appropriately managed. Management of bullfrogs, including annual draining and drying of ponds, shall follow the guidelines in Exhibit A. A copy of the annual monitoring report, shall be submitted to CDFW in accordance with the reporting measures described in Exhibit A and in the Reporting Measures section of this Agreement.

Stream Crossings

2.26 Road Approaches. The Permittee shall treat road approaches to new or re-constructed permanent crossings to minimize erosion and sediment delivery to the watercourse. Permittee shall ensure road approaches are hydrologically disconnected to the maximum extent feasible to prevent sediment from entering the crossing site, including when a Stream Crossing is being constructed or reconstructed. Road approaches shall be armored from the crossing for a minimum of *50 feet in both directions,* or to the nearest effective water bar or point where road drainage does not drain to the crossing, with durable, clean, screened, angular rock.

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

2.28 Runoff from Steep Areas. The Permittee shall make preparations so that runoff from steep, erodible surfaces will be diverted into stable areas with little erosion potential or contained behind erosion control structures. Erosion control structures such as straw bales and/or siltation control fencing shall be placed and maintained

until the threat of erosion ceases. Frequent water checks shall be placed on dirt roads, cat tracks, or other work trails to control erosion.

2.29 Crossing Maintenace. The Permittee shall provide site maintenance for the life of the structures, including, but not limited to, re-applying erosion control to minimize surface erosion and ensuring drainage structures, streambeds and banks remain sufficiently armored and/or stable.

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

2.29.2 No heavy equipment shall enter the wetted stream channel.

2.29.3 No fill material, other than clean rock, shall be placed in the stream channel.

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

2.29.5 Rock armoring shall not constrict the natural stream channel width and shall be keyed into a footing trench with a depth sufficient to prevent instability.

2.30 Culvert Installation.

2.30.1 Permanent culverts shall be sized to accommodate the estimated 100-year flood flow [i.e. ≥1.0 times the width of the bankfull channel width or the 100-year flood size, whichever is greater], including debris, culvert embedding, and sediment loads.

2.30.1 Where diversion potential exists, a critical dip shall be installed to direct flood flow over the crossing fill and back into the channel. Critical dips shall be constructed to accommodate the entire estimated 100-year flood flow and may be installed by lowering the existing fill over the crossing or by constructing a deep, broad rolling dip over the crossing surface to prevent flood flow from diverting down the road.

2.30.2 If the project is located in a high to very high Fire Hazard Severity Zone as designated by CAL FIRE, CDFW recommends culvert materials consist of corrugated metal pipe (CMP). Use of High Density Polyethylene (HDPE) pipe is discouraged.
http://www.fire.ca.gov/fire_prevention/fire_prevention_wildland_zones_maps

2.30.3 Existing fill material in the crossing shall be excavated down vertically to the approximate original channel and outwards horizontally to the approximate crossing hinge points (transition between naturally occurring soil and remnant temporary crossing fill material) to remove any potential unstable debris and voids in the older fill prism.

2.30.4 Culvert shall be installed to grade (not perched or suspended), aligned with the natural stream channel, and extend lengthwise completely beyond the toe of fill. If culvert cannot be set to grade, it shall be oriented in the lower third of the fill face, and a downspout or energy dissipator (such as boulders, rip-rap, or rocks) shall be installed above or below the outfall as needed to effectively control stream bed, channel, or bank erosion (scouring, headcutting, or downcutting). The Permittee shall ensure basins are not constructed and channels are not be widened at culvert inlets.

2.30.5 Culvert bed shall be composed of either compacted rock-free soil or crushed gravel. Bedding beneath the culvert shall provide for even distribution of the load over the length of the pipe, and allow for natural settling and compaction to help the pipe settle into a straight profile. The crossing backfill materials shall be free of rocks, limbs, or other debris that could allow water to seep around the pipe, and shall be compacted.

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

3. Reporting Measures

Permittee shall meet each reporting requirement described below.

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

3.1.1 Prior to commencing work, Permittee shall provide to CDFW for review preconstruction FYLF survey notes and observations.

