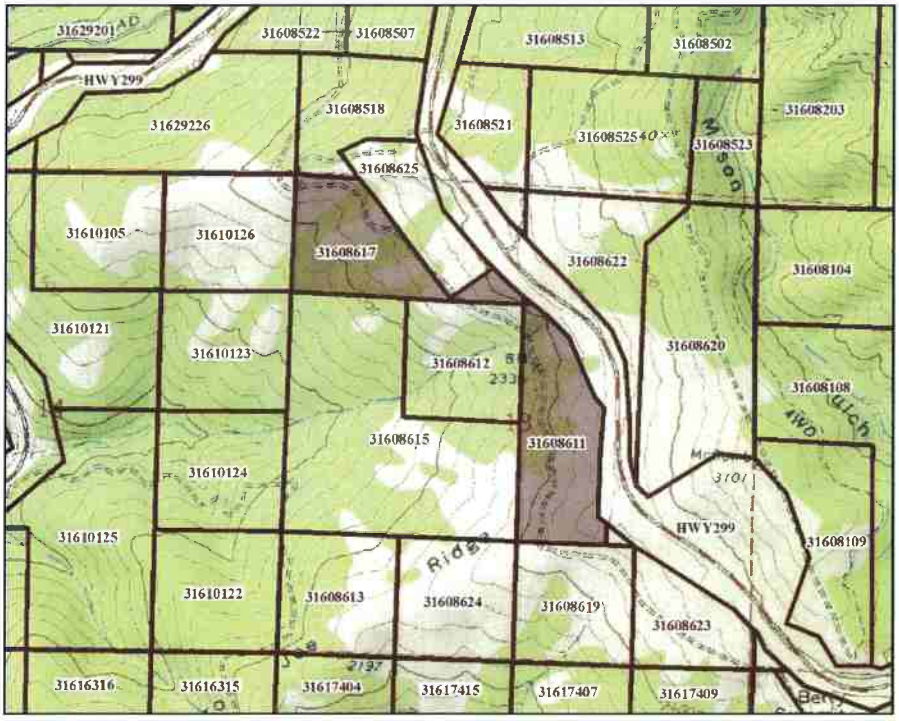
Water Resource Protection Plan (WRPP)

for

APN 316-086-017 and APN 316-086-011

Located at
30000 and 30500 State Hwy 299
Blue Lake, California

November, 2018



Prepared for:
WDID#1B161313CHUM
PWA180101020102-5359
30000 and 30500 State Hwy 299, Blue Lake, CA

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Blue Lake, California

1.0 PROJECT SUMMARY

This report documents Pacific Watershed Associate's (PWA)[1] Water Resource Protection Plan (WRPP) for APN 316-086-017 and APN 316-086-011 located at 30000 and 30500 State Hwy 299, Blue Lake, California, as shown on Figure 1. These properties are located approximately 11 miles east of the town of Blue Lake, Humboldt County, CA, off of State Route 299, 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 September 28, 2016, by PWA geologist Courtney Sundberg and PWA geologist Michelle Robinson, when a reconnaissance level investigation of the property was conducted and the conditions of the property noted.

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.

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

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

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

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

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

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

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

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

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

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

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

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

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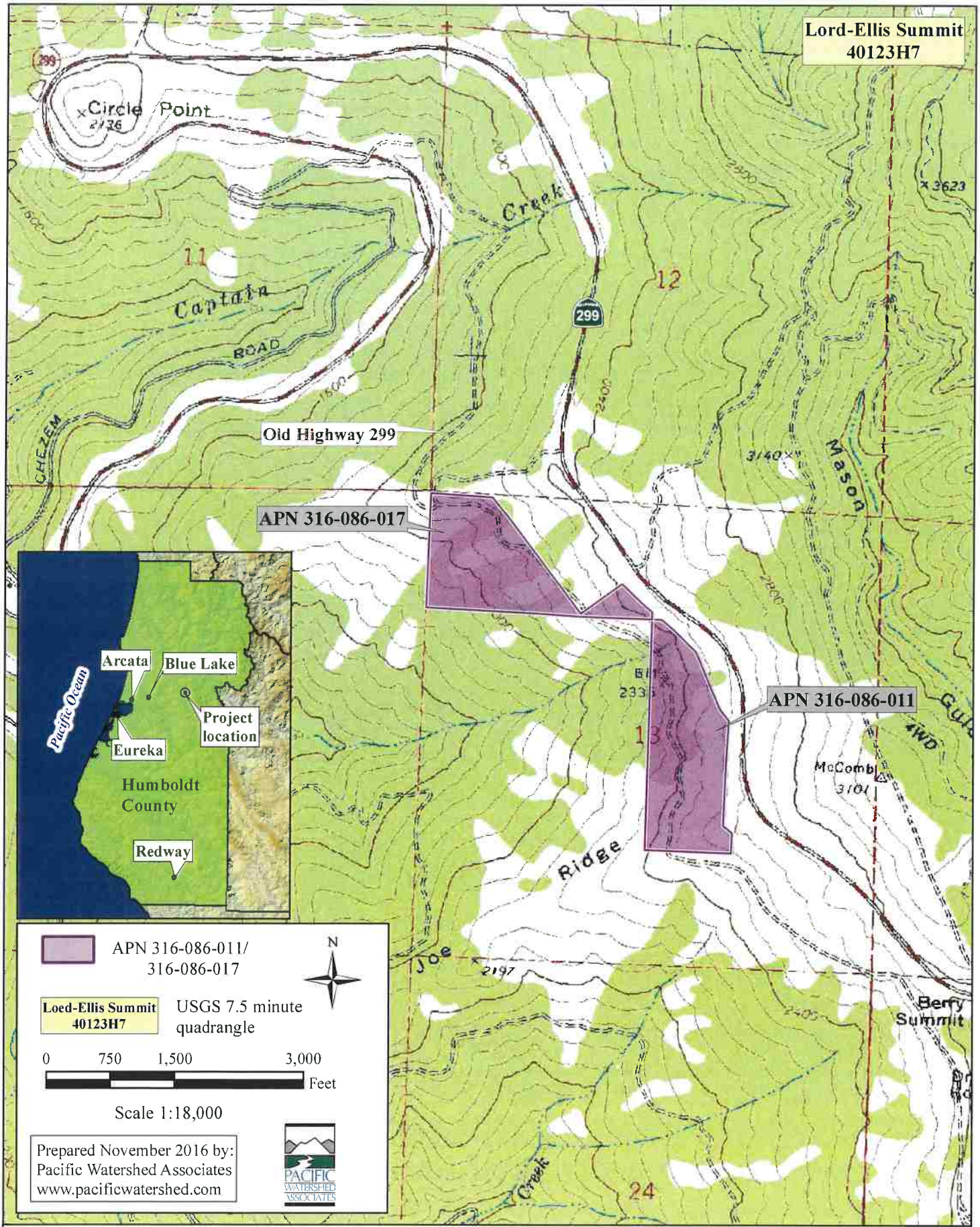

Figure 1. Location map for WDID #1B161313CHUM, APN 316-086-011 and 316-086-017, located at 30000 and 30500 Old Highway 299, Blue Lake, Humboldt County, California.

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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 APNs 316-086-017 and 316-086-011 located at 30000 and 30500 State Hwy 299, Blue Lake, California, as shown on Figure 1 and hereinafter referred to as the "Project Site. " The WRPP describes and addresses the required elements and compliance with the 12 Standard Conditions established by the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023 to protect water quality from cannabis cultivation and related activities (Order). PWA has identified certain areas where the Project Site does not fully meet all 12 of the Standard Conditions of the Order. Section 4, below, identifies and discusses each of the 12 Standard Conditions as related to your property with regard to compliance with the NCRWQCB's Order.

The WRPP contains the following required sections:

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

4.0 STANDARD CONDITIONS CHECKLIST FOR APN 316-086-017 and APN 316-086-011 as of 9/28/2016

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 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.

