Water Resource Protection Plan (WRPP)

for

APN 522-025-003, 522-024-002 and 522-024-005

Located on
New 3 Creeks Road
Willow Creek, California

May, 2017

Prepared for:
WD ID# 1B16635CHUM
PWA ID #180102111205-5252, 180102111201-5252, 180102111206-5252
New 3 Creeks Road, Willow Creek, CA

Prepared by:
Jack Skeahan, Staff Geologist, jacks@pacificwatershed.com
Thomas H Leroy, C.E.G. #2593, toml@pacificwatershed.com
Pacific Watershed Associates Inc.
P.O. Box 4433, Arcata, CA 95518
(707) 839-5130

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1.0 PROJECT SUMMARY

This report documents Pacific Watershed Associate's (PWA)[1] Water Resource Protection Plan (WRPP) for APN 522-025-003, 522-024-002 and 522-024-005 located on New 3 Creeks Road, Willow Creek, CA as shown on Figure 1. This property is located approximately 6.0 miles northwest of Willow Creek, Humboldt County, CA, and hereinafter is referred to as the "Project Site." Based on either site conditions and/or total cultivation area, this Project Site falls within **Tier 2** of the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023, Waiver of Waste Discharge and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects ("Order"). Properties that fall into Tier 2 of the Order are required to develop a WRPP. Therefore, as required, this WRPP has been developed for you based on site inspections made by PWA on your property. PWA's recommendations for any remediation or corrective actions are a result of water quality requirements under the Order, including Best Management Practices (BMPs) designed to meet those requirements (Appendix A). This WRPP documents the findings of site visits conducted on June 13 and June 15, 2016 by PWA Certified Engineering Geologist Thomas H Leroy and Staff Geologist Jack Skeahan.

2.0 CERTIFICATIONS, LIMITATIONS AND CONDITIONS

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

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

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

[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").

limited extent and artificial exposures of subsurface materials. Interpretations of problematic geologic, geomorphic or hydrologic features such as unstable hillslopes, erosional processes and water quality threats are based on the information available at the time of our inspection and on the nature and distribution of existing features we observed on the property.

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

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

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

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

As a Third Party Program, PWA will be responsible for the data, interpretations and recommendations developed by PWA, but will not be responsible for the interpretation by others of that information, for implementation of corrective actions by others, or for additional or modified work arising out of those plans, interpretations and recommendations. PWA assumes no liability for the performance of other workers or suppliers while following PWA's recommendations in the WRPP, unless PWA is under contract to perform or oversee those activities. Additionally, PWA is not responsible for changes in applicable or appropriate standards

beyond our control, such as those arising from changes in legislation or regulations, or the broadening of knowledge which may invalidate or alter any of our findings or recommended actions.

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

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

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

Prepared by:

Tom Leroy
Certified Engineering Geologist #2593
Pacific Watershed Associates, Inc.
P.O. Box 4433, Arcata, California 95518

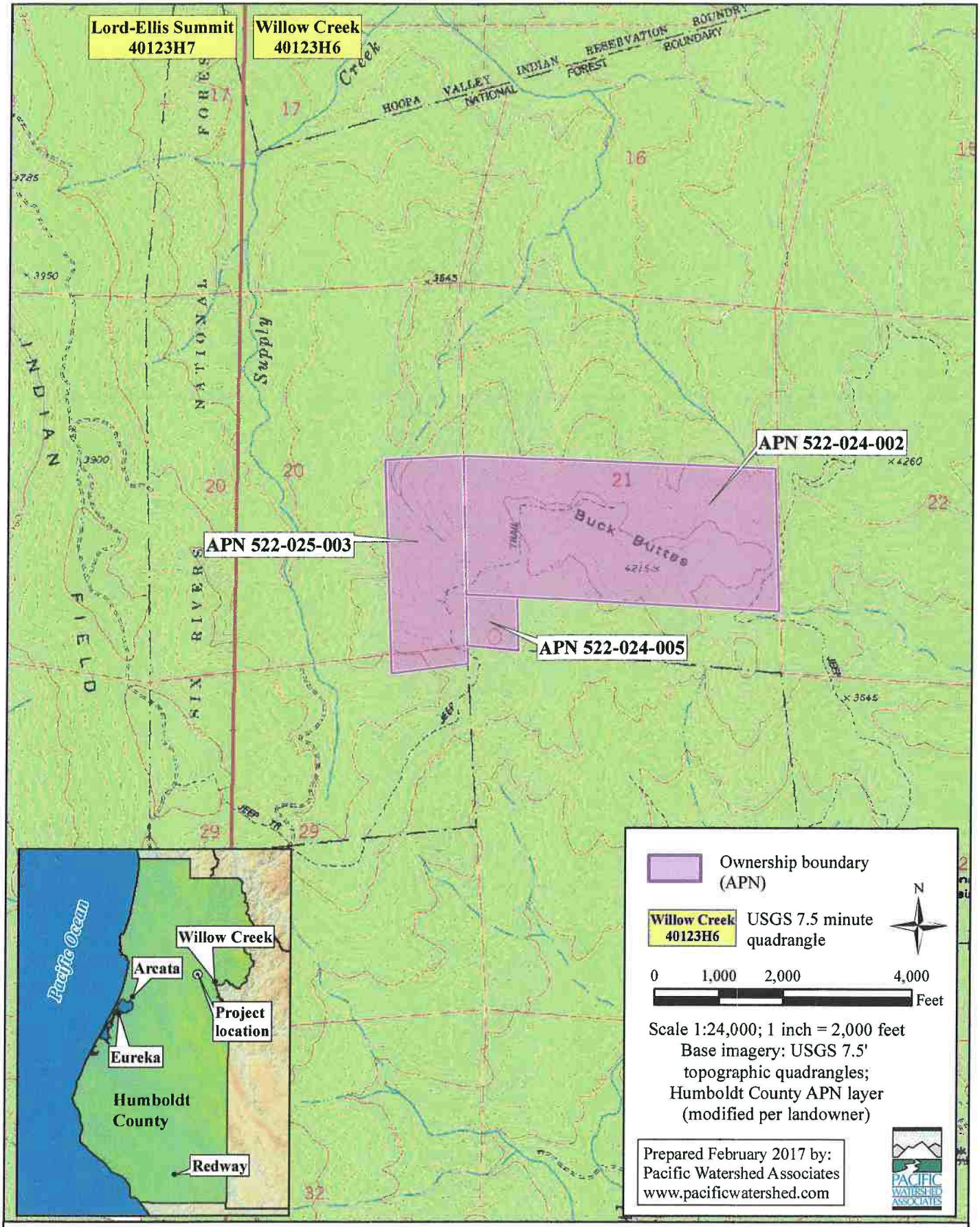

Figure 1. Location map for WDID #1B16635CHUM, APN 522-024-002, 522-024-005, and 522-025-003, Willow Creek, Humboldt County, California.

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3.0 INTRODUCTION

This Water Resources Protection Plan (WRPP) summarizes the results of Pacific Watershed Associate's (PWA) site visit and subsequent analysis and documentation of site conditions on APN 522-025-003, 522-024-002 and 522-024-005 located on New 3 Creeks Road, Willow Creek, 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 2A, 2B) 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 522-025-003, 522-024-002 and 522-024-005 as of 6/15/2016

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.

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: Roads on the Project Site have ruts and gullies due to long road segments lacking appropriate drainage features such as adequate outsloping, rolling dips and ditch relief culverts (DRC). Multiple sections of undrained road concentrate runoff causing surface erosion and sediment delivery to stream crossings and surface waters. The inlet of DRC #1 was plugged at the time of the Project Site inspection resulting in concentrated runoff that bypassed the culvert and caused surface erosion.

Photos: MP #1: Photo 1. MP #2: Photo 2a. MP #3: Photo 3a and 3b. MP #4: Photo 4a. MP #5: Photo 5a and 5b.

Corrective or remedial actions needed: See Figure 2 for proposed road drainage feature locations. Rolling dips should be spaced approximately 150-200 feet apart and connected to the cutbank or inboard ditch unless otherwise noted. Install eight rolling dips on Access Road #1 from 100 feet right of DRC #1 to 250 feet left of DRC #2. Install four rolling dips up the left road approach from Stream Crossing #1 (SC #1). Install two rolling dips to the right of SC #2. Install two rolling dips to the left of SC #3. Install additional rolling dips with adequate spacing intervals at any other location on the road system where concentrated road runoff and resultant rutting, rill erosion or gullying is observed. Typical drawings included in Appendix H will provide guidance for proper rolling dip construction.

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

Meets condition? No

Observations: See Standard Condition 4.1a observations and comments, above.

Photos: See Standard Condition 4.1a Monitoring Points and photos, above.

Corrective or remedial actions needed: See Standard Condition 4.1a corrective actions, above.

c) *Roads and other features shall be maintained so that surface runoff drains away from potentially unstable slopes or earthen fills. Where road runoff cannot be drained away*

from an unstable feature, an engineered structure or system shall be installed to ensure that surface flows will not cause slope failure.

Meets condition? No

Observations/Comments: Concentrated road surface runoff was observed to drain to slumping outboard fill that had been sidecast upslope of Pond #1 (MP#3). Concentrated road surface runoff was also observed to drain to a recently failed outboard landing fillslope at Cultivation Area #5 (CA #5; MP#5) and a recently failed outboard fillslope on Access Road #7 (MP#6).

Photos: MP #3: Photo 3a and 3b. MP #5: Photo 5a and 5b. MP #6: Photo 6.

Corrective or remedial actions needed: Ensure that the road drainage treatments (rolling dips) mentioned in 4.1a corrective actions, above, do not discharge road drainage runoff onto the landing pad and unstable fill upslope of Pond #1. The sidecast fill material at the outboard edge of CA #2 should be excavated using heavy equipment and stored in a location and manner where they cannot enter any surface water.

The remaining perched fill material at the landing fillslope failure at CA #5 should also be excavated to prevent future sediment delivery to the downslope stream network. An adequately sized hydraulic excavator, such as a Caterpillar 325 or 330, is recommended. A Caterpillar D-5 or D-6 bulldozer with a six way blade and rippers should be onsite to manage spoils and also be available for other stream crossing and road shaping work. The remaining perched fill should be excavated from the left edge to the right edge for approximately 120 feet wide and as far down as the hydraulic excavator can reach. The depth of the excavation should reach half way into the existing road bed or to stable native ground. Depending upon where stable native ground is encountered and how far downslope the hydraulic excavator can reach, fill volumes may range between 150 to 200 cubic yards, with the potential for variability depending on site conditions encountered at the time of the excavation. The existing inboard ditch directly upslope of the failure should be retained. This segment of inboard ditch should be cut at a grade to allow collected runoff to discharge on the hillslope to the southeast beyond the failure with minimum potential for infiltration directly upslope of the failure. Fill material from the excavation should be spoiled on the road bed to the right at a stable angle and with adequate compaction. Prior to spoiling fill material on the road bed, the road surface should be decompacted using the rippers on the bulldozer. The amount of compaction of the spoil material should allow for quick revegetation while still ensuring that spoil material will not mobilize. The entire road segment should be outsloped and any remaining inboard ditch filled in. All disturbed areas and bare soil should be mulched with native vegetation and seeded. The entire landslide, including downslope of the finished excavation area, should also be planted with willow trees to aid in desaturation and stabilization of the hillslope and mitigate potential sediment delivery. Treatment of this feature should occur as soon as possible, preferably before the upcoming winter season depending upon permitting requirements and heavy equipment availability, to prevent further mobilization of the remaining unstable fill material.

Due to the shallow remaining fillslope angle and low estimated sediment delivery volume at the failed outboard fillslope on Access Road #7, this location likely does not need immediate treatment but should be monitored for potential future failure. If

necessary, all applicable permits will need to be obtained prior to treatment of the fillslopes at these locations. These may include a Humboldt County Grading Permit, although this permit may not be required to address road maintenance issues.

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

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

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

Meets condition? No
Observations/Comments: The inlet of DRC #1 was completely plugged with sediment resulting in concentrated road runoff that bypassed the culvert and caused surface erosion. The outlet of DRC #2 showed signs of erosion at the outlet due to the culvert being installed high in the road fill, although some rock armor had been installed on the outboard fillslope. Although DRC #3 has a 12-inch diameter culvert, the inlet was open and the culvert is located in a low gradient area with heavy vegetation downslope of the outlet. Minimal erosion was observed at this location. Multiple locations where rolling dips were located also exhibited erosion of the road bed and outboard fillslope. Also see 4.1a and 4.1c observations and comments, above.
Photos: See Standard Condition 4.1a and 4.1c Monitoring Points and photos, above.
Corrective or remedial actions needed: Clean the inlet of DRC #1 and conduct regular inspections and maintenance of DRCs #1, #2 and #3 to ensure conveyance of flow and debris, to prevent plugging and to monitor the potential for erosion until these culverts are upgraded. Both DRC #1 (if smaller than 18-inch diameter) and DRC #3 should be upgraded to 18-inch diameter culverts. Install 0.5 foot diameter rock at the outlet of DRC #2 to prevent splash erosion or install an 18 inch diameter full-round downspout to outlet the inboard ditch flow at the base of the fillslope (Appendix H). Also see Standard Condition 4.1a corrective actions, above.

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

Meets condition? Yes
Observations/Comments: No stockpiled construction materials were observed on the Project Site with delivery potential to receiving waters.
Photos: No
Corrective or remedial actions needed: None

Standard Condition #1. - General comments and recommendations: Approximately 3.78 mi. of road was inspected on the Project Site, mostly comprised of a long ridge and upper mid-slope driveway, multiple access road spur roads, and several long quad trails. All roads occupy a ridge-top and mid-watershed location and exhibit surface erosion issues caused by a lack of road drainage structures and inadequate maintenance. Inadequate road drainage has contributed to outboard fillslope instability and failure at multiple locations on the Project Site. See 4.1a, 4.1c and 4.1e corrective actions, above, for treatment recommendations. The steep quad road (Quad Trail #2) upslope of SC #1 should be winterized by installing water bars at 50-foot spacing intervals prior to each winter wet season (November 1). Quads should not use the winterized (waterbarred) trail during the winter season from November 1 to March 15.

4.2 Standard Condition #2. Stream Crossing Maintenance

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

Meets condition? No

Observations/Comments: There are four stream crossings on the Project Site (Figure 2A, 2B), three of which have undersized culverts. Stream Crossing #1 has an appropriately sized 24-inch diameter culvert, but the culvert is set high in the fill and experiences continued outlet erosion. Stream Crossings #2 and #3 have undersized 24-inch diameter culverts, both of which should be upgraded to 42-inch diameter culverts. Stream Crossing #4 has an 18-inch diameter culvert installed as the spillway outlet culvert for Class III instream Pond #1. This culvert is slightly undersized based on PWA standards for stream crossings. Due to the fact that this culvert only conveys streamflow at high flow events, a spillway ditch has been installed at a level equal to or slightly below the inlet of the culvert, and the minimal drainage area upslope of the pond, the diameter of the culvert appears adequate for the near future. Peak flows will also be significantly muted because of the pond above the inlet, so the culvert is likely sufficient for the 100-year event. More importantly, this pond has been selected by the client for decommissioning as it is no longer needed, has not been used by the current landowner, is unpermitted and shows evidence of embankment instability. Methods for determining culvert sizes to address the 100-year peak streamflow include the Rational Method, USGS Magnitude and Frequency Method and Flow Transference Method. All of the stream crossing upgrades will be constructed according to standards provided in the "Handbook for Forest, Ranch and Rural Roads," (Weaver, Weppner, and Hagans, 2015), and the California Salmonid Stream Habitat Manual, Part X (Weaver et al., 2006).

Photos: MP #2: Photo 2a and 2b. MP #7: Photo 7. MP #4: Photo 4b. MP #8: Photo 8a.

Corrective or remedial actions needed: PWA recommends upgrading three stream crossings mentioned above (SC #1, #2 and #3) with properly sized culverts that are designed to pass the expected 100-year peak stream flow, as well as the other stream crossing construction standards required by the Order (e.g., minimized hydrologic connectivity, correct vertical and horizontal orientation, no diversion potential, etc.). PWA also recommends decommissioning SC #4 and Pond #1 during the 2017-2018 equipment season.

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: Three of the four stream crossings on the Project Site are undersized to pass debris associated with the expected 100-year peak streamflow.
Photos: See Standard Condition 4.2a Monitoring Points and photos, above.
Corrective or remedial actions needed: PWA recommends upgrading the stream crossings mentioned above with properly sized culverts that are designed to address debris associated with the expected 100-year peak stream flow and associated debris in transport.

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

Meets condition? No
Observations/Comments: Two of the four stream crossings (SC #2 and #3) on the Project Site are installed on intermittent streams and do not currently allow passage of aquatic organisms.
Photos: MP #7: No photo. MP #4: Photo 4b.
Corrective or remedial actions needed: Upgrade stream crossings #2 and #3 with properly designed and sized culverts to allow passage of aquatic organisms.

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

Meets condition? No
Observations/Comments: There was some erosion observed at the stream crossings on the Project Site and it appears adequate maintenance was not being performed.
Photos: MP #2: Photo 2b. MP #4: Photo 4b. MP #7: No photo.
Corrective or remedial actions needed: Upgrade the stream crossings mentioned above with properly designed crossings and culverts installed at grade and in line with the natural channel to prevent or minimize erosion from exposed surfaces. Monitor and perform adequate maintenance on all stream crossings before, during and after upgrading or decommissioning activities, including prior to each winter season and after major winter storms, to prevent or minimize erosion. Follow appropriate BMPs listed in Appendix A.

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

Meets condition? No
Observations/Comments: The culverted stream crossings on the Project Site are not installed at grade but appear to be horizontally aligned with the natural stream channel.
Photos: MP #2: Photo 2b. MP #4: Photo 4b. MP #7: No photo. MP #8: Photo 8a.
Corrective or remedial actions needed: Upgrade SC #1, #2 and #3 with properly installed culverts that align with the natural channel grade and stream alignment. Decommission the pond spillway/crossing at SC #4 (Pond #1) by removing the culvert

and the embankment fill, and restoring the channel to its natural grade and alignment with stable channel sideslopes that are gentler that a 2:1 slope gradient.

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: There is one stream crossing on the Project Site (SC #1) that has diversion potential down the right road approach. The rest of the stream crossings do not have diversion potential.

Photos: MP #2: No photo.

Corrective or remedial actions needed: When upgrading the culvert at SC #1, construct a critical dip on the right hinge line of the crossing fill to prevent stream diversion in case of a plugged culvert or exceptionally high flood flow.

Standard Condition #2. - General comments and recommendations: Obtain all necessary agreements and permits prior to commencing work in any watercourse or at any stream crossing. These may include, but not be limited to: California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA) 1602, State Water Resources Control Board (SWRCB) 401 Certification, and Army Corps of Engineers (ACOE) 404 Permit.

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

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

Meets condition? No

Observations/Comments: The 2,500 gallon water transfer tank, a small fuel can and a gas powered water pump are located downslope of SC #2 and #3 and are within the recommended 100-foot riparian setback required for a Class II watercourse (Figure 2A). A pile of potting soil (MP #9) has been placed within the 50 foot riparian buffer zone of a Class III stream (near SC #1) with the potential to enter surface waters. The lower portion of Cultivation Area #2, the Storage Shed west of DRC #2 and the potting soil next to the Storage Shed are slightly outside of the 50 foot riparian setback for a Class III stream but should be monitored to ensure no future impacts to the riparian area occur (Figure 2B). The fuel cans located next to Pond #2 are also within the 50 foot riparian buffer zone and should be relocated and equipped with secondary containment basins. PWA did not observe any other impacts to riparian areas as part of cultivation activities on this parcel.

Photos: MP #9: Photo 9. MP #10: Photo 10.

Corrective or remedial actions needed: Relocate the 2,500 gallon water tank, fuel can and gas powered water pump downslope of SC #2 and #3 to a suitable location outside of the 100-foot riparian buffer zone. The disturbed buffer area should then be

seeded, mulched for erosion control and replanted with riparian vegetation. Relocate the pile of potting soil (MP #9) near SC #1 to a secure location outside of the riparian buffer zone where there is no threat of delivery to surface waters. Relocate the fuel cans next to Pond #2 outside the 50 foot riparian buffer zone and equip with secondary containment basins. Monitor the area at the lower portion of CA #2 and near the storage shed to ensure no impacts to the riparian area occur. Although not within the 50 foot riparian buffer zone, the potting soil at MP #11 should be relocated to a location where the potential threat to surface waters does not exist and properly stored.

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

Meets condition? No

Observations/Comments: The placement of the 2,500 gallon water tank downslope of SC #2 and #3 has minimally impacted native vegetation and required minor grading of the natural hillslope using hand tools. The placement of the potting soil near SC #1 has been placed on a skid bench and appears to have minimal to no impact on native vegetation.

Photos: MP #9: Photo 9. MP #10: Photo 10.

Corrective or remedial actions needed: After relocation of the 2,500 gallon water tank PWA recommends replanting the impacted area with native vegetation. Reshaping the graded pad at this location is likely not necessary due to the minimal or non-existent threat of sediment delivery to surface waters. After relocation of the potting soil near SC #1, this area should also be replanted with native vegetation.

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

Meets condition? No

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

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

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

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

Meets condition? No

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

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

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

4.4 Standard Condition #4. Spoils Management

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

Meets condition? No

Observations/Comments: Construction (grading)-related spoils at the lower portion of CA #2 were observed to be sidecast onto the slope above Pond #1. This fill material, generated from excavation and grading of the adjacent landing, shows evidence of instability and has a high potential for delivery to surface waters. The unstable fill material on Access Road #7 (MP #6) and at CA #5 (MP #5) also appear to be the result of sidecasting and/or improper spoil management. A pile of potting soil has been placed within the 50-foot riparian buffer zone of a Class III stream (near SC #1) with the potential to enter surface waters.
Photos: MP #3: Photo 3a and 3b. MP #9: Photo 9.
Corrective or remedial actions needed: See Standard Condition 4.1c corrective actions, above, regarding treatments for the unstable sidecast fill material. See Standard Condition 4.3a and 4.3b corrective actions, above, regarding treatments for relocation of the pile of potting soil.

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

Meets condition? No
Observations/Comments: See Standard Condition 4.4a comment, above.
Photos: See Standard Condition 4.4a Monitoring Points and photos.
Corrective or remedial actions needed: See Standard Condition 4.1c corrective actions, above, regarding treatments for the unstable sidecast fill material. See Standard Condition 4.3a and 4.3b corrective actions, above, regarding treatments for relocation of the pile of potting soil.

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? No
Observations/Comments: See Standard Condition 4.4a comment, above.
Photos: MP #3: Photo 3a and 3b.
Corrective or remedial actions needed: See Standard Condition 4.1c corrective actions, above, regarding treatments for the unstable sidecast fill material.

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? No
Observations/Comments: The client diverts stream flow from two separate points of diversion (POD) located on different Class II streams (POD #1 and POD #2, Figure 2A). An off-stream pond (Pond #2, POD #3, Figure 2a) that is fed by rain, surface runoff and day lighted spring flow is also used for irrigation. This pond is considered a surface water diversion and will need to be inspected by CDFW and may be classified

as an instream pond at the headwaters of a Class III stream. Based on the 42,684 ft^2 cultivation area and the amount of water storage currently available (26,550 gallons in water tanks and 25,183 gallons in Pond #2), it appears that water storage generated during the rainy season is not sufficient for the landowner to forbear (not divert) during the dry season. However due to a lack of accurate water use data it is not definitively known if the operation impacts water quality. A Water Budget needs to be developed and refined by water monitoring to determine if additional storage is needed.
Photos: MP #12: Photo 12c. Photo 13. Photo 14.
Corrective or remedial actions needed: A Water Budget should be developed to determine sufficient water storage volumes needed on the Project Site for cultivation and other uses (domestic and irrigation) during low flow periods from May 15th through October 31st. A Water Monitoring Plan will also need to be implemented (see comments below). Under the Order, you are required to measure and document surface water diversions, storage and use for irrigation and other purposes throughout the year. PWA has created a simple log sheet to help you monitor this water data for your Project Site (Appendix D). PWA highly recommends, and state agencies may require, that you install flow meters on your water diversion infrastructure to accurately document your water diversion and use volumes over time. This water data will help you refine the water budget and the data will be reported annually to the North Coast Regional Water Quality Control Board (NCRWQCB) no later than each March 31st for the preceding calendar year. A groundwater well is proposed for the Project Site and is scheduled to be installed in 2017.

b) *Water conservation measures shall be implemented. Examples include use of rainwater catchment systems or watering plants with a drip irrigation system rather than with a hose or sprinkler system.*
Meets condition? Yes
Observations/Comments: A drip irrigation system with timers is used on the Project Site for water conservation.
Photos: No
Corrective or remedial actions needed: Additional water conservation measures should continue to be investigated and employed to minimize surface water diversion and use. These include: volume-limited drip irrigation systems, incorporating water holding amendments and native soil during the initial soil preparation at the start of the season, surface mulching pots and planting beds to minimize evaporation, irrigation scheduling (early morning and late afternoon watering), the use of compost and mulch fertilizer to improve soil structure and increase its water-holding capacity, and planting plants in the ground instead of in above-ground pots. Rainwater harvesting during the wet season should be evaluated and employed to limit or completely eliminate surface water diversions during the dry season.

As a water conservation measure, PWA further recommends adding or increasing rainwater harvesting activities and, if needed, adding rainwater-fed storage facilities sufficient to meet dry season irrigation needs. You should assess the size of the existing rainwater catchment system to determine if it is adequate to meet your water use needs during the dry season, and to support the addition of as much water storage as will be needed to forbear (not divert) in the summer irrigation period. If needed, investigate the

possibility of developing an off-stream pond that can be filled entirely through rainwater harvesting during the winter season.

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

Meets condition? No

Observations/Comments: Based on the total size of the cultivation area and existing off-stream water storage, it appears that adequate storage does not exist onsite to minimize or eliminate surface water diversions during the dry season. Based on water use estimates from the Humboldt County Planning and Building Department, adequate storage does not currently exist on the Project Site. These estimates suggest that 27 gallons of water is needed for every square foot of cultivation to observe the forbearance period. Based on the existing cultivation area of 42,684 ft^2, 1,152,468 gallons of storage would be needed to observe the 150 day forbearance period. Using rough irrigation estimates provided by the client, approximately half of the water storage recommended from the county values mentioned above would be needed to observe the forbearance period. The current amount of water storage (51,733 gallons) is not adequate for the size of the operation. Additional water storage requirements will be determined after the Water Budget has been developed and refined. Pond #2, located northwest of CA #3, may be considered an instream pond after inspection by CDFW. An instream pond (Pond #1, Figure 2B) exists to the east of CA #2 that was inherited from a previous owner and is not used for irrigation or domestic purposes. It is proposed for decommissioning and restoration. A groundwater well is proposed for the Project Site and is scheduled to be installed in 2017.

Photos: MP #12: Photo 12c.

Corrective or remedial actions needed: Develop a Water Budget to determine adequate off-stream storage requirements to minimize or eliminate surface water diversion during the dry season. Continue to pursue siting, permitting and installation of the proposed groundwater well to aid in completely eliminating dry season stream diversions. Any proposed water well site should be reviewed prior to drilling to ensure that it is not drawing on groundwater that is connected to surface streams.

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

Meets condition? Unknown

Observations/Comments: According to the cultivator, water is applied sparingly due to water scarcity, though application was not observed due to the early inspection date.

Photos: No

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

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

Meets condition? No

Observations/Comments: There are currently no registered water rights for the Project Site. An Initial Statement of Diversion and Use (ISDU) application for both points of diversion on the Class II streams (POD #1 and POD #2) and at Pond #2 (POD #3) will need to be submitted to the State Water Board. Supplemental water use reporting will be submitted on an annual basis as per reporting requirements.

Photos: MP #12: Photo 12c. Photo 13. Photo 14.

Corrective or remedial actions needed: Water diversion and water storage requires valid water rights documentation. File an Initial Statement of Diversion and Use for the stream diversions and spring-fed pond to cover your irrigation requirements. Appropriate water rights applications to be filed with the State Water Resources Control Board (SWRCB) include:

- Initial Statement of Diversion and Use (ISDU) http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/docs/intl_stmnt_form.pdf

Note: the SWRCB is currently developing a small irrigation appropriation for this region. PWA recommends that you apply for this small irrigation water right as soon as it becomes available.

As opposed to employing one or more surface water diversions, irrigation waters could be secured by developing rainwater capture systems to fill tanks and/or an off-stream, rainwater-fed pond, or by drilling a well. To be compliant with the SWRCB-DWR and CDFW, any drilled agricultural wells may need to be inspected and/or certified as unconnected to nearby surface waters (streams).

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

Meets condition? No

Observations/Comments: The instream pond (Pond #1) located east of CA #2 shows signs of instability of the pond embankment and the potential for catastrophic undermining of the spillway culvert (SC #4). This pond was inherited from a previous landowner, has been in place for approximately eight years, is not in use by the current landowners and is proposed for decommissioning in 2017-2018. The embankment of Pond #2 appeared stable at the time of the site inspection, however this pond should be inspected by a certified engineer to verify stability and proper design. An actual designed spillway was not observed at this pond however no erosion associated with overtopping was noted during the site inspection. Neither pond has been permitted with Humboldt County. Based on a cursory analysis of aerial imagery, Pond #1 appears to have been installed prior to October of 2006 and Pond #2 appears to have been installed prior to August of 2012. The majority of the water storage tanks utilized on

this Project Site are located on stable slopes far from any streams making it unlikely that water storage structure failures could result in delivery of runoff and eroded sediment to the stream network. The 2,500 gallon water tank downslope of SC #2 and #3 is located in close proximity to the Class II stream but it has been installed on a stable pad. Regardless, its location within the 100 foot buffer to the stream requires that it be moved outside that buffer under the Order.
Photos: MP #8: Photo 8a and 8b. MP #10: Photo 10. MP #12: Photo 12c.
Corrective or remedial actions needed: Decommission the instream pond (Pond #1) according to PWA specifications, remove the existing culvert (SC #4) and restore the natural channel grade and alignment during the 2017-2018 equipment seasons. Obtain all necessary permits prior to commencement of construction activities. Monitor the instream pond, embankment and spillway culvert (SC #4) for further signs of instability or potential failure until decommissioning activities are complete. See Standard Condition 4.3a and 4.3b corrective actions, above, for relocation of the 2,500 gallon tank. Pond #2 should be inspected by a licensed engineer for adequate outlet (overflow) design and embankment stability and for potential failure threats. CDFW may also want to inspect the pond to determine whether it is instream.

Standard Condition #5 - General comments and recommendations: Currently, the source of water for both irrigation and domestic use are two points of diversion located on two separate Class II streams and Pond #2 (Figure 2A). There is 26,550 gallons of water storage capacity in hard plastic tanks and 25,183 gallons in Pond #2. Pond #2 will need to be inspected by a certified engineer and CDFW. At this time it appears that the water storage capacity contained within this Project Site does not fully satisfy the demand that would be expected from the cultivation area (~42,684 ft^2) during the dry season (May 15th through October 31st). A Water Budget will be developed and refined by water monitoring to determine if water storage is adequate or whether dry season surface water diversions are required for the operation. A groundwater well is proposed for the Project Site and scheduled to be installed in 2017. Additional storage will need to be added so the diverter can completely forbear (not divert) during the dry season. In this way, as per the Order, it can then be assumed that water use will not impact downstream water quality or beneficial uses.

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

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

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

4.6 Standard Condition #6. Irrigation Runoff

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

Meets condition? Yes
Observations/Comments: No evidence of irrigation runoff was observed on the Project Site with the threat of discharge to nearby watercourses. Because irrigation is limited to a drip system and precise hand watering, there is a high degree of control. With the closest stream located more than 50 feet away from the closest cultivation area, any runoff that theoretically might flow off the Project Site could not travel far due to the low gradient topography and adequate vegetative buffer. Overwatering can still lead to excessive nutrient leaching and impacts to groundwater.
Photos: No
Corrective or remedial actions needed: None

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

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

4.7 Standard Condition #7. Fertilizers and Soil Amendments

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

Meets condition? No

Observations/Comments: Most fertilizers and amendments are stored inside a storage shed or tarped during the wet season; however some fertilizers and potting soil were observed to be stored outdoors, uncovered and/or lacking adequate secondary containment.

Photos: MP #9: Photo 9. MP #11: Photo 11a, 11b and 11c.

Corrective or remedial actions needed: Soil amendments, potting soils and fertilizers stored near SC #1, the Storage Shed, CA #3, and anywhere else on the Project Site, shall be stored within a water tight building or covered area not exposed to the elements or, if stored outdoors, fully tarped in a stable location with no chance of nutrient leaching or runoff and delivery to surface waters. Adequate secondary containment, especially for liquid chemicals, should be used where applicable. Also see Standard Condition 4.3a and 4.3b for additional treatment recommendations regarding potting soil near SC #1. 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: No

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

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

Meets condition? No

Observations/Comments: Potting soil at multiple cultivation areas was observed to be left uncovered with the potential for nutrient mobilization to surface waters or leaching into groundwater if left uncovered over the wet season.

Photos: MP #9: Photo 9. MP #11: Photo 11a and 11c.

Corrective or remedial actions needed: To prevent nutrient mobilization, you should: 1) keep new or spent potting soils and amendments inside or under a roof or 2) fully tarp any exposed soils or amendments that are kept outside over the wet season to prevent mobilization or leaching of nutrients. You should remove and properly store spent soils in planting holes, pots and beds, or plant dense cover crops to enrich soil

and lock up nutrients over the wet season. If dense cover crops cannot be kept alive (due to cold temperatures or snow), all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients. Also see Standard Condition 4.3a and 4.3b for additional treatment recommendations regarding potting soil near SC #1.

Standard Condition #7 - General comments and recommendations: A portion of the fertilizers, potting soil and soil amendments on the Project Site were observed to be stored outdoors without cover or secondary containment. Potting soil was also observed to be left uncovered with the potential for mobilization or leaching of nutrients if not covered over the wet season. Fertilizers and amendments were reportedly applied according to packaging instructions, and usage is diminished or eliminated toward the end of the growing season.

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

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

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

4.8 Standard Condition #8. Pesticides/Herbicides

a) *At the present time, there are no pesticides or herbicides registered specifically for use directly on cannabis and the use of pesticides on cannabis plants has not been reviewed for safety, human health effects, or environmental impacts. Under California law, the only pesticide products not illegal to use on cannabis are those that contain an active ingredient that is exempt from residue tolerance requirements and either registered and labeled for a broad enough use to include use on cannabis or exempt from registration requirements as a minimum risk pesticide under FIFRA section 25(b) and California Code of Regulations, title 3, section 6147. For the purpose of compliance with conditions of this Order, any uses of pesticide products shall be consistent with product labelling and any products on the site shall be placed, used, and stored in a manner that ensures that they will not enter or be released into surface or ground waters.*

Meets condition? Unknown

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

Photos: No

Corrective or remedial actions needed: All pesticides, herbicides and related materials (e.g., fungicides) must be used and applied consistent with product labeling. When present, these chemicals should be stored within enclosed buildings in such a

way they cannot enter or be released into surface or ground waters. To verify conformance with this Standard Condition, you are required to keep track of the type, timing and volume of pesticides, herbicides and related chemicals that are applied your operations. This can be done using a simple log form, such as the one included in Appendix F.

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

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

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

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

4.9 Standard Condition #9. Petroleum Products and other Chemicals

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

Meets condition? No

Observations/Comments: There are multiple small fuel cans, generators and water pumps on the Project Site that lack adequate secondary containment. One of the water pumps and a small fuel can are also located within the riparian buffer zone of a Class II stream and do not have adequate secondary containment. Two small fuel cans are located in close proximity to an off-stream pond (Pond #2) and also lack adequate secondary containment. Note that when petroleum products are onsite they will need to be stored under cover, off the ground and in a secondary containment basin (tote, tub, etc.) capable of containing the entire stored volume.

Photos: MP #10: Photo 10. MP #11: Photo 11b. MP #12: Photo 12a and 12b.

Corrective or remedial actions needed: Place all small fuel cans, generators, water pumps, diesel tanks, gasoline powered garden equipment and any other items containing petroleum products in adequate secondary containment basins (tote, tub, impermeable basin/floor etc.) and store in a safe and secure location out of the

elements. Relocate the water pump and small fuel can outside of the 100-foot riparian buffer zone of the Class II stream and store in adequate secondary containment basins. Relocate the two small fuel cans near Pond #2 to a safe and secure location away from the pond and store under cover, off the ground, and in adequate secondary containment vessels.

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: No above ground storage tanks or containers other than the items discussed in Standard Condition 4.9a, above, were observed on the Project Site.
Photos: See Standard Condition 4.9a Monitoring Points and photos, above.
Corrective or remedial actions needed: See Standard Condition 4.9a corrective actions, above.

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

Meets condition? Yes
Observations/Comments: No diked areas were observed on the Project Site.
Photos: No
Corrective or remedial actions needed: None

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

Meets condition? No
Observations/Comments: No spill prevention cleanup kit is kept onsite to help clean up small spills.
Photos: No
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 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? Yes
Observations/Comments: No underground storage tanks were observed on the Project Site.
Photos: No
Corrective or remedial actions needed: None

Standard Condition #9 - General comments and recommendations: Place all fuel cans, generators and water pumps under cover, off the ground and in adequate secondary containment basins (tote, tub, impermeable floor, etc.). Relocate the fuel cans and water pumps located within the Class II riparian buffer zone and fuel cans near Pond #2 to safe and secure locations and equip with adequate secondary containment. Due to the amount of

petroleum products stored onsite at the time of the Project Site inspection, a Hazardous Material Business Plan (HMBP) must be developed for the Project Site.

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

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

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

4.10 Standard Condition #10. Cultivation-Related Wastes

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

Meets condition? No

Observations/Comments: Plant waste from cultivation activities is burned on the Project Site. A burn pile was observed to be located in close proximity to a previously failed outboard landing fillslope and has the potential for delivery to surface waters in the event of a future slope failure.

Photos: MP #5: Photo 5a.

Corrective or remedial actions needed: Relocate the burn pile near the outboard fillslope failure at CA #5 to a safe and secure location. Incorporate the ashes in potting soil to be reused or cover the ashes to prevent leaching into groundwater or mobilization to surface waters during winter rain events. Collect all future cultivation-related waste material located on the Project Site and dispose of properly at an appropriate waste disposal facility or by burning, shredding or composting.

The Project Site contained uncovered spent soil in several areas. Either 1) fully tarp or otherwise cover spent plant stalks, root balls, soil piles and potted spent soils 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 at the end of the growing season and store the materials indoors or undercover during the off-season.

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

4.11 Standard Condition #11. Refuse and Human Waste

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

Meets condition? No

Observations/Comments: The Order requires County permitted or approved OWTS. The three existing Onsite Wastewater Treatment Systems (OWTS) are unpermitted and it is not known if they are properly sized or designed for the existing residences. The three existing OWTS appear to be located in stable areas and are functioning properly according to the landowner.

Photos: No

Corrective or remedial actions needed: All three (3) OWTSs on the Project Site must be permitted by the Humboldt County Division of Environmental Health. Proof of permitting is required. Since the three existing OWTS are not permitted, PWA recommends you: 1) conduct the necessary system inspections and subsurface investigations and improve the existing systems (if possible and necessary) to meet the HCDEH standards required to obtain a retroactive permit for each of the existing OWTS, or 2) conduct wet weather testing and onsite investigations to site, design and install a newly permitted OWTS for each of the residences on the Project Site. Either way, the systems must be designed to serve the number of residents and workers that will be present on the Project Site when your cultivation-related operations are at their peak.

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

Meets condition? Yes

Observations/Comments: Garbage and refuse was observed to be stored properly and securely at the time of the Project Site inspection.

Photos: No

Corrective or remedial actions needed: Continue to store all garbage and refuse in lidded cans at a safe and secure location where the threat to waters of the state is eliminated.

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

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

4.12 Standard Condition #12. Remediation/Cleanup/Restoration

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

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

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

Meets condition? Yes

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

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

5.0 PRIORITIZED CORRECTIVE ACTIONS AND SCHEDULE TO REACH FULL COMPLIANCE

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

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
1 – Site Maintenance, Erosion Control and Drainage Features	1a, b, d	High	Oct. 15, 2019	- See Figure 2 for proposed road drainage feature locations. Rolling dips should be spaced approximately 150-200 feet apart and connected to the cutbank or inboard ditch unless otherwise noted. - Install eight rolling dips on Access Road #1 from 100 feet right of DRC #1 to 250 feet left of DRC #2. - Install four rolling dips up the left road approach from Stream Crossing #1 (SC #1). - Install two rolling dips to the right of SC #2. - Install two rolling dips to the left of SC #3. - Install additional rolling dips with adequate spacing intervals at any other location on the road system where concentrated road runoff and resultant rutting, rill erosion or gullying is observed. Typical drawings included in Appendix H will provide guidance for proper rolling dip construction.	MP #1, Photo 1 MP #2, Photo 2a MP #3, Photo 3a, 3b MP #4, Photo 4a MP #5, Photo 5a, 5b	
	1c	High	Oct. 15, 2019	- Ensure that the road drainage treatments (rolling dips) mentioned in 4.1a corrective actions, above, do not discharge road drainage runoff onto the landing pad and unstable fill upslope of Pond #1. - The sidecast fill material at the outboard edge of CA #2 should be excavated using heavy equipment and stored in a location and manner where they cannot enter any surface water. - The remaining perched fill material at the landing fillslope failure at CA #5 should also be excavated to prevent future sediment delivery to the downslope stream network. An adequately sized hydraulic excavator, such as a Caterpillar 325 or 330, is recommended. A Caterpillar D-5 or D-6 bulldozer with a six way blade and rippers should be onsite to manage spoils and also be available for other stream crossing and road shaping work. The remaining perched fill should be excavated from the left edge to the right edge for approximately 120 feet wide and as far down as the hydraulic excavator can reach. The depth of the excavation should reach half way into the existing road bed or to stable native ground. Depending upon where stable native ground	MP #3, Photo 3a, 3b MP #5, Photo 5a, 5b MP #6, Photo 6	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
				is encountered and how far downslope the hydraulic excavator can reach, fill volumes may range between 150 to 200 cubic yards, with the potential for variability depending on site conditions encountered at the time of the excavation. The existing inboard ditch directly upslope of the failure should be retained. This segment of inboard ditch should be cut at a grade to allow collected runoff to discharge on the hillslope to the southeast beyond the failure with minimum potential for infiltration directly upslope of the failure. Fill material from the excavation should be spoiled on the road bed to the right at a stable angle and with adequate compaction. Prior to spoiling fill material on the road bed, the road surface should be decompacted using the rippers on the bulldozer. The amount of compaction of the spoil material should allow for quick revegetation while still ensuring that spoil material will not mobilize. The entire road segment should be outsloped and any remaining inboard ditch filled in. All disturbed areas and bare soil should be mulched with native vegetation and seeded. The entire landslide, including downslope of the finished excavation area, should also be planted with willow trees to aid in desaturation and stabilization of the hillslope and mitigate potential sediment delivery. Treatment of this feature should occur as soon as possible, preferably before the upcoming winter season depending upon permitting requirements and heavy equipment availability, to prevent further mobilization of the remaining unstable fill material. - Due to the shallow remaining fillslope angle and low estimated sediment delivery volume at the failed outboard fillslope on Access Road #7, this location likely does not need immediate treatment but should be monitored for potential future failure. - If necessary, all applicable permits will need to be obtained prior to treatment of the fillslopes at these locations. These may include a Humboldt County Grading Permit, although this permit may not be required to address road maintenance issues.		
	1e	Moderate	Oct. 15, 2019	- Clean the inlet of DRC #1 and conduct regular inspections and maintenance of DRCs #1, #2 and #3 to ensure conveyance of flow and debris, to prevent plugging and to monitor the potential for erosion until these culverts are upgraded. - Both DRC #1 (if smaller than 18-inch diameter) and DRC #3 should be upgraded to 18-inch diameter culverts. - Install 0.5 foot diameter rock at the outlet of DRC #2 to prevent splash erosion or install an 18 inch diameter full-round downspout to outlet the inboard ditch flow at the base of the	MP #1, Photo 1 MP #2, Photo 2a MP #3, Photo 3a, 3b MP #4, Photo 4a MP #5, Photo 5a, 5b	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
				fillslope (Appendix H). Also see Standard Condition 4.1a corrective actions, above. - The steep quad road (Quad Trail #2) upslope of SC #1 should be winterized by installing water bars at 50-foot spacing intervals prior to each winter wet season (November 1). - Quads should not use the winterized (waterbarred) trail during the winter season from November 1 to March 15.		
2 – Stream Crossing Maintenance	2a, b, c, e, f	High	Oct. 15, 2020	- Upgrade three of the four stream crossings on the Project Site (SC #1, #2 and #3) for the 100-year discharge; employ standard BMPs (Appendix A) including debris passage, culvert alignment and diversion potential. - Upgrade Stream Crossing #1 with a 24-inch diameter culvert properly installed at the natural channel grade and with no diversion potential. - Upgrade Stream Crossing #2 and #3 with 42-inch diameter culverts properly installed at the natural channel grade and that also provide for aquatic organism passage.	MP #2, Photo 2a, 2b MP #7, Photo 7 MP #4, Photo 4b	
	2d	High	Oct. 15, 2020	- Upgrade the stream crossings mentioned above to prevent or minimize erosion from exposed surfaces. Apply erosion control (seeding and mulching) of bare soils after upgrading. - Monitor and perform adequate maintenance on all stream crossings before, during and after upgrading or decommissioning activities to prevent or minimize erosion following appropriate BMPs listed in Appendix A.	MP #2, Photo 2b MP #4, Photo 4b MP #7, No photo	
	2e	High	October 15, 2020	Upgrade SC #1, #2 and #3 with properly installed culverts that align with the natural channel grade and stream alignment. - Decommission the pond spillway/crossing at SC #4 (Pond #1) by removing the culvert and the embankment fill, and restoring the channel to its natural grade and alignment with stable channel sideslopes that are gentler that a 2:1 slope gradient. - Decommission the pond spillway/crossing at SC #4 (Pond #1) during the 2017-2018 summer equipment season. Remove the culvert and restore the channel to its natural grade, stable sideslopes (≤ 2:1 gradient) and alignment. - Stream Crossing #4 and the associated instream pond should be decommissioned employing approved decommissioning BMPs and specifications (see Appendices A and H).	MP #2, Photo 2b MP #4, Photo 4b MP #7, No photo MP #8, Photo 8a, 8b	
	2f	High	Oct. 15, 2019	When upgrading the culvert at SC #1, construct a critical dip on the right hinge line of the crossing fill to prevent stream diversion in case of a plugged culvert or exceptionally high flood flow.	MP #2, No photo	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	2a-f	High	Prior to any stream crossing work	Obtain all necessary agreements and permits prior to commencing work in any watercourse or at any stream crossing. These may include, but not be limited to: California Department of Fish and Wildlife (CDFW) Lake and Streambed Alteration Agreement (LSAA) 1602, State Water Resources Control Board (SWRCB) 401 Certification, and Army Corps of Engineers (ACOE) 404 Permit.	--	
3 – Riparian and Wetland Protection and Management	3a, b, c, d	High	Oct. 15, 2020	- Relocate the 2,500 gallon water tank, fuel can and gas powered water pump downslope of SC #2 and #3 to a suitable location outside of the 100-foot riparian buffer zone. - The disturbed buffer area should then be seeded, mulched for erosion control and replanted with riparian vegetation. - Relocate the pile of potting soil (MP #9) near SC #1 to a secure location outside of the riparian buffer zone where there is no threat of delivery to surface waters. - Relocate the fuel cans next to Pond #2 outside the 50-foot riparian buffer zone and equip with secondary containment basins. - Monitor the area at the lower portion of CA #2 and near the storage shed to ensure no impacts to the riparian area occur. - Although not within the 50 foot riparian buffer zone, the potting soil at MP #11 should be relocated to a location where the potential threat to surface waters does not exist and properly stored.	MP #9, Photo 9 MP #10, Photo 10	
4 – Spoils Management	4a, b, c	Moderate-High	Oct. 15, 2019	- See Standard Condition 4.1c corrective actions, above, regarding treatments for the unstable sidecast fill material at the lower portion of CA #2. - See Standard Condition 4.3a and 4.3b corrective actions, above, regarding treatments for relocation of the pile of potting soil near SC #1.	MP #3, Photo 3a, 3b MP #9, Photo 9	
5 – Water Use	5a	Moderate-High	May 31, 2018 and continuing	Develop and refine a Water Budget for the Project Site to determine water needs and required storage volumes needed for forbearing during the entire dry season from May 15th - October 31st.	--	
	5a	High	May 31, 2018 and continuing	Implement a Water Monitoring Plan on the Project Site: - Install float valves on storage tanks to prevent overflow. - Install water monitoring meters on your surface water diversions and water tanks. - Monitor and record the timing and volume of surface water diversions, water storage and water use using the log sheets provided in Appendix D.	--	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	5b	Moderate	May 31, 2018 and continuing	- Increase the use of water saving strategies, such as volume-limited drip irrigation systems, incorporating water holding amendments and native soil during soil preparation, surface mulching pots and planting beds, or planting cover crops to minimize evaporation, irrigation scheduling, using compost mulch and fertilizer, and planting plants in the ground instead of in above-ground pots. - Rainwater harvesting during the wet season should be evaluated and employed as feasible to limit or completely eliminate surface water diversions during the dry season. - PWA further recommends you add or increase rainwater harvesting activities and investigate the possibility of developing an off-stream pond or additional rigid tanks that can be filled entirely through rainwater harvesting during the winter season.	--	
	5c	Moderate-High	May 31, 2018 and continuing	Develop and refine a Water Budget to determine adequate off-stream storage requirements to minimize or eliminate surface water diversion during the dry season.	--	
	5c	Moderate	May 31, 2018 and continuing	- Continue to investigate siting and permitting of the proposed groundwater well to aid in completely eliminating dry season stream diversions. - Any proposed water well site should be reviewed prior to drilling to ensure that it is not drawing on shallow groundwater or groundwater that is connected to surface streams.	--	
	5c	High	March 1, 2019 or sooner	- Install the bedrock groundwater well if and when it is determined feasible and after permits are secured. - If determined feasible and needed, locate, design and construct one or more permitted off-stream, rainwater-fed ponds and/or additional rigid water tanks sufficient to provide enough water storage so that you can forbear (not divert surface waters) during the dry season from May 15 through October 31 each year.		
	5d	Moderate	May 31, 2018 and continuing	- Start measuring and recording your average water usage on a per plant basis, based on type and size of plant pot, full term versus short season (light deprivation) plant, and type of irrigation, in order to develop and refine a Water Budget for your operation. - Observe and monitor soil moisture so watering, fertilizer and chemical applications are made only when necessary and overwatering and excess infiltration is avoided.	--	
	5e	High	June 30, 2018	- Submit an Initial Statement of Diversion and Use (ISDU) application before June 30, 2017 for both points of stream diversion and for the spring diversion at Pond #2.	MP #12, Photo 12c Photo 13 Photo 14	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
				- File for a Small Irrigation Use (SIU) water right for your agricultural water use when it is made available by the SWRCB-DWR later in 2017.		
	5f	High	Oct. 15, 2020	- Decommission the instream pond (Pond #1) according to PWA specifications, remove the existing culvert (SC #4) and restore the natural channel grade, channel alignment and stable sideslope (≤ 50%) gradient during the 2018-2019 equipment season if possible. - Obtain all necessary permits prior to commencement of construction activities. - Monitor the instream pond, embankment and spillway culvert (SC #4) for further signs of instability or potential failure until decommissioning activities are complete. - See Standard Condition 4.3a and 4.3b corrective actions, above, for relocation of the 2,500 gallon tank. - Pond #2 should be inspected by a licensed engineer for adequate outlet (overflow) design and embankment stability and for potential failure threats.	MP #8, Photo 8a, 8b MP #10, Photo 10 MP #12, Photo 12c	
	5	High	Oct. 15, 2019	Consult with California Department of Fish and Wildlife (CDFW) staff and file for a CDFW Lake and Streambed Alteration Agreement (LSAA) for the two stream diversions, the spring diversion at Pond #2, Pond #1 decommissioning, and any proposed stream crossing upgrade and decommissioning work on the Project Site.	--	
7 - Fertilizer and Amendment Use	7a	High	Oct. 15, 2018 and continuing	- Soil amendments, potting soils and fertilizers stored near SC #1, the Storage Shed, CA #3, and anywhere else on the Project Site, shall be stored within a water tight building or covered area not exposed to the elements or, if stored outdoors, fully tarped in a stable location with no chance of nutrient leaching or runoff and delivery to surface waters. - Adequate secondary containment, especially for liquid chemicals, should be used where applicable. - Also see Standard Condition 4.3a and 4.3b for additional treatment recommendations regarding potting soil near SC #1. - Fertilizers, soil amendments, and hazardous chemicals should not be stored with petroleum products as they are considered incompatible materials and could potentially react.	MP #9, Photo 9 MP #11, Photo 11a, 11b, 11c	
	7b	High	May 31, 2018 and continuing	To confirm compliance with this Standard Condition, you are required by the Order to keep detailed records of the type, timing and volume of fertilizers and/or other soil amendments you use in your operations. Use log sheets provided in Appendix E.	--	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
	7c	High	Oct. 15, 2018 and annually	- To prevent nutrient mobilization, you should: 1) keep new or spent potting soils and amendments inside or under a roof or 2) fully tarp any exposed soils or amendments that are kept outside over the wet season to prevent mobilization or leaching of nutrients. - You should remove and properly store spent soils in planting holes, pots and beds, or plant dense cover crops to enrich soil and lock up nutrients over the wet season. If dense cover crops cannot be kept alive (due to cold temperatures or snow), all planted areas should be tarped to protect them from rainfall, snowmelt and subsequent infiltration and leaching of nutrients. - Also see Standard Condition 4.3a and 4.3b for additional treatment recommendations regarding potting soil near SC #1.	MP #9, Photo 9 MP #11, Photo 11a, 11c	
8 – Pesticides and Herbicides	8	Moderate-High	May 31, 2018 and continuing	Under the Order you are required to keep detailed records of the type, timing and volume of any pesticides, herbicides or other chemicals you use in your operations on log sheets such as those PWA has provided in Appendix F.	--	
9 – Petroleum Products and Other Chemicals	9a, b	High	May 31, 2018 and continuing	- Place all small fuel cans, generators, water pumps, diesel tanks, gasoline powered garden equipment and any other items containing petroleum products in adequate secondary containment basins (tote, tub, impermeable basin/floor etc.) and store in a safe and secure location out of the elements. - Relocate the water pump and small fuel can outside of the 100-foot riparian buffer zone of the Class II stream and store in adequate secondary containment basins. - Relocate the two small fuel cans near Pond #2 to a safe and secure location away from the pond and store under cover, off the ground, and in adequate secondary containment vessels.	MP #10, Photo 10 MP #11, Photo 11b MP #12, Photo 12a, 12b	
	9d	High	June 1, 2018	Obtain and make available one or more spill prevention cleanup kits to clean up small spills. Spill kits should be located where fuel is stored and refueling occurs.	--	
	9`	High	Oct. 31, 2018	Develop a Hazardous Material Business Plan (HMBP) for the Project Site if necessary.	--	
10 – Cultivation-Related Waste	10	Moderate	Oct. 15, 2018 and annually	- Relocate the burn pile near the outboard fillslope failure at CA #5 to a safe and secure location. Incorporate the ashes in potting soil to be reused or cover the ashes to prevent leaching into groundwater or mobilization to surface waters during winter rain events. - Collect all future cultivation-related waste material located on the Project Site and dispose of properly at an appropriate waste disposal facility or by burning, shredding or composting.	MP #5, Photo 5a	

Standard Condition Requiring Action		Treatment Priority	Schedule	Summary of Corrective Actions/Recommendations (see more detailed listing of corrective actions in Section 4, above)	Monitoring Point and Photo #	Date Completed
				- The Project Site contained uncovered spent soil in several areas. Either 1) fully tarp or otherwise cover spent plant stalks, root balls, soil piles and potted spent soils 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 at the end of the growing season and store the materials indoors or undercover during the off-season.		
11 – Refuse and Human Waste	11a	Moderate-High	Dec. 31, 2020 or sooner	- All three (3) OWTSs on the Project Site must be permitted by the Humboldt County Division of Environmental Health. Proof of permitting is required. - Since the three existing OWTS are not permitted, PWA recommends you: 1) Conduct the necessary system inspections and subsurface investigations and improve the existing systems (if possible and necessary) to meet the HCDEH standards required to obtain a retroactive permit for each of the existing OWTS; **or** 2) Conduct wet weather testing and onsite investigations to site, design and install newly permitted OWTS for each of the residences on the Project Site that cannot be retroactively permitted. - The OWTS must be designed to serve the number of residents and workers that will be present on the Project Site when your cultivation-related operations are at their peak.	--	

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 2A and 2B to review the monitoring plan and specific monitoring points for which you are responsible.

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

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

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

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

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

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

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

7.0 WATER USE PLAN

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

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

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

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

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

Water Storage and Forbearance – The ultimate goal of the applicant is to accumulate enough water storage capacity to forebear the entire period from May 15th to October 31st. According to

the Order, this will ensure the timing of water use is not impacting water quality objectives and beneficial uses. There is 26,550 gallons of water storage in tanks and 25,183 gallons in Pond #2 used for irrigation and domestic use currently on the Project Site. Based on the size of the cultivation area (42,684 ft^2) it does not appear that there is adequate storage to avoid surface water diversions during the dry season from May 15th through October 31st. A Water Budget will need to be developed and refined using your water monitoring data to determine if additional storage is needed for your operations to forbear (not divert) during this period. A groundwater well is proposed for the Project Site and is scheduled to be installed in 2017. This groundwater well should be used to fill water storage outside of the forbearance period so as to further limit or completely eliminate surface water diversions during the dry summer season. Adequate storage volumes will still be needed to account for water used for irrigation to observe the forbearance period.

Water Conservation - Water conservation measures currently practiced include the use of a timed drip irrigation system and controlled hand watering. We suggest growing many of the plants in-ground (as compared to above ground pots) and watering late in the afternoon or evening to minimize water loss through evaporation and maximize water up-take by the plants. Starting this year, new water conserving techniques and equipment will be utilized and tested to evaluate their effectiveness and efficiency. Test and deploy volume-limited drip emitters and incorporating water holding amendments and native soil during the initial soil preparation at the start of the season. Other possible water conservation techniques are described in Section 4.5b of this WRPP.

As a water conservation measure, PWA further recommends adding or increasing rainwater harvesting activities and adding rainwater-fed storage facilities sufficient to meet dry season irrigation needs. This can include one or more off-stream, rainwater-fed ponds and/or additional rainwater-fed rigid water tanks.

Water sources and use - Though several Class II and Class III streams are located within the Project Site parcel, the water used for irrigation activities comes from two stream diversions (POD #1 and POD #2) and Pond #2 (POD #3) identified in Figure 2A. Rainwater harvesting should be evaluated and employed where possible to limit surface water diversion during the dry season. When and if new ponds are approved and constructed, they should be designed to be off-stream and rainwater-fed so your operations will have minimal or no impact on downstream water quality and aquatic habitat, especially during the dry summer months.

At this time, the client has a rough estimate of the amount of water that is used monthly and annually on this Project Site for irrigation purposes. Based on water use estimates from the Humboldt County Planning and Building Department, adequate storage does not currently exist on the Project Site. These estimates suggest that 27 gallons of water is needed for every square foot of cultivation to observe the forbearance period. Based on the existing cultivation area of 42,684 ft^2, 1,152,468 gallons of storage would be needed to observe the 150 day forbearance period. Using rough irrigation estimates provided by the client, approximately half of the water storage recommended from the county values mentioned above would be needed to observe the forbearance period. It will be important for you to keep accurate records of your water diversion, storage and use so that it can be reported on or before March 31 each year, for the previous calendar year, as required by the NCRWQCB. The more frequently and accurately water use is recorded, the better you will understand the water uses and needs of your farm, the value of water

conservation, and the volume of water storage that is needed for you to forbear (not divert from streams) during the dry summer growing season.

Over the course of the upcoming cultivation season, water use should be accurately measured and documented using the log forms supplied to you by PWA, attached in Appendix D. Annual reporting of diversion and use rates are required to be submitted annually to the State Water Resource Control Board (Division of Water Rights). As more accurate 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. Water rights registrations will be filed with the SWRCB-DWR for both domestic and agricultural water uses. The landowner will also consult with CDFW about the need for obtaining a Lake and Streambed Alteration Agreement for water diversions, ponds and the three road-stream crossings on the Project Site.

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:

Bone Meal	150 lbs
Humic Acid	150 lbs
Seaweed	250 lbs
Moca Guano	275 lbs
Molasses	24 gal
Azomite	165 lbs
Nitro Guano	220 lbs
Black Gold Organic Soil	40,000 lbs
Rainbow Mix Organic Soil	300 lbs

Pesticides, Herbicides, and Fungicides:
No pesticides, herbicides or fungicides were reported to be used.

Petroleum and Other Chemicals:
Gasoline
Motor oil
Propane
Solar batteries

9.0 LANDOWNER/LESSEE CERTIFICATION/SIGNATURES

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

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

Name of Legally Responsible Person (LRP): MIKE SCHAEFFER

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

Signature: _____ Date: 11-17-17

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

WRPP prepared and finalized on (date): 11/17/17

Signature: _____

Date: 11/17/17

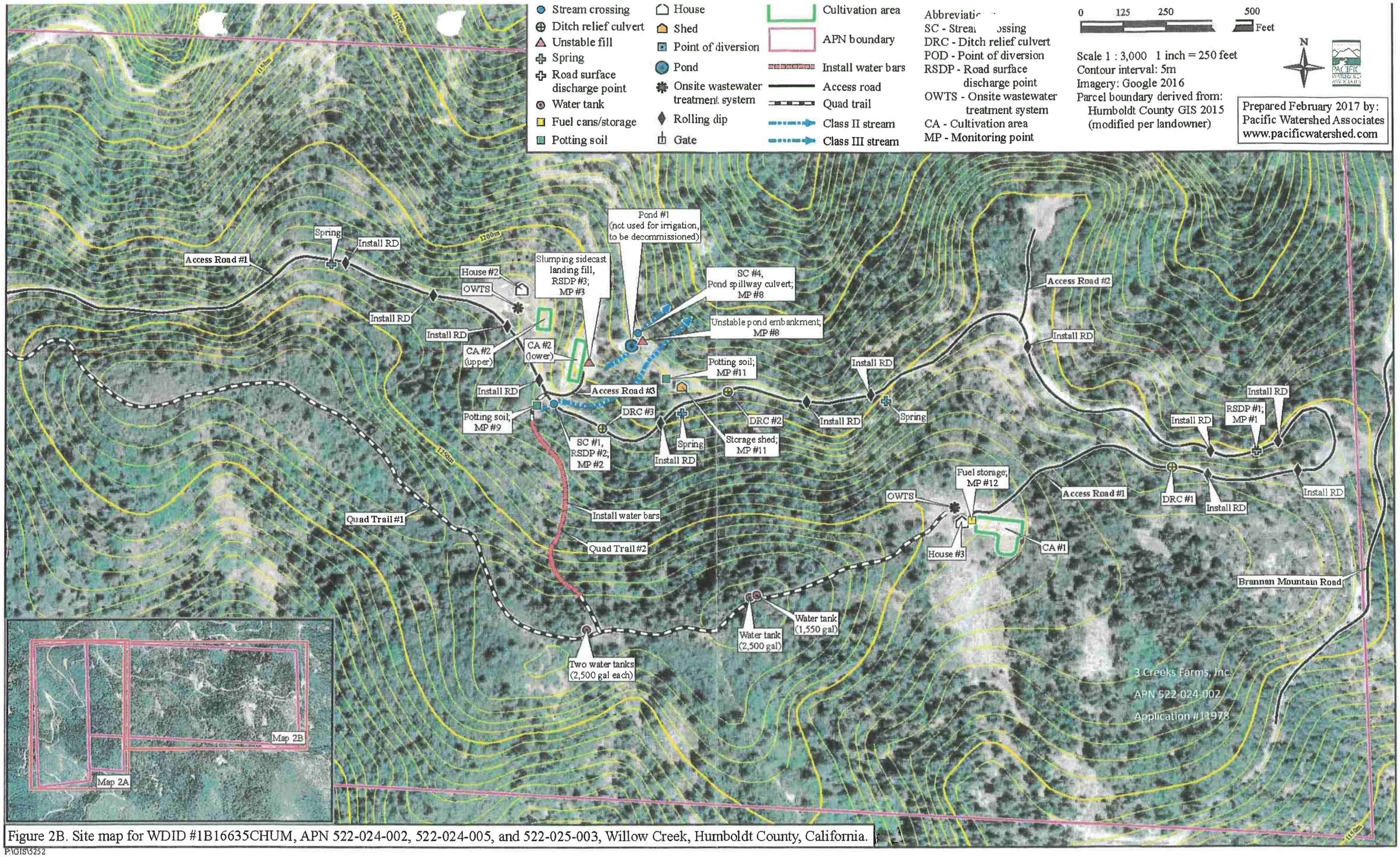

Figure 2B. Site map for WDID #1B16635CHUM, APN 522-024-002, 522-024-005, and 522-025-003, Willow Creek, Humboldt County, California.

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Site Map, Map 2 of 5: Water Features, Buildings—Part II.

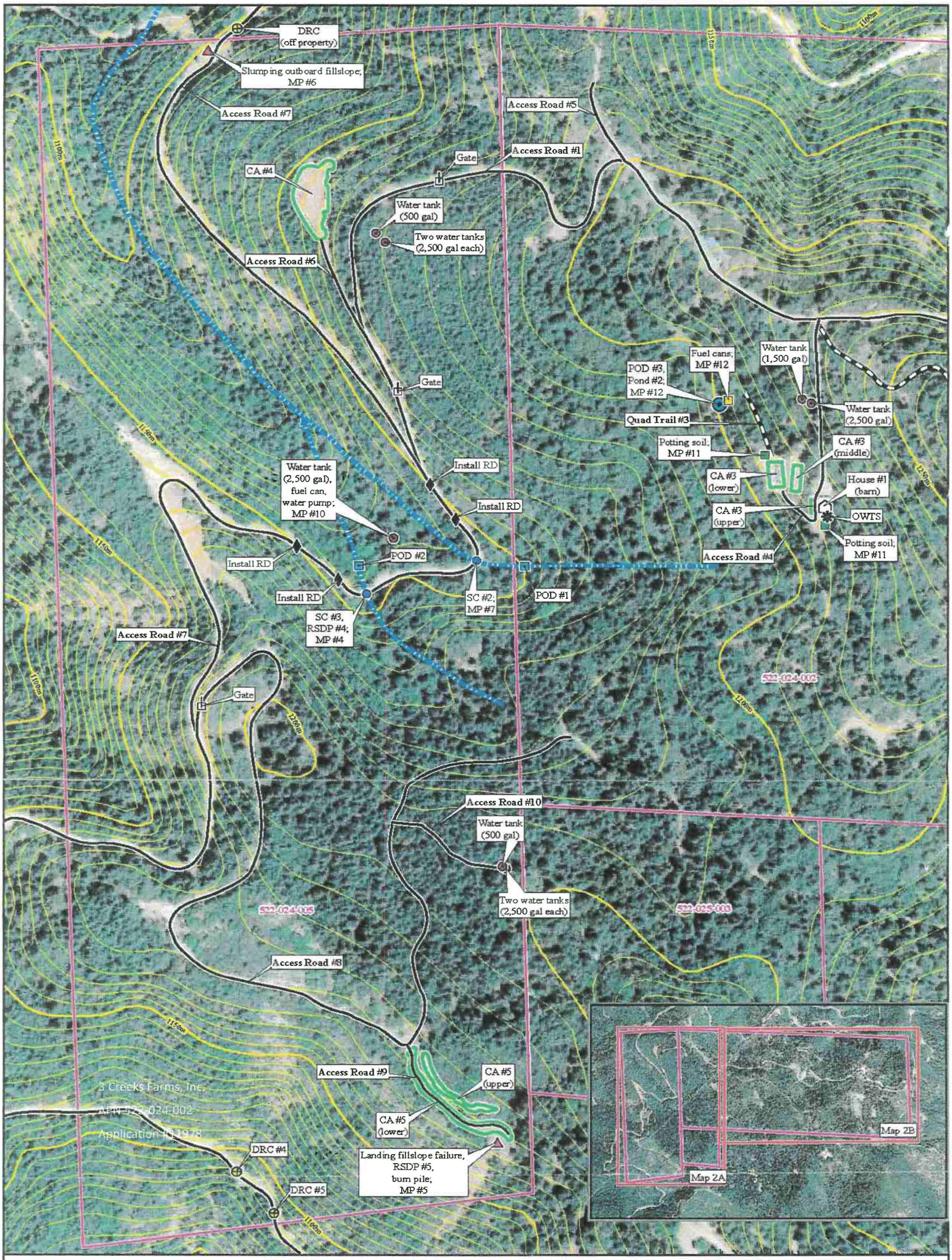

Figure 2A. Site map for WDID #1B16635CHUM, APN 522-024-002, 522-024-005, and 522-025-003, Willow Creek, Humboldt County, California.

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Site Plan, Map 1 of 5: Water Features and Buildings—Part I.