3.2 Work Completion. The proposed work shall be completed by no later than **October 15, 2021**. Extensions to this date may be granted on a case by case basis as a minor amendment requested at least 30 days prior to this date. Failure to complete work by this date may result in suspension or revocation of this Agreement. **Notification of completion will include photographs of the completed work, erosion control measures, waste containment and disposal, and a summary of any CNDDB submissions** and shall be submitted to CDFW, LSA program at 619 Second Street, Eureka, CA 95501 **within seven (7) days** of project completion.

3.3 Project Inspection. The Project shall be inspected by Pacific Watershed Associates or a licensed professional to ensure that the stream crossings were installed as designed and/or the stream restoration was implemented as designed.

A copy of the inspection report, including photographs of each site, shall be submitted to CDFW within 90 days of completion of this project. The Permittee shall submit the **Project Inspection Report** to CDFW, LSA Program at 619 Second Street, Eureka, CA 95501

3.4 Invasive Species Management for Reservoirs. The Permittee shall submit all required documents described in the Invasive Species Management for Reservoirs, **Bullfrog Management Plan** (Exhibit A) no later than **December 31** of each year. The Bullfrog Management Plan shall be submitted to CDFW at 619 Second Street, Eureka, CA 95501.

3.5 Site Management Plan. The Permittee shall submit to CDFW the project's **current draft** of the Site Management Plan if it was not included in the Notification. If the Site Management Plan is still in preparation, Permittee shall submit it and all **subsequent revisions and updates** within 30 days of submittal to the Water Board.

3.6 Pond Inspection. The Permittee shall submit to CDFW an **inspection report for ponds within 60 days** from the effective date of this agreement. The report shall be prepared by a qualified geologist or engineer licensed in the State of California and include recommendations regarding stability and erosion potential minimizations.

CONTACT INFORMATION

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

To Permittee:

Kevin Bourque
PO Box 610
Fortuna, California 95540
707-267-4297
onedropcultivators@gmail.com

To CDFW:

Department of Fish and Wildlife
Attn: Lake and Streambed Alteration Program – Jonathan Hollis
Notification #1600-2019-00542-R1
619 Second Street
Eureka, California 95501

LIABILITY

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

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

SUSPENSION AND REVOCATION

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

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

ENFORCEMENT

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

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

OTHER LEGAL OBLIGATIONS

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

authorization from the U.S. Fish and Wildlife Service or National Marine Fisheries Service.

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

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

AMENDMENT

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

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

TRANSFER AND ASSIGNMENT

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

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

EXTENSIONS

In accordance with Fish and Game Code section 1605, subdivision (b), Permittee may request one extension of the Agreement, provided the request is made prior to the

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

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

EFFECTIVE DATE

The Agreement becomes effective on the date of CDFW's signature, which shall be: 1) after the Permittee signature; 2) after CDFW complies with all applicable requirements under the California Environmental Quality Act (CEQA); and 3) after payment of the applicable FGC section 711.4 filing fee listed at http://www.wildlife.ca.gov/habcon/ceqa/ceqa_changes.html.

TERM

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

EXHIBITS

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

Exhibit A. Bullfrog Monitoring and Management Plan

AUTHORITY

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

AUTHORIZATION

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

CONCURRENCE

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

FOR KEVIN BOURQUE

Kevin Bourque — Date: 12/4/2019

FOR DEPARTMENT OF FISH AND WILDLIFE

Cheri Sanville — Date: 12/5/19

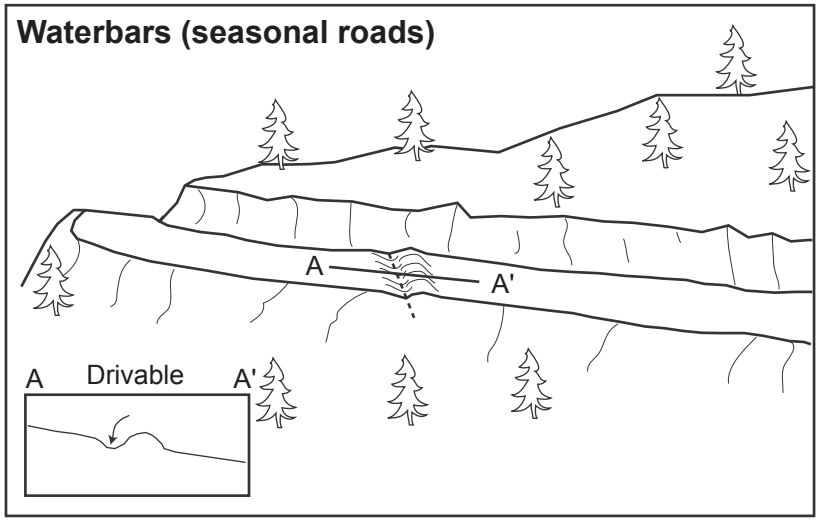
Senior Environmental Scientist Supervisor