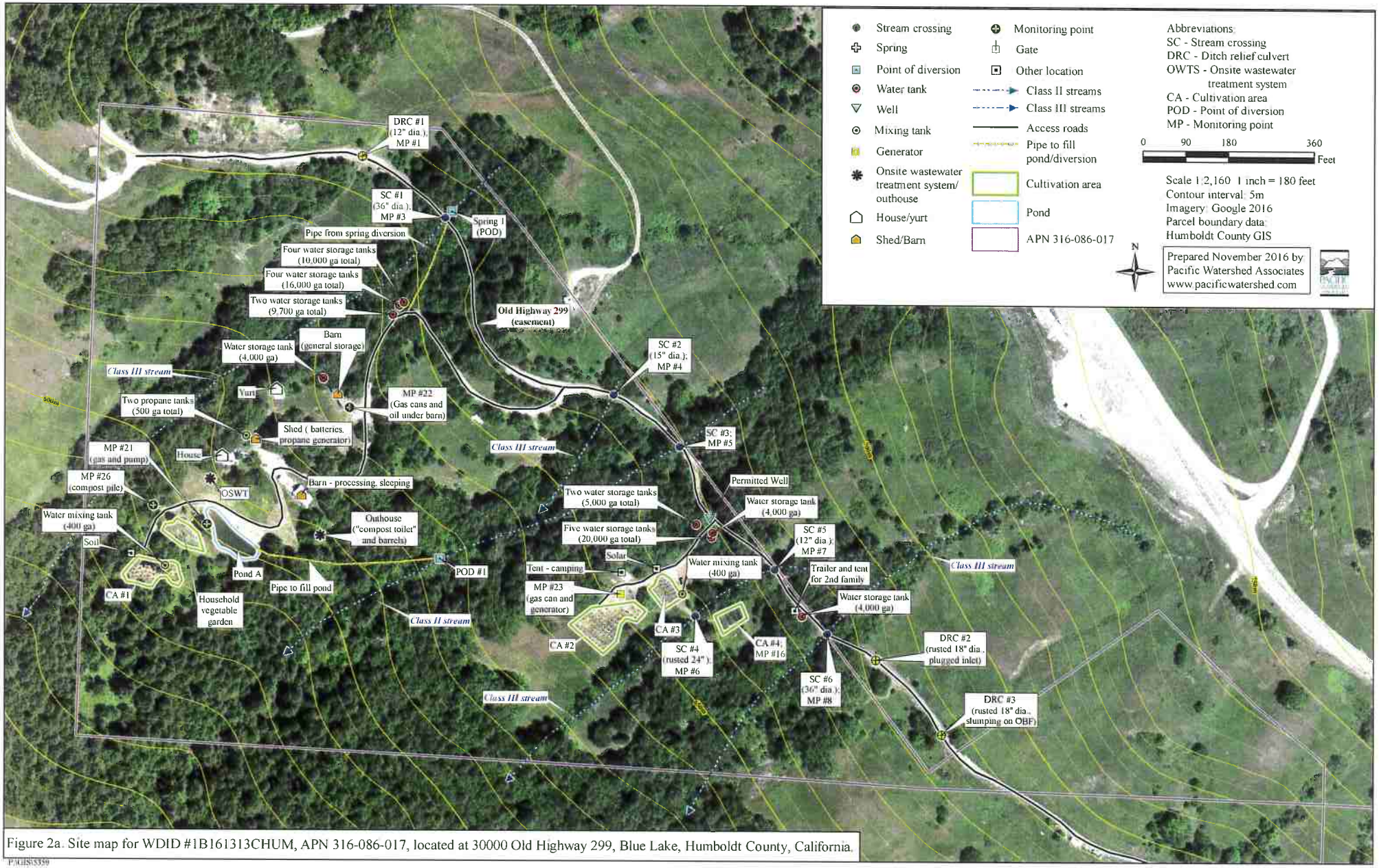

Figure 2a. Site map for WDID #1B161313CHUM, APN 316-086-017, located at 30000 Old Highway 299, Blue Lake, Humboldt County, California.

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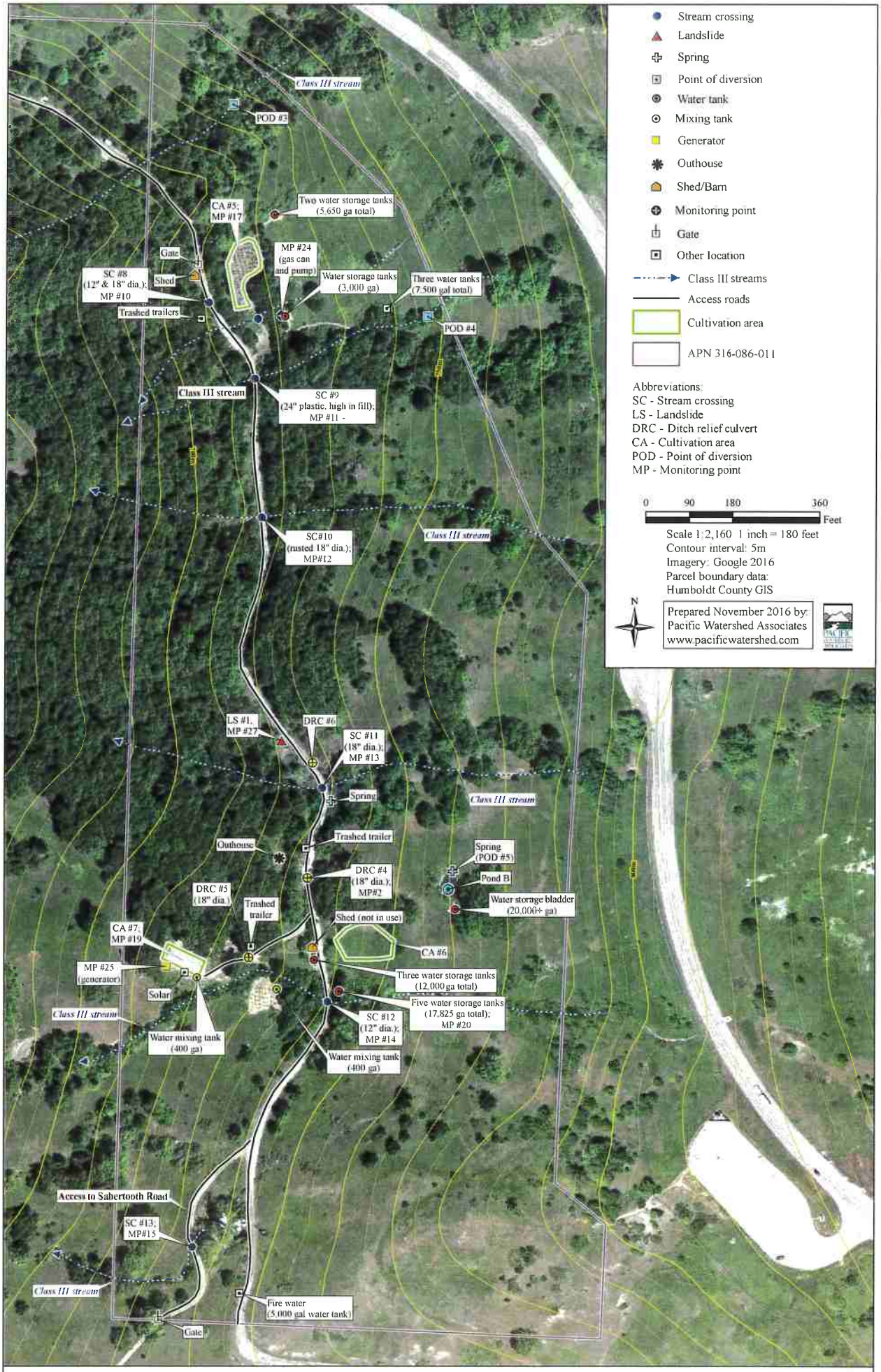

Figure 2b. Site map for WDID #1B161313CHUM, APN 316-086-011, located at 30500 Old Highway 299, Blue Lake, Humboldt County, California.

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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: PWA inspected 1. 6 miles of road on the Project Site. Most of the main road (approx. one mile of Old Highway 299) is paved with several ditch relief culverts (DRCs), but some paving is giving way to gravel and in some locations the outboard fill is slumping. Other access roads are maintained and rocked with several rolling dips and DRCs; however, these drainage features are not sufficient to hydrologically disconnect road segments from surface waters and to disperse road surface runoff to minimize road surface erosion. Concentrated drainage from the current Highway 299 is directed downslope toward the project site.

Photos: None

Corrective or remedial actions needed: Install permanent road drainage structures which shape the road surface (such as rolling dips) where feasible to hydrologically disconnect road segments from surface waters (mostly at stream crossings) and to disperse road surface runoff to minimize road surface and fillslope erosion. PWA will work with the client to design and determine the proper location of proposed road drainage structures prior to heavy equipment implementation. Maintain the roadside ditch and DRCs as necessary to ensure proper drainage and disperse runoff.

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: PWA observed five DRCs on the Project Site: DRC #1 is washed out at the inlet with a gully that appears to deliver sediment to a Class III stream channel (Monitoring Point (MP) #1); DRC #2 is an 18-inch rusted through culvert with a plugged inlet; DRC #3 is an 18-inch rusted through culvert with some slumping on the outboard fill; DRC #4 is an 18-inch rusted through culvert, located in a headwall swale, with a plugged inlet and an exposed outlet that appears to deliver sediment to a Class III stream channel (MP#2); DRC #5 is a functioning 18-inch culvert; and DRC #6 is partially plugged culvert. PWA also observed several rolling dips on the Project Site that appear functioning but are not sufficient to effectively hydrologically disconnect road segments from surface waters and to disperse road surface runoff to prevent road surface erosion.

