

Site Management Plan
Humboldt County APN 217-032-013
SWRCB App# 420397
NCRWQCB WDID# 1B16190CHUM

Submitted to:
State Water Resources Control Board -
North Coast Region
5550 Skylane Boulevard, Suite A
Santa Rosa, California 95403

Prepared for:
Earth Green Cali Farms
36492 Alder Point Road
Blocksburg, CA 95514
(707) 498-3292

Prepared by:
Natural Resources Management Corporation
1434 3rd Street
Eureka, CA 95501

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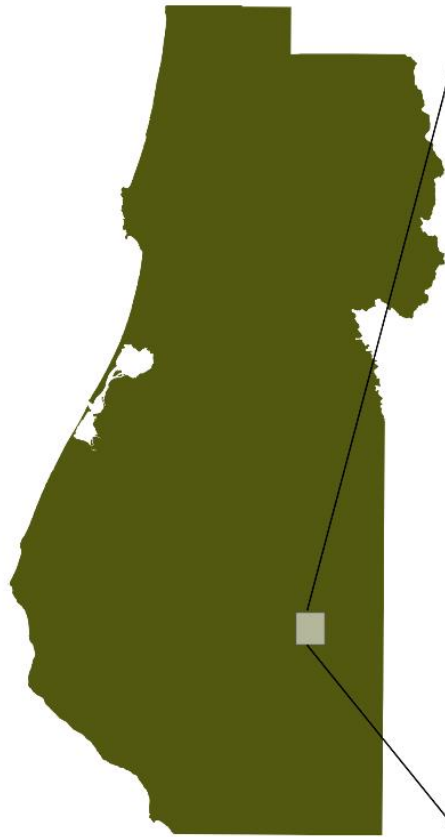
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APN 217-032-013-000 Humboldt County; T01S, R04E, SEC 15 & 22, HB&M; USGS Blocksburg QUAD; HUC12: 180101050601



Humboldt County

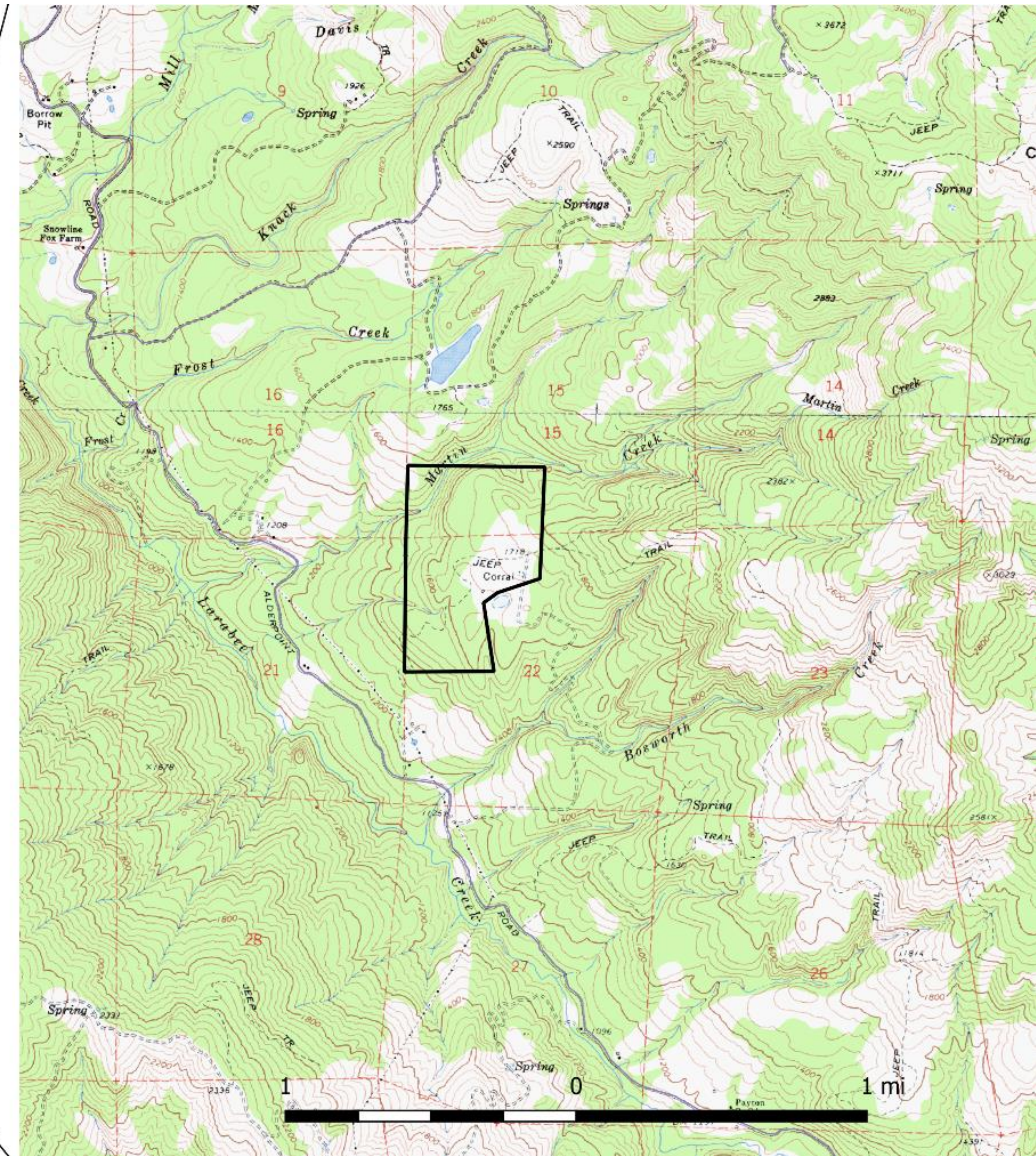


Figure 1. Vicinity map for APN 217-032-013

Site Management Plan

Introduction

This document serves as the Site Management Plan for APN 217-032-013 pursuant to Order No. WQ 2017-0023-DWQ and as amended by Order No. WQ 2019-001-DWQ and No.2019-0007. On October 17, 2017, the State Water Board adopted the Cannabis Cultivation Policy - Principles and Guidelines for Cannabis Cultivation (*Cannabis Policy*) and General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (*Cannabis General Order*), Order No. WQ 2017-0023-DWQ. One of the requirements of Order No. WQ 2017-0023-DWQ is that all Tier 1 and Tier 2 Dischargers shall submit and implement a Site Management Plan (Plan) that describes how the Discharger is implementing the best practical treatment or control (BPTC) measures listed in Attachment A. Summary

Summary

The project is located at 36492 Alderpoint Road, Blocksburg, CA 95514. To navigate to the site, travel approximately 2,150 feet up a private gravel road located between Martin Creek and Bosworth Creek on the north side of Alderpoint Rd. The turnoff is approximately 11.1 miles south of Highway 36. There is a gate at the approximate property line.

The site is enrolled in the Cannabis General Order (WQ-2017-0015-DWQ; updated number WQ-2019-001-DWQ) as a Tier 2, low-risk site. The cultivation area, as reported, is 30,320 square feet (ft²).

This site is located on a parcel of approximately 178 acres in the Larabee Creek sub-watershed of the Eel River watershed located on a mixture of forest and grassland. Approximately 38 acres is grassland or developed areas, the rest is forested. The elevation ranges from 1360 feet to 1800 feet and the residence and cultivation area are located on a large naturally low gradient area, with steeper terrain upslope and downslope. The aspects are variable but predominantly western facing. Martin Creek, A Class I watercourse flows through the northwestern corner of the parcel, and there is a Class III tributary to this watercourse located entirely within the property. The headwaters of a small unnamed Class II tributary to Larabee Creek, located between Martin Creek and Bosworth Creek is located on the west side of the property. The property was formerly used for ranching and timber but is now a homestead with cannabis cultivation.

LSAA Notification number 1600-2020-0038-R1 has been submitted to CDFW to Permit the pond shown in this plan, which is not related to Cannabis production and not covered under this plan. The roads on this parcel are mostly legacy timber and ranch roads that, where used, are mostly used for recreational activities. The actively used roads for cannabis cultivation are well maintained and meet water quality guidelines. There are some minor discharge issues associated with legacy timber roads that are to be addressed and monitored as appropriate. Water use for Cannabis cultivation and domestic use is provided by two wells. Additional non-cannabis irrigation water may come from the large pond adjacent to the cultivation area in the future. A SIUR will be filed with the SWRCB to cover the proposed usage of the pond for non-cannabis-related irrigation, when and if it becomes necessary to do so.

Cultivation will take place in hoop houses with raised beds and there are two outdoor garden areas. The outdoor cultivation area has a capacity of 9825 ft² of cultivation. The five hoop houses for cultivation have a total area of approximately 10,000 ft². There are four additional greenhouses for propagation and immature with a total area of approximately 5130 ft².

The only fertilizer used for cannabis cultivation at this time is Seaweed Nitrozyme. No Pesticides are being used at this time. Fertilizer containment is within plastic totes stored in a newly constructed barn with a concrete floor. If any pesticides were to be used, they would be stored the same way as the fertilizer.

Petroleum containment is achieved using standard containment methods. Diesel is stored in a designated 500-gallon tank with adequate secondary containment. Gasoline is stored in portable fuel cans kept in plastic totes on a concrete floor, and propane is stored in a new 1000-gallon tank, installed outdoors.

1. Sediment Discharge BPTC Measures

1.1. Site Characteristics

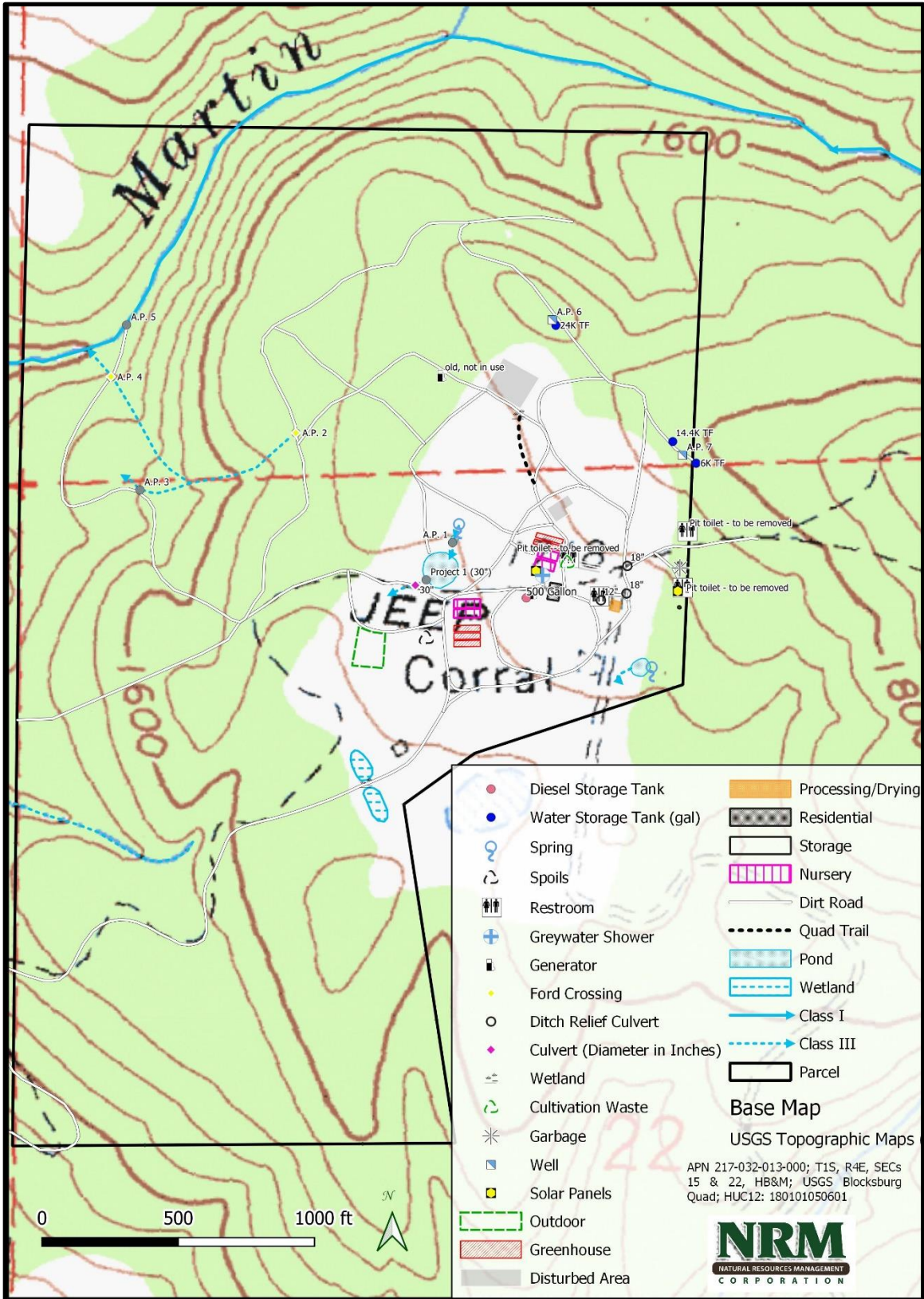


Figure 2 Property map (Topographic)