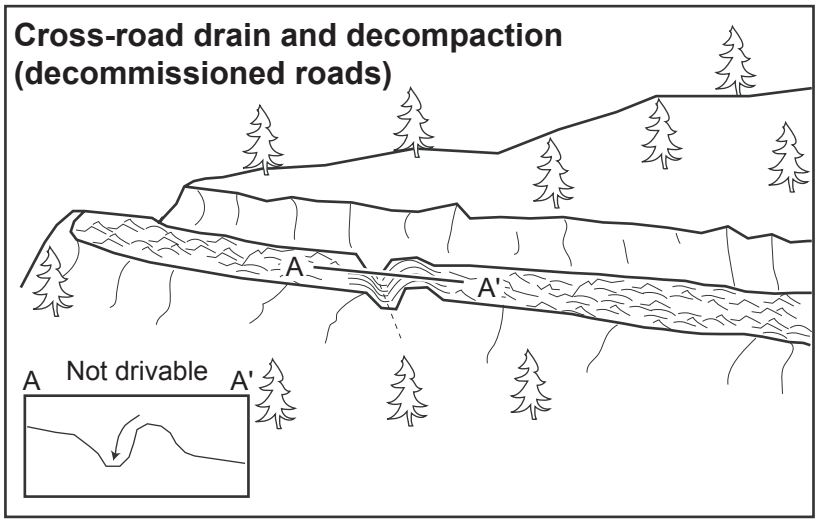
Prepared by: Jonathan Hollis, Environmental Scientist, August 19, 2019

