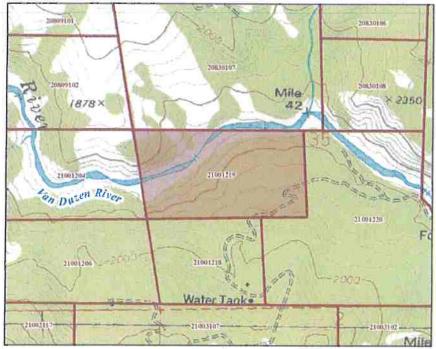


Water Resource Protection Plan (WRPP) for APN 210-012-019 Located North of Ma-Car.

North of McClellan Rock off HWY 36 Bridgeville, California

January 2017



Prepared for: Karen and Dennis Silva WDID# 1B161248CHUM PWA ID #180101050903-5112 North of McClellan Rock off HWY 36 Bridgeville, California

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TABLE OF CONTENTS

1.0	PROJECT SUMMARY	
2.0	CERTIFICATIONS, LIMITATIONS AND CONDITIONS	
3.0	INTRODUCTION	,
4.0	STANDARD CONDITIONS CHECKLIST FOR APN 219-012-019 AS OF 10/12/2016	
4.	1 Standard Condition #1. Site Maintenance, Erosion Control and Drainage Features	
4	2 Standard Condition #2, Stream Crossing Maintenance	10
4	3 Standard Condition #3. Riparian and Wetland Protection and Management	12
4.4	4 Standard Condition #4. Spoils Management	13
4.	5 Standard Condition #5. Water Storage and Use	13
	5 Standard Condition #6. Irrigation Runoff	
4.	7 Standard Condition #7. Fertilizers and Soil Amendments	16
4.8	STANDARD CONDITION #8. PESTICIDES/HERBICIDES	18
4.9	STANDARD CONDITION #9. PETROLEUM PRODUCTS AND OTHER CHEMICALS	19
4.1	10 Standard Condition #10. Cultivation-Related Wastes	20
	1 Standard Condition #11. Refuse and Human Waste	
4.1	2 STANDARD CONDITION #12. REMEDIATION/CLEANUP/RESTORATION	22
5.0	MONITORING AND INSPECTION PLAN	23
5.0	PRIORITIZED CORRECTIVE ACTIONS AND SCHEDULE TO REACH FULL COMPLIANCE.	
7.0	WATER USE PLAN	26
3.0	LIST OF CHEMICALS	28
0.0	LANDOWNER/ LESSEE CERTIFICATION/SIGNATURES	29

LIST OF FIGURES

Figure 1. General Location Map

Figure 2. Site Plan

LIST OF TABLES

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

LIST OF APPENDICES

Appendix A. Best Management Practices (BMPs) – NCRWQCB

Appendix B. Monitoring Plan and Photo Log

Appendix C. Photo Documentation of Monitoring Points

Appendix D1, D2, D3. Water Use Plan and Log Forms

Appendix E. Fertilizer and Amendment Use Plan and Log Forms

Appendix F. Pesticide, Herbicide, and Fungicide Use Plan and Log Forms

Appendix G. Hazardous Materials Storage Guidelines

Water Resource Protection Plan (WRPP) APN 219-021-019 North of McClellan Rock off HWY 36 Bridgeville, California

1.0 PROJECT SUMMARY

This report documents Pacific Watershed Associate's (PWA)¹ Water Resource Protection Plan (WRPP) for APN 219-012-019 located at North of McClellan Rock off HWY 36, Bridgeville, CA, as shown on Figure 1. This property is located approximately 7 miles east of Bridgeville, Humboldt County, CA, and hereinafter is referred to as the "Project Site." Based on either site conditions and/or total cultivation area, this property falls within Tier 2 of the North Coast Regional Water Quality Control Board's (NCRWQCB) Order No. 2015-0023, Waiver of Waste Discharge and General Water Quality Certification for Discharges of Waste Resulting from Cannabis Cultivation and Associated Activities or Operations with Similar Environmental Effects ("Order"). Properties that fall into Tier 2 of the Order are required to develop a WRPP. Therefore, as required, this WRPP has been developed for you based on site inspections made by PWA on your property. PWA's recommendations for any remediation or corrective actions are a result of water quality requirements under the Order, including Best Management Practices (BMPs) designed to meet those requirements (Appendix A). This WRPP documents the findings of a site visit and reconnaissance level investigation of the property conducted on October 12 and 13, 2016, by PWA Principal Earth Scientist, Danny Hagans.