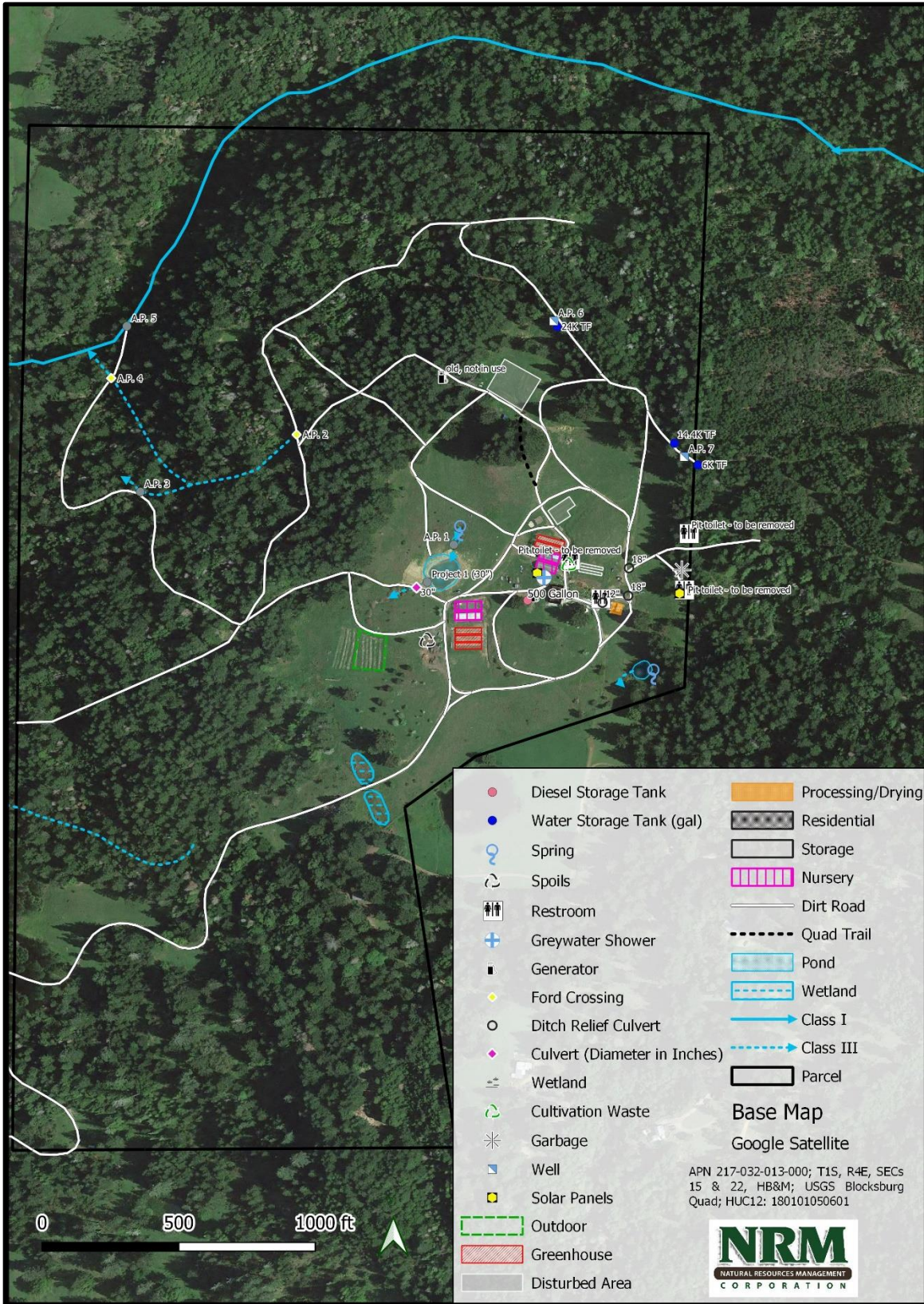


Figure 3. Property map (Orthographic)



Figure 4. Property Diagram

Cultivation Areas

The cultivation on this parcel consists of two outdoor gardens and five hoop houses for cultivation. There are four additional greenhouses for propagation and immature plants. Areas of cultivation are located near the center of the parcel, extending east (See Figures 2 and 3), and covers a total of 30,320 ft². The cultivation areas are on gentle slopes with grades of less than 8%. The flats are out-sloped with a grade of 1-2%. The outdoor cultivation areas are in natural grassy flats with natural slopes of approximately 2-4% that have not been graded.

Of the five hoop houses located on-site, three were in use during 2019, and none were used full term in 2020 due to issues with the CDFA License which have since been resolved. The outdoor cultivation areas were not operational in 2019 or 2020. All existing cultivation areas have been used previously.

The original footprint of the main outdoor cultivation area has been reduced to approximately 10,000ft² and will accommodate approximately 200 full-term plants. The rest of the former outdoor cultivation area has been replanted as a fruit orchard; nut-bearing trees may be added at a later date. The outdoor cultivation area is located outside of the buffer of any watercourses, although discharge from the pond seasonally infiltrates into the ground near this location. The nearest watercourse, a Class III, initiates over 250 feet downslope. The pond is approximately 60 feet from an immature plant greenhouse, the nearest cultivation infrastructure. Two additional abandoned outdoor cultivation areas have not been used for several years and have naturally revegetated. One is approximately 4952 ft², located just over 50 feet north of the northernmost hoop house. The other is located in a smaller field located just north of the main field and is approximately 19512 ft². There are no current plans to use the abandoned cultivation areas for Cannabis cultivation.

The five hoop houses are used for light deprivation. The three to the southeast are approximately 20 feet wide and 100 feet long and are set up for approximately 200 plants each. The two to the northwest are approximately 16 feet wide and 100 feet long and are set up for approximately 180 plants each. The four other greenhouses are used for the propagation of nursery stock and are full sun exposure. All the greenhouses for immature plants are 30 feet wide, two are 75 feet long and two are 96 feet long.

All the cultivation structures are constructed of steel and are seasonally covered with polyethylene sheeting. The plants are grown in large planter boxes the beds are six feet wide and 1.5 feet deep in the 16-foot-wide greenhouses and 2 each approximately nine feet wide and 1.5 feet deep in the 20-foot-wide greenhouses and are irrigated using a drip system. The nursery stock is grown in pots and hand watered.

There is an area approximately 75 feet due west of the southwest cultivation hoops for cannabis waste storage. There is a designated area immediately south of the cannabis waste storage area for excess soils and spoils storage. Soils and spoils will be tarped and surrounded with wattles during the rainy season from October 15 through May 15th when not in use.

Corrective Actions: There are no corrective actions required.

Project Operations - BPTCs: # 8, 9, 11, 13, 57, 58, 59, 60, 61, 62, 97, 114

Monitoring – BPTCs: # 14,59

- Cannabis cultivators shall monitor erosion control and sediment capture measures during and after each storm event that produces .5 inches in one day or 1 inch in 7 days.

- Cannabis cultivators will regularly check for surface water runoff from irrigation and report if there are any indications of soil erosion.
- In preparation for the winter season, bare ground in-between outdoor pots and any soil left in outdoor pots should be planted with a cover crop as soon as the cultivation is complete. Cover crops will be checked for germination by December 15th. If germination has not been successful, these areas will instead be covered with a weed-free straw.

1.1.2 Roads

There are approximately 19,775 feet of vehicle-accessible roads on this parcel. The primary access road is about 3,390 feet long and leads from the gate on the southern edge of the parcel to the cultivation-related roads. These roads branch off from the primary access road, are used to access cannabis cultivation and the residence. Cannabis access roads include roads that access cultivation sites, water tanks and wells, spoils or compost piles, and storage and drying facilities. These roads are used for all-season cannabis access (roughly 6940 feet). The roads to the north of the cultivation area are not used for cannabis access. These legacy roads were used for timber harvesting under previous ownership.

Cannabis-associated roads include roads that access cultivation sites, water tanks and wells, spoils or compost piles, and storage and drying facilities. It is estimated that all dirt roads on this property that are associated with cultivation have an average width of 10-feet. The main access road and the cannabis cultivation road are consistent with the guidelines presented in the Handbook for Forest, Ranch, and Rural Roads (PWA, 2015). The legacy timber roads evaluated on May 29, 2019, showed multiple locations in which the road surface had rilling and other signs of erosion. They are described here by their location and respective name in Figure 4.

A legacy timber road crosses the headwater swale of a Class III watercourse that starts just below the road (Figure 4; A.P.2). The surface of the road is rutted with no drainage facilities and contributes almost 1000 feet of surface drainage from steep rutted road surfaces. Here the addition of a rocked rolling dip for drainage through the swale crossing site and the installation of drainage facilities consisting of waterbars and breaching the entrenched skid roads to drain them where feasible is appropriate. See Photo 6.

A legacy landing with mature trees growing on it sits on the alignment of a partially diverted Class III watercourse with a poorly defined channel (Figure 4; A.P.3). The watercourse channel has been disrupted by legacy skid roads. There is little to no surface erosion where the watercourse is partially diverted onto the legacy landing surface. There is a gully through the outboard fill and continuing below that is well vegetated and shows no signs of recent erosion, therefore, this area will be monitored for any future indications of erosion potential. See Photo 7.

A legacy timber road on the upper terrace of a Class I watercourse is crossed by a Class III watercourse with a poorly defined channel above due to interference by legacy skid roads shows little to no surface erosion where it crosses uncontrolled over the rocked road surface (Figure 4; A.P.4). There is no diversion potential at this site. The watercourse is hydrologically connected for approximately 150' on the left road approach. This area should be treated by installing a waterbar or rolling dip approximately 50 feet to the left (south) to hydrologically disconnect the road from the watercourse. Monitoring will also take place annually at this site to ensure that no erosion is taking place.

Any future grading or road work will follow the requirements listed out in Section II of Attachment A of the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges

of Waste Associated with Cannabis Cultivation Activities (Order WQ 2017-0023-DWQ), constructed by the State Water Resources Control Board.

Corrective Actions – BPTCs: 23, 26

- Install drainage facilities on legacy timber roads to minimize the development of ruts and delivery of sediment-laden surface runoff to watercourses, as feasible before October 15, 2021.

Project Operations - BPTCs: # 3, 4, 17, 20, 23, 26, 27, 28, 29, 30

Monitoring – BPTCs: 30, 54

- Cannabis cultivators shall monitor erosion control measures during and after each storm event that produces at least 0.5 in/day or 1.0 inch/7 days of precipitation, and repair or replace, as needed, ineffective erosion control measures immediately
- Cannabis cultivators shall inspect roads to ensure that access roads are not allowed to develop or show evidence of significant surface rutting or gulying. Cannabis cultivators shall use water bars and rolling dips as designed by professionals to minimize access road surface erosion and dissipate runoff.
- Cannabis cultivators shall regularly inspect ditch-relief culverts and clear them of any debris or sediment.
- Cannabis cultivators shall inspect the condition of access roads, drainage features, and watercourse crossings prior to the onset of fall and winter precipitation and following storm events that produce at least 0.5in/day or 1 inch in 7 days.

1.1.3 Watercourse Crossings

There are six specific-point locations associated with the development of the site. There is one Project (Project 1), for which the client is applying for a Lake and Streambed Alteration Agreement (LSAA). This is a non-cannabis-related Point of Diversion at an existing Pond, the 30-inch diameter outflow culvert for which flows under a road. Additional areas where hydrologic features were identified and mapped, but erosion potential is low, are indicated as ‘Non-Projects’ and are addressed in Section 1.3 Roads. See Figure 1.

Project 1

Project 1 is currently A large pond in an open meadow fed by surface drainage and a smaller Class II pond in an open meadow that drains to an ephemeral Class III watercourse channel below through a recently installed 30” x 80’ double-walled plastic culvert in good condition but may be slightly undersized for a 100-year interval peak discharge depending on the methodology used to calculate it. The culvert has a 30” diameter and the rational method predicts a peak discharge of 15.8 cfs which an FHWA Culvert Capacity Nomograph indicates should require a culvert between 30” and 36” in diameter using a 2/3 Headwall/ Depth Ratio. However, since no large woody debris would be transported through this site in a 100-year storm event, and any sediment load transported by such an event would settle out in the large pond before reaching the culvert, the existing 30” diameter culvert should be more than sufficient. Using a Headwall Depth ratio of 1/1, the FHWA Culvert Capacity Nomograph indicates that the existing 30” diameter culvert is more than adequate. The pond is not currently being used as a water source for cultivation or domestic use, but water from the pond may be used to water the orchard in the future. See Photos 1 & 2.

Additional Points (Non-LSAA Projects)

Additional Point 1

Additional Point 1 is currently A small spring-fed Class II pond in an open meadow that drains to a larger pond below. The spillway is not armored, and water runs uncontrolled between the two ponds with some surface rilling along the path that water flows down into the larger man-made pond below in the summer low flow periods. During the winter months, the bare surface is mostly submerged, minimizing the potential for erosion; the rest is vegetated with grasses. There is an intermittent Class III watercourse channel below the outlet of the larger pond below. Because of the lack of serious erosion potential at this site, Additional Point 1 will not be treated. See Photos 3 & 4.

Additional Point 2

Additional Point 2 is currently a road that crosses the headwater swale of a Class III watercourse that starts just below the road. There is no sign of active erosion at the crossing site, but three native-surfaced entrenched skid roads with no drainage facilities contribute almost 1000 feet of surface drainage from steep rutted road surfaces. The deepest of the ruts, shown in photo 6 does exit the road surface where it filters through some brush and grass, before reaching the crossing but it is still hydrologically connected.