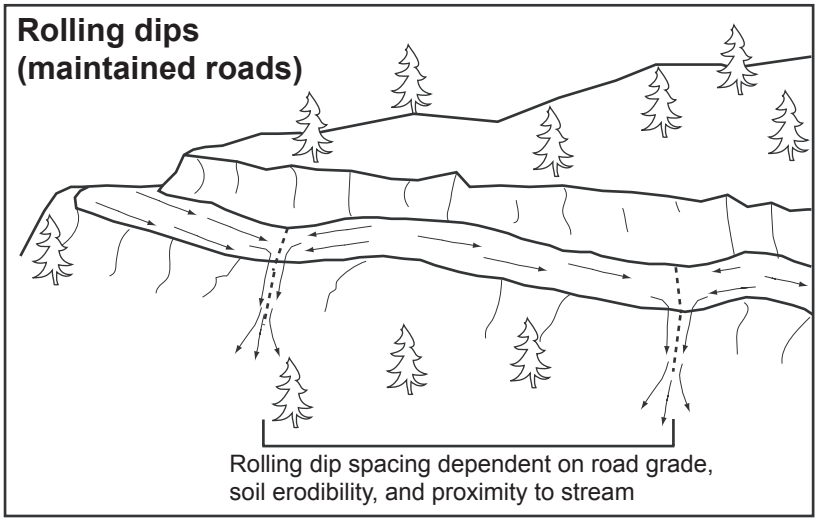
APPENDIX C

Pacific Watershed Associates Typical Drawings

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

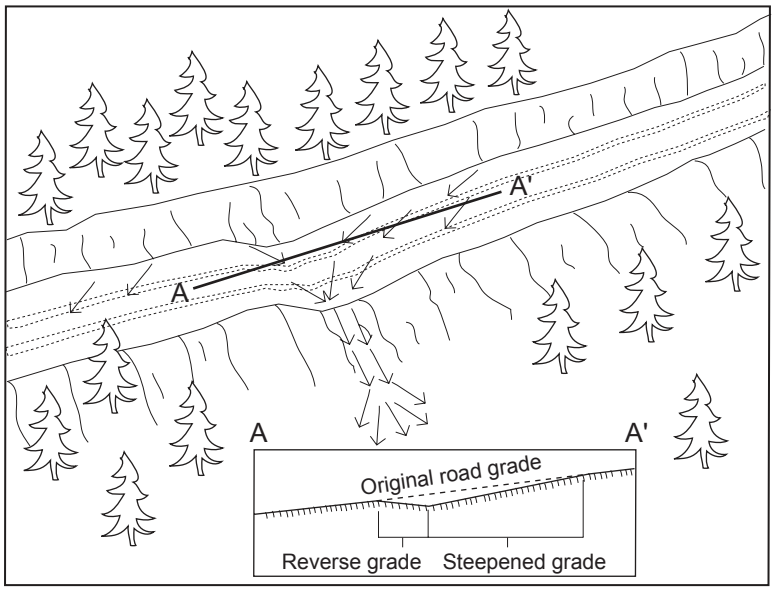






Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

Typical Road Surface Drainage by Rolling Dips



Rolling dip installation:

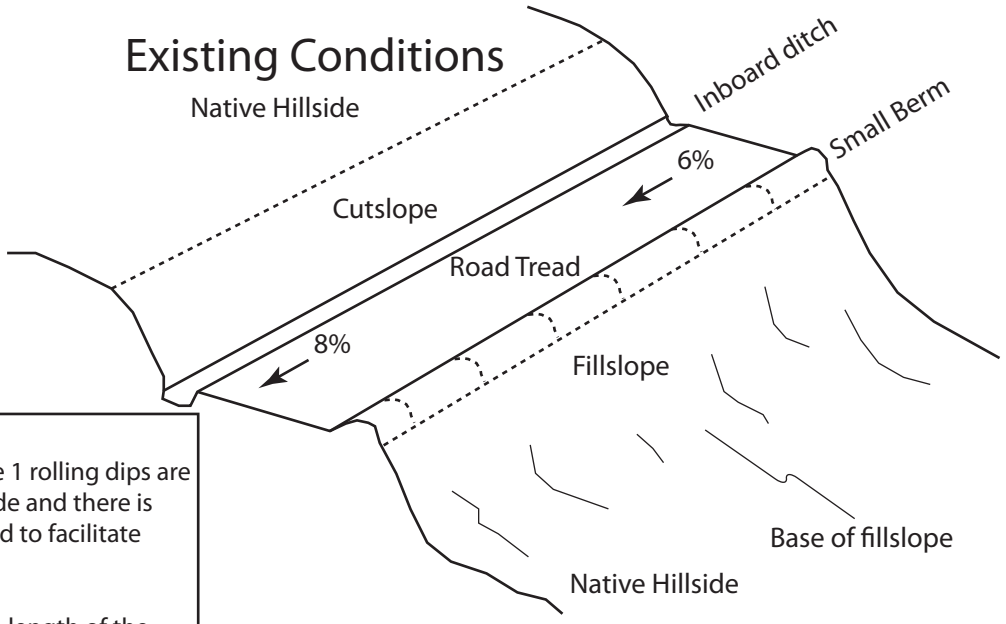
1. Rolling dips will be installed in the roadbed as needed to drain the road surface.
2. Rolling dips will be sloped either into the ditch or to the outside of the road edge as required to properly drain the road.
3. Rolling dips are usually built at 30 to 45 degree angles to the road alignment with 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:

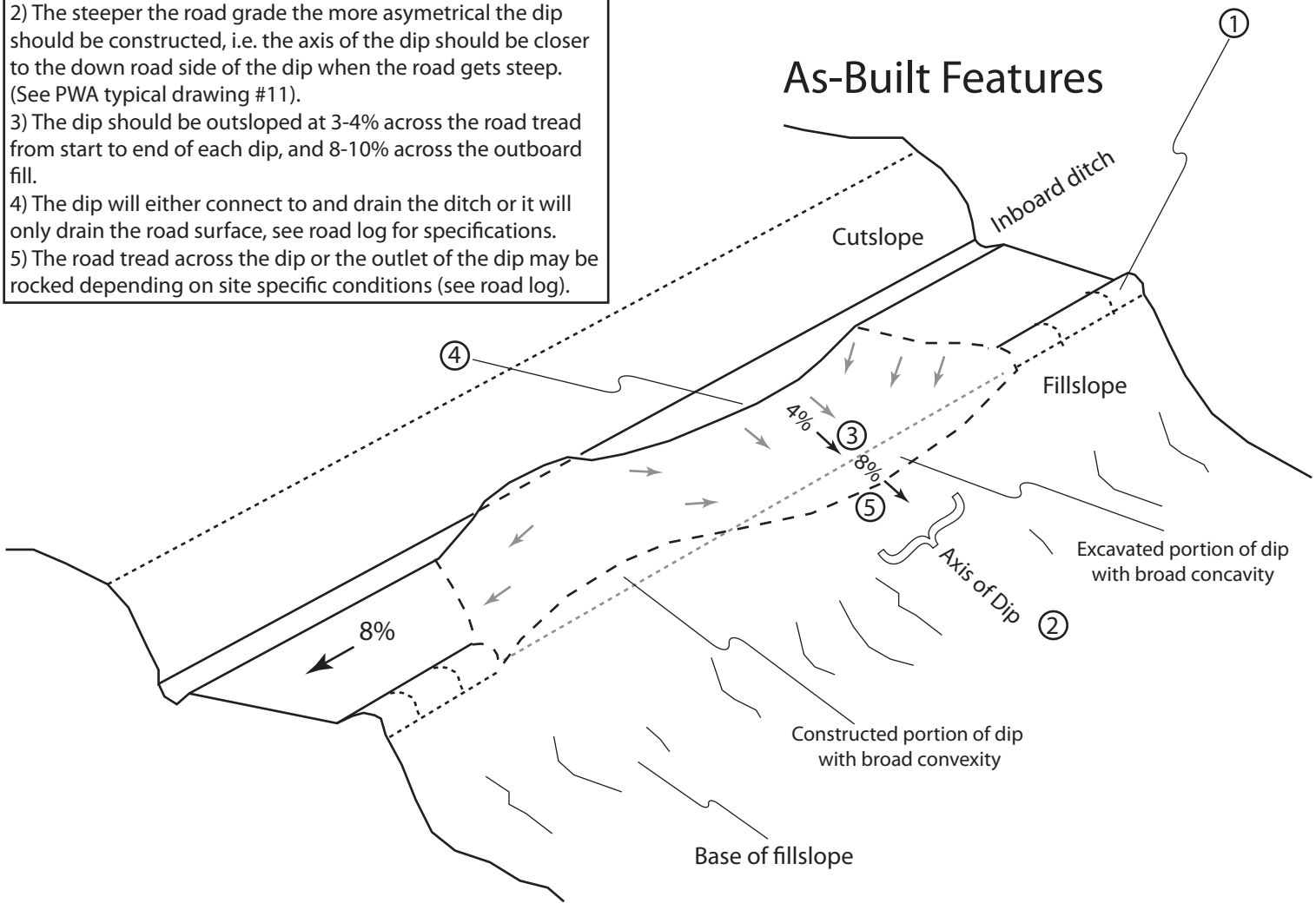
1) The berm should be removed for the entire length of the dip.

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).