2.0 CERTIFICATIONS, LIMITATIONS AND CONDITIONS

This WRPP has been prepared by Pacific Watershed Associates, Inc. (PWA), and all information herein, including treatment recommendations, are based on observations, data and information collected by PWA staff, as well as based on discussions with the landowner.

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 professional evaluation of the whole 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 limited extent and artificial exposures of subsurface materials. Interpretations of problematic

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").

WRPP - APN 210-012-019 PWA ID #180101050903

January 2017 Page 4

geologic, geomorphic or hydrologic features such as unstable hillslopes, erosion 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 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 re-evaluated 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 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 ownership of the property is transferred, 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 subcontractors 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 different 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 on-site and available for NCRWQCB staff to inspect and review upon request.

Prepared by:

Danny Hagans, Principal Earth Scientist Pacific Watershed Associates, Inc.

Danny Hagans

P.O. Box 4433, Arcata, California 95518

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 219-012-019 located at North of McClellan Rock off HWY 36, Bridgeville, Humboldt County, 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 (Order) to protect water quality from cannabis cultivation and related activities. Your property and cultivation operations appear to not 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:

- 1.0 <u>Legible map (Figure 2) depicting the required site elements and features</u> associated with the 12 Standard Conditions of the Order;
- 2.0 <u>Description of current site conditions</u>, 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;
- 3.0 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);
- 4.0 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;
- 5.0 <u>List of fertilizers and chemicals stored and used onsite</u>, including a log of the frequency and quantity of these materials used.

4.0 STANDARD CONDITIONS CHECKLIST FOR APN 219-012-019 as of 10/12/2016

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 or at a later date, 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. We 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: There are a total of 1.2 miles of low standard former logging roads on the property, with most being constructed many decades ago. All roads within the Project Site have poor surfacing and drainage, exhibit various sized rill erosion, but fortunately less than 25% of the road length is hydrologically connected to the 2 stream channels that pass through the western portion, and the least developed portion of the property (Map 2).

Photos: No

<u>Corrective or remedial actions needed</u>: Prepare a road erosion assessment and Erosion Control Plan (ECP).

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/Comments: Surface erosion and rill development are common along the poorly maintained roads on the property. While evidence of ongoing erosion is widespread, the location of most of the developed areas are well away from streams.

Photos: No

<u>Corrective or remedial actions needed</u>: Prepare a road erosion assessment and Erosion Control Plan (ECP).

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

Meets condition? Yes

<u>Observations/Comments</u>: The densely forested, north facing property is generally very rocky, and although there are steep slopes throughout, no actively failing or unstable hillslopes or fillslopes were identified.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

<u>Observations/Comments</u>: The cleared and terraced areas are not delivering sediment to streams, however portions of the road system, particularly along the old, low use logging road that accesses the Van Duzen River are delivering sediment to the 2 stream crossings (Map 2).

Photos: No

<u>Corrective or remedial actions needed</u>: Prepare a road erosion assessment and Erosion Control Plan (ECP).

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

<u>Observations/Comments</u>: There are no efforts to control or prevent erosion along the roads and developed areas on the property.

Photos: No

Corrective or remedial actions needed: See Summary Comment below.

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

Meets condition? Yes

<u>Observations/Comments</u>: The recently developed areas on the property, while messy and unsightly, are not delivery sediment to streams.

Photos: No

Corrective or remedial actions needed: See Summary Comment below.

Standard Condition #1. - General comments and recommendations: Based on field observations of the road and developed pads within this property, PWA observed several road related drainage issues that contribute to sediment input into local creeks and streams, as well as 2 partially failed stream crossings on the lower road. A road erosion assessment and Erosion Control Plan (ECP) shall be developed. The ECP needs to be developed to address these issues and provide guidance and specifications on how best to reduce road erosion and remediate the potential risk to receiving waters.

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 2 failing stream crossings on the property, both are on the lower road leading to the river (Map 2).

Photos: MP #1, Photo #1.

<u>Corrective or remedial actions needed</u>: A LSAA will be prepared and submitted to CDFW.

