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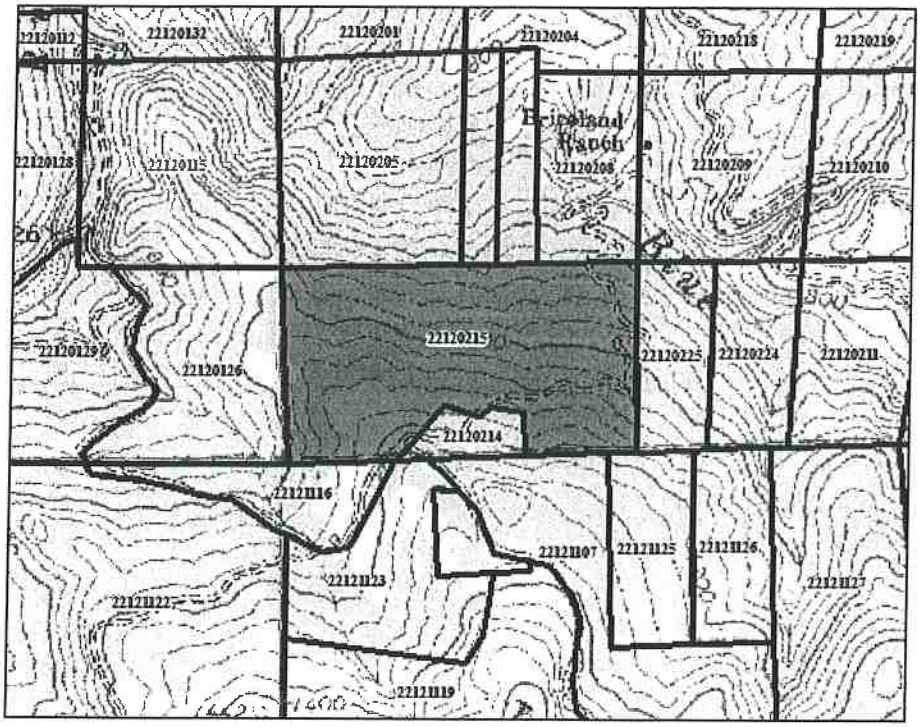
Water Resource Protection Plan (WRPP)

for

APN 221-202-015

4791 Ettersburg Road
Whitethorn, California

May, 2019



WD ID #1B16874CHUM
PWA ID #180101070203-50311
4791 Ettersburg Road
Whitethorn, California

Prepared by:
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4791 Ettersburg Road
Whitethorn, California

1.0 PROJECT SUMMARY

This report documents Pacific Watershed Associate's (PWA)[1] Water Resource Protection Plan (WRPP) for APN 221-202-015 located at 4791 Ettersburg Road, Whitethorn, CA, as shown on Figure 1. This property is located approximately 16 miles west of Garberville, Humboldt County, CA, hereinafter is referred to as the "Project Site." Based on either site conditions and/or total cultivation area, this property falls within **Tier 2** of the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023, Waiver of Waste Discharge and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects ("Order"). Properties that fall into Tier 2 of the Order are required to develop a WRPP. Therefore, as required, this WRPP has been developed for you based on site inspections made by PWA on your property. PWA's recommendations for any remediation or corrective actions are a result of water quality requirements under the Order, including Best Management Practices (BMPs) designed to meet those requirements (Appendix A).

This WRPP documents the findings of a site visit conducted on October 26, 2016 by PWA Professional Geologist Christopher Herbst, and PWA Staff Geologist Jack Skeahan, when a reconnaissance level investigation of the property was conducted and the conditions of the property noted. In addition, a previous survey of the road system was conducted on September 14, 2015 by PWA Engineering Geologist Tom Leroy in order to prepare an Erosion Control Plan (ECP). This plan, containing specific treatment recommendations for the road network, is referenced frequently within the body of this WRPP and is included as Appendix I.

2.0 CERTIFICATIONS, LIMITATIONS AND CONDITIONS

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

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

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

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

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

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

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

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

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

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

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

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

Prepared by:

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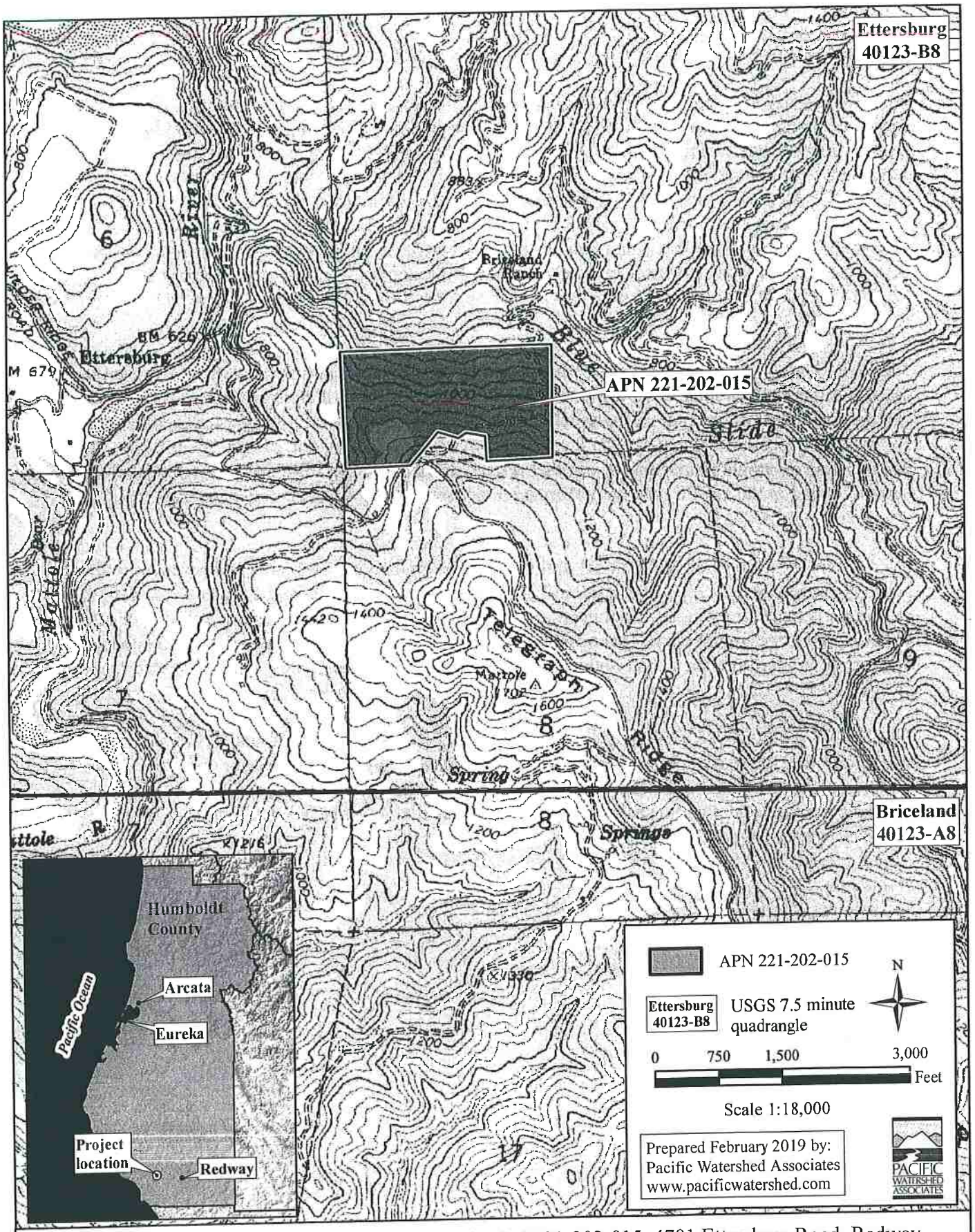

Figure 1. Location map for WDID #1B16874CHUM, APN 221-202-015, 4791 Ettersburg Road, Redway, Humboldt County, California.

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3.0 INTRODUCTION

This Water Resources Protection Plan (WRPP) summarizes the results of Pacific Watershed Associate's (PWA) site visit and subsequent analysis and documentation of site conditions on APN 221-202-015 located at 4791 Ettersburg Road, Whitethorn, California, as shown on Figure 1 and hereinafter referred to as the "Project Site." Note that the erosion control plan (ECP) and this WRPP are limited in scope to the western portion of the property, as depicted on the county parcel map because at the time of the inspection, the eastern portion of the property was used and managed by a land partner as a as separate domicile.

The WRPP describes and addresses the required elements and compliance with the 12 Standard Conditions established by the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023 to protect water quality from cannabis cultivation and related activities (Order). PWA has identified certain areas where the Project Site does not fully meet all 12 of the Standard Conditions of the Order. Section 4, below, identifies and discusses each of the 12 Standard Conditions as related to your property with regard to compliance with the NCRWQCB's Order.