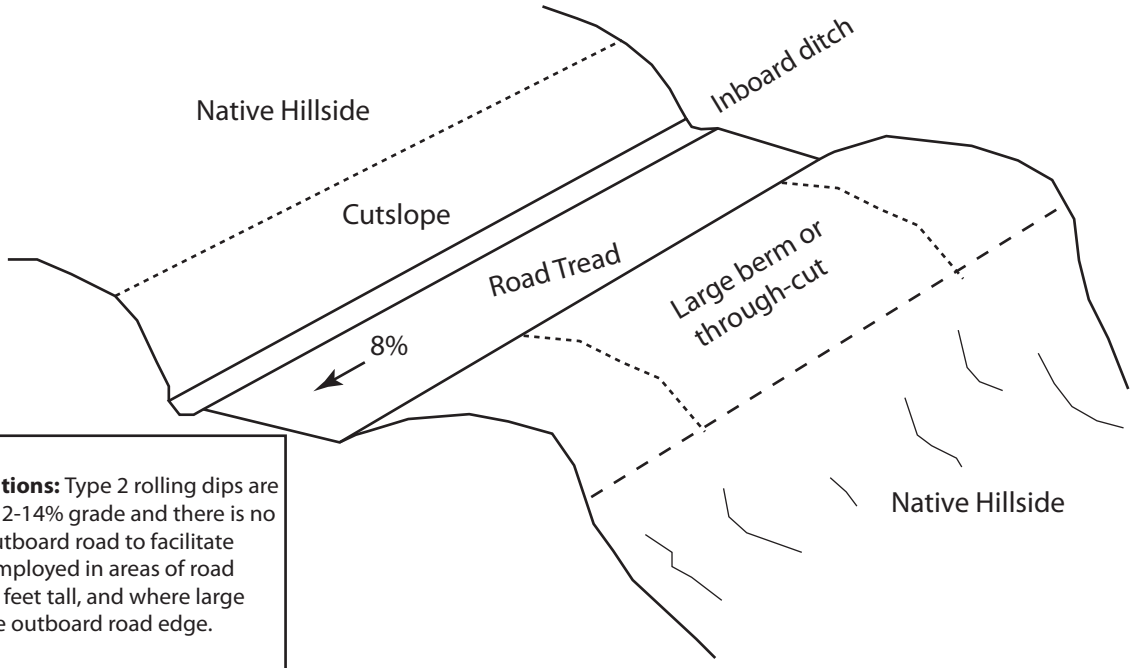


Pacific Watershed Associates Inc.
Geologic and Geomorphic Studies • Watershed Restoration • Wildland Hydrology • Erosion Control • Environmental Services
PO Box 4433, Arcata, CA 95518 / Ph: 707-839-5130 / FAX: 707-839-8168 / www.pacificwatershed.com

PWA Typical Drawing #19a

Type 2 Rolling Dip Construction

(Through-cut or thick berm road reaches)



Notes

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

Design Notes:

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

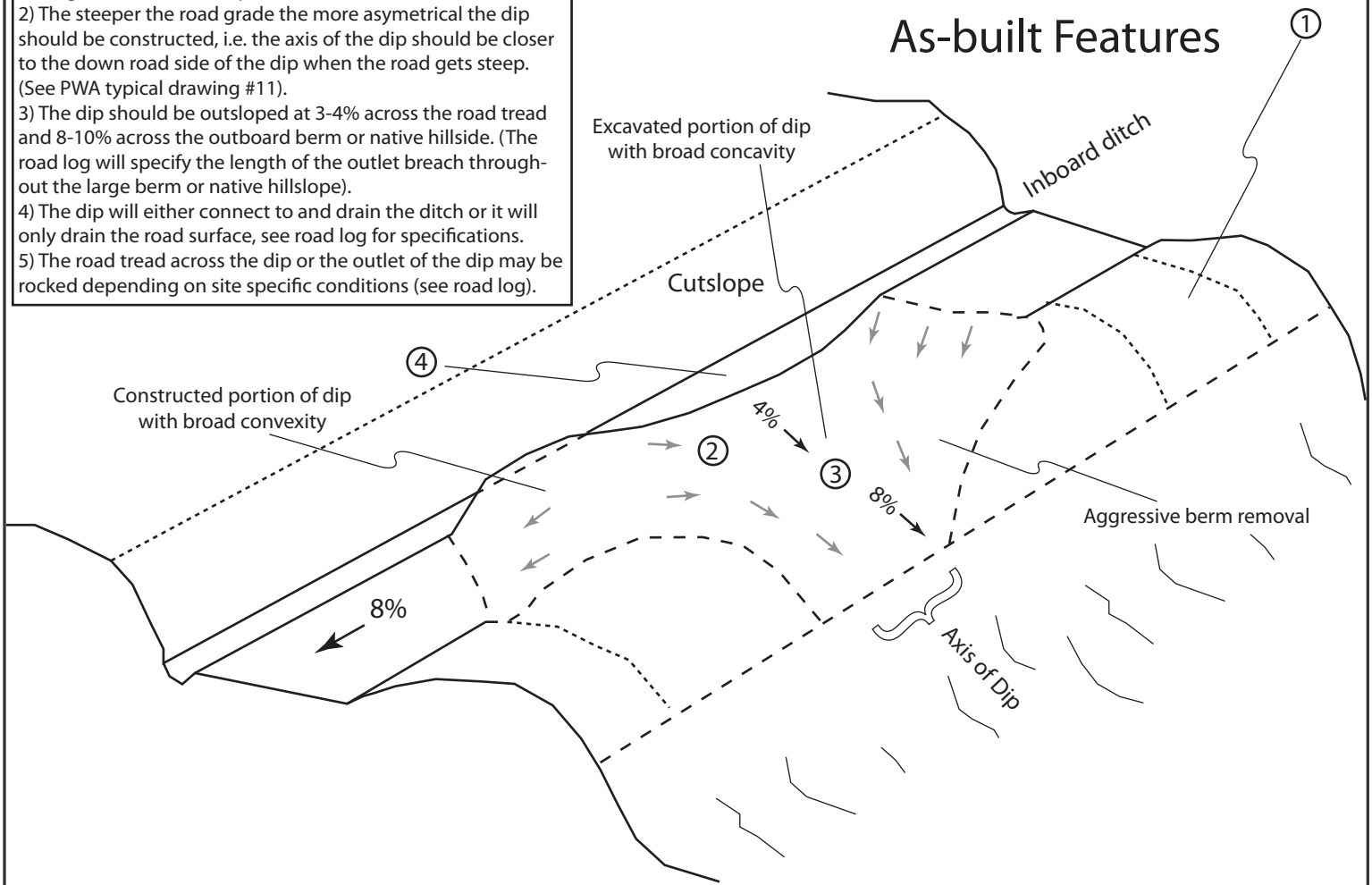
2) The steeper the road grade the more asymetrical the dip should be constructed, i.e. the axis of the dip should be closer to the down road side of the dip when the road gets steep. (See PWA typical drawing #11).