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

Meets condition? No

Observations/Comments: See Summary Comments below.

Photos: No

Corrective or remedial actions needed: See Summary Comments below.

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

Meets condition? Yes

Observations/Comments: Both crossings are intermittent Class II streams.

Photos: No

Corrective or remedial actions needed: See Summary Comments below.

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: See 4.2 a. above.

Photos: No

<u>Corrective or remedial actions needed</u>: A LSAA will be prepared and submitted to CDFW.

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

Meets condition? No

Observations/Comments: See 4.2 a. above.

Photos: No

<u>Corrective or remedial actions needed</u>: A LSAA will be prepared and submitted to CDFW.

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

Meets condition? Yes

Observations/Comments: See 4.2 a. above.

Photos: No

<u>Corrective or remedial actions needed</u>: A LSAA will be prepared and submitted to CDFW.

Standard Condition #2. - General comments and recommendations: Based on field observations, the 2 failing stream crossings will be designed to accommodate the 100-year event, along with debris in transport, and a LSAA will be prepared and submitted to CDFW.

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

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

Meets condition? Yes

<u>Observations/Comments</u>: All cultivation activities on this Project Site are located at least 178 feet from the nearest Class II watercourse. There are no ponds or wetlands on the Project Site.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? Yes

<u>Observations/Comments</u>: Streams trough the property are bounded natural and mature riparian buffer greater than 100-feet wide to the nearest developed areaa. The buffer consists of native deciduous trees, conifers, and riparian understory shrubs.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? Yes

<u>Observations/Comments:</u> The developed areas on the property are located on varying sized natural benches on the hillslopes that required minor grading of cut and fill areas to facilitate cultivation activities. Runoff and erosion from the developed areas is discharged and dissipated by the adjacent forest cover.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? Yes

<u>Observations/Comments</u>: The Project Site riparian areas are undisturbed except for selection timber harvesting that occurred decades in the past.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

Standard Condition #3. - General comments and recommendations: The riparian buffers are sufficient, dense and in a good mature condition. The client will be educated to not encroach into the buffers anymore into the future.

4.4 Standard Condition #4. Spoils Management

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

Meets condition? Yes

<u>Observations/Comments</u>: While the site is in need of considerable general housekeeping, no construction or development-related spoils were observed with any risk of delivery to streams.

Photos: No

<u>Corrective or remedial actions needed</u>: No corrective actions are required, but the property could use a good cleaning.

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

Meets condition? Yes

Observations/Comments: See 4.4.a, above.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? Yes

Observations/Comments: See 4.4.a, above.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

Standard Condition #4 - General comments and recommendations: Based on field observations, it is PWA's opinion that the Project Site is currently compliant with this condition. The flat nature of the developed area has minimized cut and fill activities. The area is messy and in need of general house cleaning.

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: Water is diverted in the spring months from the westernmost of the 2 Class II streams on the property. It is unclear as of yet what is the relationship of the diversion with other water users farther upslope in the basin.

Photos: MP #2, Photo #2.

Corrective or remedial actions needed: The point of stream diversion is not located on the Silva's property, and its' use will be discontinued. For the future, either a bedrock groundwater well will be drilled on the property, or a new stream diversion will be identified on the property. Any new stream diversion locations to be identified

will be permitted with both a CDFW LSAA permit and a Initial Statement of Diversion (ISDU) agreement with Division of Water Rights.

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: According to the cultivator, crops are either watered via drip irrigation lines or by hand, as needed. Water conservation measures are in effect on the property, since there are currently no water sources on the property from May on most years. During the summer months, all water use is purchased and trucked onto the property.

Photos: No

Corrective or remedial actions needed: Continue water conservation measures currently being practiced. In addition, begin quantifying water use utilizing the attached water use monitoring forms on a year-around basis, and, if beneficial, incorporating additional water holding amendments into the native soil during the initial soil preparation at the start of the season. Water conservation measures should continue to be investigated and employed in order to most effectively maximize water use efficiency.

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

Meets condition? Yes

Observations/Comments: All irrigation water diverted from the Class II stream during the late winter and spring months is stored in 16 plastic water tanks that total 74,000 gallons of stored water. By the time the crops are planted, the stream is usually dry and no stream diversion is occurring during the summer growing season. As the stored water is used, it is replenished with purchased and trucked water.