Photos: Photo 1-2; MP#1-2

Corrective or remedial actions needed: Upgrade DRCs #1 - #4 to new 18" culverts, set grade to the base of the road fill (or downspouted to the base of the fill) and oriented to prevent erosion and delivery of sediment to surface waters. Regular inspections and maintenance of all DRCs should be conducted to ensure conveyance of flow and debris, to prevent plugging, and to monitor the potential for erosion until these culverts are upgraded. Also, see Standard Condition 4. 1a, corrective actions, above.

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

Meets condition? No
Observations/Comments: PWA observed some slumping on the outboard fill at DRC #3 and Landslide (LS) #1 near SC#11 (Figure 2b).
Photos: None
Corrective or remedial actions needed: See Standard Condition, 4. 1a and 4. 1b corrective actions, above.

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: Road drainage features are not sufficient to hydrologically disconnect road segments from surface waters and to disperse road surface runoff to prevent road surface erosion.
Photos: None
Corrective or remedial actions needed: See Standard Condition 4. 1a corrective actions, above. Rolling dips and ditch relief culvert should be installed on the approaches to stream crossings so as to disperse road surface and ditch runoff before it reaches each stream crossing. PWA will flag/mark all needed drainage structures, if desired, prior to implementation of road surface drainage improvements.

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

Meets condition? No
Observations/Comments: See Standard Condition 4. 1a and 4. 1b observations/comments, above.
Photos: See Standard Condition 4. 1b photos and monitoring points, above.
Corrective or remedial actions needed. See Standard Condition 41a and 4. 1b corrective actions, above.

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

Meets condition? N/A

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 13 stream crossings on the Project Site, including 10 crossings located on Old Highway 299.

1) Stream Crossing (SC) #1 (MP#3) is a rusted through 36-inch diameter CMP on a near origin Class III stream with diversion potential to the right.
2) SC#2 (MP#4) is a rusted through 15-inch diameter CMP on a near origin Class III stream with diversion potential to the right.
3) SC#3 (MP#5) is a recently upgraded 42-inch diameter culvert on a Class II stream.
4) SC#4 (MP#6) is a rusted 24-inch diameter CMP on a Class III stream with no diversion potential.
5) SC#5 (MP#7) is a rusted through 12-inch diameter CMP on a near origin Class III stream with diversion potential to the right. The culvert outlet is located high in the fill.
6) SC#6 (MP#8) is a 36-inch diameter CMP on a Class III stream with diversion potential to the right. The culvert is located high in the fill.
7) SC#7 (MP#9) has no formal structure or diversion potential and is located on a near origin Class III stream. There is active erosion on the outboard fill of the road.
8) SC#8 (MP#10) has a 12-inch and 18-inch diameter culvert located on a Class III stream.
9) SC#9 (MP#11) is a 24-inch diameter plastic culvert on a Class III stream with diversion potential to the right. The outlet is located high in the fill. There is approximately 200 feet of inboard ditch on the left approach that delivers to the culvert inlet.
10) SC#10 (MP#12) is a rusted through 18-inch diameter CMP on a Class III stream with a plugged inlet and aggraded sediment wedge. The culvert is located high in the fill. There is an inboard ditch leading to the culvert from the left road approach and diversion potential down to the right.
11) SC#11 (MP#13) is an 18-inch diameter CMP on a steep and rocky Class III stream with diversion potential to the right. The outlet is located high in the fill. PWA observed trash in the channel and on the outboard fill of the road.
12) SC#12 (MP#14) is a rusted through 12-inch diameter CMP on a Class III stream with a plugged inlet and diversion potential to the right. There is evidence of slumping on the fillslope.
13) SC#13 (MP#15) is an 18-inch diameter plastic culvert on a Class III stream. The outlet is installed high in the fill with a 1.5 foot plunge and is actively eroding the outboard fillslope.

Eleven of the thirteen stream crossing culverts are not correctly sized for the 100-year peak streamflow and associated debris (Table 4. 2). SC#1, SC#3 and SC#6 are appropriately sized for 100-year peak streamflow and associated debris, but SC#1 is rusted through and should also be replaced. In addition, culvert sizes for each crossing were calculated for the 100-year design storm flow using the Rational Method.
Photos: Photos 3–24; MP#3-15
Corrective or remedial actions needed: Replace all undersized and rusted through stream crossing culvert(s) with adequately sized (minimum 24-inch diameter) drainage structures, set in line and at grade with the natural channel, as itemized in Table 4. 2.

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 Standard Condition 4. 2a, observations/comments, above.
Photos: See Standard Conditions 4. 2a photos and monitoring point, above.
Corrective or remedial actions needed: See Standard Conditions 4. 2a, corrective actions, 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: While there are no fish-bearing streams on the Project Site, and most streams are near-origin and may not be intermittent, all new crossings will be upgraded to allow for the passage of aquatic organisms.
Photos: None
Corrective or remedial actions needed: None

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#7 is a fill crossing with no formal drainage structure and active erosion on the outboard fill of the road. There was evidence of slumping on the outboard fill of the road at SC#12. See 4. 2a, observations/comments above.
Photos: Photos 14, 22-23; MP#9, 14
Corrective or remedial actions needed: See Standard Conditions 4. 2a, corrective actions, 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: SC#5, 6, 9, 10 and 11 are placed high in the fill. See 4. 2a, observations/comments, above.
Photos: Photos 10-13, 16-21; MP#s 7-8, 11-13
Corrective or remedial actions needed: See Standard Conditions 4. 2a, corrective actions, above.

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

Observations/Comments: SC#1, 2, 5, 6, 9, 10, 11, and 12 exhibit diversion potential in the event that the culvert fails or plugs. See 4. 2a, observations/comments, above.

Photos: Photos 3-6, 10-13, 16-24; MP#3, 4, 7, 9, 12, 13, 14, and 15

Corrective or remedial actions needed: All newly upgraded and installed culverts should be designed with a critical dip to prevent stream diversion. For existing culverted crossings that do not need to be upgraded (SC#3 and SC#6), install critical dips in the road bed at the lower (down-road) hinge line of existing stream crossings with a diversion potential to ensure that flow is directed over the road and back to the stream channel if the culvert plugs. In locations where the road is paved, either 1) install an oversized culvert (emergency relief culvert) in the road fill such that if the main culvert is plugged, the emergency culvert will take the flow through the road prism, or 2) remove the paving and install a rocked critical dip on the down road side of the stream crossing fill.

Standard Condition #2. - General comments and recommendations: See comments above. Obtain all necessary permits prior to commencing work in or along the banks of any watercourse. Permits may include, and may not be limited to: CDFW LSAA 1602, SWRCB 401 Certification, and ACOE 404 Permit.

Table 4. 2 Stream Crossings - Culvert Sizing Recommendations[1, 2]

Stream crossing number	Existing culvert diameter (in)	Watershed area (acres)	Q100 – discharge estimate for 100-yr storm (cfs)[2]	Recommended culvert diameter (in)
SC #1	36	7	10	36
SC #2	15	11	16	42
SC #3	42	25	37	42
SC #4	24	4	6	Decommission
SC #5	12	4	6	24
SC #6	36	5	7	36
SC #7	Fill	5	7	Armored Fill
SC #8	12	11	16	42
SC #9	24	14	20	42
SC #10	18	33	49	60
SC #11	18	18	27	48
SC #12	12	20	30	48
SC #13	18	2	3	24

[1] Assumes mean annual precipitation of 79 inches, 0.35 runoff coefficient (C) and a headwater depth ratio (HW/D) of 0.67 was used to determine culvert sizing.
[2]The 100-year Return-Period precipitation data was sourced from: http://hdsc. nws. noaa. gov/hdsc/pfds/pfds_map_cont. html?bkmrk=ca

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: A number of associated facilities are found within stream buffers and will need to be moved or partially moved from the buffer.