3) The dip should be outsloped at 3-4% across the road tread and 8-10% across the outboard berm or native hillside. (The road log will specify the length of the outlet breach through-out the large berm or native hillslope).

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

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

As-built Features



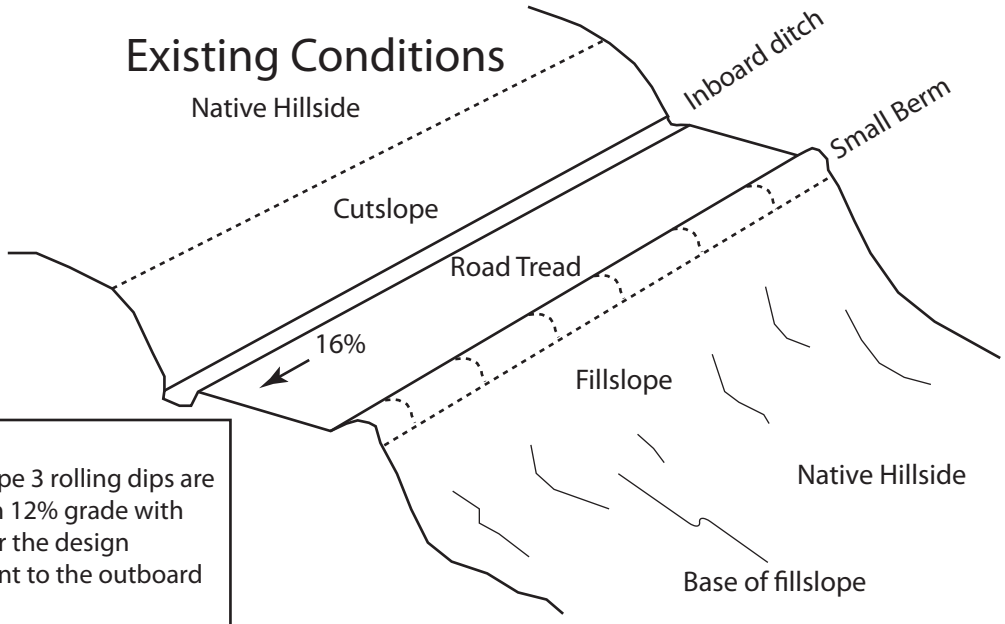
Pacific Watershed Associates Inc.

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 #19b

Type 3 Rolling Dip Construction
(steep slope outslope)



Notes

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

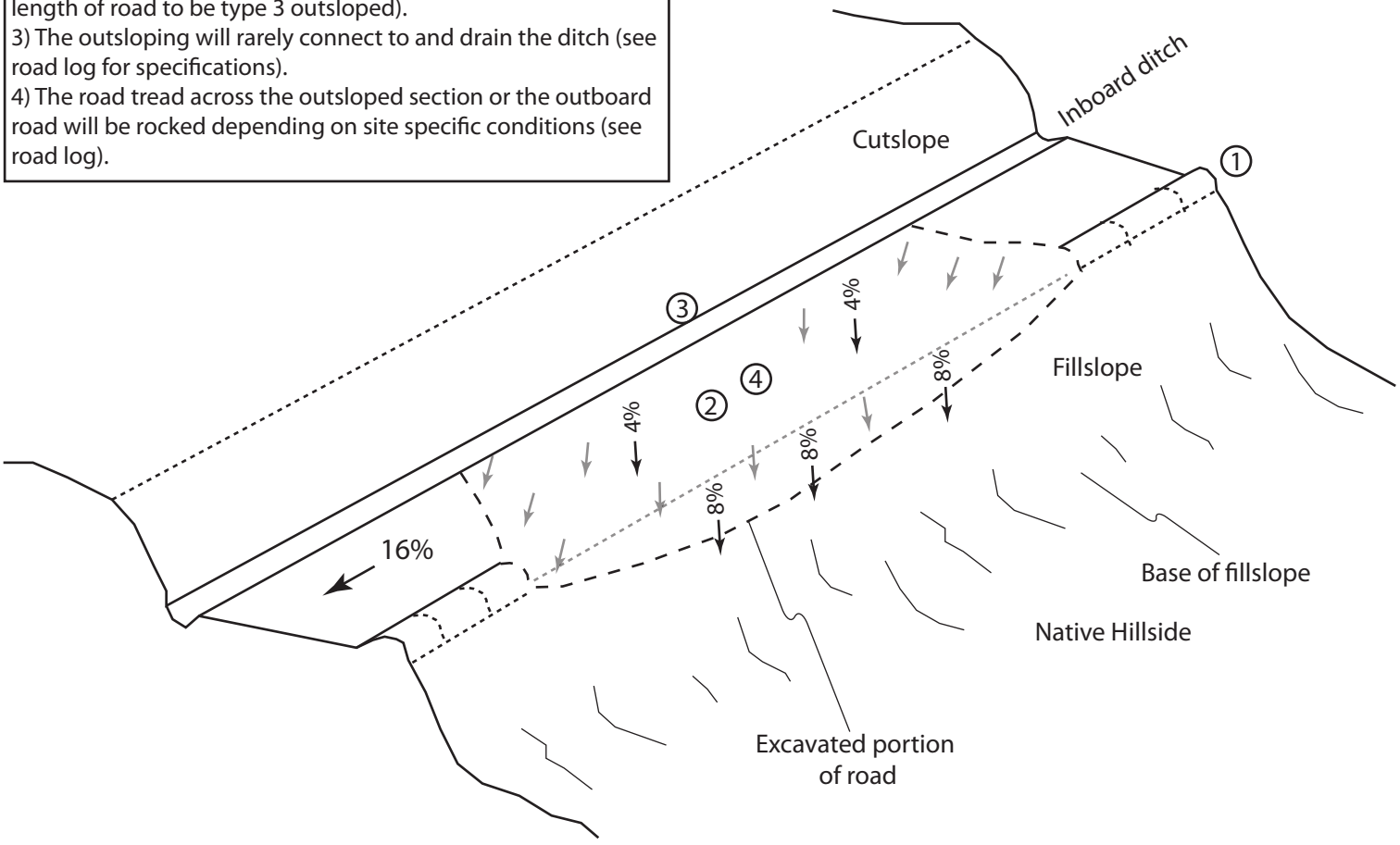
Design Notes:

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

2) The dip should be outsloped at 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