Photos: Photos #3 and #4.

<u>Corrective or remedial actions needed</u>: Develop a Water Budget to determine overall water needs and use through the year for both domestic and cultivation needs.

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

Meets condition? Yes

<u>Observations/Comments</u>: As best as PWA can determine, the water application rate is appropriate utilizing a drip irrigation system. There was no evidence of overwatering or soil saturation, past or present, during the site inspection.

Photos: No

Corrective or remedial actions needed: To verify agronomic watering, start measuring and recording your average daily water usage based on the plant developmental stage (seed vs. seedling vs. in-the-ground), and type of water application employed, in order to refine your water budget, and as a part of water monitoring for your operation, so PWA can more accurately determine your daily and monthly water use.

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

<u>Observations/Comments</u>: The currently used stream diversion is not permitted nor on the Silva's property.

Photos: No

Corrective or remedial actions needed: See Summary Comment below.

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? Yes

<u>Observations/Comments</u>: All water storage tanks are located on stable ground well away from nearby streams (Map 2).

Photos: No

Corrective or remedial actions needed: No corrective action required.

<u>Standard Condition #5 - General comments and recommendations</u>: Currently there are 16 water storage tanks and a bladder on the Project Site (Map 2). Because the current stream diversion location is not on the Silva's property, its' use should be immediately discontinued. Either a groundwater well should be drilled with the required permits, and/or a properly registered and permitted riparian stream diversion location should be located on the Silva's property. These permits include but not limited to a CDFW LSAA application and an Initial Statement of Diversion and Use registration (ISDU).

- Initial Statement of Diversion and Use (ISDU)

 http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/docs/intl_stmnt_form.pdf
- Lake and Streambed Alteration Agreement (LSAA). https://www.wildlife.ca.gov/Conservation/LSA

Also, a water budget should be developed and refined by monitoring water diversion, storage and usage. PWA highly recommends, and state agencies may require, that you install flow meters on your groundwater well and/or stream diversion to accurately measure your water pumping, water use volumes and rates. You will then need to document the amount of water you are pumping and using through time. In this way, as per the Order, it can then be assured that water use will not impact downstream water quality or beneficial uses, and that you are practicing efficient water conservation measures. PWA has created a simple log sheet to help you monitor your water diversion, storage and usage (see Appendix D).

4.6 Standard Condition #6. Irrigation Runoff

a) Implementing water conservation measures, irrigating at agronomic rates, applying fertilizers at agronomic rates and applying chemicals according to the label specifications,

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

Meets condition? Yes

<u>Observations/Comments</u>: No evidence was observed of concentrated overland flow or irrigation runoff from the last growing season. See general comments below.

Photos: No

Corrective or remedial actions needed: You will need to monitor the daily and monthly application rate for watering, fertilizers and other assorted amendments and chemicals to soils and plants. You need to monitor and identify when and where runoff occurs from within your operations and adjust application rates to eliminate discharge. Log forms included within this WRPP should assist with record keeping.

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 of 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), 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: At the time of the PWA site inspection, most fertilizer, potting soil, soil amendments or any plant related chemical not directly being used within the grow bags or greenhouses were being stored outside in an area more than 200' from the nearest stream channel. The dozens of soil amendment containers were neatly stored next to the water mixing tanks.

Photos: MP #3, Photo #5.

<u>Corrective or remedial actions needed</u>: If you want to continue mixing and soil amendment activities at their current location, then construct a roofed and floored 10' x 12'shed at the locations, or store the materials in the large metal containers located near the house on the property.

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

Meets condition? Yes

Observations/Comments: According to the landowner, all amendments are applied at the approved rate or less. The landowner has a mixing location for the mostly liquid organic amendments which are applied at recommended label rates. The amendments are added to each plant three?? (3) times per month, also at the recommended application rates. A maximum of ????#'s is applied to all the crops annually.

Photos: No

Corrective or remedial actions needed: To confirm compliance with this Standard Condition next growing season, you are required by the Order to keep detailed records of the type, amount and timing 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 or by using some other accurate record keeping method. 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: PWA observed planting soils were left on the cultivation areas uncovered leading into this winter. In the future all growing medium should be properly stored and covered through the rainy season, or properly disposed of off site. Photos: No

Corrective or remedial actions needed: 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 fields prior to planting the cover crop to add minerals and recycle the ash.