The WRPP contains the following required sections:

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

4.0 STANDARD CONDITIONS CHECKLIST FOR 221-202-015 as of 10/26/2016

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

The following section details the specific requirements listed and described in the Order for each of the 12 Standard Conditions. Each Standard Condition has from 1 to 6 sub-requirements (*listed in italic type*), each of which must be satisfied to protect water quality and comply with the Order. The checklist developed by PWA for your property indicates: 1) whether the Standard Condition or Standard Condition sub-requirement was adequately met as of the date of PWA's field inspection, 2) PWA's observations and comments related to the Standard Condition or Standard

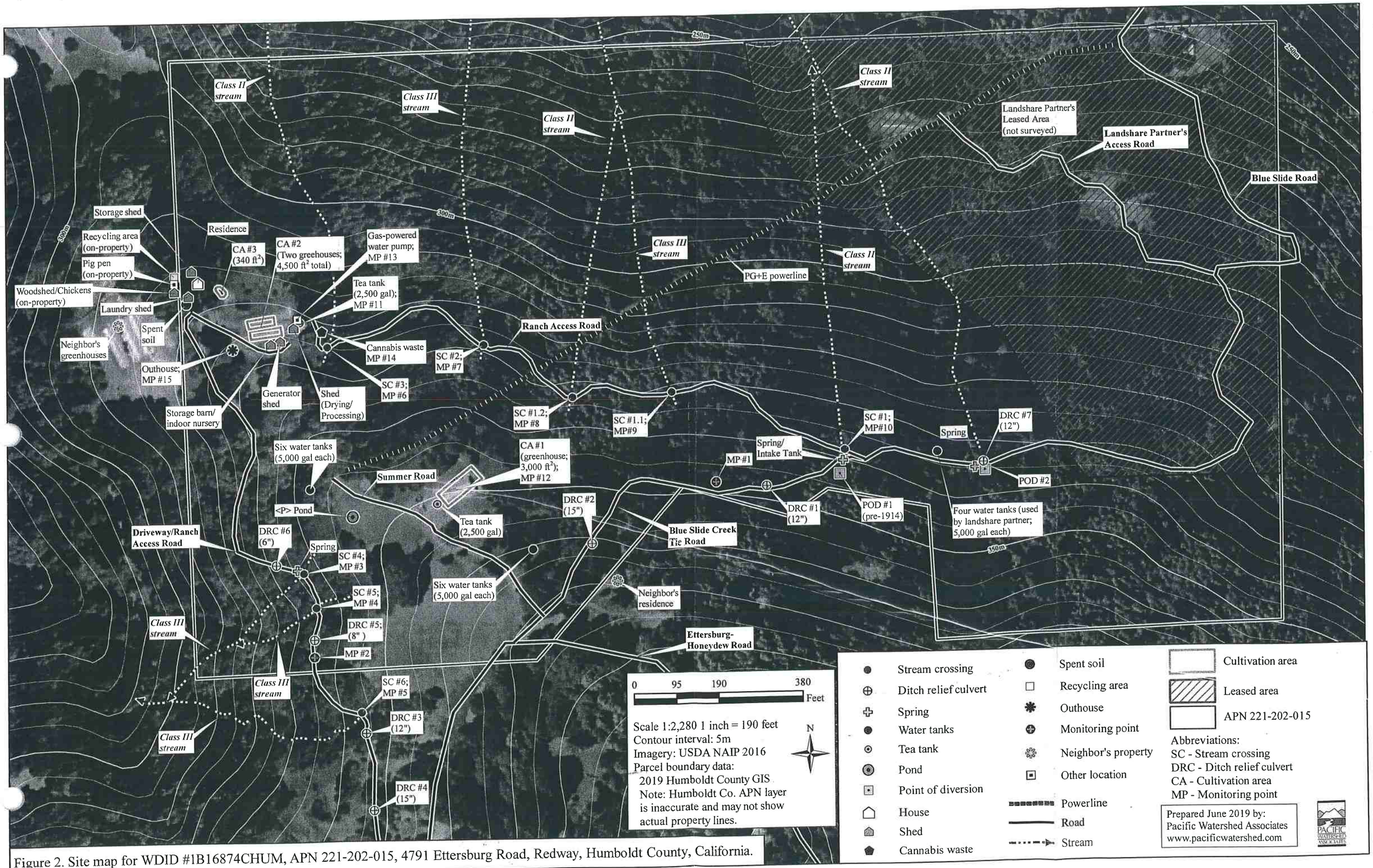

Figure 2. Site map for WDID #1B16874CHUM, APN 221-202-015, 4791 Ettersburg Road, Redway, Humboldt County, California.

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Condition sub-requirement, 3) whether a relevant photo has been taken and included in the WRPP, and 4) recommended corrective or remedial actions that need additional work to meet the requirements of the Order.

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

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

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

Meets condition? No

Observations/Comments: Note that the road segments leading to the northeastern portion of the property were not inspected since they were associated with a separate land partner's domicile. This includes approximately 0.25 mile segment of Blue Slide Road east of DRC #7 and another approximately 0.25 mile segment of driveway or access road leading to the domicile in the northeast corner of the property (see Figure 2).

Approximately 0.9 mi of road was inspected on the Project Site (the western 2/3 of the property) during the site inspection. Approximately 2/3 of the road network surveyed is well maintained and roads that are used year-round were surfaced with rock. Though in relatively good condition, in general, stream crossings lack drainage features sized to pass 100-year storm flows and they lack road surface drainage structures, resulting in a relatively high degree of hydrologic connectivity to the stream network.

The other 1/3 of the road network surveyed during the inspection included a 0.3 mile long "legacy" logging road ("Abandoned Road" on Figure 2) that has been abandoned (or unmaintained) for decades. Though surface erosion is no longer an issue (in its current state) due to thick layers of duff and vegetation covering the entire road surface, this road segment contains a number of small stream crossings and lacks road surface drainage structures along its length.

Specific features noted at the time of the inspection include a poorly drained road segment on Blue Slide Road leading to DRC #1, which contained rills caused by concentrated road surface runoff and spring flow (Photo 1). In addition, more rills caused by poor road surface drainage and spring flow were observed on the driveway leading to the domicile in the western portion of the property.

Photos: Photo 1, MP#1, Photo 2, MP#2

Corrective or remedial actions needed: Refer to the ECP in Appendix I for treatment details addressing road drainage treatments on the Ranch Access Road, as well as the

Blue Slide Creek Tie Road between the intersection of Ettersburg Road and the intersection of the old abandoned section of the Ranch Access Road.

In general, install permanent road drainage structures which shape the road surface (such as rolling dips, ditch relief drains/culverts, etc.), on the immediate approaches to stream crossings to hydrologically disconnect road segments from surface waters. Install drainage structures elsewhere, as needed, to disperse road surface runoff to minimize road surface erosion. See Appendix G for typical drawings of proper rolling dip design and installation. Install drainage structures and shaping, including berm removal, elsewhere, as needed, to disperse surface runoff to minimize road or graded pad surface erosion. If certain roads are only used seasonally, install frequent (every 75-100 feet, or less) waterbars prior to October 15th every year and maintain waterbars as necessary to ensure proper winter drainage and to minimize erosion at their outlets.

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

Meets condition? No
Observations: See Standard Condition 4.1a observations/comments, above.
Photos: None
Corrective or remedial actions needed: See 4.1a, above.

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

Meets condition? Yes
Observations/Comments: PWA did not observe drainage directed to unstable slopes or earthen fills.
Photos: None
Corrective or remedial actions needed: None

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

Meets condition? No
Observations/Comments: See 4.1.a.
Photos: None
Corrective or remedial actions needed: See 4.1.a, above.

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

Meets condition? Yes
Observations/Comments: Though there was evidence of past erosion, at the time of the inspection, the features appeared to be stable and not active.

Photos: None
Corrective or remedial actions needed. None

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

Meets condition? Yes
Observations/Comments: No stockpiled construction materials were observed onsite.
Photos: None
Corrective or remedial actions needed: None

4.2 Standard Condition #2. Stream Crossing Maintenance

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

Meets condition? No
Observations/Comments: PWA identified eight (8) stream crossings (SC) on the Project Site. Three of these (SC #4 – SC #6) are located on the maintained segment of the driveway or Ranch Access Road and contain old and undersized culverts. The other five stream crossings (SC #1, SC #1.1, SC #1.2, SC #2, and SC #3) are stream crossings on the old abandoned (legacy) segment of the Ranch Access Road and are in various stages of washing out. With the exception of SC #1 and SC #3, all of the stream crossings on the abandoned road segment lack any formal drainage structure and are various stages of washing out. Domestic debris was placed in SC #3 by the previous landowner in an attempt to armor the gully below the road.
Photos: Photos 3-18; MP #3-10
Corrective or remedial actions needed: All eight of the identified stream crossings require culvert replacements to ensure culverts can pass 100-year storm flows. Table 4.2 lists the drainage area and recommended culvert sizes for the crossings using a headwall to culvert diameter ratio of 0.67. Refer to the ECP in Appendix I for treatment details addressing road drainage treatments on the Ranch Access Road.