1) Cultivation Area (CA) #4 (MP#16) is located within 50 feet of the Class III stream.
2) At least four (4) 400-gallon geo-pots in CA#5 (MP#17) are located within 50 feet of the Class III stream.
3) CA#6 (MP#18) is located approximately 15 feet away from a Class III stream.
4) CA#7 (MP#19) is located within 20 feet of a Class III stream, however no runoff was observed and the area slopes away from the watercourse at 16%. Since this CA slopes away from the watercourse there is little threat to water quality from this cultivation area; you may consider asking for a waiver for this small area, but a site inspection by the Water Board may be required.
5) Gas can and pump (MP#24) are located within the riparian buffer of a Class III stream near SC#7;
6) Water storage tanks near MP#24 are also located within the riparian buffer of a Class III stream above SC#7;
7) Two water tanks (MP#20) are located within the riparian buffer of a Class III stream near SC#12;

Photos: Photo 25; MP#16-20 and MP#24

Corrective or remedial actions needed: Relocate any portion of CA #4 - #6 that are within the riparian buffer so that they are a minimum of 50 feet from any Class III stream. Relocate any portion CA#7 that is within the riparian buffer so that it is at least 50 feet from the Class III stream. Relocate all gas cans, pumps, generators, water tanks, or associated facilities that are located within the riparian buffer so that they are 50 feet from any Class III streams and 100 feet from any Class II or I streams.

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

Meets condition? Yes

Observations/Comments: Aside from facilities listed 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? No.

Observations/Comments: Existing buffers are well vegetated and undisturbed, but do not meet setback distances to watercourses. See observations/comments in 4. 3a, above.

Photos: Photo 25; MP#16-20 and MP#24
Corrective or remedial actions needed: See 4. 3a, above.

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

Standard Condition #3. - General comments and recommendations Cultivation Areas (CA) #4 (MP#16), CA#5 (MP#17) and CA#6 (MP#18) are located less than 50 feet from a Class III stream. CA#7 (MP19) is located within 20 feet of a Class III stream, however no runoff was observed, the area slopes away from the watercourse at 16%, and there is little threat to water quality from this cultivation site.

Set back CA#4-6 a minimum of 50 feet from any Class III stream. Set back CA#7 at least 50 feet from the Class III stream. Except for selective clearing of several trees during initial construction, the riparian buffer is undisturbed and intact on the property. There is no intent from the owner to disturb, modify or develop the existing riparian buffer within the ownership. The slope buffer is more than adequate as a filter for any errant waste or entrained sediment.

- **NOTE:** Certain cultivation areas and/or other related facilities on this Project Site do not meet the setback or buffer area requirements to be achieved and maintained under the North Coast Water Quality Control Board's (NCRWQCB) Waiver of Waste Discharge (Order) (see 4. 3a, above). However, if you are participating in the County Land Use planning and permitting process, the Humboldt County Planning Department (County) also requires that no infrastructure be moved at this time to maintain consistency in the process of evaluating and approving a pending land use applications on file for properties in Humboldt County.

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

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

(1) Obtain a written note from the County stating that you are directed not to remove the infrastructure within stream buffer areas on the Project Site; keep that note with your WRPP.

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

4. 4 Standard Condition #4. Spoils Management

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

Meets condition? 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: Based on field observations it is PWA's opinion that the Project Site is currently compliant with this condition as there were no spoils observed during the project site inspection. All road fillslopes and building pads appear stable. When spoils are on site, they should be stored 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: Water is provided by 5 surface water diversions including a spring fed pond, one lined rainwater-fed pond (Pond A), and a permitted groundwater well. The water stored in the rainwater pond (Pond A) is supplemented by the groundwater well and POD #1. The amount of water used for cultivation irrigation and domestic purposes was unknown at the time of the site inspection.

Photos: None

Corrective or remedial actions needed: A Water Budget should be developed to determine the required volume of water storage you will need so as to forbear (not divert surface flows) during the low flow period from May 15 through November 31 each year. A Water Monitoring Plan will also 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).

The groundwater well can be used as needed to supplement storage, but it is also preferred that groundwater pumping be minimized or avoided during the driest times of the year to assure that you are not impacting groundwater levels or streamflow in downstream areas.

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

Meets condition? Yes

Observations/Comments: Conservation measures such as drip irrigation and controlled hand watering are being implemented, as well as the use of timed emitters and timed watering in the morning and evenings to limit effects of evaporation. CA#1 and CA#7 are drip irrigated. All other cultivation areas are irrigated by controlled hand watering.

Photos: None

Corrective or remedial actions needed: Continue to be employ current conservation techniques. In addition, evaluate and employ: 1) timed or volume limited drip irrigation at all cultivation areas; 2) surface mulching to minimize evaporation, 3) planting in –ground and not in above-ground pots or bags, 4) the use of water retaining soil mediums when planting, 5) the use of cover crops during rotations and winter, to protect and increase soil fertility, and 6) capturing and storing rainwater. 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. Other water conservation measures should continue to be investigated and employed in order to most effectively maximize water use efficiency and limit surface water diversions.

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

Meets condition? Yes

Observations/Comments: The water storage facilities include a Pond (Pond A), a spring-fed Pond (Pond B), water storage bladder, and 42 rigid water storage tanks. There is approximately 733,165 gallons of water storage on the Project Site: roughly 145,575 gallons in 42 rigid tanks; 20,000 gallons in one water bladder, and 586,530 in two ponds.

Photos: None

Corrective or remedial actions needed: Additional water storage may or may **not** be needed for the landowner to forbear (not divert surface waters) from May 15 through November 31 each year. However, a Water Budget should be developed to determine the required volume of water storage you will need to support your irrigation needs. Additionally, all on-stream storage facilities including the spring-fed pond are subject to forbearance during the dry season. As long as Pond A is fed by a surface water diversion (POD#1) it will also be subject to forbearance during the dry season.

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 comply with this Standard Condition, and to 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? No

Observations/Comments: There are five points of diversion (POD) on the Project Site and one permitted groundwater well: 1) POD #1 is a 20-inch long perforated box with a 2-inch black poly pipe diverting surface water from a Class II stream to Pond A; 2) Spring 1 is a horizontal well tapped into on the right bank of a Class III stream; 3) POD #3 is 5-gallon plastic bucket embedded into the stream channel with a 1-inch black poly pipe diverting surface water from a Class III stream; 4) POD #4 is plastic box with a metal grate embedded into the stream channel with a 1-inch black poly pipe diverting surface water from a Class III stream; and 5) POD #5 is a spring which flows into Pond B. There is no evidence of the spring flowing on the surface below Pond B.

Photos: None

Corrective or remedial actions needed: Four Initial Statements of Water Diversion and Use (ISDU) and one Small Irrigation Use Registration (SIUR) have been field for all of the surface water diversions. 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. If verified as being unconnected to surface waters, your well can also be employed to fill water storage facilities during the wet season.

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: If you are directly diverting water from a jurisdictional spring or stream, pumping water from a hydrologically connected well, or capturing surface water in a pond, you will need to obtain a consultation with California Department of Fish and Wildlife (CDFW) staff to determine if you are required to file a CDFW Lake and Streambed Alteration Agreement (LSAA):

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

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

Meets condition? No

Observations/Comments: PWA observed several locations where water storage tanks are located within the riparian buffer (MP #20 and MP#24). All other water storage tanks are located on stable slopes away from any streams, making it unlikely that water storage structure failures will result in delivery to the stream network. Water bladders are susceptible to failure and can cause serious downslope erosion and water quality impacts. PWA recommends you discontinue the use of water bladders. According to the landowner, both ponds onsite have been evaluated by a licensed engineer. Pond A was designed by Trinity Valley Consulting Engineers (TVCE) and it is unknown if standards for design and construction for integrity of the structure have been followed for either ponds.

Photos: Photo 26; MP#20, MP#24

Corrective or remedial actions needed: The ponds will need to be retroactively permitted with Humboldt County Building Department. Additionally, a Lake or Streambed Alteration Agreement will need to be filed with the California Department of Fish and Wildlife (CDFW) the ponds.

PWA recommends you discontinue the use of water bladders. If large water bladders continue to be used, they should be sited on a flat bench, secured so they cannot move downslope, and surrounded by engineered containment berms capable of containing the stored water in the event of a bladder failure. If used, water bladders should be emptied at the end of the growing season and filled in the late winter or spring, preferably using rainwater capture methods.

Standard Condition #5 - General comments and recommendations: PWA highly 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: All watering is based on drip irrigation/emitters and/or controlled hand watering; there is a high degree of control and minimal chance of causing runoff. 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 location out of the elements.
Photos: None
Corrective or remedial actions needed: When not being used on the planting beds or in greenhouses, all bagged or bulk 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, fully tarped in a stable location with no chance of nutrient leaching or delivery to surface waters. Fertilizers, soil amendments, and hazardous chemicals should not be stored with petroleum products as they are considered incompatible materials and could potentially react

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 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 watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration of water and nutrients 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.
Photos: None
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 dense and alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients. Winterize all cultivation areas by seeding and mulching all bare surface areas (exposed soils) on cultivation sites.

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

Standard Condition #7 - General comments and recommendations: Based on field observations PWA noted that fertilizers and soil amendments were being properly stored. Most growing amendments will be brought inside during the growing season and either stored indoors, in the greenhouse, or under tarps such that they are protected from the

elements. Fertilizers and amendments were reported to be applied according to packaging instructions. Usage is diminished or eliminated toward the end of the growing season.

Fertilizers, potting soils, compost, and other soils and soil amendments should not be stored with petroleum products as they are considered incompatible materials and could potentially react. See Standard Condition #9 *Comments for recommendations* about storage of hazardous and incompatible materials.

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: PWA did not observe pesticides or herbicides on the site.
Photos: None
Corrective or remedial actions needed: All pesticides, herbicides and related materials (e. g., fungicides) must be used and applied consistent with product labeling. When present, these chemicals should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters. Under the Order you are required to keep records (logs) of the type, timing and volume of pesticides and herbicides used in your operations. This can be done using a simple log form, such as the one included in Appendix F1.

Standard Condition #8 - General comments and recommendations: When present, pesticides and herbicides should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters. See Standard Condition #9 Comments for recommendations about storage of hazardous and incompatible materials

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. Please ask about our cultivators BMP handbook.

Additionally, for any pesticide use you must comply with 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: It is PWAs understanding that gasoline is stored in approved containers, but not under cover and off the ground. Petroleum product storage includes:

1) A fuel can and a pump near the pond (MP#21);
2) Fuel cans stored under the barn (MP#22);
3) One fuel can and a pump near CA #2 (MP#23);
4) One fuel can near the 3,000 gallon water storage tank near CA #5 (MP#24) and;
5) One gas powered generator near CA #7 (MP#25).

Photos: Photos 27-31; MP#21-25

Corrective or remedial actions needed: 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 the entire stored volume, and in a safe, secure location (e. g. away from slopes and outside of riparian buffers). All storage containers and equipment that are not in use should be completely drained of petroleum products, and labeled as "Empty, Not in use." If feasible, have separate storage areas for incompatible materials such as amendments/chemicals and petroleum products (see *General comments and recommendations*, below).

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 observations and comments above.

Photos: Photos 27-31; MP#21-25

Corrective or remedial actions needed: See corrective actions for 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 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 kits were 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 on the Project Site.
Photos: None
Corrective or remedial actions needed: None

Standard Condition #9 - General comments and recommendations: All generators, diesel tanks, gas pumps and other petroleum products onsite and in use must be stored under cover and off the ground and must have a secondary containment basin capable of containing the entire stored volume.

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 HMBP for your operation. Information regarding HWBPs can be found at
http://ca-humboldtcounty. civicplus. com/DocumentCenter/Home/View/3224.

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

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).

Proper storage of hazardous materials - 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.

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 easily ignitable materials.
  - ✓ Solvents
  - ✓ Oxidizing acids and oxidizers.

- **Oxidizers** (e. g. ammonium nitrate, ammonium phosphate, oxygen gas) must be segregated from:
  - ✓ Combustible and flammable liquids and gasses (e. g. oxygen-acetylene torches) by 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, some organic agricultural amendments may be caustic, ignitable, or corrosive. Segregation of hazardous materials from non-hazardous materials eliminates the potential for cross-contamination of materials 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? No

Observations/Comments: The Project Site contained many above-ground, uncovered planting pots containing spent soil in the cultivation areas. PWA also observed a compost pile (which included a small amount cultivation waste) near a break in slope, less than 50 feet from a Class III stream.

Photos: None

Corrective or remedial actions needed: Either 1) fully tarp or otherwise cover spent plant stalks, root balls, plastic soil bags, and other cultivation waste during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the native soil and groundwater, or 2) remove all spent soils and cultivation waste at the end of the growing season and store the materials indoors or undercover during the off-season.

Remove and store indoors, or tarp or otherwise cover, all spent soil in piles, pots or beds during the wet season to prevent soil and nutrients from being transported to surface waters or leaching nutrients into the groundwater. Alternately, spent soils may be heavily cover cropped to tie up nutrients during the wet season, but if the dense cover crop cannot be maintained due to cold weather or snow, then the soil materials must be tarped and fully protected from the weather.

Relocate the compost pile away from the break-in-slope, at least 50 feet from any Class III watercourse. Winterize the pile by tarping, or by cover cropping and placing straw waddles or other containment structures around the perimeter of the compost to prevent the surface runoff.

Standard Condition #10 - General comments and recommendations: According to the landowner, most cultivation related waste is either burned, composted, re-used or disposed of at an appropriate facility. We encourage you to chip or shred your plant stalks and compost them after harvest. 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.

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? Unknown

Observations/Comments: The Order requires one or more County permitted or approved OWTS (septic systems). Proof of permitting is required and a copy of the permit should be kept with this WRPP for possible inspection. The landowner reported that there is a permitted OWTS near the residence. There are also two outhouses (compost toilets) in use. The waste is stored in seven 55-gallon drums. The landowner intends to have the waste disposed of properly by contracting with a septic tank hauling service.

Photos: None
Corrective or remedial actions needed: Remove non-compliant outhouse toilets and dispose of drums/waste at an appropriate, permitted and approved facility. Additional field investigation (or records searches at HCDEH) should be undertaken to determine the size of the existing OWTS and to determine if it is adequate for the maximum level of use by residents, workers and visitors at the expected peak of operations. Work with HCDEH to determine if their records can confirm the current and needed size of the system, based on you expected level of use.

Unless they are approved 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. If the existing permitted OWTS is not adequate for the current or expected level of use (seasonal or otherwise), utilize 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.

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: The Project Site contained several inherited and trashed travel trailers or mobile homes onsite.
Photos: Photo 32; MP#26
Corrective or remedial actions needed: Collect and haul refuse and debris offsite and dispose of it at an appropriate waste disposal facility.

c) *Garbage and refuse shall be disposed of at an appropriate waste disposal location.*
Meets condition? Yes
Observations/Comments: Refuse and garbage is both secured properly and periodically hauled offsite to be disposed of at an appropriate waste disposal facility.
Photos: None
Corrective or remedial actions needed: None

Standard Condition #11 - General comments and recommendations: Remove non-compliant outhouse toilets and dispose of drums/waste appropriately. If the permitted OWTS is not adequate for the current or expected level of use (seasonal or otherwise), utilize portable toilets until you can design and install another permitted OWTS. Maintain good house-keeping by removing trashed trailers and other inherited waste and dispose of all refuse and garbage appropriately. Additionally, it is important to utilize storage facilities which prevent animals from accessing or disturbing garbage or refuse.

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: 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.

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
4. 1 – Site Maintenance, Erosion Control and Drainage Features	1a - e	Moderate	On or before Oct. 15, 2020	- Upgrade DCRs #1 to #4 to appropriate size, grade and orientation to prevent erosion and delivery of sediment to surface waters. Regular inspections and maintenance of DRCs #1 - #4 should be conducted to ensure conveyance of flow and debris, to prevent plugging and to monitor the potential for erosion until these culverts are upgraded. - Remove unstable material on the outboard fill at DRC#3 and Landslide (LS) #1 - Rolling dips and ditch relief culverts should be installed on the approaches to stream crossings so as to disperse road surface and ditch runoff before it reaches each stream crossing. In desired, PWA will assist in locating which ones to install and where they are needed. - Maintain the roadside ditch and DRCs as necessary to ensure proper drainage and disperse runoff.	MP#1-2; Photos 1-2	TBD	
4. 2 – Stream Crossing Maintenance	2a, b, c, d, e, f	High	On or before Oct. 15, 2020	- Replace all undersized and/or poorly aligned culvert(s) with adequately sized (minimum 24-inch diameter) culverts, set in line and at grade with the natural channel. See the culvert sizes listed in the Culvert table in Section 4. 2a, above. - Install critical dips in the road bed at the lower hinge line of the stream crossings exhibiting diversion potential, where feasible, to ensure that flow is directed back into the stream channel. - In locations where the road is paved, either 1) install an oversized culvert (emergency relief culvert) in the road fill such that if the main culvert is plugged, the emergency culvert will take the flow through the road prism, or 2) remove the paving and install a rocked critical dip on the down road side of the stream crossing fill, and then rock the disturbed road surface. - Obtain all necessary permits prior to commencing work in any watercourse, including stream crossing upgrades. Permits may include, and may not be limited to: CDFW LSAA 1602, SWRCB 401 Certification, and ACOE 404 Permit	MP# 3-15; Photos 3-24	TBD	

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
4. 3 Riparian and Wetland Protection and Management	3a, c	High	March 1, 2019, or as soon as County land Use permitting will allow	- ***NOTE***: *Before you remove or move cultivation areas and/or associated facilities, as listed below, you should read Section 4. 3 – General Comments and recommendations, above. If you are applying for a County Land Use permit for commercial cultivation, the date at which these must be moved out of the buffer zone may be temporarily postponed and other temporary treatments maybe required. PWA has provided detailed interim measures to apply at these sites if the facilities are not allowed to be moved according this recommended schedule (see Section 4. 3, General Comments and Recommendations, above). These interim measures shall be applied until the removal or relocation of these facilities has been approved.* - Set back CA#4-6 a minimum of 50 feet from any Class III stream. - Set back CA#7 at least 50 feet from the Class III stream, or obtain a waiver for this condition from the NCRWQCB - Relocate all gas cans, pumps, generators, water tanks, or associated facilities that are located within the riparian buffer so that they are 50 feet from any Class III streams and 100 feet from any Class II or I streams. NOTES: CA#5 and CA#6 have been relocated outside of the riparian buffer	MP#16-20 and MP#24; Photo 25	-	
4. 5 – Water Storage and Use	5a, b	High	Jan. 1, 2019 and then annually	- Develop a Water Budget to determine the required volume of water storage you will need so as to forbear (not divert surface flows) from May 15 through November 31 each year. - Develop and implement a Water Monitoring Plan. Under the Order you are required to document the timing and volume of your water diversion, storage and use throughout the year. You can use log sheets provided in Appendix D. - The groundwater well can be used as needed to supplement storage, but it is also preferred that groundwater pumping be minimized or avoided during the driest times of the year to assure that you are not impacting groundwater levels or streamflow in downstream areas. - PWA highly 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.	N/A	Float valves: $10 - $40; Flow meters: $120 – $2,000	
	5b	Moderate-High	Jan. 1, 2019 and continuing	- Continue to be employ current conservation techniques. In addition, evaluate and employ: 1) timed or volume limited drip irrigation at all cultivation areas; 2) surface mulching to minimize evaporation, 3)			

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
				planting in –ground and not in above-ground pots or bags, 4) the use of water retaining soil mediums when planting, 5) the use of cover crops during rotations and winter, to protect and increase soil fertility, and 6) capturing and storing rainwater.			
	5d	Moderate	Dec. 1, 2018 and then continuing	- To comply with this Standard Condition, and to 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, in order to develop and refine a Water Monitoring Plan 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.	N/A	-	
	5e	High	March 1, 2019 LSAA on or before April 1, 2019	**- Fish and Wildlife impacts:** If you are directly diverting water from a jurisdictional spring or stream, pumping water from a hydrologically connected well, capturing surface water in a pond, or working on stream crossings on your road system, you will need to obtain a Lake and Streambed Alteration Agreement (LSAA) from the California Department of Fish and Wildlife (CDFW). This agreement will cover your diversions and stream crossings.	N/A	TBD	
	5f	High	Dec. 31, 2018	- If they are not permitted, the ponds will need to be retroactively permitted with Humboldt County Building Department. - Obtain all necessary permits prior to commencing work. Permits may include, and may not be limited to: Building permits, CDFW LSA 1602, SWRCB 401 Certification, and ACOE 404 Permit. - PWA recommends you discontinue the use of water bladders. If large water bladders continue to be used, they should be sited on a flat bench, secured so they cannot move downslope, and surrounded by engineered containment berms capable of containing the stored water in the event of a bladder failure. - Water bladders should be emptied at the end of the growing season and filled in the late winter or spring, preferably using rainwater capture methods.	N/A	TBD	
4. 7 - Fertilizer and Amendment Use	7a, b, c	Moderate	Nov. 30, 2018 and then	- When not being used on the planting beds or in greenhouses, all bagged or bulk 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, fully tarped in a	N/A	-	

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
			annually by Oct. 15	stable location with no chance of nutrient leaching or delivery to surface waters. - Fertilizers, soil amendments, and hazardous chemicals should not be stored with petroleum products as they are considered incompatible materials and could potentially react. - Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration of water and nutrients is avoided. Fertilizers and amendments should be applied according to packaging instructions. - To verify compliance with this condition, you are required by the Order to keep detailed records 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. - 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 dense and alive, all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients. Winterize all cultivation areas by seeding and mulching all bare surface areas on cultivation sites.			
4. 8 – Pesticides and Herbicides	8a	Moderate	Dec. 31, 2017, and then annually	- When present, pesticides and herbicides should be stored within enclosed buildings in such a way they cannot enter or be released into surface or ground waters. - Under the Order you are required to keep records (logs) of the type, timing and volume of pesticides and herbicides used in your operations. This can be done using a simple log form, such as the one included in Appendix F1.	N/A	-	
4. 9 – Petroleum Products and Other Chemicals	9a, b	Moderate-High	Nov. 30, 2018 and then annually by Oct. 15.	- Continue to 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 capable of containing the entire stored volume, and in a safe, secure location. - If feasible, have separate storage areas for incompatible materials such as amendments/chemicals and petroleum products (see General comments and recommendations, below).	MP#21-25; Photos 27-31	TBD	

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
	9d	High	Jan 1, 2018	- 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.	MP#21-25; Photos 27-31	Spill kits: $30 - $65	
4. 10 – Cultivation-Related Wastes	10a	Moderate	Nov. 30, 2018 and then annually by Oct. 15.	- Either 1) fully tarp or otherwise cover spent plant stalks, root balls, plastic soil bags, and other cultivation waste during the wet season to prevent soil from being transported to surface waters or leaching nutrients into the native soil and groundwater, or 2) remove all spent soils and cultivation waste at the end of the growing season and store the materials indoors or undercover during the off-season. - Remove and store indoors, or tarp or otherwise cover, all spent soil in piles, pots or beds during the wet season to prevent soil and nutrients from being transported to surface waters or leaching into groundwater. - Alternately, spent soils may be heavily cover cropped to tie up nutrients during the wet season, but if the dense cover crop cannot be maintained due to cold weather or snow, then the soil materials must be tarped and fully protected from the weather. - Relocate the compost pile away from the break-in-slope, at least 50 feet from any Class III watercourse. Winterize the pile by tarping, or by cover cropping to prevent the surface runoff and or nutrient leaching. NOTES: Compost pile has been relocated outside of the riparian buffer.			
4. 11 – Refuse and Human Waste	11a	Moderate-High	Determine adequacy & capacity of existing OWTS by March 1, 2019 Decom-mission outhouse, & remove wastes by June 15, 2019	- The Order requires one or more County permitted or approved OWTS. Proof of permitting is required and a copy of the permit should be kept with this WRPP for possible inspection. - Additional field investigation (or records searches at HCDEH) should be undertaken to determine the size of the existing OWTS and adequacy of the current system for the maximum level of use by residents, workers and visitors at the expected peak of operations. Work with HCDEH to determine adequacy of the current system for your maximum expected level of use. - Remove non-compliant outhouse toilets and dispose of drums/waste at an appropriate, permitted and approved facility. - 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.	None	TBD	

Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)

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 #	Estimated Cost	Date Completed
			If needed, design & install new or updated OWTS by 12/31/20	- If the existing permitted OWTS is not adequate for the expected level of use, utilize one or more regularly serviced portable toilets for use by your residents, workers, and visitors to the Project Site until an appropriately sized OWTS can be designed, permitted and installed. - Maintain servicing records for portable toilets for possible inspection.			
	11b	High	Dec. 31, 2018 and continuing	- Collect and haul refuse and debris offsite and dispose of it at an appropriate waste disposal facility. - Maintain good house-keeping by scheduling removal, and eventually hauling, trashed trailers and other inherited waste and dispose of all refuse and garbage appropriately. - Additionally, it is important to utilize storage facilities which prevent animals from accessing or disturbing garbage or refuse. NOTES: All refuse has been cleaned up and disposed of at an offsite facility.	MP#26; Photo 32	-	

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 November 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 November 15th, whichever is soonest.
4) Following any rainfall event with an intensity of 3 inches precipitation in 24 hours. Precipitation data can be obtained from the National Weather Service by entering the site zip code at http://www. srh. noaa. gov/forecast; Pick the nearest or most relevant zip code and then select the 3 day history that will also show precipitation totals.

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

your monitoring points and will need to be updated as corrective treatments are implemented and treatments are monitored and evaluated over time.

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

7. 0 WATER USE PLAN

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

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

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

- No surface water diversions occur from May 15th to November 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 diversion for the entire period from May 15 to November 31. According to the Order, this will ensure the timing of water use is not impacting water quality objectives and beneficial uses.

There is approximately 733,165 gallons of water storage in 42 rigid tanks and one (20,000 gal) water bladder, and in two ponds, on the Project Site. With 41,907 ft^2 of cultivation area on the Project Site (Figure 1) and a typical cultivation water use of 10 gallons/ft^2/season, we estimate approximately 419,070 gallons of water storage will be needed to forbear (not divert) from May 15 through October 31 each year. Using this preliminary calculations, additional water storage is **not** required dry season irrigation needs. A Water Budget will need to be developed and refined through water monitoring to determine how much additional storage is needed, if any, for your operations to forbear (not divert) during this period.

Water Conservation - Water conservation measures currently practiced include drip irrigation and the use of soil mediums that retain moisture. Starting this year, new water conserving techniques and equipment will be utilized and tested to evaluate effectiveness and efficiency, including volume-limited or timed drip emitters, straw mulch cover on top of the soil surface, irrigation scheduling and other included in Section 4. 5c. 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 five surface water diversions , one permitted well, and one lined pond (Pond A; Figure 2). The water storage facilities include a lined pond (Pond A) fed by rainwater, the groundwater well and POD#1; a spring-fed pond (Pond B); approximately 20,000 gallon water storage bladder; and 31 water storage tanks. The existing water storage at this location is approximately 733,165 gallons.

At the time of the site inspection, the operator was not aware of the overall water use on the property. We informed the landowner of the requirements to monitor and record water use in the future and that it is a requirement of the Order. Over the course of the current season, water use will be documented using the log forms attached in Appendix D. Over the course of the season, water use will be documented using the log forms attached in Appendix D. Water rights notifications and registrations (SDU, SIU) will be submitted to the State Water Resource Control Board (Division of Water Rights) and a Lake and Streambed Alteration Agreement (LSAA) sought through the California Department of Fish and Wildlife (CDFW) for the diversions, ponds and stream crossings. As more accurate water data is gathered, refined targets can be made to ensure adequate storage exists 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 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:
Bat guano
Seabird guano
Fishbone mean
Neem meal
Shrimp meal
Kelp meal
Feather meal
Alfalfa
Crab shell
Azomite
Sulfate of potash
Compost
Worm castings
Biochar

Pesticides, Herbicides, and Fungicides:
_____
_____
_____
_____
_____

Petroleum and Other Chemicals:
Gasoline
Diesel

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): _____

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

Signature: _____ Date: _____

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

WRPP prepared and finalized on (date): _____

Signature: _____ Date: _____

Fertilizers and amendments:
Bat guano
Seabird guano
Fishbone mean
Neem meal
Shrimp meal
Kelp meal
Feather meal
Alfalfa
Crab shell
Azomite
Sulfate of potash
Compost
Worm castings
Biochar

Pesticides, Herbicides, and Fungicides:

_____
_____
_____
_____
_____

Petroleum and Other Chemicals:
Gasoline
Diesel

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).

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Name of Legally Responsible Person (LRP): APRIL ARMSTRONG

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

Signature: A Armstrong Date: 3/11/19

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

WRPP prepared and finalized on (date): 3/11/2019

Signature: CS Date: 3/11/2019

Appendix B

Monitoring Plan and Photo Log

APPENDIX B: MONITORING PLAN AND PHOTO LOGS

Monitoring Plan – In general, the entire road network, cultivation area and associated facilities need to be monitored throughout the year to identify any problems that might arise and to monitor the effectiveness of corrective actions (Table 1) when completed. Refer to Figure 2 for the specific locations of monitoring points that you are responsible for tracking. Regardless, the entire project site needs to be regularly inspected and monitored to ensure that the site achieves and maintains compliance with the 12 Standard Conditions. If additional deficiencies develop, or individual problems arise, then corrective actions must be implemented immediately and these problem areas will need to be further monitored according to the WRPP.

For this project site, twenty-six (26) monitoring points have been designated. Two Monitoring Points (MP) #1, #2 have been established to monitor ditch relief culverts (DRC) #1 and #4 on the main road (Old highway 299). MP#s 3-15 have been established at stream crossings (SC), to document conditions and monitor the effectiveness of corrective actions listed on Table 1. Inspect MP#s 16-19 to verify that geo-pots and cultivation areas are outside the minimum buffer requirements for Class III watercourses at Cultivation Areas #4-7. Inspect at MP #21-25 to verify that spill kits have been purchased and are available, and petroleum containers and generators are stored properly and have secondary containment. Inspect MP #26 to verify that the compost pile has been relocated out of the stream buffer and there is no debris or nutrients leaving the pile.

The goal of the monitoring on this Project Site is to ensure the original problems or non-compliant features (e.g., fuel tanks and generators without secondary containment; under-designed stream crossings, etc.) have been effectively treated and that environmental problems or threats to water quality do not arise or are adequately mitigated during the year. Consult with PWA if a problem is detected at any of these monitoring locations or elsewhere on the property, or if you would like our assistance in monitoring or developing corrective actions (BMPs) for problems that develop. Please also report to PWA when one or more of the corrective actions in the WRPP have been implemented, and include photos and descriptions of the actions taken.

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 on-site.
2) Prior to November 15 to evaluate site preparedness for storm events and stormwater runoff.
3) Following the accumulation of 3 inches cumulative precipitation (starting September 1st) or by December 15th, whichever is sooner.
4) Following 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.

Photo Log of features of interest and monitoring points before, during, and/or after treatment					
Photo #	**Monitoring Point**	**Standard Condition**	**Date**	**Pre-, during, or post-treatment**	**Description**
1	MP#1; DRC#1	4.1	9/28/16	Pre-treatment	DRC #1, 12-inch diameter culvert, view looking at inlet.
2	MP #2; DRC#4	4.1	9/28/16	Pre-treatment	DRC #4, 18-inch diameter culvert, view looking upslope at outlet placed high in the road fill. Outlet erosion appears relatively old.
3	MP #3; SC#1	4.2	9/28/16	Pre-treatment	SC#1, rusted 36-inch diameter culvert on a near origin Class III stream, view looking downstream at inlet and eroded road fill. Culvert is short in the fill and lacks adequate barrel extension.
4	MP #3; SC#1	4.2	9/28/16	Pre-treatment	SC#1, rusted 36-inch diameter culvert on a near origin Class III, view looking upstream at culvert outlet.
5	MP #4; SC#2	4.2	9/28/16	Pre-treatment	SC#2, rusted 15-inch diameter culvert on a near origin Class III stream, view looking downstream at culvert inlet.
6	MP#4; SC#2	4.2	9/28/16	Pre-treatment	SC#2, rusted 15-inch diameter culvert on a near origin Class III stream, view looking upstream at culvert outlet.
7	MP #5; SC#3	4.2	11/7/18	Post-treatment	SC#3, 42-inch diameter culvert on a Class III stream; view looking downstream at culvert inlet.
8	MP #5; SC#3	4.2	11/7/18	Post-treatment	SC#3, 42-inch diameter culvert on a Class III stream, view looking upstream towards culvert outlet.

Photo Log of features of interest and monitoring points before, during, and/or after treatment					
Photo #	**Monitoring Point**	**Standard Condition**	**Date**	**Pre-, during, or post-treatment**	**Description**
9	MP#6; SC#4	4.2	9/28/16	Pre-treatment	SC#4, rusted 24-inch diameter culvert on a Class III stream.
10	MP#7; SC#5	4.2	9/28/16	Pre-treatment	SC #5, rusted 12-inch diameter culvert on a near origin Class III stream, view looking downstream at culvert inlet.
11	MP#7; SC#5	4.2	9/28/16	Pre-treatment	SC #5, rusted 12-inch diameter culvert on a near origin Class III stream placed high in the fill, view looking downstream at culvert outlet.
12	MP #8; SC#6	4.2	11/7/18	Pre-treatment	SC #6, rusted 36-inch culvert on a Class III stream, placed high in the fill, view looking downstream at culvert inlet.
13	MP #8; SC#6	4.2	9/28/16	Pre-treatment	SC #6, rusted 36-inch culvert on a Class III stream, placed high in the fill above two older, buried culverts; view looking upstream at culvert outlet. Note fillslope gully erosion beneath culvert signifying leaking, rusted-through culvert.
14	MP #9; SC#7	4.2	9/28/16	Pre-treatment	SC #7, view looking downstream at road surface/stream crossing which lacks any formal drainage structure.
15	MP#10; SC#8	4.2	9/28/16	Pre-treatment	SC #8, view of two culverts (18-inch dia. and 15-inch dia.) on a Class III stream, placed high in the fill, view looking downstream at the culvert outlets.
16	MP#11; SC#9	4.2	9/28/16	Pre-treatment	SC #9, 24-inch plastic culvert on a Class III stream, placed high in the fill; view looking downstream at culvert inlet.

Photo Log of features of interest and monitoring points before, during, and/or after treatment					
Photo #	**Monitoring Point**	**Standard Condition**	**Date**	**Pre-, during, or post-treatment**	**Description**
17	MP#11; SC#9	4.2	11/7/18	Pre-treatment	SC #9, 24-inch plastic culvert on a Class III stream, placed high in the fill; view looking across the fill at the culvert outlet. Culvert is not placed at the base of the fill, but most outlet erosion of the fill has already occurred.
18	MP#12; SC#10	4.2	9/28/16	Pre-treatment	SC #10, rusted 18-inch culvert on a Class III stream, placed high in the fill; view looking downstream at plugged inlet and the resultant inlet erosion that has occurred during flood flows.
19	MP#12; SC#10	4.2	9/28/16	Pre-treatment	SC #10, rusted 18-inch culvert on a Class III stream, placed high in the fill; view looking downstream from road toward culvert outlet in the shadows.
20	MP#13; SC#11	4.2	9/28/16	Pre-treatment	SC #11, rusted 18-inch culvert on a steep and rocky Class III stream, placed high in the fill; view looking downstream at culvert inlet and hand built headwall.
21	MP#13; SC#11	4.2	9/28/16	Pre-treatment	SC #11, rusted 18-inch culvert showing outlet on a steep and rocky Class III stream that is placed high in the fill; view looking downstream at outlet and trash in the channel.
22	MP#14; SC#12	4.2	9/28/16	Pre-treatment	SC #12, rusted 12-inch culvert on a Class III stream; view looking downstream at culvert inlet showing inlet erosion caused during high flow events.
23	MP#14; SC#12	4.2	9/28/16	Pre-treatment	SC #12, rusted 12-inch culvert on a Class III stream; view looking upstream at culvert outlet (Photo September 2016).
24	MP#15; SC#13	4.2	11/7/18	Pre-treatment	SC #13, view of crossing looking perpendicular to the road towards the 24-inch diameter culvert inlet.

Photo Log of features of interest and monitoring points before, during, and/or after treatment					
Photo #	**Monitoring Point**	**Standard Condition**	**Date**	**Pre-, during, or post-treatment**	**Description**
25	MP#19; CA#7	4.3	9/28/16	Pre-treatment	View of corner of CA#7 located within riparian buffer of a Class III stream. Note how the area slopes gently away from the streamside slope (left side of photo).
26	MP#20	4.5	9/28/16	Pre-treatment	View of two water storage tanks (3,000 gal and 2,825 gal) located less than 50 feet from a Class III watercourse.
27	MP#21	4.9	9/28/16	Pre-treatment	View of small pump and gas can located next to Pond A and without secondary containment.
28	MP#22	4.9	9/28/16	Pre-treatment	View of gas cans and other petroleum products outside barn uncovered and without secondary containment.
29	MP#23	4.9	9/28/16	Pre-treatment	View of small water pump and gas, uncovered and without secondary containment, can near CA#2.
30	MP#24	4.9	9/28/16	Pre-treatment	View of small pump gas can next to 3,000 gallon water storage tank near CA#5, uncovered and without secondary containment.
31	MP#25	4.9	9/28/16	Pre-treatment	View of generator near CA#7, uncovered and without secondary containment.
32	MP#26	4.11	9/28/16	Pre-treatment	View of compost and cultivation waste pile near vegetable garden located less than 50 feet from a Class III stream.

Appendix C

Photo Documentation of Monitoring Points

Appendix C: Photo Documentation of Monitoring Points

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

Photo 1, MP #1 – DRC#1, 12-inch diameter ditch relief culvert, view looking downslope at inlet (Photo September 2016).

Photo 2, MP #2 – DRC#4, 18-inch diameter ditch relief culvert, view looking upslope at outlet (Photo September 2016).

4.2 Standard Condition #2. Stream Crossing Maintenance

Photo 3, MP#3 – Stream Crossing (SC) #1, rusted through 36-inch diameter culvert on a near origin Class III stream, view looking downstream at inlet (Photo September 2016).

Photo 4, MP#3 – SC #1, rusted 36-inch diameter culvert on a near origin Class III stream, view looking upstream at outlet (Photo September 2016).

Photo 5, MP#4 – SC#2, rusted 15-inch diameter culvert on a near origin Class III stream, view looking downstream at inlet (Photo September 2016).

Photo 6, MP#4 – SC#2, rusted through 15-inch diameter culvert on a near origin Class III stream, view looking upstream at outlet (Photo September 2016).

Photo 7, MP#5 – SC#3, view of 42-inch diameter culvert inlet (Photo November 2018).

Photo 8, MP#5 – SC#3, view of 42-inch diameter culvert outlet (Photo November 2018).

Photo 9, MP#6 – SC#4, view of rusted 24-inch diameter culvert inlet on a Class III stream (Photo November 2018).

Photo 10, MP#7 – SC#5, rusted 12-inch diameter culvert on a near origin Class III stream, view looking downstream at inlet (Photo September 2016).

Photo 11, MP#7 – SC#5, rusted through 12-inch diameter culvert on a near origin Class III stream placed high in the fill, view looking downstream at outlet (Photo September 2016).

Photo 12, MP#8 – SC#6, rusted 36-inch culvert on a Class III stream, placed high in the fill, view looking downstream at inlet (Photo November 2018).

Photo 13, MP#8 – SC#6, rusted 36-inch culvert on a Class III stream, placed high in the fill above 2 older buried culverts, view looking upstream at outlet (Photo September 2016).

Photo 14, MP#9 – SC#7, no formal drainage structure on a near origin Class III stream, view looking downstream from road bed (Photo September 2016).

Photo 15, MP#10 – SC#8, view of two culverts (18-inch dia. and 15-inch dia.) on a Class III stream, placed high in the fill, view looking downstream at the culvert outlets (Photo September 2016).

Photo 16, MP#11 – SC#9, 24-inch plastic culvert on a Class III stream, placed high in the fill, view looking downstream at inlet (Photo September 2016).

Photo 17, MP#11 – SC#9, 24-inch plastic culvert on a Class III stream, placed high in the fill, view looking upstream at outlet (Photo November 2018).

Photo 18, MP#12 – SC#10, rusted 18-in culvert on a Class III stream, placed high in the fill, view looking downstream at plugged inlet (Photo September 2016).

Photo 19, MP#12 – SC#10, rusted 18-in culvert on a Class III stream, placed high in the fill, view looking downstream from road toward outlet (Photo September 2016).

Photo 20, MP#13 – SC#11, rusted 18-in culvert on a steep and rocky Class III stream, placed high in the fill, view looking downstream at inlet (Photo September 2016).

Photo 21, MP#13 – SC#11, rusted 18-in culvert on a steep and rocky Class III stream, placed high in the fill, view looking downstream at outlet and trash in the channel (Photo September 2016).

Photo 22, MP#14 – SC#12, rusted 12-inch culvert on a Class III stream, view looking downstream at inlet (Photo September 2016).

Photo 23, MP#14 – SC#12, rusted 12-inch culvert on a Class III stream, view looking upstream at inlet (Photo September 2016).

Photo 24, MP#15 – SC#13, view of inlet and a portion of the inboard road (Photo November 2018).

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

Photo 25, MP#19– View of CA#7 located within riparian buffer of a Class III stream. Note how the area slopes away from the stream (at 16%). (Photo September 2016).

4.5 Standard Condition #5: Water Storage and Use

Photo 26, MP#20 – View of two water storage tanks (3,000 gal and 2,825 gal) located less than 50 feet from a Class III stream (Photo September 2016).

4.9 Standard Condition #9. Petroleum Products and other Chemicals

Photo 27, MP#21 – View of small pump and gas can located next to Pond A (Photo September 2016).

Photo 28, MP#22 – View of gas cans and other petroleum products outside barn (Photo September 2016).

Photo 29, MP#23 – View of small pump gas can near CA#2 (Photo September 2016).

Photo 30, MP#24 – View of small pump gas can next to 3,000 gallon water storage tank near CA#5 (Photo September 2016).

Photo 31, MP#25 – View of gas powered generator near CA#7 (Photo September 2016).

4.11 Standard Condition #11. Refuse and Human Waste

Photo 32, MP#26 – View of compost pile near vegetable garden located less than 50 feet from a Class III stream (Photo September 2016).

Appendix H

Hazardous Materials Storage Guidelines

Appendix H. Hazardous Materials Storage Guidelines

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.

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 easily ignitable materials.
Solvents.
Oxidizing acids and oxidizers.

Oxidizers (e.g. ammonium nitrate, ammonium phosphate, oxygen gas) must be segregated from:
Combustible and flammable liquids and gasses (e.g. oxygen-acetylene torches) by 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, some organic agricultural amendments may be caustic, ignitable, or corrosive. Segregation of hazardous materials from non-hazardous materials eliminates the potential for cross-contamination of materials and exposure of workers to hazardous fumes or residues.

Guidelines for proper storage of hazardous materials and regulatory oversight (California Code of Regulations Title 22) are provided by the California Department of Toxic Substances Control (DTSC). The regulations are located in Social Security, Division 4.5, Environmental Health Standards for the Management of Hazardous Waste.