Standard Condition #7 - General comments and recommendations: Based on field observations, PWA noted that chemical fertilizers and soil amendments are currently being stored outside, including the post season uncovered potting soil. However, all the outdoor storage locations are on stable ground that is well over 200' from the nearest watercourse. We observed no evidence of runoff or nutrients leaving the gently sloping cultivation areas.

Nutrient containing amendments and all chemical materials should be stored indoors or completely tarped outdoors during the rainy season. If tarped outdoors, chemicals should not be stored directly on the ground surface and runoff should be diverted away from the storage area. In the future, at the completion of harvesting activities, all potting soil would

be bested to be tilled into the soil and planted with a winter cover crop of grasses, or gathered up and stored with a covering tarp(s) during the rainy season.

In using these products, <u>you must adhere to packaging instructions</u> and ensure they are applied at agronomic rates. In the event that irrigation runoff occurs, you must ensure that contaminated runoff does not enter nearby watercourses. This can be done using containment measures as described above, including sediment basins, berms, infiltrations ditches, and/or other BMPs for control and containment of runoff. Under the Order, you are required to keep track of the daily and monthly timing and volume of fertilizers and other soil amendments that are applied. This can be done using the simple log forms we have provided in Appendix F.

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? Yes

<u>Observations/Comments</u>: According to the Landowner, pesticides and/or herbicides are not used and none were observed on the Project Site at the time of our inspection **Photos**: No

<u>Corrective or remedial actions meeded</u>: All pesticides, herbicides and related materials (e.g., fungicides) must be used and applied consistent with product labeling and the laws of the State of California. When present, these chemicals should be stored within fully enclosed buildings in such a way they cannot enter or be released into surface or ground waters, and where they are not a hazard to humans or other animals.

Standard Condition #8 - General comments and recommendations: Under the Order you are required to keep records (logs) of the timing and volume of pesticides and herbicides used in your operations. This can be done using a simple log form, such as the one included in Appendix F. Additionally, for any pesticide use you must comply with any Pesticide Registration Requirements. See Appendix F2 included in the NCRWQCB Order, or on their web site at:

http://www.waterboards.ca.gov/northcoast/board_decisions/adopted_orders/pdf/2015/1507 28 Appendix E2 DPR_MJ%20Pesticide%20Handout.pdf

4.9 Standard Condition #9. Petroleum Products and other Chemicals

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

Meets condition? Yes

Observations/Comments: All petroleum products are stored within a designated container/shed and include secondary containment.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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? Yes

Observations/Comments: No above ground storage tanks were present on the Project Site.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? N/A

Observations/Comments: N/A

Photos: No

Corrective or remedial actions needed: None

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

Meets condition? Yes

Observations/Comments: A spill prevention cleanup kit is kept onsite to help clean up small spills.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? N/A

Observations/Comments: N/A

Photos: No

Corrective or remedial actions needed: None

Standard Condition #9 - General comments and recommendations: The Project area is totally off the grid, and underwent a Notice of Violation (NOV) from the Humboldt County Department of Environmental Health (HCDEH) dated December 1, 2015, resulting from a Sheriffs' Department property search warrant. The requirements of the NOV were met and the completion report was submitted to HCDEH on December 15, 2016. Currently, the property houses less the 50 gallons of gasolines in secure 2 to 5 gallon fuel containers that are stored out of the weather in the metal container near the house (Map 2).

Note that the State of California requires an owner or operator of a facility to complete and submit a Hazardous Material Business Plan (HMBP) if the facility handles a hazardous material or mixture containing a hazardous material that has a quantity at any one time during the reporting year equal to or greater than: 55 gallons (liquids), 500 pounds (solids), or 200 cubic feet for compressed gas (propane). If at any time during the year you exceed any one of these quantities for use in your cultivation operations, you need to prepare and file a HMBP for your operation. Information and applicable reporting documents for Humboldt County can be obtained from the CA-EPA or from the Department of Toxic Substances Control, Humboldt CUPA at:

http://www.dtsc.ca.gov/HazardousWaste/CUPA/Humboldt CUPA HMBP.cfm.