Table 4.2. Culvert Sizing (Mean annual rainfall = 94 in)

Stream crossing	Existing culvert diameter (in)	Watershed area (acres)	Proposed treatment	Proposed culvert diameter (in)	Proposed culvert length (ft)
SC #1	12"	1.7	Upgrade	24	60
SC #1.1	Unculverted fill	2	Upgrade	24	40
SC #1.2	Unculverted fill	2	Upgrade	24	60
SC #2	Unculverted fill	1	Upgrade	24	50
SC #3	Unculverted fill	1.5	Upgrade	24	50
SC #4	12"	1	Upgrade	24	60
SC #5	12"	1.7	Upgrade	24	40
SC #6	18"	1.2	Upgrade	30	60

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

Meets condition? No
Observations/Comments: See 4.2.a, above
Photos: None
Corrective or remedial actions needed: See 4.2.a, above

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

Meets condition? Yes
Observations/Comments: There are no fish-bearing streams on the Project Site. Most of the culverted crossings have "shotgun" outlets that discharge flow from high in the air relative to the natural stream grade, causing erosion of the road fill. Stream crossings on the legacy forest road are unculverted fills that show evidence of gully erosion and partial failure.
Photos: Photos 3, 8, and 17
Corrective or remedial actions needed: Upgraded stream crossings at SC#3, SC#2, SC#1.2, and SC#1 will be designed to accommodate aquatic organism passage. See also 4.2.a, above.

d) *Stream crossings shall be maintained so as to prevent or minimize erosion from exposed surfaces adjacent to, and in the channel and on the banks.*

Meets condition? No
Observations/Comments: SC#1 appears to have fresh erosion around its outlet. Most of the stream crossings on the abandoned "legacy" road are in various stages of washing out, though the rate of erosion is relatively low.
Photos: Photo 17
Corrective or remedial actions needed: See 4.2.a, above

e) *Culverts shall align with the stream grade and natural stream channel at the inlet and outlet where feasible.*

Meets condition? No
Observations/Comments: The outlets of all culverted stream crossings are located high in the fill.
Photos: None
Corrective or remedial actions needed: When upgrading culverts, ensure that they are installed in line and at grade with the natural stream channel, and at the base of the road fill.

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

Meets condition? No

Meets condition? No
Observations/Comments: There are diversion potentials at most of the maintained stream crossings (SC#4 – SC#6). Note that stream crossings on the legacy road do not have diversion potentials (due to washout gullies) but some of these may require critical dips upon re-construction of the crossings.
Photos: None
Corrective or remedial actions needed: When upgrading drainage structures, ensure that the road is dipped through the crossings in a way that prevents diversion in the event that the culvert fails or plugs. Also see 4.3.a, above.

Standard Condition #2. - General comments and recommendations:
In general, install culverts in line and at grade with the natural stream channel and, where necessary, install critical dips or reconstruct the stream crossings such that they prevent the diversion of streamflow out of the natural stream drainage. Implement appropriate BMPs to all disturbed areas (such as recontouring slopes, seeding with grass, mulching with straw and re-planting with native riparian species, etc.) to minimize surface erosion and sediment transport, and to mitigate any other potential impacts to water quality

Provide notices and obtain all necessary permits prior to commencing work in any watercourse or for any stream crossing upgrades. Required Permits/Agreements may include, and may not be limited to: CDFW LSAA 1602, SWRCB 401 Certification, and ACOE 404 Permit. An after-the-fact notification may be needed for recent upgrading work performed without a valid LSAA Agreement from CDFW.

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

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

Meets condition? No
Observations/Comments: All the cultivation areas appear to have adequate buffers. Cultivation Area (CA) #1 is located on a ridge and is approximately 150 feet from a Class III stream. CA #2 is approximately 150 feet from a small Class II stream. CA #3 is over 200 ft. from the nearest stream. There is a 2,500 gallon nutrient watering tank located behind the drying/processing shed located next to CA #2 that appears to be within 100 ft. of the Class II stream located downslope.
Photos: Photo 19, MP #11
Corrective or remedial actions needed: Move the 2,500 gallon "tea" tank at least 100 ft. away from the adjacent watercourse. Seed with grass, mulch with straw and plant riparian species (e.g., willow) on the disturbed area associated with the tank location upon re-location.

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

Meets condition? Yes

Observations/Comments: With the exception of the mixing tank (see 4.3a, above) buffer areas are at natural slopes with native vegetation.
Photos: None
Corrective or remedial actions needed: None

c) *Buffers shall be of sufficient width to filter wastes from runoff discharging from production lands and associated facilities to all wetlands, streams, drainage ditches, or other conveyances.*
Meets condition? Yes
Observations/Comments: With the exception of the mixing tank (see 4.3a, above) existing buffers are generally well-vegetated and undisturbed.
Photos: None
Corrective or remedial actions needed: None

d) *Riparian and wetland areas shall be protected in a manner that maintains their essential functions, including temperature and microclimate control, filtration of sediment and other pollutants, nutrient cycling, woody debris recruitment, groundwater recharge, streambank stabilization, and flood peak attenuation and flood water storage.*
Meets condition? Yes
Observations/Comments: There is no intent from the operator to disturb, modify or develop the existing riparian buffers.
Photos: None
Corrective or remedial actions needed: None

4.4 Standard Condition #4. Spoils Management

a) *Spoils shall not be stored or placed in or where they can enter any surface water.*
Meets condition? Yes
Observations/Comments: No spoils were observed onsite.
Photos: None
Corrective or remedial actions needed: None

b) *Spoils shall be adequately contained or stabilized to prevent sediment delivery to surface waters.*
Meets condition? Yes
Observations/Comments: No spoils were observed onsite.
Photos: None
Corrective or remedial actions needed: None

c) *Spoils generated through development or maintenance of roads, driveways, earthen fill pads, or other cleared or filled areas shall not be sidecast in any location where they can enter or be transported to surface waters.*
Meets condition? Yes
Observations/Comments: No spoils were observed onsite.
Photos: None

Corrective or remedial actions needed: None

Standard Condition #4 - General comments and recommendations: If spoils are stored onsite at a later time, they should be in a stable location where there is no threat of delivery to surface waters.

4.5 Standard Condition #5. Water Storage and Use

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

Meets condition? Unknown

Observations/Comments: According to estimates provided by the landowner, the total annual water use on the project site is approximately 147,500 gallons, including both domestic and irrigation use, and water is sourced from a spring, which according to the landowner, contains pre-1914 water rights. In addition, there is another developed spring at the head of SC#1. At the time of the inspection, water storage facilities included two separate tank fields and a couple of nutrient mixing tanks, for a total of approximately six five-thousand gallons (65,000 gallons total). Note that there is one other tank field near POD#2 that contains four 5,000 gallon tanks. These tanks belong to the neighboring land partner and are not included in the storage totals for the Project Site. Based on similar operations and the combined cultivation area totaling approximately 7,840 ft^2, there will be insufficient water storage for the landowner to forbear (not divert surface waters) during the dry season from May 15 through October 31 each year. Additional water storage (between 15,000 (our estimate) and 83,000 gallons (landowner data)) will likely need to be added.

Corrective or remedial actions needed: Under the Order, you are required to measure, document and report the water you divert, store and use throughout the year. PWA has created a simple log sheet to help you monitor this water data for your Project Site (Appendix D). This water data will help you refine the water budget and water storage requirements, and is required to be reported annually to the NCRWQCB no later than March 31st for the preceding calendar year, and similarly to the State Water Resources Control Board, Division of Water Rights, by June 30th.

A Water Monitoring Plan will need to be developed and implemented to document the exact timing and volume of your water diversion, storage and use throughout the year (see general comments below). This will allow you to develop and refine your preliminary water budget so you can verify the required volume of water storage you will need to forbear (not divert surface flows) during the low flow period from April 1st through October 31 each year.

To increase storage and meet your forbearance requirements, you should add rainwater-fed water storage, including an off-stream, rainwater-fed pond (as tentatively proposed on the Site Map) and/or additional rigid rainwater catchment tanks.

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

Meets condition? Unknown

Observations/Comments: The plants are grown in greenhouses in smart pots and appear to be irrigated utilizing hand watering. The lack of control associated with general hand watering does not meet current standards and can result in excessive infiltration and leaching of nutrients to groundwater.