Work will consist of installing a rocked rolling dip through the crossing site and the installation of drainage facilities consisting of waterbars and breaching the entrenched skid roads to drain them where feasible. Because there is no defined channel at this site all work at Additional Point 2 will be performed within the existing road prism and not disturb any channel length, or channel / riparian area; no vegetation will be disturbed except the grass and pennyroyal growing on the road surface. Because the work will take place entirely outside of the bed and banks of any watercourse, this does not qualify as a project under the LSAA. See Photos 5 & 6.

Additional Point 3

Additional Point 3 is currently a legacy landing with mature trees growing on it that sits on the alignment of a partially diverted Class III watercourse with a poorly defined channel above due to interference by legacy skid roads and little to no surface erosion where it crosses uncontrolled over the landing surface. There is a large gully through the outboard fill and continuing below that is well vegetated and shows no sign of recent erosion. The gully dissipates as it follows the path of an existing swale alignment. The watercourse does not divert to the existing road, but the gully is visible from the road.

Because the channel above is dispersed, the depth of fill is very shallow, and there is no potential for diversion down the road or visible evidence of recent erosion. Treatment at Additional Point 3 will consist of monitoring the site for any future indications of erosion potential. See Photo 7.

Additional Point 4

Additional Point 4 is currently a road on the upper terrace of a Class I watercourse that is crossed by a Class III watercourse with a poorly defined channel above due to interference by legacy skid roads and little to no surface erosion where it crosses uncontrolled over the road surface. Before returning to the natural channel below the road. The watercourse is hydrologically connected for approximately 150' on the left road approach.

Because the channel above is dispersed, the depth of fill is very shallow, and there is no potential for diversion, or visible evidence of erosion, treatment at Project 1 will consist of installing a waterbar or rolling dip approximately 50 feet to the left (south) to hydrologically disconnect the road from the

watercourse. Monitoring will also take place annually at this site to ensure that no erosion is taking place. All work will be performed within the existing road prism and not disturb any channel length; or channel /riparian area; no vegetation will be disturbed. See Photo 8.

Additional Point 5

Additional Point 5 is currently the site of a legacy watercourse crossing on Class I Martin Creek. The old crossing structure is completely gone having long since washed downstream. The channel has cut down to the natural width and depth through the site and the banks have already eroded to the approximate natural angle of repose. The crossing appears to be related to historical timber harvest activities under a previous landowner. There is little visual evidence of a watercourse crossing having ever been at this location except for the road stretching in either direction from the banks of Martin Creek. A Tank-trap style waterbar or Logs or large rocks will be placed to prevent standard 4x4 vehicles from attempting to ford the watercourse at this location. No further treatment is required. See Photo 9.

Figure 4. Drainage area for Project 1.

Table 1. 100-year flood flow based on the Rational Method

Crossing	$T_c = 60((11.9 \times L^3)/H)^{0.385}$			$Q_{100} = CIA$			
	Channel Length to top of basin (mi) L	Elevation Difference (ft) H	Concentration Time (min) Tc	Runoff Coefficient C	100-year Return-Period Precipitation (in/hr) I	Area (acres) A	100-yr flood flow (cfs) Q₁₀₀
Project 1	0.19	160	3	0.3	3.6	14.6	15.8

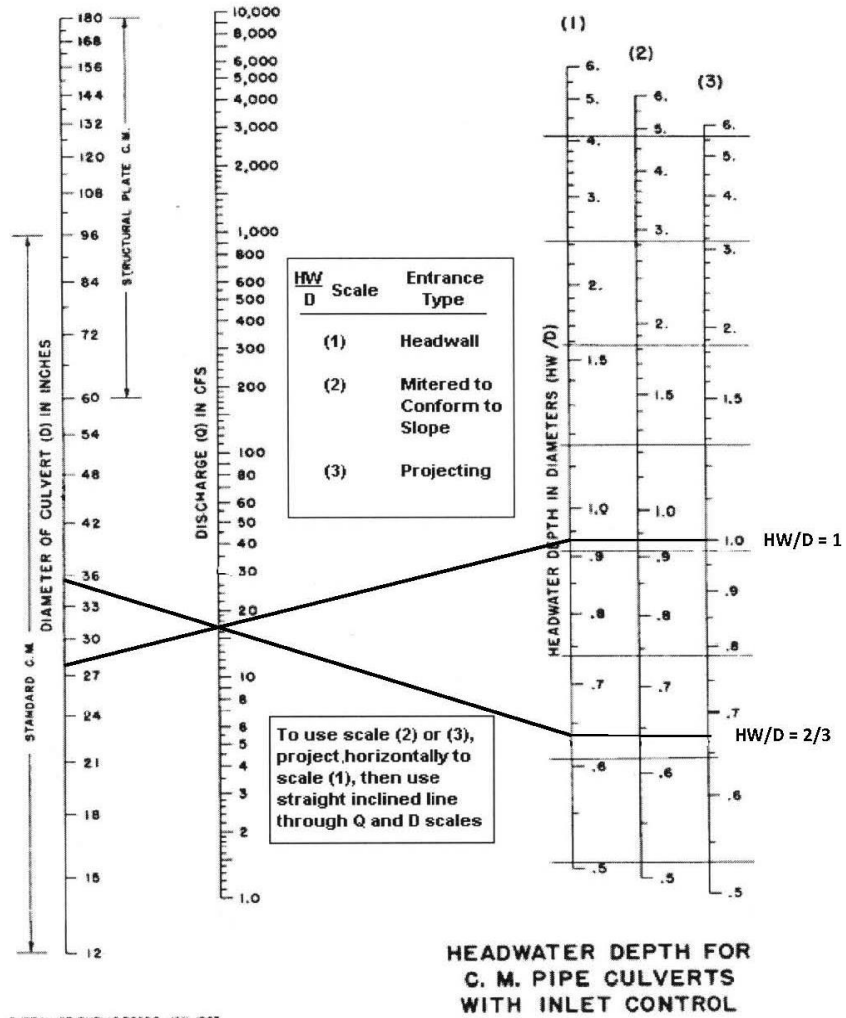


Figure 5. Culvert Nomograph with projecting inlet control

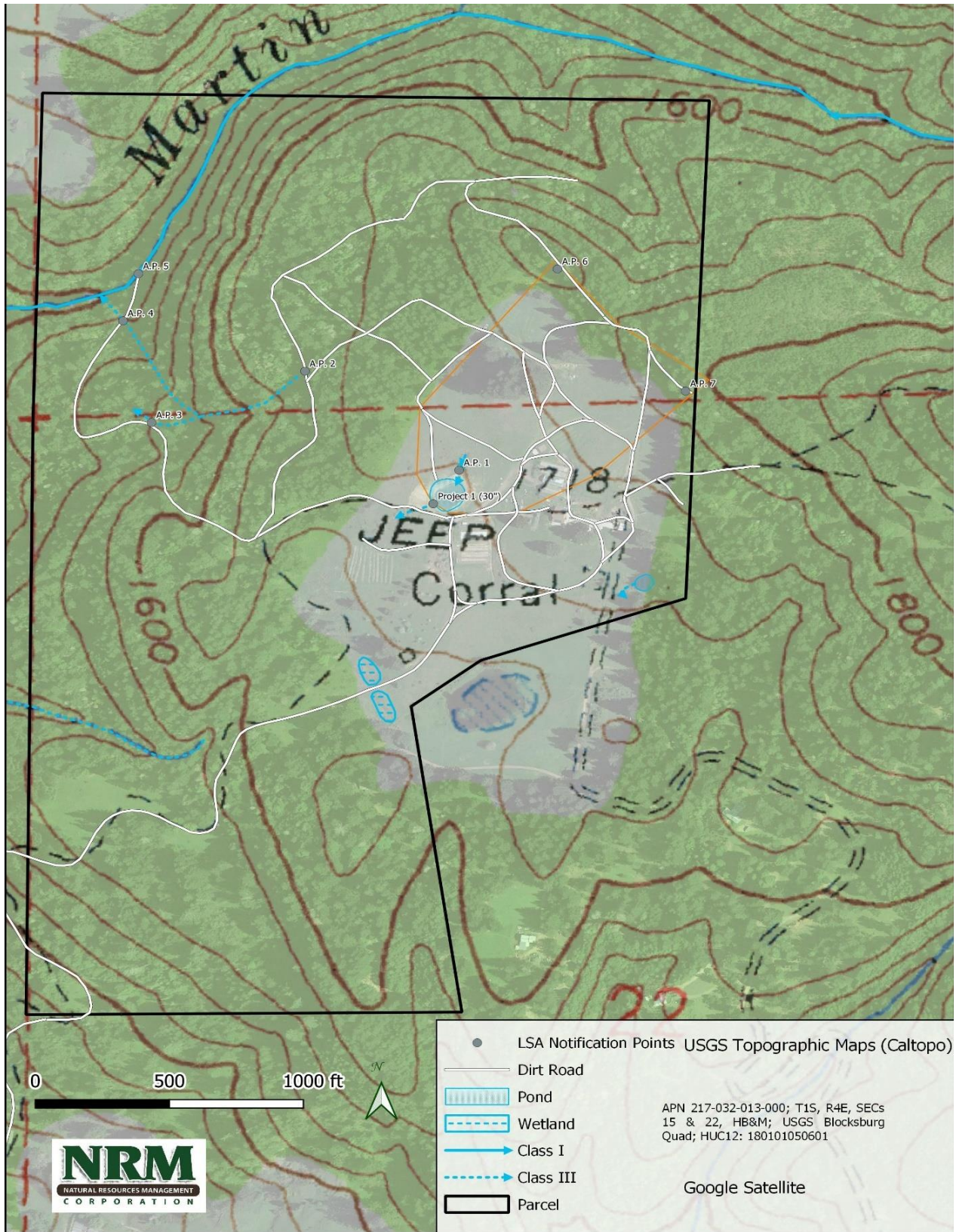


Figure 6. Drainage area Map for calculation of culvert size.

Corrective Actions – BPTCs: #

- There are no corrective actions required.

Project Operations - BPTCs: # 54, 63, 64

Monitoring – BPTCs: 51, 54

- Cannabis cultivators shall conduct regular inspection and maintenance of stream crossings to ensure crossings are not blocked by debris

1.1.3.1 Legacy Discharge Issues

This parcel has no legacy discharge issues other than those disclosed in the Watercourse Crossings and Roads sections.

Corrective Actions – BPTCs: 26

Water bars and/or rolling dips will be installed to minimize access road surface erosion and dissipate runoff before October 15, 2021.

Project Operations - BPTCs: # 3, 4, 17, 20

Monitoring – BPTCs: 26, 30, 54

- Cannabis cultivators shall monitor erosion control measures during and after each storm event that produces at least 0.5 in/day or 1.0 inch/7 days of precipitation, and repair or replace, as needed, ineffective erosion control measures immediately
- Cannabis cultivators shall regularly inspect ditch-relief culverts and clear them of any debris or sediment.
- Cannabis cultivators shall inspect roads to ensure that access roads are not allowed to develop or show evidence of significant surface rutting or gulying.
- Cannabis cultivators shall inspect the condition of access roads, drainage features, and watercourse crossings prior to the onset of fall and winter precipitation and following storm events that produce at least 0.5in/day or 1 inch in 7 days.

1.2. Sediment Erosion Prevention and Sediment Capture

The following list identifies possible sediment discharge features on-site. Each feature will be described in terms of erosion prevention and control, sediment capture and control, and maintenance of erosion and sediment control measures.

Table 2. Possible sediment discharge features and BPTC Schedule for APN 217-032-013

Item #	Possible Sediment Discharge feature	BPTC Schedule
1	Waterbars and rolling dips	Prior to October 1 st , Ongoing
2	Drainage ditch and DRCs	Ongoing

1. Waterbars

Existing legacy logging roads on the property that are not associated with cannabis cultivation have the potential to deliver sediment-laden runoff directly to watercourses. The watercourse crossings at Additional Points two and four, described above have been identified as locations where this has occurred.

Prevention of erosion and sediment transport:

- Additional drainage features (waterbars and or rolling dips) will be installed to minimize the potential for future sediment generation and delivery.
- Road approaches from the nearest drainage facility will be treated with rock to minimize the potential for sediment generation where water cannot be discharged away from the watercourses.

Capture and control of sediment:

- Any measurable sediment generated by rolling dips and waterbars will be stabilized in place with grass seed and a minimum of two inches of straw mulch. This should stabilize the sediment and filter any future discharges from the point of application.
- If this measure is insufficient to control the volume of sediment generated, other measures such as installing additional rolling dips or waterbars and/or rocking the section of road that delivers sediment to them will be implemented, as needed.

Maintenance of erosion control and sediment capture measures:

- The cultivator will regularly inspect waterbars and rolling dips and maintain them, as necessary.
- The cultivator will inspect the condition of access roads, drainage features, and watercourse crossings prior to the onset of fall and winter.

2. Drainage ditch and DRCs

Three ditch relief culverts (DRCs) are located on the property. All three were observed to be functioning properly, as designed. Two of the DRCs are 18 inches in diameter and are in full compliance with all waterboard regulations. The third measures 12 inches in diameter and drains a short ditch along the edge of a concrete driveway that is almost perfectly flat. No evidence of water exceeding the capacity of the DRC was observed, and even if it did, the danger of what would have to be an exceptionally small volume of water running over a flat concrete surface at low velocity would be highly unlikely to contribute to any sediment transport, let alone delivery, with no watercourses or other bodies of water within 250 feet of the DRC. There are few drainage ditches present on the property, no down cutting or other erosion was observed on those that are present.

Prevention of erosion and sediment transport:

- No measures to prevent erosion and sediment transport are currently necessary.

Capture and control of sediment:

- No measures to capture and control sediment are currently necessary.

Maintenance of erosion control and sediment capture measures:

- The cultivator will regularly inspect DRCs and inboard ditches and maintain them, as necessary.

- The cultivator will inspect the condition of access roads, drainage features, and drainage ditches prior to the onset of fall and winter.

Any future grading or road work will follow the requirements listed out in Section II of Attachment A of the General Waste Discharge Requirements and Waiver of Waste Discharge Requirements for Discharges of Waste Associated with Cannabis Cultivation Activities (Order WQ 2017-0023-DWQ), constructed by the State Water Resources Control Board.

2. Fertilizer, Pesticide, Herbicide, and Rodenticide BPTC Measures

Table 3. Fertilizer, Pesticide, Herbicide, and Rodenticide

Product	Delivery	Storage	Use	Disposal
Seaweed Nitrozyme	Pickup Truck	1 and 5-gallon plastic jugs	Soil amendment	Used up and empty containers recycled

A Spill Kit Will be kept on-site to address chemical spills, all chemicals are kept in secondary containment. The basic components of the cultivator’s spill kit include:

- Emergency phone numbers (California Office of Emergency Services: 1-800-852-7550)
- Labels and MSDSs of all fertilizers, pesticides, and rodenticides on hand
- A Copy of the Spill Plan
- Personal Protective Equipment: rubber gloves, footwear, apron, goggles, face shield, respirator
- Heavy plastic bags for material storage
- 10 lbs. of absorbent materials (cat litter, vermiculite, sorbent pads, etc.)
- Shovel, broom or hand broom, dustpan
- Heavy-duty detergent, chlorine bleach, and water for a final clean up
- A sturdy plastic container that closes tightly and will hold the largest quantity of pesticide on hand
- First-aid supplies

(From USDA FS Herbicide Spill Plan https://www.fs.usda.gov/Internet/FSE_DOCUMENTS/fseprd497003.pdf)

Corrective Actions – There are no corrective actions required.

Project Operations - BPTCs: # 104, 105, 110

Monitoring – BPTCs: # 111, 113

- Cannabis cultivators shall monitor the weather forecast and will not apply agricultural chemicals within 48hrs of a predicted rainfall event of .25 inches or greater with a probability greater than 50 percent.
- Cannabis cultivators will record their fertilizer and amendment application and submit the total nitrogen and phosphorus use numbers annually to the State Water Quality and Control Board

3. Petroleum Product BPTC Measures

Table 4. Petroleum Products

Product	Delivery	Storage	Use	Disposal
Gasoline	Pickup Truck	in portable	Small farm equipment	Used on-site
Diesel	Delivery Truck	500 Gallon Tank	Large farm equipment	Used on-site

Motor oil	Pickup Truck	1-quart bottles	all motorized equipment	Eel River Disposal
Propane	Delivery Truck	1,000 Gallon Tank	Domestic/Heating	Used on-site

Corrective Actions – There are no corrective actions required.

Project Operations - BPTCs: # 7, 104, 105,106, 108, 109, 110, 118

Monitoring – BPTCs: # 116, 117,

- Cannabis cultivators will monitor the condition of their vehicles and machinery and inspect for leaks before refueling.

3.1 Hazardous Materials Safety and Reporting

As indicated in Table 4 there is a 500-gallon storage tank for diesel fuel located on the property. In these amounts, the fuel is considered hazardous material. The project will be enrolled in the California Environmental Reporting System (CERS); a Hazardous Materials Business Plan (HMBP) will be prepared and submitted to the local Certified Unified Program Agency (CUPA) – Humboldt County Department of Health and Human Services. The project will comply with the Materials Plan and agree to periodic inspections.

Humboldt County’s CUPA is a part of the County Hazardous Materials Unit in the Department of Health and Human Services, Environmental Health Division. A CUPA inspector can be reached at:
100 H St.
Suite 100
Eureka, CA 95501
Ph: 707-445-6215

4. Trash/Refuse and Domestic Wastewater BPTC Measures

4.1 Trash and Refuse

Household waste and packaging materials will be the primary forms of waste generated onsite. Other occasional waste may include broken or worn-out tools and infrastructure that breaks or wears out over time such as hoses and tarps. There is currently a fenced-in area near the yurt by the house where trash/refuse is stored. There are plans for a new spot with a pad and rooftop on the east side behind the shipping container and the new pad for a building. Trash/refuse is disposed of at the Recology Eel River waste transfer station located at 965 Riverwalk Drive in Fortuna, CA at least once a month.

4.2 Employees, Visitors, Residents

There are no full-time employees only seasonal ones. Up to 3 employees may be on-site during peak activity times.

4.2.1 Domestic Wastewater

Domestic wastewater is disposed of in a permitted onsite wastewater treatment system in the form of a septic tank and leach lines. There are also rented chemical toilets for employee use and for convenience. The chemical toilets are serviced every two weeks by Six Rivers Portable toilets.

There are a couple of old outhouses on the property, but they will be decommissioned, and the structures converted into tool sheds.

Corrective Actions - There are no corrective actions required for this section.

Project Operations - BPTCs: # 119, 120, 123, 124, 125

Monitoring – There is no monitoring required for this section.

5. Winterization BPTC Measures

At the end of the growing season, before winter rains, the following steps will be taken to prepare the site for winter:

- The soil used in cultivation will be left in beds and planted with a cover crop.
- Any bare soil on the fill slopes of graded areas will be covered with straw a minimum of 2 inches thick and secured with a tackifier or describe any revegetation activities that will occur either at the beginning or end of the precipitation season. Cannabis cultivators shall apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent the discharge of sediment to waters of the state.
- Cannabis stems and root balls will be composted on-site in the designated area.
- All nutrients, fuels, and all chemicals will be placed in a secure storage shed in secondary containment.
- All cultivation trash and debris will be properly disposed of
- Cannabis cultivators shall maintain all culverts, drop inlets, trash racks, and similar devices to ensure they are not blocked by debris or sediment. The outflow of culverts shall be inspected to ensure erosion is not undermining the culvert. Culverts shall be inspected before the onset of fall and winter precipitation and following precipitation events that produce at least 0.5 inch/day or 1.0 inch/7 days of precipitation to determine if maintenance or cleaning is required.
- Cannabis cultivators shall block or otherwise close any temporary access roads to all motorized vehicles no later than the onset of the winter period each year.
- Cannabis cultivators shall not operate heavy equipment of any kind at the cannabis cultivation site during the winter period unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction

If any BPTC measure cannot be completed before the onset of the winter period, the landowner will contact the Regional Water Board to establish a compliance schedule.

As stated by the Water Code section 13267 the landowner will complete and submit technical monitoring reports monthly until winterization measures have been implemented.

6. Water Use and Storage BPTC Measures

There are two wells on the property that provide all the water used for cultivation and domestic use.

There are plans to potentially use water from the pond to irrigate the small fruit tree orchard located adjacent to the outdoor cultivation area. Facilities for such a diversion are currently permitted under LSAA 1600-2020-0038-R1 with the California Department of Fish and Wildlife. A SUIR will be applied for with the SWRCB when and if any water is diverted from the pond.

For future compliance, a water meter or meters will be used to quantify irrigation use. A photo of the meter reading will be taken weekly to document water use.

Corrective Actions – BPTCs: #

- A water meter or meters will be installed to monitor irrigation use for reporting purposes by June 1st, 2021.

Project Operations - BPTCs: # 96, 97

Monitoring – BPTCs: 95

- Cannabis cultivators shall on a monthly basis, at a minimum, inspect their entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks.

7. Summary of Corrective Actions and Monitoring

7.1 Corrective Actions

- Install drainage facilities on legacy timber roads to minimize the development of ruts and delivery of sediment-laden surface runoff to watercourses, as feasible before October 15, 2021.
- Water bars and/or rolling dips will be installed to minimize access road surface erosion and dissipate runoff before October 15, 2021.
- A water meter or meters will be installed to monitor irrigation use for reporting purposes by June 1st, 2021.

7.2 Monitoring

1. Sediment Discharge BPTC Measures

- The cultivator will perform a periodic inspection of the water delivery system for leaks and immediately repair any leaks.
- All ditch relief culverts will be inspected periodically for blockage and cleared.
- The cultivator will inspect and repair erosion prevention and control systems after every storm that produces .5 inches of rain in one day or 1 inch in 7 days.

2. Fertilizer, Pesticide, Herbicide, and Rodenticide Amendments (reported annually to State Water Board)

- Cannabis cultivators shall monitor the weather forecast and will not apply agricultural chemicals within 48hrs of a predicted rainfall event of .25 inches or greater with a probability greater than 50 percent.
- Cannabis cultivators will record (monthly) their fertilizer and amendment use.
-

3. Petroleum Products

- Cannabis cultivators will monitor the condition of their vehicles and machinery and inspect for leaks before refueling.

4. Trash/Refuse and Domestic Waste

- The cultivator will maintain a riparian setback free of refuse and contaminants (plastic, litter, construction debris, creosote-treated wood, spoils, etc.).

5. Winterization BPTC (see section 5, page 21)

6. Water Use (water numbers reported annually to CDFW and State Water Board)
- A daily documentation of water use (photos of continuous read meter or meters)

Appendix A. Photo Documentation



Photo 1. Project 1- Large pond, The inlet of the overflow culvert on the large pond.



Photo 2. Project 1- Large pond, At the outlet of the overflow culvert on the large pond, with an ephemeral Class III watercourse channel that dissipates approximately 225 feet downslope.



Photo 3. Additional Point 1 (Non-project). View of small pond from the outlet.



Photo 4. Additional Point 1 (Non-project). Looking downstream from the outlet of the small pond to the large pond below.



Photo 5. Additional Point 2 (Non-project). Rutted, entrenched road draining to head of Class III below.



Photo 6. Additional Point 2 (Non-project). Captured surface flow exits the road and filters through the brush just above Additional Point 3, where it saturates the road surface before delivering to the head of the Class III watercourse.



Photo 7. Additional Point 3 (Non-project). From the road upslope.



Photo 8. Additional Point 4. Looking upstream from the road.



Photo 9. Additional Point (Non-Project)- Looking upstream through the site from below showing both banks.



Photo 10. Hoop House #1, 102 x 16



Photo 11. Hoop House #2, 102 x 16



Photo 12. Interior of Hoop House 4 (propagation), 72 x 30



Photo 13. Hoop Houses #3 & 4 (propagation), 72 x 30



Photo 14. Parking area (pre-gravel treatment), Pond, Hoop Houses 5-9



Photo 15. Hoop Houses 5-7



Photo 15. Hoop Houses 7-9



Photo 16. Overview of Premises.



Photo 17. Outdoor cultivation area



Photo 18. Young Fruit Orchard



Photo 19. Vegetable Garden



Photo 20. Solar Panels



Photo 21. Diesel tank in Containment Pre-Pad installation



Photo 21. Diesel tank in Containment Post-Pad installation



Photo 22. Generator shed



Photo 23. Propane tank



Photo 24. Greywater Shower



Photo 25. Alternate View of Solar Panels



Photo 26. Parking Area (post-gravel treatment)



Photo 27. New shop/outbuilding under construction



Photo 28. 24,000 Gallon Tank Farm



Photo 10. Additional Point 6. Well #1



Photo 11. Additional Point 7. Well #2

State of California
Well Completion Report
WCR Form - DWR 188 Submitted 06/29/2017
WCR2017-001835

Owner's Well Number 1 Date Work Began 06/27/2017 Date Work Ended 06/27/2017
Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program
Secondary Permit Agency _____ Permit Number 1578-0598 Permit Date 04/11/2016

Well Owner (must remain confidential pursuant to Water Code 13752)	Planned Use and Activity
Name <u>JOSHUA YOUNG</u>	Activity <u>New Well</u>
Mailing Address <u>P.O. BOX 212</u>	Planned Use <u>Water Supply Irrigation - Agriculture</u>
City <u>ALDERPOINT</u> State <u>CA</u> Zip <u>95514</u>	

Well Location	
Address <u>30492 ALDERPOINT RD</u>	APN <u>217-032-013</u>
City <u>Bucksburg</u> Zip <u>95514</u> County <u>Humboldt</u>	Township <u>01</u> <u>S</u>
Latitude _____ N Longitude _____ W	Range <u>04</u> <u>E</u>
Dec. Lat. _____ Deg. Min. _____ Sec. _____	Section <u>15</u>
Dec. Long. _____ Deg. Min. _____ Sec. _____	Baseline Method <u>Humboldt</u>
Vertical Datum _____ Horizontal Datum <u>WGS84</u>	Ground Surface Elevation _____
Location Accuracy _____ Location Determination Method _____	Elevation Accuracy _____
	Elevation Determination Method _____

Borehole Information	Water Level and Yield of Completed Well
Orientation <u>Vertical</u> Specify _____	Depth to first water <u>61</u> (Feet below surface)
Drilling Method <u>Direct Rotary</u> Drilling Fluid <u>Air</u>	Depth to Static _____
Total Depth of Boring <u>140</u> Feet	Water Level <u>52</u> (Feet) Date Measured <u>06/27/2017</u>
Total Depth of Completed Well <u>140</u> Feet	Estimated Yield* <u>40</u> (GPM) Test Type <u>Air Lift</u>
	Test Length <u>4</u> (Hours) Total Drawdown <u>79</u> (Feet)
	*May not be representative of a well's long term yield.

Geologic Log - Free Form		
Depth from Surface Feet to Feet	Description	
0 - 4	TOP SOIL	
4 - 18	BROWN SANDSTONE	
18 - 21	SHALE	
21 - 140	BLUE SANDSTONE HARD SHALE	

Casings										
Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casing Specifications	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	40	Blank	PVC	OD: 5.563 in. SDR: 21 Thickness: 0.265 in.	0.265	5.563			
1	40	140	Screen	PVC	OD: 5.563 in. SDR: 21 Thickness: 0.265 in.	0.265	5.563	Milled Slots	0.032	

Annular Material				
Depth from Surface Feet to Feet	FILL	FILL Type Details	Filter Pack Size	Description
0 - 20	Bentonite	Other Bentonite		Sanitary Seal
20 - 140	Filter Pack	Other Gravel Pack	3/8 inch	Pea Gravel

Page 1 of 2

Figure 7. Additional Point 6, Well completion report for well #1, page 1.

Other Observations:

Borehole Specifications		
Depth from Surface Feet to Feet	Borehole Diameter (Inches)	
0	140	10

Certification Statement				
<small>I, the undersigned, certify that this report is complete and accurate to the best of my knowledge and belief</small>				
Name FISCH DRILLING				
<small>Person, Firm or Corporation</small>				
3150 JOHNSON ROAD		HYDESVILLE	CA	95547
<small>Address</small>		<small>City</small>	<small>State</small>	<small>Zip</small>
Signed <i>electronic signature received</i>				
<small>C-57 Licensed Water Well Contractor</small>		<small>Date Signed</small>	<small>C-57 License Number</small>	
		06/29/2017	683865	

Attachments
Scan.pdf - Location Map

DWR Use Only													
[Empty Box]													
Site Number / State Well Number													
[Empty Boxes] N										[Empty Boxes] W			
<small>Latitude Deg/Min/Sec</small>										<small>Longitude Deg/Min/Sec</small>			
TRS:													
APN:													

Page 2 of 2

Figure 8. Additional Point 6, Well completion report for well #1, Page 2.

State of California
Well Completion Report
WCR Form - DWR 188 Submitted 06/29/2017
WCR2017-001937

Owner's Well Number 2 Date Work Began 06/21/2017 Date Work Ended 06/27/2017
Local Permit Agency Humboldt County Department of Health & Human Services - Land Use Program
Secondary Permit Agency _____ Permit Number 15/16-0595 Permit Date 04/11/2016

Well Owner (must remain confidential pursuant to Water Code 13752)	Planned Use and Activity
Name <u>JOSHUA YOUNG</u>	Activity <u>New Well</u>
Mailing Address <u>P.O. BOX 212</u>	Planned Use <u>Water Supply Irrigation - Agriculture</u>
City <u>BLOCKSBURG</u> State <u>CA</u> Zip <u>95514</u>	

Well Location	
Address <u>26492 ALDERPOINT RD</u>	APN <u>217-032-013</u>
City <u>Blocksburg</u> Zip <u>95514</u> County <u>Humboldt</u>	Township <u>01</u> S
Latitude _____ N Longitude _____ W	Range <u>04</u> E
Dec. Lat. <u>40.3689900</u> Dec. Long. <u>-123.7130400</u>	Section <u>15</u>
Vertical Datum _____ Horizontal Datum <u>WGS84</u>	Baseline Meridian <u>Humboldt</u>
Location Accuracy _____ Location Determination Method _____	Ground Surface Elevation _____
	Elevation Accuracy _____
	Elevation Determination Method _____

Borehole Information	Water Level and Yield of Completed Well
Orientation <u>Vertical</u> Specify _____	Depth to first water <u>102</u> (Feet below surface)
Drilling Method <u>Direct Rotary</u> Drilling Fluid <u>Air</u>	Depth to Static _____
Total Depth of Boring <u>280</u> Feet	Water Level <u>75</u> (Feet) Date Measured <u>06/27/2017</u>
Total Depth of Completed Well <u>280</u> Feet	Estimated Yield* <u>5</u> (GPM) Test Type <u>Air Lift</u>
	Test Length <u>4</u> (Hours) Total Drawdown <u>178</u> (Feet)
	*May not be representative of a well's long term yield.

Geologic Log - Free Form		
Depth from Surface Feet to Feet	Description	Description
0 3	TOP SOIL	
3 28	SOFT BROWN SANDSTONE	
28 53	SANDSTONE	
53 80	SHALE	
80 175	BLUE GRAY SANDSTONE	
175 201	SHALE	
201 244	BLUE SANDSTONE SHALE MIX	
244 280	SHALE	

Casings										
Casing #	Depth from Surface Feet to Feet		Casing Type	Material	Casings Specifications	Wall Thickness (inches)	Outside Diameter (inches)	Screen Type	Slot Size if any (inches)	Description
1	0	80	Blank	PVC	OD: 5.563 in. SDR: 21 Thickness: 0.265 in.	0.265	5.563			
1	80	280	Screen	PVC	OD: 5.563 in. SDR: 21 Thickness: 0.265 in.	0.265	5.563	Milled Slots	0.032	

Figure 9. Additional Point 7, Well completion report for well #2, Page 1.

Appendix B. BPTC Measures from Attachment A of Cannabis Cultivation Policy

SECTION 2 – REQUIREMENTS RELATED TO WATER DIVERSIONS AND WASTE DISCHARGE FOR CANNABIS CULTIVATION

The following requirements apply to any water diversion or waste discharge related to cannabis cultivation.

Land Development and Maintenance, Erosion Control, and Drainage Features

Limitations on Earthmoving

1. Cannabis cultivators shall not conduct grading activities for cannabis cultivation land development or alteration on slopes exceeding 50 percent grade, or as restricted by local county or city permits, ordinances, or regulations for grading, agriculture, or cannabis cultivation; whichever is more stringent shall apply. The grading prohibition on slopes exceeding 50 percent does not apply to site mitigation or remediation if the cannabis cultivator is issued separate WDRs or an enforcement order for the activity by the Regional Water Board Executive Officer.
2. Finished cut and fill slopes, including side slopes between terraces, shall not exceed slopes of 50 percent and should conform to the natural pre-grade slope whenever possible.
3. Cannabis cultivators shall not drive or operate vehicles or equipment within the riparian setbacks or within waters of the state unless authorized under 404/401 CWA permits, a CDFW LSA Agreement, coverage under the Cannabis General Order water quality certification, or site-specific WDRs issued by the Regional Water Board. This requirement does not prohibit driving on established, maintained access roads that comply with this Policy.
4. Cannabis cultivation land development and access road construction shall be designed by qualified professionals. Cannabis cultivators shall conduct all construction or land development activities to minimize grading, soil disturbance, and disturbance to aquatic and terrestrial habitat.
5. The cannabis cultivator shall control all dust related to cannabis cultivation activities to ensure dust does not produce sediment-laden runoff. The cannabis cultivator shall implement dust control measures, including, but not limited to, pre-watering of excavation or grading sites, use of water trucks, track-out prevention, washing down vehicles or equipment before leaving a site and prohibiting land disturbance activities when instantaneous wind speeds (gusts) exceed 25 miles per hour. Cannabis cultivators shall grade access roads in dry weather while moisture is still present in the soil to minimize dust and to achieve design soil compaction, or when needed use a water truck to control dust and soil moisture.

Construction Equipment Use and Limitations

6. Cannabis cultivators shall employ spill control and containment practices to prevent the discharge of fuels, oils, solvents and other chemicals to soils and waters of the state.
7. Cannabis cultivators shall stage and store equipment, materials, fuels, lubricants, solvents, or hazardous or toxic materials in locations that minimize the potential for discharge to waters of the state. At a minimum, the following measures shall be implemented:
 - 7.1. Designate an area outside the riparian setback for equipment storage, short-term maintenance, and refueling. Cannabis cultivator shall not conduct any maintenance activity or refuel equipment in any location where the petroleum products or other pollutants may enter waters of the state as per Fish and Game Code section 5650 (a)(1).

7.2. Frequently inspect equipment and vehicles for leaks.

7.3. Immediately clean up leaks, drips, and spills. Except for emergency repairs that are necessary for the safe transport of equipment or vehicles to an appropriate repair facility, equipment or vehicle repairs, maintenance, and washing onsite is prohibited.

7.4. If emergency repairs generate waste fluids, ensure they are contained and properly disposed of or recycled off-site.

7.5. Properly dispose of all construction debris off-site. 6. Use dry cleanup methods (e.g., absorbent materials, cat litter, and/or rags) whenever possible. Sweep up, contain, and properly dispose of spilled dry materials.

Erosion Control

8. The cannabis cultivator shall use appropriate erosion control measures to minimize erosion of disturbed areas, potting soil, or bulk soil amendments to prevent discharges of waste. Fill soil shall not be placed where it may discharge into surface water. If used, weed-free straw mulch shall be applied at a rate of two tons per acre of exposed soils and, if warranted by site conditions, shall be secured to the ground.

9. The cannabis cultivator shall not plant or seed noxious weeds. Prohibited plant species include those identified in the California Invasive Pest Plant Council's database, available at www.cal-ipc.org/paf/. Locally native, non-invasive, and non-persistent grass species may be used for temporary erosion control benefits to stabilize disturbed land and prevent exposure of disturbed land to rainfall. Nothing in this term may be construed as a ban on cannabis cultivation that complies with the terms of this Policy.

10. Cannabis cultivators shall incorporate erosion control and sediment detention devices and materials into the design, work schedule, and implementation of the cannabis cultivation activities. Erosion prevention and sediment capture measures shall be effective in protecting water quality.

- Interim erosion prevention and sediment capture measures shall be implemented within seven days of completion of grading and land disturbance activities, and Cannabis Cultivation Policy: Attachment A – October 17, 2017 Page 30 shall consist of erosion prevention measures and sediment capture measures including:
 - Erosion prevention measures are required for any earthwork that uses heavy equipment (e.g., bulldozer, compactor, excavator, etc.). Erosion prevention measures may include surface contouring, slope roughening, and upslope stormwater diversion. Other types of erosion prevention measures may include mulching, hydroseeding, tarp placement, revegetation, and rock slope protection.
 - Sediment capture measures include the implementation of measures such as gravel bag berms, fiber rolls, straw bale barriers, properly installed silt fences, and sediment settling basins
 - Long-term erosion prevention and sediment capture measures shall be implemented as soon as possible and before the onset of fall and winter precipitation. Long-term measures may include the use of heavy equipment to reconfigure access roads or improve access road drainage, installation of properly-sized culverts, gravel placement on steeper grades, and stabilization of previously disturbed land.
 - Maintenance of all erosion protection and sediment capture measures is required year-round. Early monitoring allows for the identification of problem areas or underperforming

erosion or sediment control measures. Verification of the effectiveness of all erosion prevention and sediment capture measures is required as part of winterization activities.

11. Cannabis cultivators shall only use geotextiles, fiber rolls, and other erosion control measures made of loose-weave mesh (e.g., jute, coconut (coir) fiber, or from other products without welded weaves). To minimize the risk of ensnaring and strangling wildlife, cannabis cultivators shall not use synthetic (e.g., plastic or nylon) monofilament netting materials for erosion control for any cannabis cultivation activities. This prohibition includes photo- or bio-degradable plastic netting.

12. Cultivation sites constructed on or near slopes with a slope greater than or equal to 30 percent shall be inspected for indications of instability. Indications of instability include the occurrence of slope failures at nearby similar sites, weak soil layers, geologic bedding parallel to slope surface, hillside creep (trees, fence posts, etc. leaning downslope), tension cracks in the slope surface, bulging soil at the base of the slope, and groundwater discharge from the slope. If indicators of instability are present, the cannabis cultivator shall consult with a qualified professional to design measures to stabilize the slope to prevent sediment discharge to surface waters.

13. For areas outside of riparian setbacks or for upland areas, cannabis cultivators shall ensure that rock placed for slope protection is the minimum amount necessary and is part of a design that provides for native plant revegetation. If retaining walls or other structures are required to provide slope stability, they shall be designed by a qualified professional.

14. Cannabis cultivators shall monitor erosion control measures during and after each storm event that produces at least 0.5 in/day or 1.0 inch/7 days of precipitation, and repair or replace, as needed, ineffective erosion control measures immediately.

Access Road/Land Development and Drainage

15. Access roads shall be constructed consistent with the requirements of California Code of Regulations Title 14, Chapter 4. The Road Handbook describes how to implement the regulations and is available at http://www.pacificwatershed.com/sites/default/files/roadsenglishbookapril2015b_0.pdf. Existing access roads shall be upgraded to comply with the Road Handbook.

16. Cannabis cultivators shall obtain all required permits and approvals prior to the construction of any access road constructed for cannabis cultivation activities. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), CDFW LSA Agreement, and county or local agency permits.

17. Cannabis cultivators shall ensure that all access roads are hydrologically disconnected to receiving waters to the extent possible by installing disconnecting drainage features, increasing the frequency of (inside) ditch drain relief as needed, constructing out-sloped roads, constructing energy dissipating structures, avoiding concentrating flows in unstable areas, and performing inspection and maintenance as needed to optimize the access road performance.

18. New access road alignments should be constructed with grades (slopes) of 3- to 8- percent, or less, wherever possible. Forest access roads should generally be kept below 12-percent except for short pitches of 500 feet or less where road slopes may go up to 20- percent. These steeper access road slopes should be paved or rock surfaced and equipped with adequate drainage. Existing access roads that do not comply with these limits shall be inspected by a qualified professional to determine if improvements are needed.

19. Cannabis cultivators shall decommission or relocate existing roads away from riparian setbacks whenever possible. Roads that are proposed for decommissioning shall be abandoned and left in a condition that provides for the long-term, maintenance-free function of drainage and erosion controls. Abandoned roads shall be blocked to prevent unauthorized vehicle traffic.

20. If site conditions prohibit drainage structures (including rolling dips and ditch-relief culverts) at adequate intervals to avoid erosion, the cannabis cultivator shall use bioengineering techniques¹² as the preferred measure to minimize erosion (e.g., live fascines). If bioengineering cannot be used, then engineering fixes such as armoring (e.g., rock of adequate size and depth to remain in place under traffic and flow conditions) and velocity dissipaters (e.g., gravel-filled “pillows” in an inside ditch to trap sediment) may be used for problem sites. The maximum distance between water breaks shall not exceed those defined in the Road Handbook.

21. Cannabis cultivators shall have a qualified professional design the optimal access road alignment, surfacing, drainage, maintenance requirements, and spoils handling procedures

22. Cannabis cultivators shall ensure that access road surfacing, especially within a segment-leading to a waterbody, is sufficient to minimize sediment delivery to the wetland or waterbody and maximize access road integrity. Road surfacing may include pavement, chip-seal, lignin, rock, or other material appropriate for timing and nature of use. All access roads that will be used for winter or wet weather hauling/traffic shall be surfaced. Steeper access road grades require higher quality rock (e.g., crushed angular versus river-run) to remain in place. The use of asphalt grindings is prohibited.

23. Cannabis cultivators shall install erosion control measures on all access road approaches to surface water diversion sites to reduce the generation and transport of sediment to streams.

24. Cannabis cultivators shall ensure that access roads are out-sloped whenever possible to promote even drainage of the access road surface, prevent the concentration of stormwater flow within an inboard or inside ditch, and to minimize disruption of the natural sheet flow pattern of a hill slope to a stream.

25. If unable to eliminate inboard or inside ditches, the cannabis cultivator shall ensure adequate ditch relief culverts to prevent down-cutting of the ditch and to reduce water runoff concentration, velocity, and erosion. Ditches shall be designed and maintained as recommended by a qualified professional. To avoid point-source discharges, inboard ditches and ditch relief culverts shall be discharged onto vegetated or armored slopes that are designed to dissipate and prevent runoff channelization. Inboard ditches and ditch relief culverts shall be designed to ensure discharges into natural stream channels or watercourses are prevented.

26. Cannabis cultivators shall ensure that access roads are not allowed to develop or show evidence of significant surface rutting or gulying. Cannabis cultivators shall use water bars and rolling dips as designed by a qualified professional to minimize access road surface erosion and dissipate runoff.

27. Cannabis cultivators shall only grade ditches when necessary to prevent erosion of the ditch, undermining of the banks, or exposure of the toe of the cut slope to erosion. Cannabis cultivators shall not remove more vegetation than necessary to keep water moving, as vegetation prevents scour and filters out sediment.

28. Access road stormwater drainage structures shall not discharge onto unstable slopes, earthen fills, or directly to a waterbody. Drainage structures shall discharge onto stable areas with straw bales, slash, vegetation, and/or rock riprap.

29. Sediment control devices (e.g., check dams, sand/gravel bag barriers, etc.) shall be used when it is not practical to disperse stormwater before discharge to a waterbody. Where potential discharge to a wetland or waterbody exists (e.g., within 200 feet of a waterbody) access road surface drainage shall be filtered through vegetation, slash, other appropriate material, or settled into a depression with an outlet with adequate drainage. Sediment basins shall be engineered and properly sized to allow sediment settling, spillway stability, and maintenance activities.

Drainage Culverts (See also Watercourse Crossings)

30. Cannabis cultivators shall regularly inspect ditch-relief culverts and clear them of any debris or sediment. To reduce ditch-relief culvert plugging by debris, cannabis cultivators shall use 15- to 24-inch diameter pipes, at minimum. In forested areas with a potential for woody debris, a minimum 18-inch diameter pipe shall be used to reduce clogging. Ditch relief culverts shall be designed by a qualified professional based on site-specific conditions.

31. Cannabis cultivators shall ensure that all permanent watercourse crossings that are constructed or reconstructed are capable of accommodating the estimated 100-year flood flow, including debris and sediment loads. Watercourse crossings shall be designed and sized by a qualified professional.

Cleanup, Restoration, and Mitigation

32. Cannabis cultivators shall limit disturbance to existing grades and vegetation to the actual site of the cleanup or remediation and any necessary access routes.

33. Cannabis cultivators shall avoid damage to native riparian vegetation. All exposed or disturbed land and access points within the stream and riparian setback with damaged vegetation shall be restored with regional native vegetation of similar native species. Riparian trees over four inches diameter at breast height shall be replaced by similar native species at a ratio of three to one (3:1). Restored areas must be mulched, using at least 2 to 4 inches of weed-free, clean straw or similar biodegradable mulch over the seeded area. Mulching shall be completed within 30 days after land disturbance activities in the areas cease. Revegetation planting shall occur at a seasonally appropriate time until vegetation is restored to pre-cannabis or pre-Legacy condition or better. Cannabis cultivators shall stabilize and restore any temporary work areas with native vegetation to pre-cannabis cultivation or pre-Legacy conditions or better. Vegetation shall be planted at an adequate density and variety to control surface erosion and re-generate a diverse composition of regional native vegetation of similar native species.

34. Cannabis cultivators shall avoid damage to oak woodlands. Cannabis cultivator shall plant three oak trees for every one oak tree damaged or removed. Trees may be planted in groves to maximize wildlife benefits and shall be native to the local county.

35. Cannabis cultivators shall develop a revegetation plan for:

- All exposed or disturbed riparian vegetation areas,
- any oak trees that are damaged or removed, and
- temporary work areas.
- Cannabis cultivators shall develop a monitoring plan that evaluates the revegetation plan for five years. Cannabis cultivators shall maintain annual inspections to assess an 85 percent survival and growth of revegetated areas within a five-year period. The presence of exposed soil shall be documented for three years following revegetation work. If the revegetation results in less than an 85 percent success rate, the unsuccessful vegetation areas shall be replanted. Cannabis cultivators

shall identify the location and extent of exposed soil associated with the site; pre- and post-revegetation work photos; diagram of all areas revegetated, the planting methods, and plants used; and an assessment of the success of the revegetation program. Cannabis cultivators shall maintain a copy of the revegetation plan and monitoring results onsite and make them available, upon request, to Water Boards staff or authorized representatives. An electronic copy of the monitoring results is acceptable in Portable Document Format (PDF).

36. Cannabis cultivators shall revegetate soil exposed as a result of cannabis cultivation activities with native vegetation by live planting, seed casting, or hydroseeding within seven days of exposure.

37. Cannabis cultivators shall prevent the spread or introduction of exotic plant species to the maximum extent possible by cleaning equipment before delivery to the cannabis cultivation Site and before removal, restoring land disturbance with appropriate native species, and post-cannabis cultivation activities monitoring and control of exotic species. Nothing in this term may be construed as a ban on cannabis cultivation that complies with the terms of this Policy.

Stream Crossing Installation and Maintenance

Limitations on Work in Watercourses and Permanently Poned Areas

38. Cannabis cultivators shall obtain all applicable permits and approvals prior to doing any work in or around waterbodies or within the riparian setbacks. Permits may include section 404/401 CWA permits, Regional Water Board WDRs (when applicable), and a CDFW LSA Agreement.

39. Cannabis cultivators shall avoid or minimize temporary stream crossings. When necessary, temporary stream crossings shall be located in areas where erosion potential and damage to the existing habitat is low. Cannabis cultivators shall avoid areas where runoff from access roadway side slopes and natural hillsides will drain and flow into the temporary crossing. Temporary stream crossings that impede fish passage are strictly prohibited on permanent or seasonal fish-bearing streams.

40. Cannabis cultivators shall avoid or minimize the use of heavy equipment in a watercourse. If use is unavoidable, heavy equipment may only travel or work in a waterbody with a rocky or cobbled channel. Wood, rubber, or clean native rock temporary work pads shall be used on the channel bottom prior to the use of heavy equipment to protect channel bed and preserve channel morphology. Temporary work pads and other channel protection shall be removed as soon as possible once the use of heavy equipment is complete.

41. Cannabis cultivators shall avoid or minimize work in or near a stream, creek, river, lake, pond, or other waterbody. If work in a waterbody cannot be avoided, activities and associated workspace shall be isolated from flowing water by directing the water around the worksite. If water is present, then the cannabis cultivator shall develop a site-specific plan prepared by a qualified professional. The plan shall consider partial or full stream diversion and dewatering. The plan shall consider the use of cofferdams upstream and downstream of the worksite and the diversion of all flow from upstream of the upstream dam to downstream of the downstream dam, through a suitably sized pipe with intake screens that protect and prevent impacts to fish and wildlife. Cannabis cultivation activities and associated work shall be performed outside the waterbody from the top of the bank to the maximum extent possible.

Temporary Watercourse Diversion and Dewatering: All Live Watercourses

42. Cannabis cultivators shall ensure that cofferdams are constructed prior to commencing work and as close as practicable upstream and downstream of the work area. Cofferdam construction using offsite materials, such as clean gravel bags or inflatable dams, is preferred. Thick plastic may be used to minimize

leakage, but shall be completely removed and properly disposed of upon work completion. If the cofferdams or stream diversion fails, the cannabis cultivator shall repair them immediately.

43. When any dam or other artificial obstruction is being constructed, maintained, or placed in operation, the cannabis cultivator shall allow sufficient water at all times to pass downstream to maintain aquatic life below the dam pursuant to Fish and Game Code section 5937.

44. If possible, gravity flow is the preferred method of water diversion. If a pump is used, the cannabis cultivator shall ensure that the pump is operated at the rate of flow that passes through the cannabis cultivation site. Pumping rates shall not dewater or impound water on the upstream side of the cofferdam. When diversion pipe is used it shall be protected from cannabis cultivation activities and maintained to prevent debris blockage.

45. Cannabis cultivators shall only divert water such that water does not scour the channel bed or banks at the downstream end. Cannabis cultivator shall divert flow in a manner that prevents turbidity, siltation, and pollution and provides flows to downstream reaches. Cannabis cultivators shall provide flows to downstream reaches during all times that the natural flow would have supported aquatic life. Flows shall be of sufficient quality and quantity, and of appropriate temperature to support fish and other aquatic life both above and below the diversion. Block netting and intake screens shall be sized to protect and prevent impacts to fish and wildlife.

46. Once the water has been diverted around the work area, cannabis cultivators may dewater the site to provide an adequately dry work area. Any muddy or otherwise contaminated water shall be pumped to a settling tank, dewatering filter bag, or upland area, or to another location approved by CDFW or the appropriate Regional Water Board Executive Officer prior to re-entering the watercourse.

47. Upon completion of work, cannabis cultivators shall immediately remove the flow diversion structure in a manner that allows the flow to resume with a minimum of disturbance to the channel substrate and that minimizes the generation of turbidity.

Watercourse Crossings

48. Cannabis cultivators shall ensure watercourse crossings are designed by a qualified professional.

49. Cannabis cultivators shall ensure that all access road watercourse crossing structures allow for the unrestricted passage of water and shall be designed to accommodate the estimated 100-year flood flow and associated debris (based upon an assessment of the streams potential to generate debris during high flow events). Consult CAL FIRE 100 year Watercourse Crossings document for examples and design calculations, available at [http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20\(final\).pdf](http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20(final).pdf).

50. Cannabis cultivators shall ensure that watercourse crossings allow migration of aquatic life during all life stages supported or potentially supported by that stream reach. Design measures shall be incorporated to ensure water depth and velocity do not inhibit the migration of aquatic life. Any access road crossing structure on watercourses that supports fish shall be constructed for the unrestricted passage of fish at all life stages, and should use the following design guidelines:

- CDFW's Culvert Criteria for Fish Passage;

- CDFW's Salmonid Stream Habitat Restoration Manual, Volume 2, Part IX: Fish Passage Evaluation at Stream Crossings; and

- National Marine Fisheries Service, Southwest Region Guidelines for Salmonid Passage at Stream Crossings.

51. Cannabis cultivators shall conduct regular inspection and maintenance of stream crossings to ensure crossings are not blocked by debris. Refer to California Board of Forestry Technical Rule No. 5 available at <http://www.calforests.org/wpcontent/uploads/2013/10/Adopted-TRA5.pdf>.

52. Cannabis cultivators shall only use rock fords for temporary seasonal crossings on small watercourses where aquatic life passage is not required during the time of use. Rock fords shall be oriented perpendicular to the flow of the watercourse and designed to maintain the range of surface flows that occur in the watercourse. When constructed, the rock shall be sized to withstand the range of flow events that occur at the crossing and rock shall be maintained at the rock ford to completely cover the channel bed and bank surfaces to minimize soil compaction, rutting, and erosion. The rock must extend on either side of the ford up to the break in slope. The use of rock fords as watercourse crossings for all-weather access road use is prohibited.

53. Cannabis cultivators shall ensure that culverts used at watercourse crossings are designed to direct flow and debris toward the inlet (e.g., use of wing-walls, pipe beveling, rock armoring, etc.) to prevent erosion of road fill, debris blocking the culvert, and watercourses from eroding a new channel.

54. Cannabis cultivators shall regularly inspect and maintain the condition of access roads, access road drainage features, and watercourse crossings. At a minimum, cannabis cultivators shall perform inspections prior to the onset of fall and winter precipitation and following storm events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation. Cannabis cultivators are required to perform all of the following maintenance:

- Remove any wood debris that may restrict flow in a culvert.
- Remove sediment that impacts access road or drainage feature performance. Place any removed sediment in a location outside the riparian setbacks and stabilize the sediment.
- Maintain records of access road and drainage feature maintenance and consider redesigning the access road to improve performance and reduce maintenance needs.

55. Cannabis cultivators shall compact access road crossing approaches and fill slopes during installation and shall stabilize them with rock or other appropriate surface protection to minimize surface erosion. When possible, cannabis cultivators shall ensure that access roads over culverts are equipped with a critical dip to ensure that, if the culvert becomes blocked or plugged, water can flow over the access road surface without washing away the fill prism. Access road crossings where specific conditions do not allow for a critical dip or in areas with potential for significant debris accumulation shall include additional measures such as emergency overflow culverts or oversized culverts that are designed by a qualified professional.

56. Cannabis cultivators shall ensure that culverts used at watercourse crossings are: 1) installed parallel to the watercourse alignment to the extent possible, 2) of sufficient length to extend beyond stabilized fill/sidecast material, and 3) embedded or installed at the same level and gradient of the streambed in which they are being placed to prevent erosion.

Soil Disposal and Spoils Management

57. Cannabis cultivators shall store soil, construction, and waste materials outside the riparian setback except as needed for immediate construction needs. Such materials shall not be stored in locations of known slope instability or where the storage of construction or waste material could reduce slope stability.

58. Cannabis cultivators shall separate large organic material (e.g., roots, woody debris, etc.) from soil materials. Cannabis cultivators shall either place the large organic material in long-term upland storage sites or properly dispose of these materials offsite.

59. Cannabis cultivators shall store erodible soil, soil amendments, and spoil piles to prevent sediment discharges in stormwater. Storage practices may include the use of tarps, upslope land contouring to divert surface flow around the material, or use of sediment control devices (e.g., silt fences, straw wattles, etc.).

60. Cannabis cultivators shall contour and stabilize stored spoils to mimic natural slope contours and drainage patterns (as appropriate) to reduce the potential for fill saturation and slope failure. 61. For soil disposal sites cannabis cultivators shall:

- Revegetate soil disposal sites with a mix of native plant species,
- Cover the seeded and planted areas with mulched straw at a rate of two tons per acre, and
- Apply non-synthetic netting or similar erosion control fabric (e.g., jute) on slopes greater than 2:1 if the site is erodible.

62. Cannabis cultivators shall haul away and properly dispose of excess soil and other debris as needed to prevent discharge to waters of the state.

Riparian and Wetland Protection and Management

63. Cannabis cultivators shall not disturb aquatic or riparian habitat, such as pools, spawning sites, large wood, or shading vegetation unless authorized under a CWA section 404 permit, CWA section 401 certification, Regional Water Board WDRs (when applicable), or a CDFW LSA Agreement.

64. Cannabis cultivators shall maintain existing, naturally occurring, riparian vegetative cover (e.g., trees, shrubs, and grasses) in aquatic habitat areas to the maximum extent possible to maintain riparian areas for streambank stabilization, erosion control, stream shading, and temperature control, sediment and chemical filtration, aquatic life support, wildlife support, and to minimize waste discharge.

Water Storage and Use

Water Supply, Diversion, and Storage

65. Cannabis cultivators shall only install, maintain, and destroy wells in compliance with county, city, and local ordinances and with California Well Standards as stipulated in California Department of Water Resources Bulletins 74-90 and 74-81.14

66. All water diversions for cannabis cultivation from a surface stream, a subterranean stream flowing through a known and definite channel (e.g., groundwater well diversions from subsurface stream flows), or other surface waterbody are subject to the surface water Numeric and Narrative Instream Flow Requirements. This includes lakes, ponds, and springs (unless the spring is deemed exempt by the Deputy Director).

67. Groundwater diversions may be subject to additional requirements, such as a forbearance period, if the State Water Board determines those requirements are reasonably necessary to implement the purposes of this Policy.

68. Cannabis cultivators are encouraged to use appropriate rainwater catchment systems to collect from impermeable surfaces (e.g., rooftops, etc.) during the wet season and store stormwater in tanks, bladders, or off-stream engineered reservoirs to reduce the need for surface water or groundwater diversions.

69. Cannabis cultivators shall not divert surface water unless it is diverted under an existing water right that specifies, as appropriate, the source, the location of the point of diversion, the purpose of use, the place of use, the quantity, and season of diversion. Cannabis cultivators shall maintain documentation of the water right at the cannabis cultivation site. Documentation of the water right shall be available for review and inspection by the Water Boards, CDFW, and any other authorized representatives of the Water Boards or CDFW.

70. Cannabis cultivators shall ensure that all water diversion facilities are designed, constructed, and maintained so they do not prevent, impede, or tend to prevent the passing of fish, as defined by Fish and Game Code section 45, upstream or downstream, as required by Fish and Game Code section 5901. This includes but is not limited to the supply of water at an appropriate depth, temperature, and velocity to facilitate upstream and downstream aquatic life movement and migration. Cannabis cultivators shall allow sufficient water at all times to pass past the point of diversion to keep in good condition any fish that may be planted or exist below the point of diversion as defined by Fish and Game Code section 5937. Cannabis cultivators shall not divert water in a manner contrary to or inconsistent with these requirements.

71. Cannabis cultivators issued a Cannabis SIUR by the State Water Board shall not divert surface water unless in compliance with all additional Cannabis SIUR conditions required by CDFW.

72. Water diversion facilities shall include satisfactory means for bypassing water to satisfy downstream prior rights and any requirements of policies for water quality control, water quality control plans, water quality certifications, waste discharge requirements, or other local, state or federal instream flow requirements. Cannabis cultivators shall not divert in a manner that results in injury to holders of legal downstream senior rights. Cannabis cultivators may be required to curtail diversions should diversion result in injury to holders of legal downstream senior water rights or interfere with maintenance of downstream instream flow requirements.

73. Fuel-powered (e.g., gas, diesel, etc.) diversion pumps shall be located in a stable and secure location outside of the riparian setbacks unless authorized under a 404/401 CWA permits, a CDFW LSA Agreement, coverage under the Cannabis General Order water quality certification, or site-specific WDRs issued by the Regional Water Board. The use of non-fuel powered diversion pumps (solar, electric, gravity, etc.) is encouraged. In all cases, all pumps shall:

1. be properly maintained,
2. have suitable containment to ensure any spills or leaks do not enter surface waterbodies or groundwater, and
3. have sufficient overhead cover to prevent exposure of equipment to precipitation.

74. No water shall be diverted unless the cannabis cultivator is operating the water diversion facility with a CDFW-approved water-intake screen (e.g. fish screen). The water intake screen shall be designed and maintained following screening criteria approved by CDFW. The screen shall prevent wildlife from entering the diversion intake and becoming entrapped. The cannabis cultivator shall contact the regional CDFW Office, LSA Program for information on screening criteria for diversion(s). The cannabis cultivator shall provide evidence that demonstrates that the water intake screen is in good condition whenever

requested by the Water Boards or CDFW. Points of re-diversion from off-stream storage facilities that are open to the environment shall have a water intake screen, as required by CDFW.

75. Cannabis cultivators shall inspect, maintain, and clean water intake screens and bypass appurtenances as directed by CDFW to ensure proper operation for the protection of fish and wildlife.

76. Cannabis cultivators shall not obstruct, alter, dam, or divert all or any portion of a natural watercourse prior to obtaining all applicable permits and approvals. Permits may include a valid water right, 404/401 CWA permits, a CDFW LSA Agreement, coverage under the Cannabis General Order water quality certification, or site-specific WDRs issued by the Regional Water Board.

77. Cannabis cultivators shall plug, block, cap, disconnect, or remove the diversion intake associated with cannabis cultivation activities during the surface water forbearance period, unless the diversion intake is used for other beneficial uses, to ensure no water is diverted during that time.

78. Cannabis cultivators shall not divert from surface water or a subterranean stream for cannabis cultivation at a rate more than a maximum instantaneous diversion rate of 10 gallons per minute unless authorized under an existing appropriative water right.

82. Onstream storage reservoirs are prohibited unless either:

- The cannabis cultivator has an existing water right with irrigation as a designated use, issued prior to October 31, 2017, that authorizes the onstream storage reservoir, or
- The cannabis cultivator obtains an appropriative water right permit with irrigation as a designated use prior to diverting water from an onstream storage reservoir for cannabis cultivation. Cannabis cultivators with a pending application or an unpermitted onstream storage reservoir shall not divert for cannabis cultivation until the cannabis cultivator has obtained a valid water right.

83. Cannabis cultivators are encouraged to install separate storage systems for water diverted for cannabis irrigation and water diverted for any other beneficial uses, or otherwise shall install separate measuring devices to quantify diversion to and from each storage facility, including the quantity of water diverted and the quantity, place, and purpose of use (e.g., cannabis irrigation, other crop irrigation, domestic, etc.) for the stored water.

84. The cannabis cultivator shall install and maintain a measuring device(s) for surface water or subterranean stream diversions. The measuring device shall be, at a minimum equivalent to the requirements for direct diversions greater than 10 acre-feet per year in California Code of Regulations, Title 23, Division 3, Chapter 2.717. The measuring device(s) shall be located as close to the point of diversion as reasonable. Cannabis cultivators shall maintain daily diversion records for water diverted for cannabis cultivation. Cannabis cultivators shall maintain separate records that document the amount of water used for cannabis cultivation separated from the amount of water used for other irrigation purposes and other beneficial uses of water (e.g., domestic, fire protection, etc.). Cannabis cultivators shall maintain daily diversion records at the cultivation site and shall make the records available for review or by request by the Water Boards CDFW, or any other authorized representatives of the Water Boards or CDFW. Daily diversion records shall be retained for a minimum of five years. Compliance with this term is required for any surface water diversion for cannabis cultivation, even those under 10 acre-feet per year.

85. The State Water Board intends to develop and implement a basin-wide program for realtime electronic monitoring and reporting of diversions, withdrawals, releases, and streamflow in a standardized format if and when resources become available. Such real-time reporting will be required upon a showing by the

State Water Board that the program and the infrastructure are in place to accept real-time electronic reports. Implementation of the reporting requirements shall not necessitate an amendment to this requirement.

86. Cannabis cultivators shall not use off-stream storage reservoirs and ponds to store water for cannabis cultivation unless they are sited and designed or approved by a qualified professional in compliance with the Division of Safety of Dams (DSOD), county, and/or city requirements, as applicable. If the DSOD, county, and/or city do not have established requirements they shall be designed consistent with the Natural Resource Conservation Service National Engineering Manual. Reservoirs shall be designed with an adequate overflow outlet that is protected and promotes the dispersal and infiltration of flow and prevents channelization. All off-stream storage reservoirs and ponds shall be designed, managed, and maintained to accommodate average annual winter period precipitation and stormwater inputs to reduce the potential for overflow. Cannabis cultivators shall plant native vegetation along the perimeter of the reservoir in locations where it does not impact the structural integrity of the reservoir berm or spillway. The cannabis cultivator shall control vegetation around the reservoir berm and spillway to allow for visual inspection of berm and spillway condition and control burrowing animals as necessary.

87. Cannabis cultivators shall implement an invasive species management plan prepared by a Qualified Biologist for any existing or proposed water storage facilities that are open to the environment. The plan shall include, at a minimum, an annual survey for bullfrogs and other invasive aquatic species. If bullfrogs or other invasive aquatic species are identified, eradication measures shall be implemented under the direction of a qualified biologist, if appropriate after consultation with CDFW (under Fish and Game Code section 6400). Eradication methods can be direct or indirect. Direct methods may include handheld dip net, hook and line, lights, spears, gigs, or fish tackle under a fishing license (under Fish and Game Code section 6855). An indirect method may involve seasonally timed complete dewatering and a drying period of the off-stream storage facility under a Permit to Destroy Harmful Species (under Fish and Game Code section 5501) issued by CDFW.

88. Water storage bladders are not encouraged for long-term use. If bladders are used, the cannabis cultivator shall ensure that the bladder is designed and properly installed to store water and that the bladder is sited to minimize the potential for water to flow into a watercourse in the event of a catastrophic failure. If a storage bladder has been previously used, the cannabis cultivator shall carefully inspect the bladder to confirm its integrity and confirm the absence of any interior residual chemicals prior to resuming use. Cannabis cultivators shall periodically inspect water storage bladders and containment features to ensure integrity. Water storage bladders shall be properly disposed of or recycled and not resold when the assurance of structural integrity is no longer guaranteed.

89. Cannabis cultivators shall not use water storage bladders unless the bladder is safely contained within a secondary containment system with sufficient capacity to capture 110 percent of a bladder's maximum possible contents in the event of bladder failure (i.e., 110 percent of bladder's capacity). Secondary containment systems shall be of sufficient strength and stability to withstand the forces of released contents in the event of a catastrophic bladder failure. In addition, secondary containment systems that are open to the environment shall be designed and maintained with sufficient capacity to accommodate precipitation and stormwater inputs from a 25-year, 24-hour storm event.

90. Cannabis cultivators shall not cause or allow any overflow from off-stream water storage facilities that are closed to the environment (e.g., tanks and bladders) if the off-stream facilities are served by a diversion from surface water or groundwater. Cannabis cultivators shall regularly inspect for and repair all leaks of the diversion and storage system.

91. Water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment shall not be located in a riparian setback or next to equipment that generates heat. Cannabis cultivators shall place water storage tanks, bladders, and other off-stream water storage facilities that are closed to the environment in areas that allow for ease of installation, access, maintenance, and minimize road development.

92. Cannabis cultivators shall install vertical and horizontal tanks according to manufacturer's specifications and shall place tanks on properly compacted soil that is free of rocks and sharp objects and capable of bearing the weight of the tank and its maximum contents with minimal settlement. Tanks shall not be located in areas of slope instability. Cannabis cultivators shall install water storage tanks capable of containing more than 8,000 gallons only on a reinforced concrete pad providing adequate support and enough space to attach a tank restraint system (anchor using the molded-in tie-down lugs with moderate tension, being careful not to over-tighten) per the recommendations of a qualified professional.

93. To prevent rupture or overflow and runoff, cannabis cultivators shall only use water storage tanks and bladders equipped with a float valve, or equivalent device, to shut off diversion when storage systems are full. Cannabis cultivators shall install any other measures necessary to prevent the overflow of storage systems to prevent runoff and the diversion of more water than can be used and/or stored.

94. Cannabis cultivators shall ensure that all vents and other openings on water storage tanks are designed to prevent the entry and/or entrapment of wildlife.

95. Cannabis cultivators shall retain, for a minimum of five years, appropriate documentation for any hauled water¹⁸ used for cannabis cultivation. Documentation for hauled water shall include, for each delivery, all of the following:

1. A receipt that shows the date of delivery and the name, address, license plate number, and license plate issuing state for the water hauler,
2. A copy of the Water Hauler's License (California Health and Safety Code section 111120),
3. A copy of proof of the Water Hauler's water right, groundwater well, or other authorization to take water, and the location of the water source, and
4. The quantity of water delivered or picked up from a water source, in gallons. Documentation shall be made available, upon request, to Water Boards or CDFW staff and any other authorized representatives of the Water Boards or CDFW.

Water Conservation and Use

96. Cannabis cultivators shall regularly inspect their entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks.

97. Cannabis cultivators shall use weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss.

98. Cannabis cultivators shall implement water-conserving irrigation methods (e.g., drip or trickle irrigation, micro-spray, or hydroponics).

99. Cannabis cultivators shall maintain daily records of all water used for the irrigation of cannabis. Daily records may be calculated by the use of a measuring device or, if known, by calculating the irrigation system rates and duration of time watered (e.g., irrigating for one hour twice per day using 50 half-gallon drips equates to 50 gallons per day ($1 \times 2 \times 50 \times 0.5$) of water used for irrigation). Cannabis cultivators shall retain,

for a minimum of 5 years, irrigation records at the cannabis cultivation site and shall make all irrigation records available for review by the Water Boards, CDFW and any other authorized representatives of the Water Boards or CDFW.

Irrigation Runoff

100. Cannabis cultivators shall regularly inspect for leaks in mainlines, laterals, in irrigation connections, sprinkler heads, or at the ends of drip tape and feeder lines and immediately repair any leaks found upon detection.

101. The irrigation system shall be designed to include redundancy (e.g., safety valves) if leaks occur, so that waste of water and runoff is prevented and minimized.

102. Cannabis cultivators shall regularly replace worn, outdated, or inefficient irrigation system components and equipment to ensure a properly functioning, leak-free irrigation system at all times.

103. Cannabis cultivators shall minimize irrigation deep percolation by applying irrigation water at agronomic rates.

Fertilizers, Pesticides, and Petroleum Products

104. Cannabis cultivators shall not mix, prepare, over-apply, or dispose of agricultural chemicals/products (e.g., fertilizers, pesticides, and other chemicals as defined in the applicable water quality control plan) in any location where they could enter the riparian setback or waters of the state. The use of agricultural chemicals inconsistently with product labeling, storage instructions, or DPR requirements for pesticide applications is prohibited. Disposal of unused products and containers shall be consistent with labels.

105. Cannabis cultivators shall keep and use absorbent materials designated for spill containment and spill cleanup equipment on-site for use in an accidental spill of fertilizers, petroleum products, hazardous materials, and other substances that may degrade waters of the state. The cannabis cultivator shall immediately notify the California Office of Emergency Services at 1-800-852-7550 and immediately initiate cleanup activities for all spills that could enter a waterbody or degrade groundwater.

106. Cannabis cultivators shall establish and use a separate storage area for pesticides, and fertilizers, and another storage area for petroleum or other liquid chemicals (including diesel, gasoline, oils, etc.). All such storage areas shall comply with the riparian setback Requirements, be in a secured location in compliance with label instructions, outside of areas of known slope instability, and be protected from accidental ignition, weather, and wildlife. All storage areas shall have appropriate secondary containment structures, as necessary, to protect water quality and prevent spillage, mixing, discharge, or seepage. Storage tanks and containers must be of suitable material and construction to be compatible with the substances stored and conditions of storage, such as pressure and temperature.

107. Throughout the wet season, Cannabis Cultivators shall ensure that any temporary storage areas have a permanent cover and side-wind protection or be covered during non-working days and prior to and during rain events.

108. Cannabis cultivators shall only use hazardous materials²⁴ in a manner consistent with the product's label.

109. Cannabis cultivators shall only keep hazardous materials in their original containers with labels intact, and shall store hazardous materials to prevent exposure to sunlight, excessive heat, and precipitation. Cannabis cultivators shall provide secondary containment for hazardous materials to prevent possible

exposure to the environment. Disposal of unused hazardous materials and containers shall be consistent with the label.

110. Cannabis cultivators shall only mix, prepare, apply, or load hazardous materials outside of the riparian setbacks.

111. Cannabis cultivators shall not apply agricultural chemicals within 48 hours of a predicted rainfall event of 0.25 inches or greater with a probability greater than 50-percent. In the Lake Tahoe Hydrologic Unit, cannabis cultivators shall not apply agricultural chemicals within 48 hours of any weather pattern that is forecast to have a 30 percent or greater chance of precipitation greater than 0.1 inch per 24 hours. This requirement may be updated based on amendments to the Lahontan Regional Water Board construction stormwater general order.

Fertilizers and Soils

112. To minimize infiltration and water quality degradation, Cannabis cultivators shall irrigate and apply fertilizer to consistent with the crop need (i.e., agronomic rate).

113. When used, cannabis cultivators shall apply nitrogen to cannabis cultivation areas consistent with crop need (i.e., agronomic rate). Cannabis cultivators shall not apply nitrogen at a rate that may result in a discharge to surface water or groundwater that causes or contributes to exceedance of water quality objectives, and no greater than 319 pounds/acre/year unless plant tissue analysis performed by a qualified individual demonstrates the need for additional nitrogen application. The analysis shall be performed by an agricultural laboratory certified by the State Water Board's Environmental Laboratory Accreditation Program.

114. Cannabis cultivators shall ensure that potting soil or soil amendments, when not in use, are placed and stored with covers, when needed, to protect from rainfall and erosion, to prevent discharge to waters of the state, and to minimize leaching of waste constituents into groundwater.

Pesticides and Herbicides

115. Cannabis cultivators shall not apply restricted materials, including restricted pesticides, or allow restricted materials to be stored at the cannabis cultivation site.

116. Cannabis cultivators shall implement integrated pest management strategies where possible to reduce the need and use of pesticides and the potential for discharges to waters of the state.

Petroleum Products and Other Chemicals

117. Cannabis cultivators shall only refuel vehicles or equipment outside of riparian setbacks. Cannabis cultivators shall inspect all equipment using oil, hydraulic fluid, or petroleum products for leaks prior to use and shall monitor equipment for leakage. Stationary equipment (e.g., motors, pumps, generators, etc.) and vehicles not in use shall be located outside of riparian setbacks. Spill and containment equipment (e.g., oil spill booms, sorbent pads, etc.) shall be stored onsite at all locations where equipment is used or staged.

118. Cannabis cultivators shall store petroleum, petroleum products, and similar fluids in a manner that provides chemical compatibility, provides secondary containment, and protection from accidental ignition, the sun, wind, and rain.

119. Use of an underground storage tank(s) for the storage of petroleum products is allowed if compliant with all applicable federal, state, and local laws; regulations; and permitting requirements.

Cultivation-Related Waste

120. Cannabis cultivators shall contain and regularly remove all debris and trash associated with cannabis cultivation activities from the cannabis cultivation site. Cannabis cultivators shall only dispose of debris and trash at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Cannabis cultivators shall not allow litter, plastic, or similar debris to enter the riparian setback or waters of the state. Cannabis plant material may be disposed of onsite in compliance with any applicable CDFA license conditions.

121. Cannabis cultivators shall only dispose or reuse spent growth medium (e.g., soil and other organic media) in a manner that prevents the discharge of soil and residual nutrients and chemicals to the riparian setback or waters of the state. Spent growth medium shall be covered with plastic sheeting or stored in watertight dumpsters prior to proper disposal or reuse. Spent growth medium should be disposed of at an authorized landfill or other disposal site in compliance with state and local laws, ordinances, and regulations. Proper reuse of spent growth medium may include incorporation into garden beds or spreading on a stable surface and revegetating the surface with native plants. Cannabis cultivators shall use erosion control techniques, as needed, for any reused or stored spent growth medium to prevent polluted runoff.

Refuse and Domestic Waste

122. Cannabis cultivators shall ensure that debris, soil, silt, bark, slash, sawdust, rubbish, creosote-treated wood, raw cement and concrete or washings thereof, asphalt, paint or other coating material, oil or other petroleum products, or any other substances which could be hazardous to any life stage of fish and wildlife or their habitat (includes food sources) does not contaminate soil or enter the riparian setback or waters of the state.

123. Cannabis cultivators shall not dispose of domestic wastewater unless it meets applicable local agency and/or Regional Water Board requirements. Cannabis cultivators shall ensure that human or animal waste is disposed of properly. Cannabis cultivators shall ensure onsite wastewater treatment systems (e.g., septic system) are permitted by the local agency or applicable Regional Water Board.

124. If used, chemical toilets or holding tanks shall be maintained in a manner appropriate for the frequency and conditions of usage, sited in stable locations, and comply with the riparian setback Requirements.

Winterization

125. Cannabis cultivators shall implement all applicable Erosion Control and Soil Disposal and Spoils Management Requirements in addition to the Winterization Requirements below by the onset of the winter period.

126. Cannabis cultivators shall block or otherwise close any temporary access roads to all motorized vehicles no later than the onset of the winter period each year.

127. Cannabis cultivators shall not operate heavy equipment of any kind at the cannabis cultivation site during the winter period unless authorized for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction.

128. Cannabis cultivators shall apply linear sediment controls (e.g., silt fences, wattles, etc.) along the toe of the slope, the face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow length at the frequency specified below.

Slope (percent)	Sheet Flow Length not to Exceed (feet)
0 – 25	20
25 – 50	15

>50	10
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129. Cannabis cultivators shall maintain all culverts, drop inlets, trash racks and similar devices to ensure they are not blocked by debris or sediment. The outflow of culverts shall be inspected to ensure erosion is not undermining the culvert. Culverts shall be inspected prior to the onset of fall and winter precipitation and following precipitation events that produce at least 0.5 in/day or 1.0 inch/7 days of precipitation to determine if maintenance or cleaning is required.

130. Cannabis cultivators shall stabilize all disturbed areas and construction entrances and exits to control erosion and sediment discharges from land disturbance.

131. Cannabis cultivators shall cover and berm all loose stockpiled construction materials (e.g., soil, spoils, aggregate, etc.) that are not actively (scheduled for use within 48 hours) being used as needed to prevent erosion by stormwater. The cannabis cultivator shall have adequate cover and berm materials available onsite if the weather forecast indicates a probability of precipitation.

132. Cannabis cultivators shall apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent the discharge of sediment to waters of the state.

133. As part of the winterization plan approval process, the Regional Water Board may require cannabis cultivators to implement additional site-specific erosion and sediment control requirements if the implementation of the requirements in this section does not adequately protect water quality.