Finally, the Order requires that a <u>Petroleum Storage Spill Prevention</u>, <u>Control and Countermeasures (SPCC) Plan</u> be developed for the site if fuel storage is greater than 1,320 gallons (see the CA-EPA fact sheet:

http://www.rivcoeh.org/Portals/0/documents/guidance/hazmat/FactSheetSPCC.pdf).

4.10 Standard Condition #10. Cultivation-Related Wastes

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

Meets condition? No

Observations/Comments: The landowners do not properly secure and store used soil materials, plant waste and spent growth mediums. PWA has instructed the landowners to clean up the property each fall, particularly the used soil and waste products. Photos: M.P. #4, Photo #6.

Corrective or remedial actions needed: See Summary Comments below.

Standard Condition #10 - General comments and recommendations: While the landowners do not properly store through the winter months used soil and waste materials, where they are left within the cultivation areas is well more than 200° from the nearest watercourse. In addition, the buffers between the cultivation areas and the streams contain dense vegetated hillslopes that do provide effective measures for preventing impacts to water quality.

However, in the future at the end of the harvest season, all spent soil, growing mediums and solid crop fiber should either be: 1) chipped and used to mulch the cultivation areas and be tilled into the subsurface areas, or 2) should be neatly composted in 1 or 2 centralized piles and properly covered with tarps through the rainy season, or 3) be hauled

off the property and disposed of at a county approved disposal location, with the appropriate manifests as records.

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 Project Site has a single well-constructed greater than 10-year old house with no indoor sewage system to our knowledge. In 2015, a well-built outhouse was constructed, with indoor plumbing, which drains to a 1,400 gallon?? plastic septic tank that lacks a leach field, nor is any of the human waste disposal system permitted.

Photos: M.P. #5 and #6, Photos #7 and #8.

<u>Corrective or remedial actions needed</u>: A professional OWTS design needs to be developed and submitted to the HCDEH for permitting. See comments for conducting subsurface investigations and meeting County permitting requirements for the OWTS permit as described within the general comments and recommendations below.

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 is stored undercover and in lidded containers.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

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

Meets condition? Yes

Observations/Comments: According to the landowner, the garbage and refuse generated onsite is regularly disposed of at an appropriate waste county landfill household waste disposal location.

Photos: No

Corrective or remedial actions needed: No corrective actions are required.

Standard Condition #11 - General comments and recommendations: The OWTS should be permitted through the Humboldt County Department of Environmental Health. PWA recommended conducting soil evaluations and perk testing this winter 2016/2017 to determine an appropriate OWTS disposal location.

Additional observations made on this Project Site on 11/23/2016 indicated that it was clean and refuse was both secured properly and had been promptly removed and disposed of on a regular basis.

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, and 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? No

Observations/Comments: See Summary Comments below.

Photos: No

Corrective or remedial actions needed: See Summary Comments below.

Standard Condition #12 - General comments and recommendations: Remediation is the action of remedying something, especially the reversal or stopping of damage to the environment caused by the activities in question. In PWA's opinion, none of the cultivation and related activities and conditions on this property are individually or cumulatively significant enough to warrant a Tier 3 classification. Most of the larger or more significant corrective measures identified in this WRPP are associated with legacy land use activities, and some poorly conceived land use actions that the current landowners must now address to bring the property activities into compliance with county, state and federal water quality and environmental protection standards.

For this property, PWA recommends the following remediation actions, all of which have already been described above:

- Develop and implement an ECP to provide recommendations and guidance for road shaping, improved road drainage, hydrologic disconnection (minimizing delivery of road sediment to streams), and proper culvert sizing and construction.
- Develop and implement a water budget to determine and secure adequate water storage volumes needed for dry season domestic use and irrigation needs.
- Implement water conservation measures to minimize water use on the property.

- Submit appropriate water use and water rights registration forms to the State Water Resources Control Board, Water Rights Division.
- Submit a 1600 Lake and Streambed Alteration Agreement (LSAA) with CDFW and follow the prescribed remedial actions defined by CDFW for stream diversion water use, water well use, stream crossing reconstruction and road drainage permits.
- Determine and design the appropriate size, location and structure of an Onsite Wastewater Treatment System (OWTS) for the property and obtain the necessary county permits.
- Begin collecting actual monthly or more frequent documentation of water diversion, usage and storage, fertilizer, as well as soil amendments, chemical and fuel usage on the provided Log Sheets in Appendix F.
- Improve housekeeping activities related to the proper storage of soil amendments, fertilizers and annual waste products associated with cultivation activities and annual winterization of the property.