Photos: Photo 20, MP #12

Corrective or remedial actions needed: Begin implementing water conservation measures including: 1) timed or volume limited drip irrigation; 2) controlled hand watering; 3) irrigation scheduling (early morning or late evening watering) to minimize evaporation; and 4) top mulching to reduce evaporation. Amend the soil with moisture-holding additives, and top mulch the soil surface. In addition, evaluate and employ: 1) planting in-ground and not in above-ground pots or bags in all cultivation areas; 2) the use of cover crops during rotations and winter, to protect and increase soil fertility; and 3) capturing and storing rainwater instead of using surface water diversions. Begin quantifying water use, testing drip rates, and using timed and/or volume limited drip emitters. PWA further recommends increasing rainwater harvesting activities and adding rainwater-fed storage facilities, such as one or more off-stream, rainwater-fed ponds or additional water tanks, sufficient to meet dry season irrigation needs. Other water conservation measures should continue to be investigated and employed in order to most effectively maximize water use efficiency (see 4.5a, above).

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

Meets condition? Yes (partial)

Observations/Comments: At the time of our site inspection, there was 65,000 gallons of water storage capacity on the Project Site. Additional water storage will likely be needed to fulfill the water demand from cannabis irrigation and to not divert surface water during the forbearance period from April 1st through October 31 each year.

Photos: None

Corrective or remedial actions needed: You will need to add water storage, preferably including an off-stream pond and/or additional rigid rainwater-fed catchment tanks. See Standard Condition 4.5a, Corrective actions, above.

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

Meets condition? Unknown

Observations/Comments: According to the landowner, water is applied sparingly, as needed, using drip irrigation and hand watering.

Photos: None

Corrective or remedial actions needed: To verify compliance and further refine water use efficiency, start measuring and recording your average water usage on a per plant basis, based on type and size of plant pot, full term versus short season (light deprivation) plant, and type of irrigation. Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and

overwatering and excess infiltration is avoided. This will allow you to refine the Water Budget for your operation and verify agronomic rates of watering.

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

Meets condition? Unknown

Observations/Comments: The primary surface water diverted on the Project Site is sourced from a spring with a reportedly pre-1914 water right (Figure 2, POD#1) and thus would appear to satisfy this condition. [***NOTE***: There is another point of diversion associated with a spring at DRC#7 (POD#2) that at the time of the inspection, appeared to serve the land partner's domicile on the eastern side of the property and was not used on this Project Site.

Photos: None

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

Domestic water rights: If you plan to continue flow diversions for your domestic water needs, you will need to file, obtain, and maintain water rights for your parcel. You will need proof of your pre-1914 water right (POD#1), and a copy of that water right document and filing should be kept with this WRPP for possible inspection. It appears as though an Initial Statement of Diversion and Use (ISDU) has been filed for both POD#1 and POD #2. If you plan on storing water from either diversion for more than 30 days and don't have an active water right, file and apply for Small Domestic Use (SDU) water rights with the State Water Resources Control Board (SWRCB):

• Initial Statement of Diversion and Use (ISDU)

http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/docs/intl_stmnt_form.pdf

• Small Domestic Use (SDU) Appropriation Registration

http://www.waterboards.ca.gov/waterrights/publications_forms/forms/docs/sdu_registration.pdf

Note that you must meet SWRCB – Division of Water Rights annual reporting requirements on to maintain your existing water rights.

Agricultural water rights: If you plan to continue flow diversions for your agricultural water needs (cannabis irrigation), you need to provide documentation of your legal water rights and ensure your existing water right provides for irrigation as an allowed type of use. If it does not, you may file a formal amendment to the SWRCB – Division of Water Rights, to provide for this type of use. It appears you may still be required to forebear (cease diversion for cannabis irrigation) during the dry season (April 1 – October 31). If you find you don't have a valid water right for your parcel, the State Water Resources Control Board, Division of Water Rights (SWRCB, DWR) has developed a Small Irrigation Use (SIU) water right registration program for

commercial cannabis cultivation. If it is required, PWA recommends that you apply for this Small Irrigation Use water right for cannabis cultivators:

https://www.waterboards.ca.gov/water_issues/programs/cannabis/cannabis_water_rights.shtml

There is an online application portal for this program located at:

https://public2.waterboards.ca.gov/cgo

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

Fish and Wildlife impacts: It appears a Lake and Streambed Alteration Agreement (LSAA, 1600 permit) has been secured from the California Department of Fish and Wildlife (CDFW) for upgrading six stream crossings on the abandoned Legacy ranch access road. The LSAA will need to be amended to include the surface diversions from the two springs, which would be considered jurisdictional to CDFW.

https://www.wildlife.ca.gov/Conservation/LSA

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

Meets condition? No
Observations/Comments: The 2,500 gallon nutrient tank located behind the drying/processing shed poses a potential threat to the Class II stream located just downslope in case of failure.
Photos: Photo 19, MP #11
Corrective or remedial actions needed: Move the 2,500 gallon nutrient tank located behind the drying/processing shed to a new location at least 100 feet from the Class II watercourse where it cannot deliver to a stream if it were to fail or leak.

Standard Condition #5 - General comments and recommendations: PWA recommends, and state agencies may require, that you install flow meters on your water tanks and/or on your diversion lines, to accurately document your diversion volumes and rates. You will need to document the amount of water you are diverting, storing and using through time. PWA has created a simple log sheet to help you monitor your water usage.

4.6 Standard Condition #6. Irrigation Runoff

a) Implementing water conservation measures, irrigating at agronomic rates, applying fertilizers at agronomic rates and applying chemicals according to the label specifications, and maintaining stable soil and growth media should serve to minimize the amount of runoff and the concentration of chemicals in that water. In the event that irrigation runoff occurs, measures shall be in place to treat/control/contain the runoff to minimize the

pollutant loads in the discharge. Irrigation runoff shall be managed so that any entrained constituents, such as fertilizers, fine sediment and suspended organic particles, and other oxygen consuming materials are not discharged to nearby watercourses. Management practices include, but are not limited to, modifications to irrigation systems that reuse tailwater by constructing off-stream retention basins, and active (pumping) and or passive (gravity) tailwater recapture/redistribution systems. Care shall be taken to ensure that irrigation tailwater is not discharged towards or impounded over unstable features or landslides.

Meets condition? Yes
Observations/Comments: No runoff of irrigation water was observed.
Photos: None
Corrective or remedial actions needed: None

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

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

4.7 Standard Condition #7. Fertilizers and Soil Amendments

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

Meets condition? Yes
Observations/Comments: Fertilizers and nutrients are stored in a stable enclosed location. There was a group of smart pots near the house containing spent soil and stored outside and without cover. Due to the distance to the nearest stream (over 250 ft.) and topography, was unlikely that leeched nutrients would reach the stream network.
Photos: Photo 21
Corrective or remedial actions needed: When not being used on the planting beds or in greenhouses, all bulk or bagged fertilizers, soil amendments, potting soils and compost shall continue to be stored within a water tight building or covered area not exposed to the elements or, if stored outdoors, off the ground, fully tarped in a stable location with no chance of nutrient leaching or delivery to surface waters.

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

Meets condition? Unknown
Observations/Comments: Based on verbal communication with the cultivator, the recommended application rates are being followed.
Photos: None
Corrective or remedial actions needed: To verify compliance with this condition, you are required by the Order to keep detailed records of the type, timing and volume of any fertilizers and/or other soil amendments you use in your operations. They can be recorded on log sheets such as those provided in Appendix E. Observe and monitor soil moisture so that watering, fertilizer, and chemical applications are made only when necessary, and overwatering and excess infiltration is avoided.

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

Meets condition? Yes
Observations/Comments: Cultivation areas appear to be well-maintained and do not appear to pose a threat to water quality. The greenhouse pad at CA#1 has emergent seepage during winter that may help leech nutrients away from the site but because it is over 150 ft. from the nearest stream and drains in the opposite direction over low gradient topography, does not appear to pose a significant risk to surface water quality.
Photos: 21
Corrective or remedial actions needed: To prevent nutrient leaching, either: 1) plant dense cover crops in spent pots, holes and beds to enrich soil and lock up nutrients; 2) fully tarp any piles of exposed soils and growing mediums during the winter season; and/or 3) move spent soils and amendments inside or under a roof to temporarily store them during the wet season (November 1 – May 15). If dense cover crops cannot be kept alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients.

Cut a ditch on the inside edge of the greenhouse pad at CA#1 to try to cut off and divert as much hillslope runoff and seepage away before it can pass into the greenhouse.

To confirm compliance with this Standard Condition, provide winter time (wet season) photos of the cultivation areas showing treatments and include them with the WRPP, Appendix B (Monitoring and Reporting).

Standard Condition #7 - General comments and recommendations: Fertilizers, soil amendments, and hazardous chemicals should not be stored with petroleum products as they are considered incompatible materials and could potentially react (see *General comments and recommendations* in 4.9 for more information).

4.8 Standard Condition #8. Pesticides/Herbicides

a) *At the present time, there are no pesticides or herbicides registered specifically for use directly on cannabis and the use of pesticides on cannabis plants has not been reviewed for safety, human health effects, or environmental impacts. Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use to include use on cannabis or exempt from registration*

requirements as a minimum risk pesticide under FIFRA section 25(b) and California Code of Regulations, title 3, section 6147. For the purpose of compliance with conditions of this Order, any uses of pesticide products shall be consistent with product labelling and any products on the site shall be placed, used, and stored in a manner that ensures that they will not enter or be released into surface or ground waters.

Meets condition? Unknown

Observations/Comments: No pesticides or herbicides were observed during the site inspection. According to the cultivator, pesticides and herbicides are not used.

Photos: None

Corrective or remedial actions needed: In order for the Site to be compliant with this condition the use of chemical pesticides and herbicides shall be consistent with product labeling. Under the Order, and to confirm compliance with this Standard Condition, you are required to keep records (logs) of the type, timing and volume of any pesticides and herbicides used in your operations. This can be done using a simple log form, such as the one included in Appendix F.

Standard Condition #8 - General comments and recommendations: When present, these chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters. Pesticides and herbicides should not be stored with petroleum products as they are considered incompatible materials and could potentially react (see *General comments* in 4.9, below, for more information).

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

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

4.9 Standard Condition #9. Petroleum Products and other Chemicals

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

Meets condition? No

Observations/Comments: Observations/Comments: During PWA's site inspection there was one small gas can stored outside and a gas pump (serving the 2,500 gal. nutrient tank) behind the processing/drying shed that was uncovered and being stored improperly. Each of these items were resting on bare ground without any secondary containment, cover, or visible spill kit.

Photos: Photos 23, MP #13, Photo 24, MP #11

Corrective or remedial actions needed: All small fuel cans, generators, gasoline powered garden equipment, and any other items containing petroleum products must

be stored under cover, off the ground and in a secondary containment basin (tote, tub, impermeable basin/floor etc.) capable of containing 150% of the largest tank or 10% of the aggregate, whichever is larger. These storage facilities need to be located outside riparian areas and on stable ground.

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

Meets condition? No
Observations/Comments: See 4.9a, above.
Photos: Photos 23 - 24
Corrective or remedial actions needed: See 4.9a, above.

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

Meets condition? N/A
Observations/Comments: No diked areas are located on the Project Site.
Photos: None
Corrective or remedial actions needed: None

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

Meets condition? No
Observations/Comments: No spill prevention cleanup kit was observed on the site.
Photos: None
Corrective or remedial actions needed: Obtain one or more spill prevention cleanup kits and keep readily available to clean up small spills. Spill kits should be located where fuel is stored and where refueling occurs.

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

Meets condition? N/A
Observations/Comments: No underground tanks are located on the Project Site.
Photos: None
Corrective or remedial actions needed: None

Standard Condition #9 - General comments and recommendations: Note that the State of California requires an owner or operator of a facility to complete and submit a Hazardous Material Business Plan (HMBP) if the facility handles a hazardous material or mixture containing a hazardous material that has a quantity at any one time during the reporting year equal to or greater than: 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for compressed gas (propane) used for the cultivation operations. If at any time during the year your operations exceed any one of these quantities, you need to prepare and file a Hazardous Material Business Plan (HMBP) for your operation. Information regarding HMBPs can be found at:

http://www.caloes.ca.gov/FireRescueSite/Documents/HMBP%20FAQ%20-%20Feb2014.pdf

Additionally, while it is not explicitly stated in the Order, please note that the Humboldt County Division of Environmental Health (HCDEH) also requires that anyone that has over 55 gallons or more of any petroleum liquid at any time of the year, including fuels and waste oil, develop a HMBP. See: https://humboldtgov.org/700/Business-Plan.

Finally, the Order requires that the Discharger implement spill prevention, control, and countermeasures and have appropriate cleanup materials available onsite. Refer to Petroleum Storage Spill Prevention, Control and Countermeasures (SPCC) Plan CA-EPA fact sheet: https://www.epa.gov/sites/production/files/documents/spccbluebroch.pdf

Proper storage of hazardous materials (e.g., flammable liquids or gasses, many agricultural chemicals, oxidizers, acids, caustic substances) is essential for maintaining safe operations and for protection of the environment. Commercial operations that store hazardous materials are required to prepare a hazardous materials business plan (HMBP) and maintain Material Safety Data Sheets (MSDS) for each hazardous chemical that they store or use. County health agencies may require HMBPs to be submitted for their review. The HMBP information must be communicated to employees annually and be kept in a location that is readily accessible by employees. MSDSs explain how to medically treat a person that has been exposed to a hazardous substance and how to safely cleanup a spill.

Finally, the Order requires that a Petroleum Storage Spill Prevention, Control and Countermeasures (SPCC) Plan be developed for the site (see the CA-EPA fact sheet: http://www.rivcoeh.org/Portals/0/documents/guidance/hazmat/FactSheetSPCC.pdf).

Hazardous liquids and chemical storage - Generally, incompatible hazardous materials must be stored in separate locations, with distinct secondary containment vessels for each type of material. Secondary containment is required for hazardous liquids and must be sized to contain a spill volume equivalent to the largest hazardous material container or 10% of the total volume, whichever is greater. Flammable and combustible hazardous materials must be separated from oxidizers by a distance of no less than 20 feet. The following guidelines should be followed when handling and storing hazardous materials.

Always label containers with the substance inside for both hazardous and non-hazardous materials. For flammable hazardous materials, make certain that an appropriate fire extinguisher is available nearby the storage area. Dry powder fire extinguishers are the most versatile. Water filled fire extinguishers should not be used on certain types of hazardous material fires (e.g. water-reactive metals, strong acids, petroleum).

- Acids (e.g., hydrochloric acid, pool cleaner, citric acid) must be segregated from:
  - ✓ Reactive metals such as sodium, potassium, magnesium, etc.
  - ✓ Flammable and combustible materials.
  - ✓ Chemicals which could generate toxic or flammable fumes when mixed.
  - ✓ Bases.

- Bases (e.g., Portland cement, lime, lye, or drain cleaner) must be segregated from:
  - ✓ Acids, metals, organic peroxides and flammable liquids, and other easily ignitable materials.
  - ✓ Solvents
  - ✓ Oxidizing acids and oxidizers.

- Oxidizers (e.g., ammonium nitrate, ammonium phosphate, oxygen gas cylinders) must be segregated from:
  - ✓ Combustible and flammable liquids and gasses (e.g. petroleum, acetylene cylinders, solvents) with at least 20 feet of separation.
  - ✓ Reducing agents such as zinc, alkali metals, and formic acid.

- Flammable materials (e.g., gasoline, fuses, gunpowder, acetylene cylinders) must be segregated from:
  - ✓ Oxidizers, caustic materials, acids, and bases.

It is good housekeeping practice to store compatible hazardous materials exclusively away from agricultural chemicals. Although uncommon, even some organic agricultural amendments may be reactive, caustic, ignitable, or corrosive. Segregation of hazardous materials from non-hazardous materials eliminates the potential for cross-contamination of agricultural amendments and exposure of workers to hazardous fumes or residues.

4.10 Standard Condition #10. Cultivation-Related Wastes

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

Meets condition? Unknown

Observations/Comments: There was a large number of old cannabis plant stalks disposed of on the stream bank just downslope of the processing/drying shed. The Project Site also contained many above-ground, uncovered planting pots containing spent soil in the cultivation areas. In addition, see Comments from Section 4.7a, above.

Photos: Photos 21, 25 -26 (MP #14)

Corrective or remedial actions needed: Tarp or otherwise cover spent plant stalks, root balls, soil piles and other cultivation waste during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the groundwater. Remove spent stalks from the side of the creek (MP#14) down below the drying/processing shed. Also see *General comments and recommendations,* below.

To prevent nutrient runoff and leaching in cultivation areas, either: 1) fully tarp exposed soils and growing mediums in beds, pots and piles; 2) move spent soils and amendments inside or undercover to temporarily store them during the wet season (November 1st – May 15th), or 3) plant dense cover crops in spent pots, holes and beds to enrich soil and lock up nutrients. If a dense cover crop cannot be maintained due to cold weather or snow,

then the soil materials must be removed or completely tarped and fully protected from the weather.

To confirm compliance with this Standard Condition, provide winter time (wet season) photos of the cultivation areas showing treatments to planting beds and spent soils in pots, bags and piles, as well as cultivation waste, and include them with the WRPP, Appendix B (Monitoring and Reporting).

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

4.11 Standard Condition #11. Refuse and Human Waste

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

Meets condition? No

Observations/Comments: There is one outhouse, reportedly with a composting toilet, serving the primary residence on the property. It could be assumed that there may be a similar system in use for the eastern domicile on the property, though this area was not inspected as part of this report.

Photos: Photo 27, MP #15

Corrective or remedial actions needed: Unless they are approved in writing by the County, you should decommission all outhouses and unpermitted pit or vault toilets on the Project Site. Decommission them by first having the pits pumped (if feasible), then filling the pits with clean soil, and removing the above ground structures so they cannot be used. Only if the HCDEH provides written approval (attach that written approval to this WRPP), may you continue to use your existing, unpermitted systems until the new system(s) are designed, permitted and constructed.

All OWTSs on the Project Site must be permitted by the Humboldt County Division of Environmental Health. Proof of permitting is required and copies of the permit(s) should be kept with the WRPP for possible inspection. If the current system is found to meet county requirements, a retroactive permit might be obtained through the Humboldt County Division of Environmental Health. However, if the systems do not meet county requirements, one or more new systems will need to be sited, designed, installed and permitted.

If new On-Site Wastewater Treatment Systems are needed on the Project Site, PWA recommends you work with a professional to start the permit process to site, design and install one or more permitted septic systems. Bring in one or more portable toilets that are regularly serviced for use by your residents, workers, non-residents and visitors to the Project Site until an appropriately sized OWTS can be designed, permitted and installed. Maintain servicing records for these portable toilets for possible inspection.

Wastewater from kitchen sinks and dishwashers is not considered graywater and must be disposed of through a permitted OWTS. Until one is installed, contact County Health Services for guidance on proper disposal of kitchen waste water.

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

Meets condition? No
Observations/Comments: PWA observed old tires, auto parts, and an old appliance (refuse) placed in the stream channel at SC#3. This appeared to be an attempt to armor the washout gully associated with the unculverted, non-functional stream crossing.
Photos: Photo 28, MP #6
Corrective or remedial actions needed: Collect all garbage and refuse not already stored properly in cans or the box and store in a location and manner that prevents any contact with surface or groundwater. Remove the debris from SC#3 and ensure that all refuse and garbage is periodically hauled offsite to be disposed of at an appropriate waste disposal facility. Additionally, it is important to utilize storage facilities which prevent animals from accessing or disturbing garbage or refuse.

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

Meets condition? No
Observations/Comments: According to the landowner, refuse is hauled off-site on a regular basis to an authorized waste disposal facility. During the site inspection, the only evidence of not being in compliance with this condition were the tires and car parts already discussed in 4.11b above.
Photos: Photo 28
Corrective or remedial actions needed: See 4.11b above.

4.12 Standard Condition #12. Remediation/Cleanup/Restoration

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

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

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

Meets condition? Yes
Observations/Comments: No major site remediation or clean-up work that otherwise threatened water quality was identified at the Project Site.
Photos: None
Corrective or remedial actions needed: None

Standard Condition #12 - General comments and recommendations: No major site remediation or clean-up work that otherwise threatened water quality was identified at the Project Site. All corrective and remedial actions needed to satisfy the other 11 Standard Conditions have been outlined above.

5.0 PRIORITIZED CORRECTIVE ACTIONS AND SCHEDULE TO REACH FULL COMPLIANCE

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

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Map Point and Photo #	Date Completed
4.1 – Site Maintenance, Erosion Control and Drainage Features	1a, b, d, e	Moderate	Oct. 31, 2021	- Refer to and follow the ECP in Appendix I for details addressing road drainage treatments on the Ranch Access Road, as well as Blue Slide Creek Tie Road between the intersection of Ettersburg Road and the intersection of the old abandoned section of the Ranch Access Road (see Figure 2). - In general, install permanent road drainage structures which shape the road surface (such as rolling dips, ditch relief drains/culverts, etc.) on the immediate approaches to stream crossings. - Install drainage structures and shaping, including berm removal, elsewhere, as needed, to disperse surface runoff.	MP #1-#2 Photo 1-2	
4.2 – Stream Crossing Maintenance	2a, b, d, e, f	High	Oct. 31, 2021	- All eight of the identified stream crossings require culvert upgrades to ensure culverts can pass 100-year storm flows and debris. Table 4.2 lists the recommended culvert sizes and lengths to be installed according to specifications in the Order. - Upgraded stream crossings at SC#3, SC#2, SC#1.2, and SC#1 will be designed to accommodate aquatic organism passage by placing the new culvert at the base of the fill and in line with the natural channel. - Refer to the ECP in Appendix I for treatment details addressing road drainage treatments on the Ranch Access Road. - Utilize BMP's such as applying straw mulch and seeding all bare soil areas to minimize erosion and incidental sediment delivery. - Provide notices and obtain all necessary permits prior to commencing work in any watercourse, including your water diversion and your stream crossing upgrades or decommissions. Permits may include, and may not be limited to: CDFW LSAA 1602, SWRCB 401 Certification, and ACOE 404 Permit.	MP #3-#10, Photos 3-18;	
4.3 Riparian and Wetland Protection and Management	3a,	Moderate	Move facilities by Nov. 15, 2019	- Move the 2,500 gallon "tea" tank next to the drying/processing shed at least 100 ft. away from the adjacent Class II watercourse. - Seed the disturbed area with grass, mulch with straw and re-plant riparian species in the disturbed area associated with the former tank location.	MP #11, Photo 19	
4.5 – Water Storage and Use	5a, c	High-Moderate	On or before June 15, 2019 and then continuing	- Develop and refine a Water Budget to determine the required volume of water storage you will need to forbear (not divert surface flows) from April 1st through October 31st each year. - Develop and implement a Water Monitoring Plan. Under the Order you are required to measure, document and report the water you divert, store and use		

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Map Point and Photo #	Date Completed
			Flow meters by July 15, 2019	throughout the year. PWA has created a simple log sheet to help you monitor this water data for your Project Site (Appendix D). - PWA recommends, and state agencies may require, that you install flow meters on your water tanks and/or on your diversion lines to document your diversion volumes and rates.		
	5b	Moderate-High	June 15, 2019 and then continuing	- Begin quantifying use, testing drip rates, using timed and/or volume limited drip emitters, and incorporating water holding amendments and native soil during the initial soil preparation at the start of the season, irrigation scheduling (watering in the early morning or late evening) to minimize evaporation; and top mulching cultivation areas to reduce evaporation.. - Evaluate and employ, as feasible 1) planting in-ground and not in above-ground pots in all cultivation areas; 2) the use of cover crops during rotations and winter, to protect and increase soil fertility; and 3) capturing and storing rainwater instead of using surface water diversions. - Other water conservation measures should continue to be investigated and employed in order to most effectively maximize water use efficiency and minimize or eliminate summer diversions.		
	5c	High	By or before Oct. 15, 2020	To increase storage and meet your forbearance requirements, you should add rainwater-fed water storage, including an off-stream, rainwater-fed pond (as tentatively shown on the Site Map) and/or additional rigid rainwater-fed catchment tanks. The preliminary water budget suggests between approximately 13,500 gallons and 85,000 gallons of additional water storage may be needed for you to forbear during the summer dry season.		
	5d	Moderate-High	June 15, 2019 (or prior to irrigation activities) and then continuing	- To verify compliance with the Order, start measuring and recording your average water usage on a per plant basis, based on type and size of plant pot, full term versus short season (light deprivation) plant, and type of irrigation, in order to develop and refine a Water Budget for your operation. - Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration is avoided. This will allow you to refine the Water Budget for your operation and verify agronomic rates of watering.		

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Map Point and Photo #	Date Completed
	5e	Moderate	Obtain copy of pre-1914 water right and File for SIUR water right, by July 1, 2019 File for LSAA by or before Aug. 15, 2019 Submit annual water data as required.	- Water diversion and water storage requires valid water rights documentation. As opposed to employing one or more surface water diversions and securing various water rights, consider obtaining irrigation water for your agricultural needs by developing rainwater capture systems to fill rigid water tanks and/or one or more off-stream, rainwater-fed ponds, or drilling a well. - Verify your pre-1914 water rights and keep a copy of that water right with this WRPP for possible inspection. - If you find you do not have a current water right for POD#1, apply for a Small Domestic Use (SDU) and Small Irrigation Use (SIUR) water right for cannabis irrigation uses. See Section 4.5e, above, for additional information. - Submit annual water diversion and use volumes to the NCRWQCB by each March 31, and to the State Water Resources Control Board, Division of Water Rights (SWRCB, DWR) for supplemental reporting required for the Annual Statement of Diversion and Use (ISDU) by June 30 of each year for the previous calendar year.		
	5f	Moderate	On or before Dec. 1, 2019	- Move the 2,500 gallon nutrient tank located behind the drying/processing shed to a new location where it cannot deliver to a stream in case of failure. See Section 4.3a, above for details.	MP #11 Photo 19	
4.7 - Fertilizer and Amendment Use	7a, b	High-Moderate	On or before June 15, 2019 and continuing	- When not being used on the planting beds or in greenhouses, all bulk or bagged fertilizers, soil amendments, potting soils and compost shall be stored within a water tight building or covered area not exposed to the elements or, if stored outdoors, fully tarped in a stable location with no chance of nutrient leaching or delivery to surface waters. - To verify compliance with this Standard Condition, you are required by the Order to keep detailed records of the type, timing and volume of any fertilizers and/or other soil amendments you use in your operations. They can be recorded on log sheets such as those provided in Appendix E. - Observe and monitor soil moisture so that watering, fertilizer, and chemical applications are made only when necessary, and overwatering and excess infiltration is avoided. - Fertilizers, soil amendments, and hazardous chemicals should not be stored with petroleum products as they are considered incompatible materials and could potentially react.		
	7c	Moderate	Oct. 31, 2019 and annually thereafter for the winter period wet season	- To prevent nutrient leaching, either: 1) plant dense cover crops in spent pots, holes and beds to enrich soil and lock up nutrients; 2) fully tarp any piles of exposed soils and growing mediums during the winter season; and/or 3) move spent soils and amendments inside or under a roof to temporarily store them during the wet season (November 1 – May 15). - If dense cover crops cannot be kept alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients.		

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Map Point and Photo #	Date Completed
				- Cut a ditch on the inside edge of the greenhouse pad at CA#1 to try to cut off and divert as much hillslope runoff and seepage away before it can pass into the greenhouse. - To confirm compliance with this Standard Condition, provide winter time (wet season) photos of the cultivation areas showing treatments and include them with the WRPP, Appendix B (Monitoring and Reporting).		
4.8 – Pesticides and Herbicides	8a	High	On or before June 15, 2019 and continuing	- All pesticides, herbicides and related materials (e.g., fungicides) must be used and applied consistent with product labeling. - When present, these chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters. - To confirm compliance with the Order, you are required to keep records (logs) of the type, timing and volume of pesticides, herbicides or other chemicals (e.g., fungicides) used in your operations. This can be done using a simple log form, such as the one included in Appendix F1. - For any pesticide use you must comply with any Pesticide Registration Requirements. For more information see Appendix F2 in this report or Appendix E2 included in the NCRWQCB Order, or on their web site.		
4.9 – Petroleum Products and Other Chemicals	9a, b, d	High	Oct. 31, 2019 and annually thereafter for the winter period wet season	- Place all small fuel cans, generators, diesel tanks, gasoline powered garden equipment and any other items containing petroleum products under cover, off the ground, and in a secondary containment basin (tote, tub, impermeable basin/floor, etc.) capable of containing 150% of the largest tank or 10% of the aggregate, whichever is larger. - If you are storing more than 55 gallons of petroleum products or other liquid chemicals (including but not limited to diesel, biodiesel, gasoline and oils) you are required to develop and submit a Hazardous Material Business Plan (HMBP). See details in Section 4.9, *General comments and recommendations*, above. - Petroleum products and other liquid chemicals, including but not limited to diesel, biodiesel, gasoline, and oils should not be stored with any nitrogen based fertilizers as they are considered incompatible materials and could potentially react. - Obtain one or more a spill prevention cleanup kits and have them easily assessable at all times to help clean up small spills. Spill kits should be located where fuel is stored and where refueling occurs.).	MP #11, 13; Photos 23-24	
4.10 – Cultivation-Related Wastes	10a	Moderate	Oct. 15, 2019 and thereafter by Oct. 31 annually	- Tarp or otherwise cover spent plant stalks, root balls, soil piles and other cultivation waste during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the groundwater. - Remove spent stalks from the side of the creek at SC #3 (MP#14) near the drying/processing shed. - Organic cultivation-related waste should be covered in the winter and composted and recycled for continued use to the extent possible.		

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Map Point and Photo #	Date Completed
				- To prevent nutrient runoff and leaching in cultivation areas, either: 1) fully tarp exposed soils and growing mediums in beds, pots and piles; 2) move spent soils and amendments inside or undercover to temporarily store them during the wet season (November 1st – May 15th), or 3) plant dense cover crops in spent pots, holes and beds to lock up nutrients. - If a dense cover crop cannot be maintained due to cold weather or snow, then the soil materials must be removed or completely tarped and fully protected from the weather. - To confirm compliance with this Standard Condition, provide winter time (wet season) photos of the cultivation areas showing treatments to planting beds and spent soils in pots, bags and piles, as well as cultivation waste, and include them with the WRPP, Appendix B (Monitoring and Reporting).		
4.11 – Refuse and Human Waste	11a	High	Bring in serviced portable toilets by June15, 2019 and continuing until permitted OWTS is installed Close outhouse by June 15, 2019 and decommission by September 1, 2019 Install one or more permitted OWTS by Dec. 31, 2020	- Decommission all outhouses and unpermitted pit or vault toilets on the Project Site by first having the pits pumped (if feasible), then filling the pits with clean soil, and removing the above ground structures so they cannot be used. Only if the HCDEH provides written approval (attach that written approval to this WRPP), may you continue to use your existing, unpermitted systems until the new system(s) are designed, permitted and constructed. - All Onsite Wastewater Treatment Systems (OWTS) (septic system(s)) on the Project Site must be permitted by the Humboldt County Division of Environmental Health. Proof of permitting is required and copies of the permit(s) should be kept with the WRPP for possible inspection. - If the current system is found to meet county requirements, a retroactive permit might be obtained through the Humboldt County Division of Environmental Health. However, if the systems do not meet county requirements, one or more new systems will need to be sited, designed, installed and permitted. - If new septic systems are needed on the Project Site, PWA recommends you work with a professional to start the permit process to site, design and install one or more permitted septic systems. - Bring in one or more portable toilets that are regularly serviced for use by your residents, workers, non-residents and visitors to the Project Site until an appropriately sized OWTS can be designed, permitted and installed. Maintain servicing records for these portable toilets for possible inspection.	MP #15 Photo 27	
	11b	Moderate	Oct. 31, 2021	- Collect all garbage and refuse not already stored properly in cans or the box and store in a location and manner that prevents any contact with surface or groundwater. Remove the debris from SC#3 and ensure that all refuse and garbage is periodically hauled offsite to be disposed of at an appropriate waste disposal facility. - Additionally, it is important to utilize storage facilities which prevent animals from accessing or disturbing garbage or refuse.	MP #6 Photo 28	

6.0 MONITORING AND INSPECTION PLAN

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

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

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

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

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

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

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

treatments are monitored and evaluated over time.

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

7.0 WATER USE PLAN

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

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

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

- No surface water diversions occur from April 1 to October 31st.
- Water diversions are made pursuant to a local plan that is protective of instream beneficial uses.
- Other options that may affect water quality: (e.g., percent of flow present in stream; minimum allowable riffle depth; streamflow gage at bottom of Class I stream; AB2121 equations; CDFW instream flow recommendations; promulgated flow objective in Basin Plan; etc.).

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

Water Storage and Forbearance - The ultimate goal of the applicant is to accumulate enough water storage capacity to forebear from surface water diversions for the entire period from May 15 to October 31 each year. This will ensure the timing of water use is not impacting water quality objectives and beneficial uses. In total, there was 65,000 gallons of water storage capacity on the

Project Site. Based on similar operations and the combined cultivation area totaling approximately 7,840 ft^2, it appears there is insufficient water storage for the landowner to forbear (not divert surface waters) during the dry season from April 1st through October 31 each year. You should secure additional rainwater-fed storage, including an off-stream pond and/or additional rigid rainwater catchment tanks to meet your forbearance requirements. PWA highly recommends, and state agencies may require, you purchase and install water meters on your diversion lines and on your distribution lines so you can more accurately measure the volume of water you are diverting and using for domestic uses and commercial cannabis cultivation.

Water Conservation - Evaluate and employ: 1) planting in-ground and not in above-ground pots in all cultivation areas; 2) surface mulching to control evaporation, 3) irrigation scheduling to limit evaporation, and 4) capturing and storing rainwater instead of, or in addition to, using surface water diversions. Additional water conservation techniques are listed in Section 4.5b, above. PWA further recommends adding or increasing rainwater harvesting activities and adding rainwater-fed storage facilities, such as one or more off-stream, rainwater-fed ponds or additional water tanks, as needed to meet dry season irrigation needs. Water conservation measures will continue to be investigated and employed in order to most effectively maximize water use efficiency.

Water sources and use - Water for the Project Site is supplied from one spring (POD#1, Figure 2). There is another spring diversion (POD#2 at DRC #7) that serves the leased east side of the property (see Figure 2), which at the time of the inspection was managed independently by a land partner. For the western portion of the property (this WRPP Project Site), the water storage facilities include twelve (12) 5,000-gallon tanks and two 2,500 gallon nutrient tanks for fertilizing the plants. POD#1 (a spring) serves domestic uses as well as cannabis irrigation. According to the Site Map, the 3 cultivation areas (and indoor nursery) total 7,840 ft^2 in area. At 10 gallons/ft^2 of annual water consumption for cannabis cultivation (data from Humboldt County and PWA), the preliminary water budget for the Project Site is approximately 78,400 gallons of needed water storage if the landowner is to forbear (not divert surface waters) during the dry season from April 1 through October 31 each year. At least some additional water storage (~13,500 gallons) is estimated to be needed to meet the annual forbear requirements.

The landowner must understand the requirement to continuously monitor and document water diversion, storage and use and that it is a requirement of the Order to document and report this water data. Water rights registrations (SIUR) must be substantiated or secured from the State Water Resource Control Board (Division of Water Rights). Over the course of this season, water use will be accurately measured and documented using the log forms included in Appendix D. As more accurate data is gathered, refined targets can be made to ensure adequate water storage exists for dry season irrigation so as to protect downstream water quality and beneficial uses during the driest time of the year.

8.0 LIST OF CHEMICALS

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

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

Fertilizers and amendments:
Mocha Bat Guano 4-6-1
Bat Guano 0-7-0
Hydrozyme SM-90: [40.5 gal]
Liquid Fish Emulsion 5-1-1
Botanicare Grow 3-2-4
Botanicare CAL-MAG 2-0-0
Botanicare Bloom 1-4-5
Overdrive 1-5-4

Pesticides, Herbicides, and Fungicides:
None, as per cultivator

Petroleum and Other Chemicals:
Gasoline
Propane
Solar panels
Hydraulic oil

9.0 LANDOWNER/LESSEE CERTIFICATION/SIGNATURES

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

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

Name of Legally Responsible Person (LRP): William F. Rolff

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

Signature: _____ Date: 9-27-19

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

WRPP prepared and finalized on (date): 9-25-19

Signature: _____ Date: 9-27-19

Appendix I

Erosion Control Plan
Ettersburg Ranch Road Upgrade Project Road Logs

(Revised) Road Log of Treatments for the Ettersburg Ranch Road Upgrade Project, Humboldt County.				
Road	**Site #**	**Treatment Type**	**Comments/Treatment**	**Rock Needs**
(1) OSR-D= Outslope road with 4% grade by pulling berm and filling ditch for road decommissioning; (2) *Definitions: (1) **Left and Right-** Left and right are terms used when looking downstream, or down slope. The "left bank", or "left sideslope", is to your left when facing downstream. The "left road" is to your left, when facing the outboard edge of the road. (2) **START and END-** START and END mark the extent of a landslide or bank erosion excavation. START is always located on the left, and END is always located on the right. START and END locations are flagged in the field, along the landslide or stream bank to be excavated. (3) **TOP and BOT**- TOP and BOT mark the extent of a stream crossing excavation. The TOP is the upstream end of the excavation, and will be flagged above the stream channel, in the field. The BOT is the downstream end of the excavation, and will be flagged above the stream channel, in the field.				
Road treatments start at the intersection of the ranch access road and Blue Slide Road				
Ranch access road		*Start Ranch access road upgrade*	*Start upgrade at the intersection of the legacy (abandoned) section of the Ranch Access Road with the Blue Slide Creek Tie Road*	
Ranch access	1	Stream crossing upgrade	Replace the existing culvert with a 24"x60' double walled plastic culvert that will span the road intersection of Blue Slide Creek Tie Road and the abandoned portion of the Ranch Access Road. This crossing upgrade will require reconstruction of the outer portion of the Ranch Access Road. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip on the downhill side to assure diverted water reenters the stream at the site. Site is as much a spring as it is a stream.	
Ranch access		Install Rolling Dip #1	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access	1.1	Stream crossing upgrade	Install a 24"x40' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip on the downhill side to assure diverted water reenters the stream at the site.	
Ranch access		Install Rolling Dip #2	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	

(Revised) Road Log of Treatments for the Ettersburg Ranch Road Upgrade Project, Humboldt County.				
Road	**Site #**	**Treatment Type**	**Comments/Treatment**	**Rock Needs**
Ranch access		Install Rolling Dip #3	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access	1.2	Stream crossing upgrade	Install a 24"x50' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip on the downhill side to assure diverted water reenters the stream at the site.	
Ranch access		Install Rolling Dip #3	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access		Start out-slope road #1	Start outsloping the road at 4% by removing material from the outboard fill face spoiling it on the road at the base of the cut-slope. De-compact road surface and remove all vegetation prior to spoiling on road. See PWA typical drawing 9.	
Ranch access	2	Stream crossing upgrade	Replace the existing culvert with a 24"x50' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip in the axis of the crossing to assure diverted water reenters the stream at the site. Remove garbage from stream channel and haul to landfill.	
Ranch access		Install Rolling Dip #4	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access		Install Rolling Dip #5	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access		Install Rolling Dip #6	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	

(Revised) Road Log of Treatments for the Ettersburg Ranch Road Upgrade Project, Humboldt County.				
Road	**Site #**	**Treatment Type**	**Comments/Treatment**	**Rock Needs**
Ranch access	3	Stream crossing upgrade	Replace the existing culvert with a 24"x50' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip in the axis of the crossing to assure diverted water reenters the stream at the site. Remove garbage from stream channel and haul to landfill. Cut ditch for 40' to the left to catch spring runoff from hillside	
Ranch access		Install Rolling Dip #8	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Ranch access		End Ranch access road	End ranch access road at parking lot of residential house	
Driveway		*Start Driveway upgrade*	*Start driveway upgrade at end of Ranch Access Road.*	
Driveway		Install Rolling Dip #9	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Driveway		Install Rolling Dip #10	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Driveway		Install Rolling Dip #11	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Driveway		Replace DRC	Replace the existing 8" DRC with an 18"x40' ditch relief culvert with a 20 ft. downspout as per PWA typical drawing 8. Dip or shape the roadbed to direct spring flow running down the inboard side of the road from SC #4 to the inlet of the proposed DRC.	Driveway

(Revised) Road Log of Treatments for the Ettersburg Ranch Road Upgrade Project, Humboldt County.				
Road	**Site #**	**Treatment Type**	**Comments/Treatment**	**Rock Needs**
Driveway	4	Stream crossing upgrade	Replace the existing culvert with a 24"x60' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip in the axis of the crossing to assure diverted water reenters the stream at the site. Remove garbage from stream channel and haul to landfill. Armor the channel above the inlet with 5 cu. yds. of 0.5'-1' minus rip rap to prevent head-cutting as per PWA typical drawing 18.	5 cu. yds. of 0.5'-1' minus rip rap
Driveway	5	Stream crossing upgrade	Replace the existing culvert with a 24"x40' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip in the axis of the crossing to assure diverted water reenters the stream at the site. Remove garbage from stream channel and haul to landfill. Armor the channel above the inlet with 1 yd^3 of 0.5'-1' minus rip rap to prevent head-cutting as per PWA typical drawing 18.	1 yd^3. of 0.5'-1' minus rip rap
Driveway		Install Rolling Dip #12	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Driveway	6	Stream crossing upgrade	Replace the existing culvert with a 30"x60' double walled plastic culvert. Culvert should be installed as per PWA typical drawings 1a, 1b, and 2. Rebuild crossing with a critical dip in the axis of the crossing to assure diverted water reenters the stream at the site. Remove garbage from stream channel and haul to landfill. Armor the channel above the inlet with 1 yd^3 of 0.5'-1' diameter rock armor to prevent head-cutting as per PWA typical drawing 18. Cut a ditch on the inside of the road starting at the stream crossing for 80' to capture spring and swale runoff from up road.	1 yd^3 of 0.5'-1' rock armor

(Revised) Road Log of Treatments for the Ettersburg Ranch Road Upgrade Project, Humboldt County.

Road	Site #	Treatment Type	Comments/Treatment	Rock Needs
Driveway		Install Rolling Dip #13	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Driveway		Install DRC	Install an 18"x30' ditch relief culvert at the beginning of the driveway to direct flow from the Ettersburg road under the driveway and into the meadow as per PWA typical drawing 8.	
Blue Slide Creek Tie Road			*Start upgrade at the intersection of Blue Slide Creek Tie Road with Ettersberg Road*	
Blue Slide Creek Tie Road		Install Rolling Dip	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Blue Slide Creek Tie Road		Install Rolling Dip	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Blue Slide Creek Tie Road		Install Rolling Dip	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Blue Slide Creek Tie Road		Install Rolling Dip	Install a rolling dip as per PWA typical drawings 10 and 11 and 19a. Dip should be approximately 35' long and 1.5' deep at its axis.	
Blue Slide Creek Tie Road	DRC #7	Armor outlet	Armor the fillslope around the outlet to prevent erosion from spring flow discharging from the outlet with 3 yd^3 of 0.5'-1' diameter rock armor.	3 yd^3 of 0.5'-1' rock armor