The following three (3) Sections 6.0, 7.0 and 8.0 cover generic requirements for: Monitoring Plans, Water Use Plans and Chemical Plans, respectively, and each contains more informational and educational materials, including language of what the Order and NCRWQCB actually want to see out of cannabis cultivators.

5.0 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, Table 1 and Map #2 to review the monitoring plan and specific monitoring points for which you are responsible.

Monitoring guidelines and reporting standards have been created by the NCRWQCB as part of the Order. Monitoring of the project site includes <u>visual inspection and photographic</u> 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.

<u>Site inspection schedule</u> - 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.

6.0 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.

	Imaay	ng improve	ment or A	Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)	for correct	ive actions)	
Standard Condition requiring action		Treatment Priority	Schedule	Summary of Corrective Action / Recommendation (see more detailed listing of corrective actions in Section 4, above)	Map point and photo #	Estimated cost	Date completed
ا حرِب	la,b,d and e	High	October 30, 2017	- A road erosion assessment and Erosion Control Plan (ECP) shall be developed and implemented.		<\$4,000.	
20 0	2a,b,d, and e	High	October 30, 2017	-Prepare and submit a CDFW LSAA permit application and storm proof 2 stream crossing.	MP#1, and PP#1	\$14,000. (50% is permit costs).	
	Sa and e	High	November 30, 2017	- The current stream diversion location is not on the Silva's property. Its' use should be immediately discontinued. Both a groundwater well should be drilled with the required permits, and/or a properly registered and permitted riparian stream diversion location should be located on the Silva's property. These permits include but not limited to a CDFW LSAA application, an Initial Statement of Diversion and Use registration (ISDU), and a Humboldt County well permit. - Also, a water budget should be developed and refined by monitoring water diversion, storage and usage. PWA highly recommends, and state agencies may require, that you install flow meters on your groundwater well and/or stream diversion to accurately measure your water pumping, water use volumes and rates. You will then need to document the amount of water you are pumping and using through time. In this way, as per the Order, it can then be assured that water use will not inmart	MP#2, and PP's #2, 3, 4 and 5.	\$20,000. (75% of the costs are for the well).	1

able 1. Featu	res Need	ing Improve	ment or A	Table 1. Features Needing Improvement or Action Items (Prioritized implementation schedule for corrective actions)	corrective	e actions)	
Standard Condition requiring action	dition tion	Treatment Priority	Schedule	Summary of Corrective Action / Recommendation Map (see more detailed listing of corrective actions in Section 4, above)	Map point E	Estimated cost	Date completed
				al uses, and that you			
7 - Fertilizers and Soil Amendments	7a and c	High	October 31, 2017, annually	- Nutrient containing amendments and all chemical materials should be stored indoors or completely tarped outdoors during the rainy season. We recommend building a 10° x 12' enclosed building with a foundation for storage. In the future, at the completion of harvesting activities, all potting soil would be bested to be tilled into the soil and planted with a winter cover crop of grasses, or gathered up and stored with a covering tarp(s) during the rainy season. - Record the 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.		\$ 4,000.	
10 - Cultivation- Related Wastes	10	High	October 31, 2017	In the future at the end of the harvest season, all spent soil, growing mediums and solid crop fiber should either be: 1) chipped and used to mulch the cultivation areas and be tilled into the subsurface areas, or 2) should be neatly composted in 1 or 2 centralized piles and properly covered with tarps through the rainy season, or 3) be hauled off the property and disposed of at a county approved disposal location, with the appropriate manifests as records.	and	<\$1,000.	c
11 - Refuse and Human Waste	Ha	High	June 15, 2018	A legal OWTS should be located, designed and permitted through the Humboldt County Department of Environmental Health. Cost doesn't include construction.	MP#5and 6, <	<\$8,000.	

Geologic and Geomorphic Studies & Wildland Hydrology & Civil Engineering & Erosion Control & Soil/Septic Evaluation Pacific Watershed Associates & P.O. Box 4433 & Areata, California, 95518 & Ph. (707) 839-5130 & Fx. (707) 839-8168 www.pacificwatershed.com

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) <u>Before and after any significant alteration or upgrade</u> to a given stream crossing, road segment, or other controllable sediment discharge site. Inspection should include photographic documentation, with photo records to be kept on-site.
- 2) Prior to October 15 to evaluate site preparedness for storm events and stormwater runoff.
- 3) Following the accumulation of 3 inches cumulative precipitation (starting September 1st) or by December 15th, whichever is sooner.
- 4) Following 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 by you to the NCRWQCB or by PWA (through their 3rd Party Program). The information in the annual reporting form must be submitted by March 31 of each year. The reported information is to be reflective of current site conditions, and includes accurate monitoring data and tasks accomplished to protect water quality through the preceding year. 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

<u>Requirements</u> - According to the Order, a Water Use Plan 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 Water Use Plan 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). According to the Water Board Order, water use will <u>only</u> be presumed to not adversely impact water quality under one of the following scenarios:

- No surface water diversions occur from May 15 to October 31.
- 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 in Appendix D of this WRPP. These will be tracked and kept up-to-date by the landowner or cultivator of the site.

Water Storage and Forbearance - The ultimate goal of the applicant is to accumulate enough water storage capacity to forebear the entire period from May 15th to October 31st. This will ensure the timing of water use is not impacting water quality objectives and beneficial uses. Even though irrigation water is obtained from a groundwater well, excessive pumping from the well may have impacts on the local water table, on water resources in the valley and on streamflow in down-valley areas. The landowner will investigate the feasibility of constructing a rainwater/ snow-fed, off-stream pond that can be filled by direct precipitation, local rainwater harvesting and groundwater pumping during the wet season. The pond could satisfy all dry season irrigation needs and minimize summertime groundwater pumping and its potential down-valley effects.

Water Conservation - Water conservation measures currently practiced include using timer controlled drip irrigation, and watering late in the afternoon or evening to minimize water loss through evaporation and maximize water up-take by the plants; the use of compost and mulch fertilizer; and the use of soil mediums that retain moisture. Starting this year, new water conserving techniques and equipment will be utilized and tested to evaluate their effectiveness and efficiency.

Water sources and use – Water for the Project Site is supplied from a 30 foot deep, 100-year old, shallow groundwater well. There is no water storage on the Project Site. During the peak growing season, the operator practices dry-farming, a methodology that uses extremely low volumes of water.

Over the course of the current season, water production and use data will be documented using the log forms attached in Appendix D. 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, and water conservation and efficiency are maximized.

If and when needed, appropriate water rights notifications and registrations for the well will be submitted to the State Water Resource Control Board (Division of Water Rights) and a Lake and Streambed Alteration Agreement (LSAA) sought through the California Department of Fish and Wildlife (CDFW) will be obtained. CDFW will be also consulted to determine if the well has any jurisdictional requirements.

8.0 LIST OF CHEMICALS

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

Appendices E and F contains 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:

Soul Blend Aurora: liquid fertilizer, 1.5/4.5/3.0, 2 tsp/gal of water, once a week for 10 weeks. Big Swell Aurora: liquid fertilizer, 2.0/5.0/3.0, 1 tsp/gal of water, once a week for 10 weeks. Trinity Aurora: liquid fertilizer, 0.25/0.1/1.0, 2 tsp/gal of water, once a week for 10 weeks. Ancient Amber Aurora: liquid fertilizer, 0.1/0.01/0, 2 tsp/gal of water, once a week for 10 weeks.

Oyster Shell: solid amendment, 30ml/plant, once every 2 weeks for 2 months. Uprising Grow: solid amendment, 6.0/0.5/1.5, 20ml/plant, once every month for 2 months. Uprising Bloom: solid amendment, 3.0/6.0/4.0, 20ml/plant, once every month for 2 months.

Pesticides, Herbicides, and Fungicides:

None

Petroleum and Other Chemicals:

Less than 50 gallons of gasoline fuel on site at any given time, no diesel fuels.

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)	DENHIS M. Sila
Title (owner, lessed, operator, etc.): Landowr	<u>er</u>
Signature: William	Date: $4-13-2017$
54	
WRPP prepared by (if different from LRP):	Pacific Watershed Associates, Inc.
WRPP prepared and finalized on (date):	Tim a lillion and the case to be a considerable
Signature:	Date: