

# Site Management Plan (Summary)

Humboldt County APN 210-044-009  
SWRCB App# 416825

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

Prepared by:  
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*February 3, 2020*



To Whom it May Concern,

The following document is a snap-shot summary of the current property and project conditions, based off of NRM's most recent site visit and/or client correspondence.

This summary touches on all topics required by a Site Management Plan; all of these items will be explained in greater detail when the official Site Management Plan is completed. Currently, NRM is expecting a 4-6 month completion time frame for SMPs.

If there are any items in this summary that you would like more detail on, please reach out and I would be happy to provide any and all additional information/documents we have.

Thank you for your understanding,

Alicia Heitzman

A handwritten signature in black ink that reads "Alicia Heitzman". The signature is written in a cursive style and is positioned above a thin horizontal line.

Cannabis Compliance Supervisor

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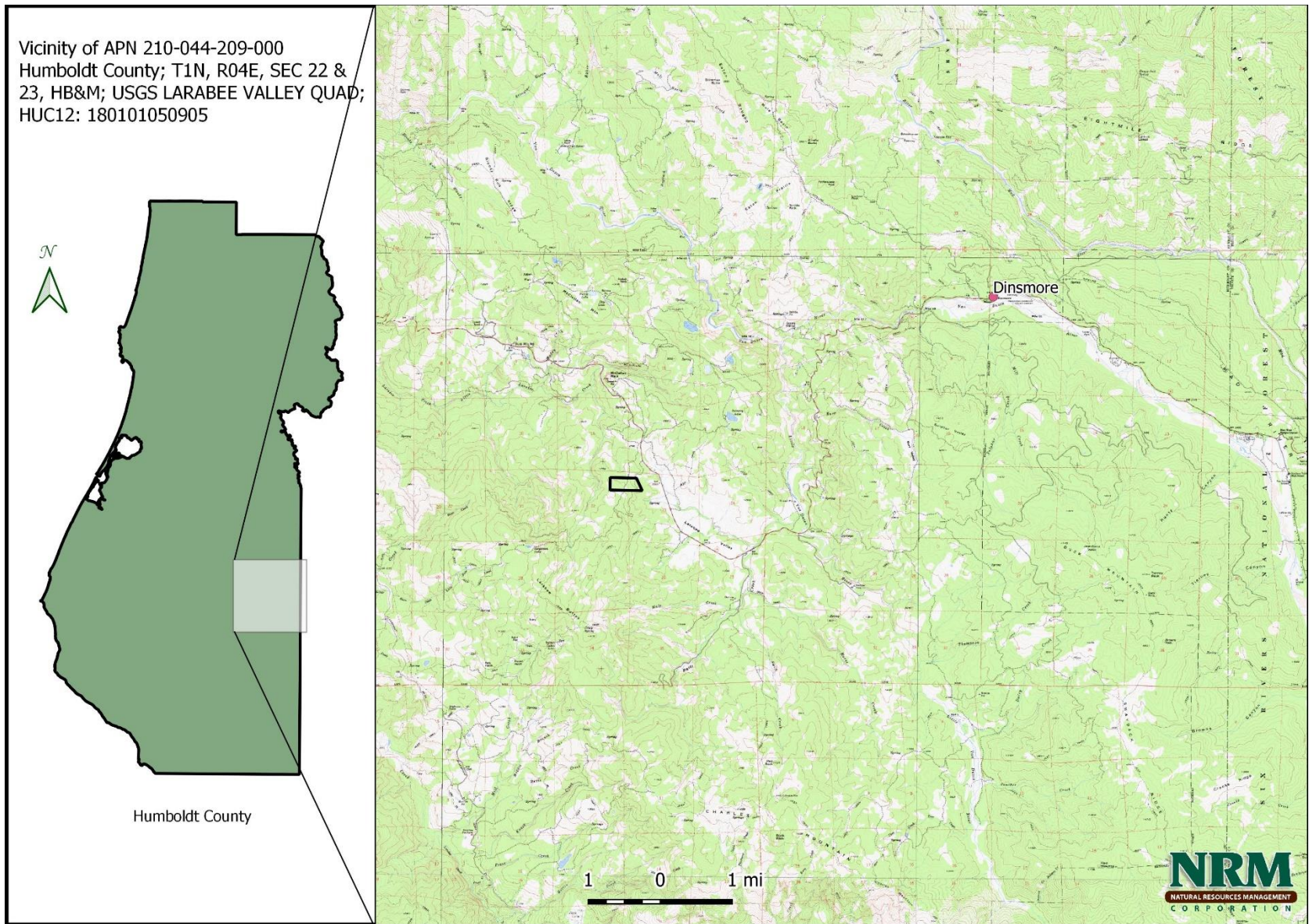


Figure 1. Vicinity map



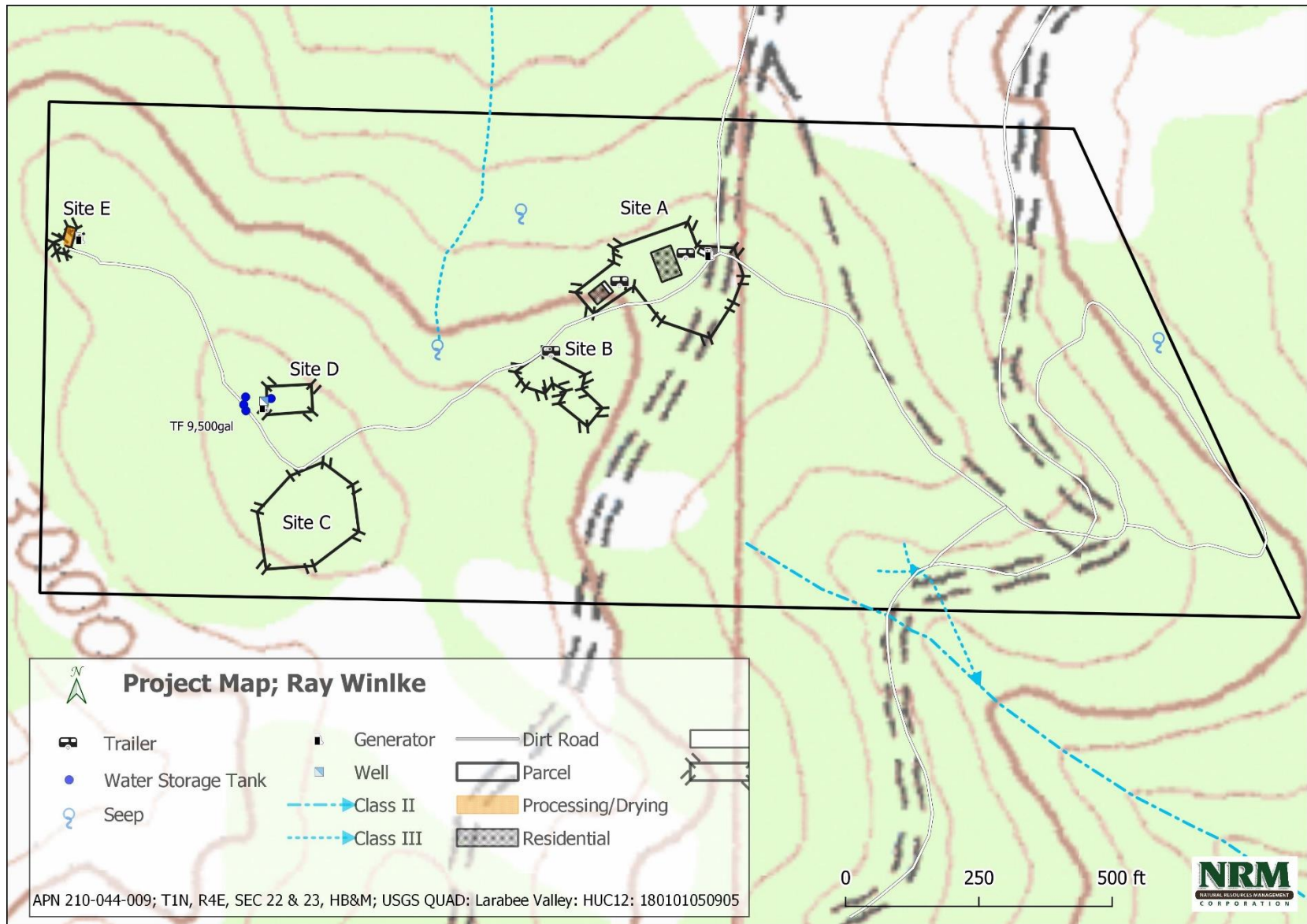


Figure 2. Property map (Topographic)



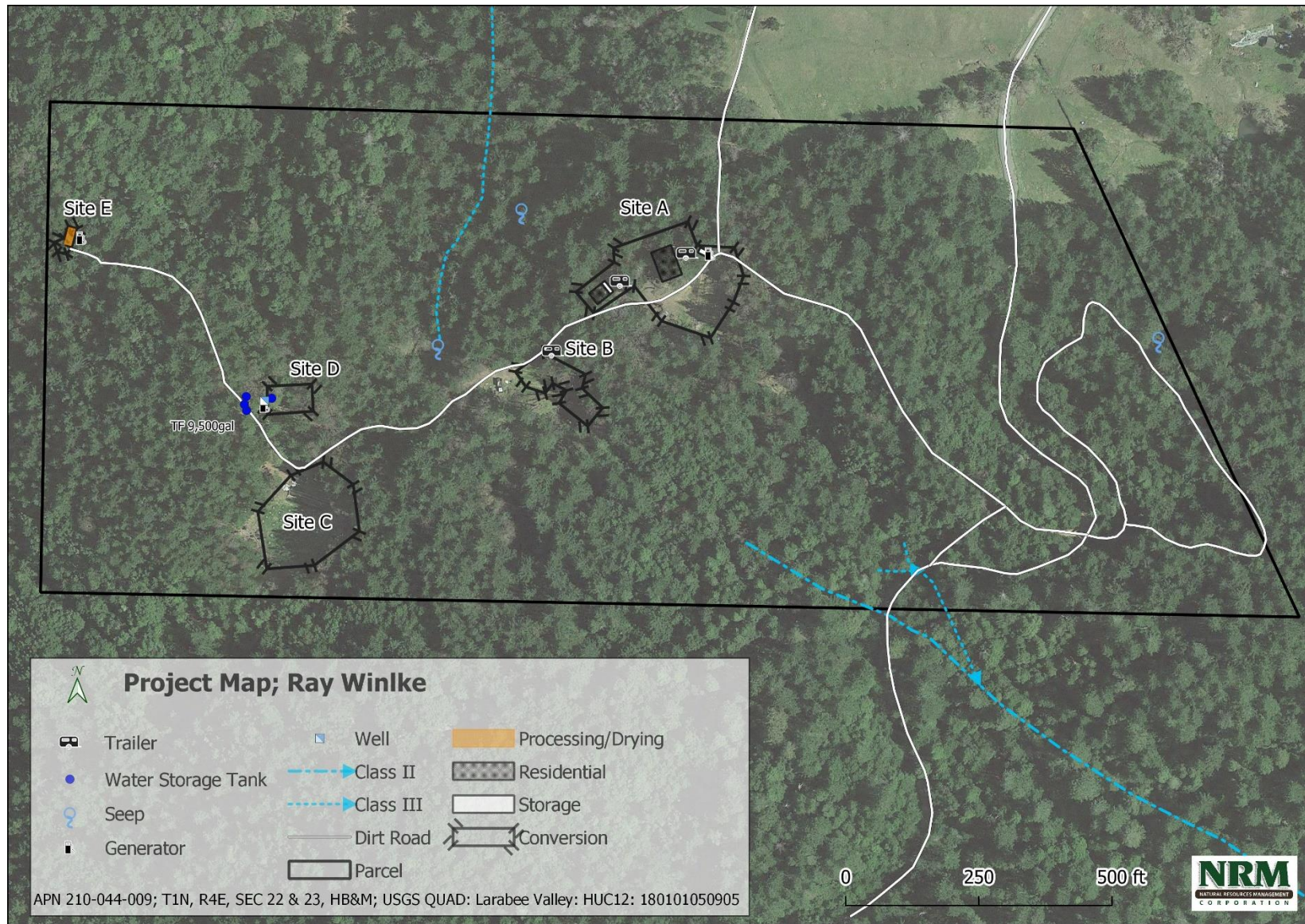


Figure 3. Property map (Google Satellite)

## 1. Sediment Discharge BPTC Measures

### 1.1. Site Characteristics

APN 210-044-009-000 is located in western Humboldt County near Larabee Valley on CA-SR 36. The 45-acre parcel is situated on the drainage divide between Little Larabee Creek to the north and Little Van Duzen River to the south and east. Elevations range from 2,800-feet to 3,100-feet, and the majority of the parcel's vegetation is mixed-coniferous forest with primarily Douglas-fir. The site has likely been logged more than once.

All infrastructure and cultivation occur on the ridge, so there are no riparian setback issues. The only watercourses are a north-flowing spring-fed Class III and a Class III that crosses a BLM road in the southeast corner of the property.

The Humboldt County cultivation license allows 10,000-square feet of Cannabis cultivation on site. Irrigation water comes from a groundwater well.

Current structures on the parcel include two residential buildings (Photos 1-2). The primary residence at site A (Photo \_\_\_) has a septic and leach field, and a propane tank for heating and cooking. To the east of the primary residence is a motorhome. At site A there is also a 10-foot by 12-foot insulated storage shed with a concrete floor.

Site E has a 16-foot by 40-foot agricultural / drying building (Photos 3-4, Figure 2).

### 1.2. Cultivation Areas

Figures 2,3; Photos 13-22

#### *Cultivation History*

The site originally had three separate cultivation areas that totaled at over 19,000-square feet (Sites A, B, C) that were converted from timberland. One additional area was converted from timberland, (Site D) to provide more sunlight to solar panels, and another area disturbed (Site E) to build a structure for drying cannabis; these five converted areas total 1.8 acres. The landowner(s) are in the process of remediating these five areas through a conversion mitigation process with Humboldt County and CalFire (Conversion Mitigation Report, May 2019), and are proposing to consolidate the three previous cultivation areas to one 10,000 square foot cultivation area at Site C and one propagation hoop house at Site A.

#### *Current Cultivation*

**Site C** is roughly 22,000 sq. ft. of cleared area. It is partially flat, with an approximately 15% slope facing southwest that is grassy and terraced. The consolidation of the site from 19,000 to 10,000 sq. ft. would include the use of 2 existing hoop houses (3,925 sq. ft.) at Site C that will yield two runs of mixed light (light deprivation) cultivation; the remaining 6,075 square feet will yield one run, cultivated as full sun outdoors at Site C. The hoop houses will use raised beds and the outdoor full sun will be in large, 5-foot diameter that are handmade from weed fabric and wire.

In the past, the cultivator used plastic netting to secure plants. The cultivator will discontinue use of plastic netting and use cages, jute or coconut fiber, or other, non-plastic methods of stabilizing plants.

The downslope edge of Site C will have

**Site A** will retain one hoop house for propagation. The propagation hoop house will be located across from the residential buildings at Site A, and only used for a short period of time at the beginning of the cultivation season. This hoop house will have raised beds.

#### *Cultivation Procedures & Plans*

In the early season, low wattage compact fluorescent lights will be used to keep young starts in a vegetative, non-flowering state. These bulbs project light only a short distance and will be used for approximately one to two hours before sunrise and after sunset, at which time this propagation hoop house will be tarped to avoid any light pollution and disruption to local wildlife.

The watering system has been decommissioned for some time as this project is still in the permitting process. When the reorganizing of the cultivation is complete and Site C is planted, the watering system will be drip irrigation. The propagation hoop house at Site A will be hand watering with possible transition to drip.

Each year the cultivator buy two pallets (2 cu. ft. bags, 36 bags per pallet) of a high quality starting soil for clones, which becomes added to the general volume of our total soil as the immature plants are transplanted into the established containers over the course of the season. The cultivator reuses soils via in place amendments and no soil piles were observed onsite.

The project utilizes mechanized trimming techniques. Processing and drying will take place in the commercial building at Site E.

In the past, the cultivator has utilized burn piles to maintain open areas and dispose of cultivation waste (stems, roots balls, etc.). Humboldt County does not allow burning as a disposal method for cannabis cultivation waste. The cultivator will establish a compost area onsite with impermeable floor and protection from the elements or, with appropriate license, move waste offsite to a permitted location (i.e.: Wes Green in Arcata).

#### *Decommissioned Sites*

**Site B** and parts of **Site A** and **C** are currently being decommissioned as per the County's decision to reduce the square footage on the site. They are not within any stream setbacks, so a Disturbed Area Stabilization Plan is not required.

All cultivation materials, including but not limited to soil, pots, raised beds, tarps, fencing, and netting at Sites A and B will be removed. Soil that is removed from the unpermitted cultivation (in excess of 10,000 sq. ft.) will be stored onsite in between tarps (beneath and above the soil) or integrated into the landscape and planted with native grass seed. While the cultivation areas have very low slopes (<10%) and erosion and sediment delivery are not likely, all disturbed areas will be planted to stabilize the area. The following



native grass mixes from Pacific Coast Seeds may be used: Habitat Mix (40 pounds per acre) or Native Erosion Control Mix (45 pounds per acre). Following the application of seed, all exposed soil within the project area will be mulched with 2-4 inches of weed-free straw or forest duff prior to October 15th of the year implemented

### 1.3. Watercourse Crossings

Figure 4; Photos 1-12

There is one watercourse crossing identified on the project parcel. This crossing is noted as ‘Project 1’ in the applicant’s LSA Application for CDFW. This project is related to legacy timber skid roads and not cannabis-related. The watercourse starts at a spring (Photo 1) which flows into a swale where an ephemeral Class III channel emerges (Photo 2). The stream flows down the path of a legacy skid road, which is native surfaced and has no fill material (Photo 3). The watercourse then exits the road at the site of a hand-dug waterbar. Prior to the installation of the waterbar, the watercourse had diverted down another legacy road towards the northeast; some gullying had previously occurred here (Photo 4). It then flowed into an inboard ditch as the road grade lessened. A small spring in the inboard ditch supplemented the flow of water (Photo 5) and it then crossed the road at a low point and dissipated on a small flat area below (Photos 6-8). The crossing is a crossroad dip that consists of road material, which is a mix of rock and soil. There is not much evidence of past erosion in this area. The channel did not seem to continue beyond the lower flat, but the possibility of connecting to downstream waters could not be ruled out (Photo 9). Photos 4-8 show the flow path before the waterbar was installed. Photos 9-12 were taken after implementation.

Although this stream-road interaction is not ideal, the watercourse does not seem to connect to other waterways and is not contributing sediment downstream. The gully seen in Photo 4 has been cut off and streamflow restored to its apparent natural path. The gully already seemed to have adjusted and has very little potential for future erosion.

The waterbar that prevents division has already been dug out by hand. Since there is nothing left to be done at this site, this site will be monitored for any signs of active erosion.

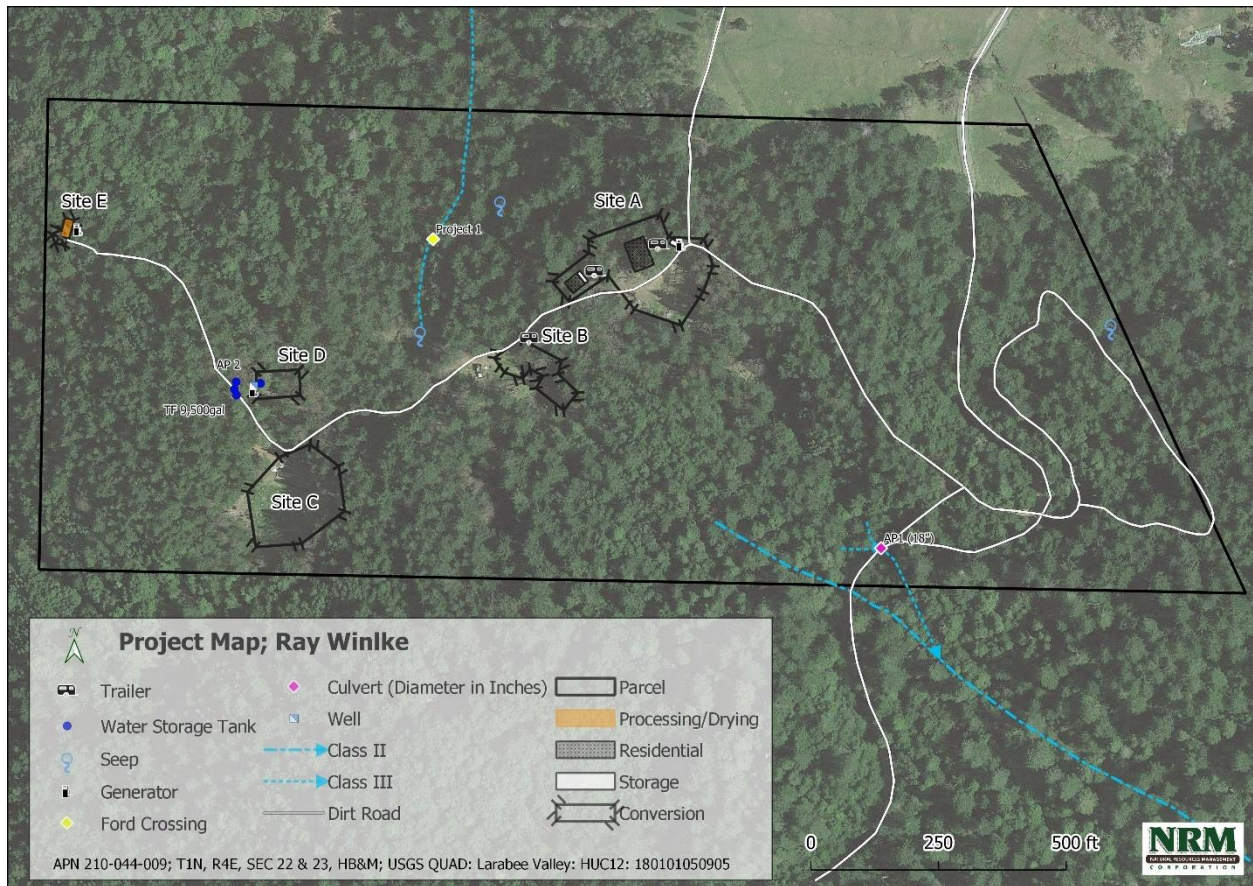


Figure 4. Project Map with LSA 1600 points included

There is an Additional Point (AP1) on the BLM road that crosses the eastern side of the parcel traveling North-South. This identifies an undersized culvert with BLM jurisdiction. Additional Point number two (AP2), discloses the project’s well at Site D.

1.1.3.1 Legacy Discharge Issues

One legacy discharge issue, the diversion of the spring was identified. See 1.3 for discussion.

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.

1.4 Roads

The NRM forester (M. Lindgren) that visited this for the “Ray Winkle Conversion Mitigation Report” (May 2019) described the internal access roads as being, in general “in good condition. The local soil contains a high portion of rock and has a low erosion potential. The road system needs more drainage facilities; several rolling dips need to be constructed.”

The specific locations of the rolling dips recommended by the RPF are noted on the map below as map points #4, 5, 6, and 7.

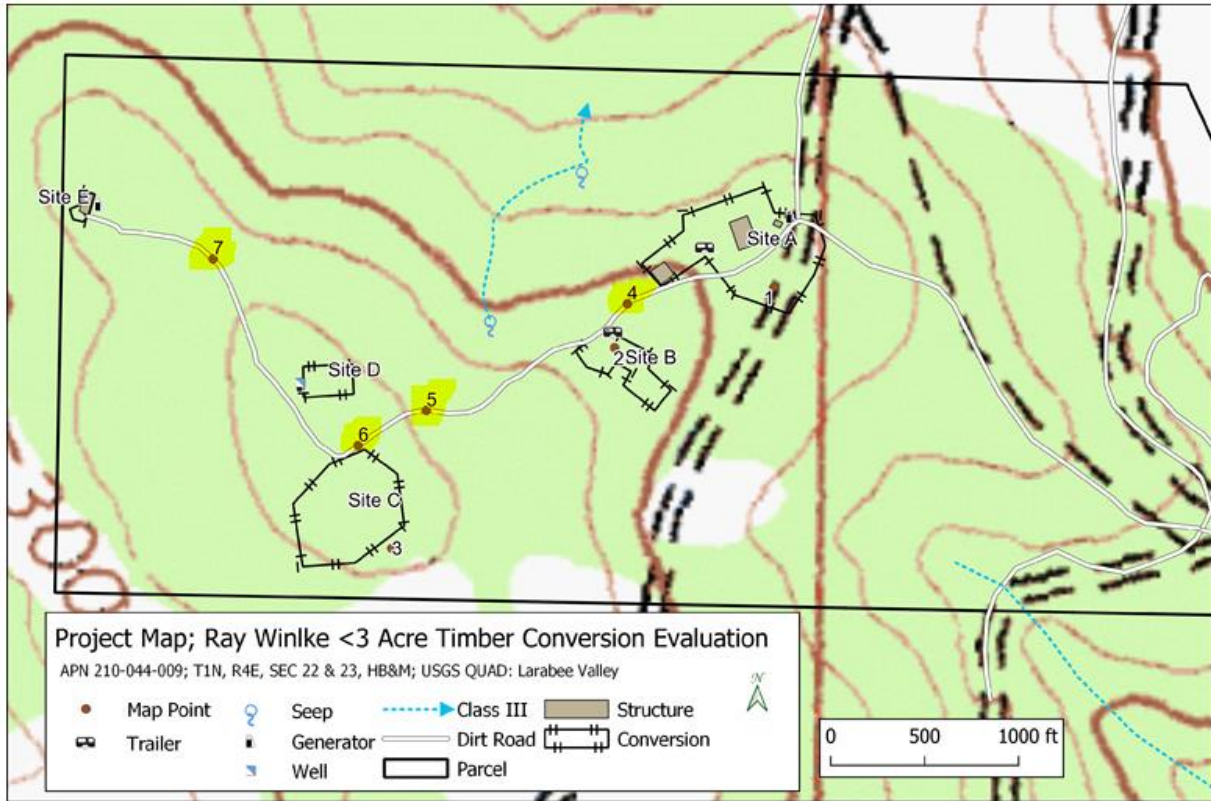


Figure 5. Conversion Evaluation Map: highlighted numbers 4, 5, 6 and 7 are recommended locations for rocked rolling dips.

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

The project does not utilize rodenticides. The fertilizers listed below are most often introduced into the soil directly during soil preparation for propagation, but the cultivator will also apply (top dressing) to the plants after they are transplanted into beds or outdoor for flowering (Site C).

The pesticides/fungicides that are employed by the project are applied by hand when necessary. All fertilizers and pesticides will be relocated from the open cover/shed (Photo 19) to the drying/processing building at Site E (Figure 5)

Table 1. Cultivation Chemicals

Product	Delivery	Storage	Use	Disposal
Archipelago Bat Guano	Pick up - Self delivery	Drying/Processing Building (Site E)	Fertilizer	Plastic is thrown in garbage; plastic is recycled
Earth Juice Rainbow Mix Grow & Bloom	"	"	"	"
Cal-Mag Plus by Botanicare	"	"	"	"
Stutzman Sup'r Green Chicken Manure	"	"	"	"
Steamed Bone Meal	"	"	"	"
Dolomite	"	"	"	"
Azomite	"	"	"	"
Gypsum	"	"	"	"
Molasses	"	"	"	"
Safer Gro Mildew Cure	"	"	Pesticide	"
Plant Therapy	"	"	"	"



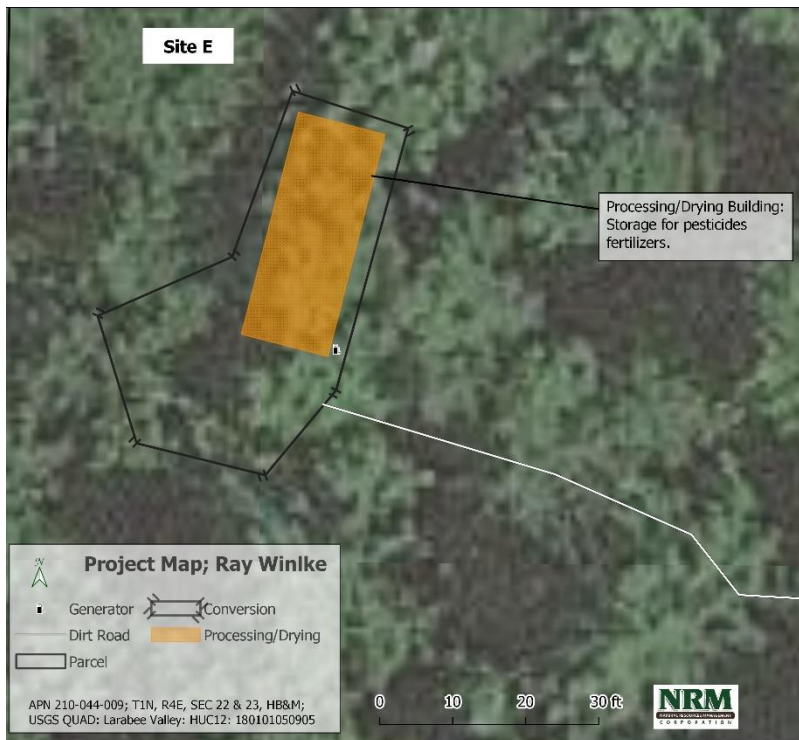


Figure 6. Fertilizers/pesticide storage location: Processing/Drying building at Site E.

### 3. Petroleum Product BPTC Measures

There are three locations on the site where generators are stored. At site A, there is a generator in an insulated shed with a concrete floor adjacent to the primary residence at site A (photo 15, 16).

At site D, a small gasoline generator (Honda 2000) is used to power the well pump (Photo 13,14). The generator and a gas can are located in the well shed. The well shed is enclosed with a roof and four walls, but the floor is native soils. The generator and gas can need secondary containment in case of spills or leaks in the form of an impermeable basin.

At site E, a third generator is used to power lights (for working indoors, not flowering) and fans in the processing and drying building. The heat source at this location is propane. The generator is stored adjacent to the building in a lean-to (Photo \_). The generator needs secondary containment in case of spills or leaks in the form of an impermeable floor or basin.

The cultivation operation will be transitioning to solar for the 2020 (or 2021) growing season. The landowner is in the process of developing a solar panel system with a local contractor that would include 20 panels at the north edge of Site C, with a trenched line sending power north to the well/pump shed and continuing west to the drying building. An additional trenched line would connect to the generator shed (Photo 15) located directly adjacent (Northeast) to the residences at Site A. When the solar system is in place, all generator use will be discontinued, except in emergency situations as backup power.



Table 2. Petroleum Product Usage

Product	Delivery	Storage	Use	Disposal
Gasoline	self-delivery	In sheds/lean-to next to generators	Generators	Refilled as needed
Propane	Self-delivery	In cans adjacent to place of use (outside)	Heat source: Domestic and processing building	Refilled as needed

Extra gasoline is stored in 5-10 gallon cans in the generator shed at site A (Figure 5) or directly adjacent to a generator that it fills. The shed should have a spill kit to safely manage spills or leaks.



Figure 7. Petroleum product storage location

## 4. Trash/Refuse and Domestic Wastewater BPTC Measures

### 4.1 Trash/Refuse

The trash/refuse produced onsite is kept in a box trailer off the access road at Site A near the residences to discourage wildlife activity, and taken to Eel River Recology in Fortuna every other week on average, except during transplanting in the early spring, when empty soil bags are immediately loaded and taken the same day that the garbage is generated.

The majority of the garbage generated on the property is domestic in nature (like food packaging and recyclables).

We do not keep any commercial compost on the property.

### 4.2. Wastewater Disposal System

A sewage disposal report is in progress by Omsberg & Preston for the primary residence. The septic system is functional and only used by the owner/operator at this time, as no employees are needed for this operation.

## 5. Winterization BPTC Measures

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

- The outer perimeters of the greenhouses will be lined with straw wattles to prevent sediment from leaving the sites, and the lowest edges of the cultivation area (Site C) will also be lined with straw wattles
- Any bare soils will be covered with straw and reseeded with a native plant mix.
- All nutrients, fuels, and all chemicals will be placed in secure storage sheds.
- All cultivation trash and debris will be properly disposed of at a permitted transfer station.
- Cultivation materials will be contained
- Cannabis stems and root balls will be composted on-site or taken to Wes Green Landscaping in Arcata, CA
- Cannabis cultivators shall not operate heavy equipment of any kind at the cannabis cultivation site during the winter period, unless authorized for emergency 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 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

In June 2015, a well and supporting solar pump were installed adjacent to Site C for domestic and irrigation purposes (5 gpm). A filing with the State Water Resources Control Board for Cannabis Small Irrigation Use Registration (#416825) was determined unnecessary, with the existing water source (well) approved for cultivation. There is currently 9,500 gallons of water storage in hard-sided plastic tanks located adjacent to the well shed (Site E, Photo 23). Of the 9,500 gallons of water storage, some is for domestic storage and for fire water storage. There are 6,550 gallons of hard sided water storage dedicated to cannabis cultivation. Float valves are installed in tanks; there were no signs of overflow or leaking.

The applicant estimates that the 10,000sq. ft. of cultivation will require approximately 111,050 gallons of water per year (Table 3). All irrigation water will be source from the onsite well. All domestic water will be sourced from the onsite well.

Table 3. Estimated Annual Water Use (adapted from Cultivation and Operations Plan, 12/2019)

	Jan	Feb	March	April	May	June	July	Aug	Sept	Oct	Nov	Dec
Gallons Used	0	0	0	50	1000	15,000	20,000	30,000	30,000	15,000	0	0

For continued future compliance, water meters will be used to quantify both direct diversion and diversion to storage. A photo of the meter reading will be taken weekly to document water use.

## 7. Summary of Corrective Actions and Monitoring

The “Conversion Mitigation Report” identified spoils piles and slash that has been addressed. The following table, Table 4, and Figure 8, include items that were identified, but not yet mitigated as well as additional corrective actions that apply to this cultivation project.

The table includes a schedule for completion. If any BPTC measure cannot be completed before the scheduled date of completion, the landowner will contact the Regional Water Board to establish a compliance schedule

Table 4. Corrective Actions Required

Corrective Action	Description	Temporary BMP	Permanent BMP (Best Management Practices)	Time Schedule for Completion
<b>1</b>	Unpermitted Cultivation Areas	n/a	Remove all cultivation related materials from site. Seed and mulch exposed dirt/disturbed areas.	Oct 31, 2020 (end of dry weather work period)
<b>2</b>	Generators and Fuel	Place all fuel cans in hard plastic totes	Store all fuel containers in designated area with impermeable flooring and spill containment. Keep Spill Kit in vicinity of hazardous materials.	ASAP May 2020 (beginning of planting season)
<b>3</b>	Water Meters	n/a	Install continuous read water meters on point of diversion (well) in a manner such that daily use for domestic and cultivation can be separately distinguished and recorded.	May 2020 (beginning of planting season)
<b>4</b>	Cultivation Waste	n/a	Discontinue burn piles for cannabis cultivation waste; Establish compost location or plan for disposal	August 2020 (end of first harvest cycle)
<b>5</b>	Erosion on Access Roads	Add gravel to areas that show evidence of surface flow	Construct Rocked Rolling Dips	Oct 31, 2023 (end of dry weather work period)



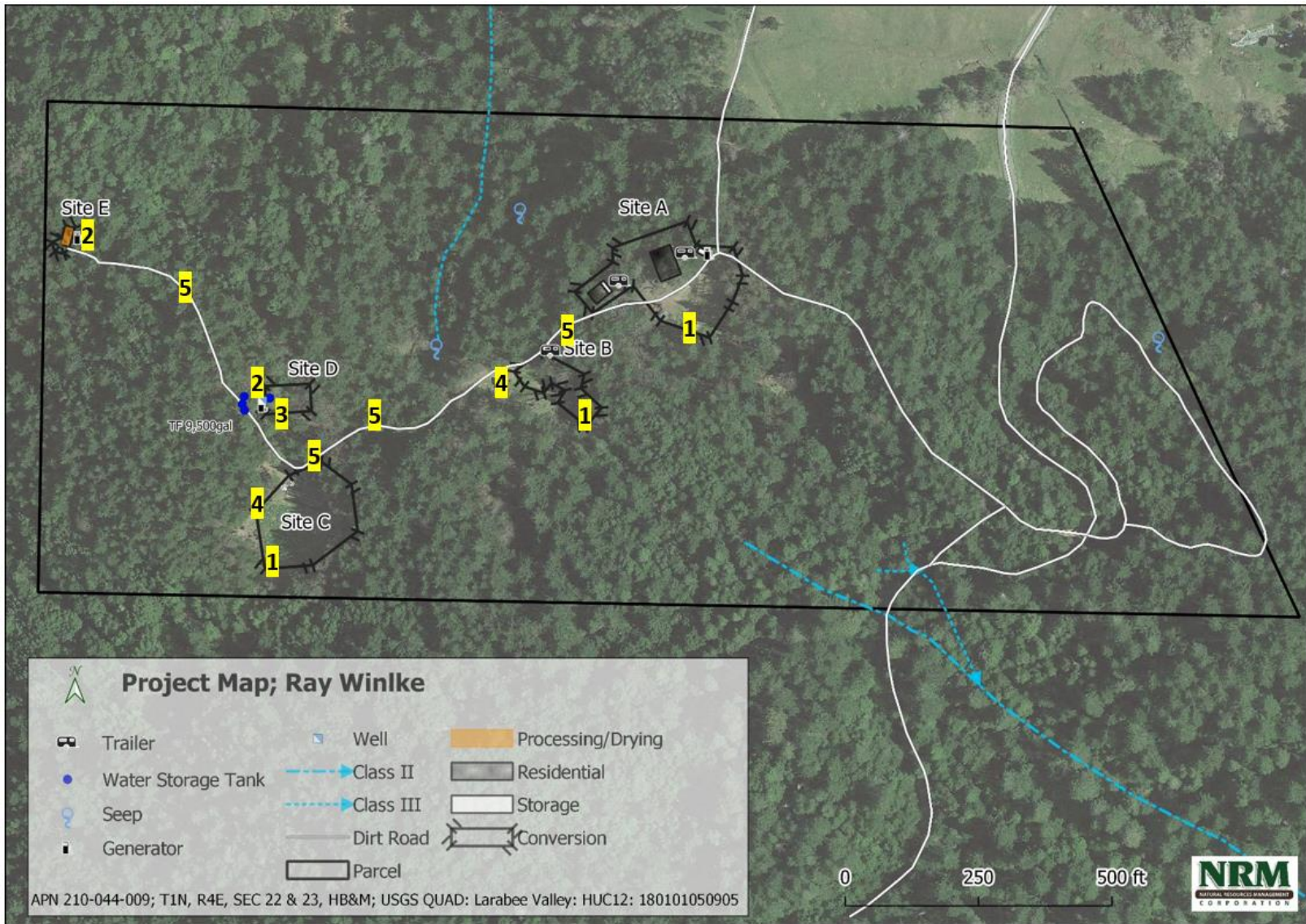


Figure 8. Corrective Actions (#s correspond to Table 4 above)



## Appendix A. Photo Documentation



Photo 1. Spring, source of water for the north-flowing Class III



Photo 2. Looking downstream swale below spring





Photo 3. Looking downstream at Class III/swale/old skid road (downstream of Photo 2)



Photo 4. Looking upstream at the former diversion of Class III after it turned to the northeast down a legacy road (looking southwest)





Photo 5. The second spring, this one is smaller and located in the inboard ditch before the water crosses the road.





Photo 6. Looking downstream where the stream crossed the road





Photo 7. Looking downstream at the outboard fill where it used to cross the road



Photo 8. The diverted stream flowed onto this small flat where the flow dissipated. There was no sign of connection to a larger watercourse at the time of the site visit (1/23/19).





Photo 9. At the site of the former diversion. The dog is facing the former diversion path. Photo from Dec 2019.





Photo 10. Streamflow following the natural watercourse alignment just past the former diversion. Photo from Dec 2019.



Photo 11. Looking north of photo 10 at the transition to the undisturbed channel below. Photo from Dec 2019.





Photo 12. The former diversion path, east of Photo 10, starting to revegetate and fill in with leaves and twigs. Photo from Dec 2019.



Photo 13. Well, well shed and tanks at Site D





Photo 14. Generator and gas can in well shed; Site D.



Photo 15. Processing/Drying building at Site E - generator in lean-to.





Photo 16. Residential area N side (primary residence), Site A; generator shed to right of photo





Photo 17. inside of generator shed - insulated with concrete floor





Photo 18. Site A, from residential area; looking south (storage shed in background)



Photo 19. Storage shed with nutrients on South edge of Site A





Photo 20. Site B; to be removed



Photo 21. looking East from tank farm (Site D) toward Site C





Photo 22. Site C



Photo 23. Tank Farm at Site D near well shed



**Appendix B. REQUIREMENTS RELATED TO WATER DIVERSIONS AND  
WASTE DISCHARGE FOR CANNABIS CULTIVATION**

Section 2 of Attachment A of the Cannabis Cultivation Policy; SWRCB WQ-2019-001-DWQ.



## 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.

No.	TERM
<b>Land Development and Maintenance, Erosion Control, and Drainage Features</b>	
<b>Limitations on Earthmoving</b>	
1.	<p>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.</p> <p>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.</p>
2.	<p>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.</p>
3.	<p>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 Cultivation 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 are in compliance with this Policy.</p>
4.	<p>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.</p>
5.	<p>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 soil to minimize dust and to achieve design soil compaction, or when needed use a water truck to control dust and soil moisture.</p>



<b>Construction Equipment Use and Limitations</b>	
<b>6.</b>	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.
<b>7.</b>	<p>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:</p> <ul style="list-style-type: none"> <li>a) 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).</li> <li>b) Frequently inspect equipment and vehicles for leaks.</li> <li>c) 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; performing equipment or vehicle repairs, maintenance, and washing onsite is prohibited.</li> <li>d) If emergency repairs generate waste fluids, ensure they are contained and properly disposed or recycled off-site.</li> <li>e) Properly dispose of all construction debris off-site.</li> <li>f) 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.</li> </ul>
<b>Erosion Control</b>	
<b>8.</b>	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.
<b>9.</b>	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: <a href="http://www.cal-ipc.org/paf/">www.cal-ipc.org/paf/</a> . 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.
<b>10.</b>	Cannabis cultivators shall incorporate erosion control and sediment detention devices and materials into the design, work schedule, and implementation of the

	<p>cannabis cultivation activities. The erosion prevention and sediment capture measures shall be effective in protecting water quality.</p> <ul style="list-style-type: none"> <li>• Interim erosion prevention and sediment capture measures shall be implemented within seven days of completion of grading and land disturbance activities, and shall consist of erosion prevention measures and sediment capture measures including: <ul style="list-style-type: none"> <li>○ 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 storm water diversion. Other types of erosion prevention measures may include mulching, hydroseeding, tarp placement, revegetation, and rock slope protection.</li> <li>○ 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.</li> </ul> </li> <li>• Long-term erosion prevention and sediment capture measures shall be implemented as soon as possible and prior to 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.</li> <li>• Maintenance of all erosion protection and sediment capture measures is required year-round. Early monitoring allows for 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.</li> </ul>
<p><b>11.</b></p>	<p>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.</p>
<p><b>12.</b></p>	<p>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.</p>
<p><b>13.</b></p>	<p>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.</p>



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.
<b>Access Road/Land Development and Drainage</b>	
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 <a href="http://www.pacificwatershed.com/PWA-publications-library">http://www.pacificwatershed.com/PWA-publications-library</a> . 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 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 techniques <sup>13</sup> 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

<sup>13</sup> A Primer on Stream and River Protection for the Regulator and Program Manager: Technical Reference Circular W.D. 02-#1, San Francisco Bay Region, California Regional Water Board (April 2003) [http://www.waterboards.ca.gov/sanfranciscobay/water\\_issues/programs/stream\\_wetland/streamprotectio ncircular.pdf](http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/stream_wetland/streamprotectio ncircular.pdf).

	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 storm water flow within an inboard or inside ditch, and to minimize disruption of the natural sheet flow pattern off 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 storm water 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 storm water 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.
<b>Drainage Culverts (See also Watercourse Crossings)</b>	
<b>30.</b>	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.
<b>31.</b>	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.
<b>Cleanup, Restoration, and Mitigation</b>	
<b>32.</b>	Cannabis cultivators shall limit disturbance to existing grades and vegetation to the actual site of the cleanup or remediation and any necessary access routes.
<b>33.</b>	<p>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.</p> <p>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.</p>
<b>34.</b>	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 in order to maximize wildlife benefits and shall be native to the local county.
<b>35.</b>	<p>Cannabis cultivators shall develop a revegetation plan for:</p> <ul style="list-style-type: none"> <li>• All exposed or disturbed riparian vegetation areas,</li> <li>• any oak trees that are damaged or removed, and</li> <li>• temporary work areas.</li> </ul> <p>Cannabis cultivators shall develop a monitoring plan that evaluates the revegetation plan for five years. Cannabis cultivators shall maintain annual inspections for the</p>

	purpose of assessing 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 monitoring results is acceptable in Portable Document Format (PDF).
<b>36.</b>	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.
<b>37.</b>	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.
<b>Stream Crossing Installation and Maintenance</b>	
<b>Limitations on Work in Watercourses and Permanently Poned Areas</b>	
<b>38.</b>	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.
<b>39.</b>	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.
<b>40.</b>	Cannabis cultivators shall avoid or minimize use of heavy equipment <sup>14</sup> 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 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.

<sup>14</sup> Heavy equipment is defined as machinery or vehicles, typically used in the building and construction industry (e.g., bulldozers, excavators, backhoes, bobcats, tractors, etc.).



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 work site. 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 coffer dams upstream and downstream of the work site 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.
<b>Temporary Watercourse Diversion and Dewatering: All Live Watercourses</b>	
42.	Cannabis cultivators shall ensure that coffer dams 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 coffer dams or stream diversion fail, 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.	Gravity flow is the preferred method of temporarily dewatering or diverting water. 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 coffer dam. When a 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 cultivators 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 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 flow to resume with a minimum of disturbance to the channel substrate and that minimizes the generation of turbidity.
<b>Watercourse Crossings</b>	
48.	Cannabis cultivators shall ensure that 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). Watercourse crossings shall be designed and sized by a Qualified Professional. Consult CAL FIRE 100 year Watercourse Crossings document for examples and design calculations, available at: <a href="http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20(final-a).pdf">http://calfire.ca.gov/resource_mgt/downloads/100%20yr%20revised%208-08-17%20(final-a).pdf</a> .
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 does not inhibit migration of aquatic life. Any access road crossing structure on watercourses that support fish shall be constructed for the unrestricted passage of fish at all life stages, and should use the following design guidelines: <ul style="list-style-type: none"> <li>• CDFW's <i>Culvert Criteria for Fish Passage</i>;</li> <li>• CDFW's <i>Salmonid Stream Habitat Restoration Manual, Volume 2, Part IX: Fish Passage Evaluation at Stream Crossings</i>; and</li> <li>• National Marine Fisheries Service, Southwest Region <i>Guidelines for Salmonid Passage at Stream Crossings</i>.</li> </ul>
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: <a href="http://www.calforests.org/wp-content/uploads/2013/10/Adopted-TRA5.pdf">http://www.calforests.org/wp-content/uploads/2013/10/Adopted-TRA5.pdf</a> .
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 period 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, 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. 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 roads 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.	<p>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 upon discovery:</p> <ul style="list-style-type: none"> <li>• Remove any wood debris that may restrict flow in a culvert.</li> <li>• 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.</li> <li>• Maintain records of access road and drainage feature maintenance and consider redesigning the access road to improve performance and reduce maintenance needs.</li> </ul>
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.
<b>Soil Disposal and Spoils Management</b>	
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 storm water. Storage practices may include 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.	<p>For soil disposal sites cannabis cultivators shall:</p> <ul style="list-style-type: none"> <li>• revegetate soil disposal sites with a mix of native plant species,</li> <li>• cover the seeded and planted areas with mulched straw at a rate of two tons per acre, and</li> <li>• apply non-synthetic netting or similar erosion control fabric (e.g., jute) on slopes greater than 2:1 if the site is erodible.</li> </ul>
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.
<b>Riparian and Wetland Protection and Management</b>	
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.
<b>Water Storage and Use</b>	
<b>Water Supply, Diversion, and Storage</b>	
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 <sup>15</sup> .
66.	All water diversions for cannabis cultivation from a surface stream, 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). See Section 3, Numeric and Narrative Instream Flow Requirements of this Attachment A for more information.

<sup>15</sup> California Well Standards are available at: <http://wdl.water.ca.gov/groundwater/wells/standards.cfm>



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., roof tops, etc.) during the wet season and store storm water 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 in accordance with an existing water right that specifies, as appropriate, the source, location of the point of diversion, purpose of use, place of use, and 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 flow 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.

<p><b>73.</b></p>	<p>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 permit, a CDFW LSA Agreement, coverage under the Cannabis Cultivation General Order water quality certification, or site-specific WDRs issued by the Regional Water Board. Use of non-fuel powered diversion pumps (solar, electric, gravity, etc.) is encouraged.</p> <p>In all cases, all pumps shall:</p> <ul style="list-style-type: none"> <li>a) be properly maintained,</li> <li>b) have suitable containment to ensure any spills or leaks do not enter surface waterbodies or groundwater, and</li> <li>c) have sufficient overhead cover to prevent exposure of equipment to precipitation.</li> </ul>
<p><b>74.</b></p>	<p>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 in accordance with 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)<sup>16</sup>. 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.</p>
<p><b>75.</b></p>	<p>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.</p>
<p><b>76.</b></p>	<p>Cannabis cultivators shall not obstruct, alter, dam, or divert 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 Cultivation General Order water quality certification, or site-specific WDRs issued by the Regional Water Board.</p>
<p><b>77.</b></p>	<p>Cannabis cultivators shall plug, block, cap, disconnect, or remove the diversion intake or otherwise bypass flow or render the diversion intake incapable of diverting water for 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.</p>
<p><b>78.</b></p>	<p>Cannabis cultivators shall not divert from a surface water or from 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 appropriate water right.</p>

<sup>16</sup> CDFW's Lake and Streambed program information is available at: <https://www.wildlife.ca.gov/Conservation/LSA> .



<b>79.</b>	<p>Onstream storage reservoirs are prohibited except in the following instances:</p> <ul style="list-style-type: none"> <li>a) 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.</li> <li>b) The cannabis cultivator obtains an appropriative water right permit with irrigation as a designated use prior to diverting water into 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.</li> <li>c) Cannabis cultivators with an unpermitted onstream reservoir that existed prior to October 1, 2016 may file for a Cannabis SIUR<sup>17</sup>. As part of filing for a Cannabis SIUR, the registrant shall agree to do the following: <ul style="list-style-type: none"> <li>i. Request a determination from the Deputy Director (or designee) and CDFW to determine whether removal of the reservoir or installation of off-stream storage would cause more environmental damage than continuing to use the existing onstream reservoir for diversion and storage.</li> <li>ii. Accept any conditions imposed by the Deputy Director (or designee) and CDFW before or after issuance of the Cannabis SIUR as part of the determinations to ensure any modifications and ongoing operation of the onstream reservoir are protective of water quality and aquatic resources. If the Deputy Director (or designee) or CDFW determine the existing onstream reservoir does not meet this condition: <ul style="list-style-type: none"> <li>(1) the reservoir and associated facilities shall be removed or otherwise modified such that the reservoir is incapable of storing water; and</li> <li>(2) the cannabis cultivator shall either install off-stream storage or obtain an alternative source of water or water right.</li> </ul> </li> <li>iii. Operate or modify the onstream reservoir to: <ul style="list-style-type: none"> <li>(1) bypass all inflow to the reservoir during the surface water diversion forbearance period (Section 3, Requirement 4). This requirement may be modified by the Deputy Director (or designee) or CDFW as part of the determinations and Cannabis SIUR;</li> <li>(2) comply with the diversion rate and diversion season bypass conditions (pursuant to Section 3, Requirements 5, 6, and 7). This requirement may be modified by the Deputy Director (or designee) or CDFW as part of the determinations and Cannabis SIUR; and</li> <li>(3) operate consistent with the other Requirements of this Policy. This requirement may be modified by the Deputy Director (or designee) as part of the determinations and Cannabis SIUR.</li> </ul> </li> </ul> </li> </ul>
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<sup>17</sup> Cannabis cultivators can apply for a Cannabis SIUR through the Water Boards online Cannabis Cultivation Program Application Portal available at: <https://public2.waterboards.ca.gov/cgo> .

	<ul style="list-style-type: none"> <li>iv. Within six months of the determinations, the cannabis cultivator shall submit a draft compliance plan for review and approval by the Deputy Director (or designee). The compliance plan shall clearly identify the scope of work and schedule for completion of modifications necessary to operate the onstream reservoir in compliance with the determinations and Cannabis SIUR. The schedule for completion must comply with the timeline established by the Deputy Director (or designee) and shall not exceed the renewal date of the Cannabis SIUR Certificate<sup>18</sup>. The Deputy Director (or designee) may require modifications prior to approving the draft compliance plan.</li> <li>v. Withdrawal of water from the onstream reservoir for cannabis cultivation activities is only allowed during the surface water diversion forbearance period.</li> <li>d) Onstream reservoirs with an existing valid water right registration for onstream storage that does not identify commercial irrigation as a purpose of use (i.e., Livestock Stockpond Use Registrations, Small Domestic Use Registrations) may file for a Cannabis SIUR, thereby requesting Deputy Director (or designee) and CDFW to make determinations and condition the Cannabis SIUR after issuance with appropriate conditions as outlined in (c)(i), (c)(ii), (c)(iii), (c)(iv), and (c)(v) above, with the exception of (c)(ii)(1) which does not apply.</li> </ul>
<p><b>80.</b></p>	<p>The State Water Board may impose conditions for each individual SIUR for an onstream reservoir for cannabis cultivation to:</p> <ul style="list-style-type: none"> <li>a) Ensure that individual and cumulative effects of water diversion and discharge associated with cultivation do not affect the instream flows needed for fish spawning, migration, and rearing, and the flows needed to maintain natural flow variability;</li> <li>b) Ensure that cultivation does not negatively impact springs, riparian habitat, wetlands, or aquatic habitat; and</li> <li>c) Otherwise protect fish, wildlife, fish and wildlife habitat, and water quality.</li> </ul> <p>Each SIUR filing for an onstream reservoir for cannabis cultivation shall include self-certification that the registrant has agreed to comply with all lawful conditions required by the State Water Board pursuant to this term. The SIUR Certificate shall include a copy of any conditions required by the State Water Board pursuant to this term.</p>
<p><b>81.</b></p>	<p>Cannabis cultivators are encouraged to install separate storage systems for water diverted for cannabis irrigation and water diverted for any other beneficial uses<sup>19</sup>, 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.</p>

<sup>18</sup> SIURs are subject to renewal every five years.

<sup>19</sup> Other beneficial uses of water include: domestic, irrigation, power, municipal, mining, industrial, fish and wildlife preservation and enhancement, aquaculture, recreational, stockwatering, water quality, frost protection, and heat control. (California Code of Regulations, Title 23 sections 659-672).



82.	<p>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 2.7 and Chapter 2.8<sup>20</sup>. 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 out 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.</p>
83.	<p>Cannabis cultivators with onstream reservoirs shall install and maintain a measuring device capable of meeting the requirements below to monitor and record the rate of diversion, the rate of collection to storage, the rate of withdrawal or release from storage, and the total volume of water collected in the onstream reservoir.</p> <ol style="list-style-type: none"> <li>a) The measurement device (e.g., water level sensor and area-capacity curve) shall be certified to measure the total volume of water diverted or stored accurate to within <math>\pm 10</math> percent by volume based on periodic testing of the installed device.</li> <li>b) The measurement device shall be capable of recording the date, time, and volume of water diverted at an hourly or more frequent basis, year-round.</li> <li>c) The measurement device shall be installed and calibrated by a Qualified Professional. This includes the development of any area-capacity curve used to convert water elevation to volume. Cannabis cultivators shall submit a description of the type of measurement device, evidence of proper installation and operation of the device, and the area-capacity curve to the Deputy Director (or designee) for review and approval within two years of the date the Cannabis SIUR is issued.</li> <li>d) To assess continued accuracy of depth readings recorded by the measurement device, a staff gage shall also be installed in the same pond or reservoir as the measurement device and manual depth readings from the staff gage and the date and time of the depth readings shall be recorded monthly, at a minimum. The area-capacity curve shall be reassessed if requested by the Deputy Director (or designee).</li> <li>e) Cannabis cultivators shall maintain hourly depth and volume records from the measurement device and area-capacity curves at the cultivation site and shall make the records available for review upon request by staff from the Water Boards or CDFW.</li> <li>f) Depth and volume records and area-capacity curves shall be retained for a minimum of five years.</li> </ol>

<sup>20</sup> Additional information on measuring devices may be found at: [https://www.waterboards.ca.gov/waterrights/water\\_issues/programs/diversion\\_use/water\\_use.shtml#measurement](https://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/water_use.shtml#measurement)

84.	<p>The State Water Board intends to develop and implement a basin-wide program for real-time 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 amendment to this requirement.</p>
85.	<p>Cannabis cultivators shall not use reservoirs and ponds to store water for cannabis cultivation unless they are sited and designed or approved by a Qualified Professional in compliance with 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.</p> <p>All off-stream storage reservoirs and ponds shall be designed, managed, and maintained to accommodate average annual winter period precipitation and storm water inputs to reduce the potential for overflow.</p> <p>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.</p>
86.	<p>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 (pursuant to Fish and Game Code section 6400). Eradication methods can be direct or indirect. Direct methods may include hand-held dip net, hook and line, lights, spears, gigs, or fish tackle under a fishing license (pursuant to 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 (pursuant to Fish and Game Code section 5501) issued by CDFW.</p>
87.	<p>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 assurance of structural integrity is no longer guaranteed.</p>



88.	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 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 storm water inputs from a 25-year, 24-hour storm event.
89.	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 on a monthly basis, at a minimum, inspect for and repair all leaks of the diversion and storage system. Written records describing the date, time, and nature of such inspections and repairs shall be kept on-site for a period of at least two years. Such written records shall be made available for review by Water Boards or CDFW, and any other authorized representatives of the Water Boards or CDFW.
90.	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.
91.	Cannabis cultivators shall install storage 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. Cannabis cultivators shall maintain a written or electronic copy of the manufacturer's specifications for each storage tank installed and used for cannabis cultivation activities, if available from the manufacturer in hardcopy or on the internet. 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. Nothing in this requirement supersedes other applicable state, county, or local requirements for the installation of water storage tanks, whichever is more stringent shall apply.
92.	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 overflow of storage systems to prevent runoff and the diversion of more water than can be used and/or stored.
93.	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.

<p><b>94.</b></p>	<p>Cannabis cultivators shall retain, for a minimum of five years, appropriate documentation for any hauled water<sup>21</sup> used for cannabis cultivation. Documentation for hauled water shall include, for each delivery, the following:</p> <ul style="list-style-type: none"> <li>a) A receipt that shows the date of delivery and the name, address, license plate number, and license plate issuing state for the water hauler,</li> <li>b) A copy of the Water Hauler’s License, if applicable (California Health and Safety Code section 111120),</li> <li>c) 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</li> <li>d) The quantity of water delivered or picked up from a water source, in gallons.</li> </ul> <p>Documentation shall be made available, upon request, to Water Boards or CDFW staff and any other authorized representatives of the Water Boards or CDFW.</p>
<p style="text-align: center;"><b>Water Conservation and Use</b></p>	
<p><b>95.</b></p>	<p>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.</p>
<p><b>96.</b></p>	<p>Cannabis cultivators shall use weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss.</p>
<p><b>97.</b></p>	<p>Cannabis cultivators shall implement water conserving irrigation methods (e.g., drip or trickle irrigation, micro-spray, or hydroponics).</p>
<p><b>98.</b></p>	<p>Cannabis cultivators shall maintain daily records of all water used for 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 irrigation emitters equates to 50 gallons per day (1 hour x 2 times per day x 50 irrigation emitters x 0.5 gallons per irrigation emitter per hour) of water used for irrigation). Cannabis cultivators shall retain, for a minimum of five 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.</p>
<p style="text-align: center;"><b>Irrigation Runoff</b></p>	
<p><b>99.</b></p>	<p>Cannabis cultivators shall on a weekly basis, at a minimum, during period of use inspect for leaks in mainlines<sup>22</sup>, laterals<sup>23</sup>, in irrigation connections, sprinkler heads, irrigation emitters, or at the ends of drip tape and feeder lines and immediately repair any leaks found upon detection.</p>

<sup>21</sup> Water hauler means any person who hauls water in bulk by any means of transportation.

<sup>22</sup> Mainlines are pipes that go from the water source to the control valves.

<sup>23</sup> Laterals are the pipes between the control valves and the sprinkler heads or irrigation emitters.



100.	The irrigation system shall be designed to include redundancy (e.g., safety valves) in the event that leaks occur, so that waste of water and runoff is prevented and minimized.
101.	Cannabis cultivators shall regularly replace worn, outdated, or inefficient irrigation system components and equipment to ensure a properly functioning, leak-free, and efficient irrigation system at all times.
102.	Cannabis cultivators shall minimize irrigation deep percolation <sup>24</sup> by applying irrigation water at agronomic rates.
<b>Fertilizers, Pesticides, and Petroleum Products</b>	
103.	Cannabis cultivators shall not mix, prepare, over apply, or dispose of agricultural chemicals/products (e.g., fertilizers, pesticides <sup>25</sup> , 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 <sup>26</sup> is prohibited. Disposal of unused product and containers shall be consistent with labels.
104.	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 which 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.

<sup>24</sup> Deep percolation occurs when excess irrigation water is applied and percolates below the plant root zone.

<sup>25</sup> Pesticide is defined as follows:

- Per California Code of Regulations Title 3, Division 6, Section 6000:
  - (a) Any substance or mixture of substances that is a pesticide as defined in the Food and Agricultural Code and includes mixtures and dilutions of pesticides;
  - (b) As the term is used in Section 12995 of the California Food and Agricultural Code, includes any substance or product that the user intends to be used for the pesticidal purposes specified in Sections 12753 and 12758 of the Food and Agricultural Code.
- Per California Food and Agricultural Code section 12753(b), the term "Pesticide" includes any of the following: Any substance, or mixture of substances which is intended to be used for defoliating plants, regulating plant growth, or for preventing, destroying, repelling, or mitigating any pest, as defined in Section 12754.5, which may infest or be detrimental to vegetation, man, animals, or households, or be present in any agricultural or nonagricultural environment whatsoever.
- In laymen's terms: "pesticide" includes: rodenticides, herbicides, insecticides, fungicides, and disinfectants.

<sup>26</sup> More information on DPR requirements is available at: [http://www.cdpr.ca.gov/docs/legbills/laws\\_regulations.htm](http://www.cdpr.ca.gov/docs/legbills/laws_regulations.htm), <http://www.cdpr.ca.gov/docs/county/cacltrs/penfltrs/penf2017/2017atch/attach0301.pdf>, and <http://www.cdpr.ca.gov/docs/cannabis/index.htm>

105.	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.
106.	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.
107.	Cannabis cultivators shall only use hazardous materials <sup>27</sup> in a manner consistent with the product's label.
108.	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.
109.	Cannabis cultivators shall only mix, prepare, apply, or load hazardous materials outside of the riparian setbacks.
110.	Cannabis cultivators shall not apply agricultural chemicals within 48 hours of any weather pattern that is forecast to have a 50 percent or greater chance of precipitation of 0.25 inches or greater per 24 hours. 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 storm water general order.
<b>Fertilizers and Soils</b>	
111.	To minimize infiltration and water quality degradation, cannabis cultivators shall irrigate and apply fertilizer consistent with the crop need (i.e., agronomic rate).

<sup>27</sup> A hazardous material is any item or agent (biological, chemical, radiological, and/or physical), which has the potential to cause harm to humans, animals, or the environment, either by itself or through interaction with other factors.



112.	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.
113.	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.
<b>Pesticides and Herbicides</b>	
114.	Cannabis cultivators shall not apply restricted materials, including restricted pesticides, or allow restricted materials to be stored at the cannabis cultivation site.
115.	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 <sup>28</sup> .
<b>Petroleum Products and Other Chemicals</b>	
116.	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 appropriate for the conditions at and near the site (e.g., oil spill booms if surface water could be impacted by a spill, sorbent pads, etc.) shall be stored onsite at all locations where equipment is used or staged.
117.	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.
118.	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.

<sup>28</sup> <https://www.epa.gov/safepestcontrol/integrated-pest-management-ipm-principles>

## Cultivation-Related Waste

<b>119.</b>	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.
<b>120.</b>	Cannabis cultivators shall only dispose or reuse spent growth medium (e.g., soil and other organic media) in a manner that prevents 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 water tight 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.
<b>121.</b>	<p>Wastewater tanks or storage containers must be rigid, enclosed to the environment, and appropriately designed to hold wastewater. They shall not be located within the riparian setback. Cannabis cultivators shall place wastewater storage tanks in areas that allow for ease of installation, access, maintenance, and minimize road development.</p> <p>Cannabis cultivators shall install tanks according to manufacturer's specifications and shall place tanks on properly compacted soil or other surface (e.g., concrete) that is free of rocks and sharp objects and capable of bearing the weight of the tank and its maximum contents with minimal settlement. Cannabis cultivators shall maintain a written or electronic copy of the manufacturer's specifications for each tank installed and used for cannabis cultivation activities, if available from the manufacturer in hardcopy or on the internet.</p> <p>Tanks shall not be located in areas of slope instability or next to equipment that generates heat. Cannabis cultivators shall install wastewater 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.</p> <p>To prevent rupture or overflow and runoff, cannabis cultivators shall only use wastewater storage tanks equipped with a float valve, or equivalent device, to shut off inflow when storage systems are full. Cannabis cultivators shall install any other measures necessary to prevent overflow of storage systems and prevent spills or leaks. Cannabis cultivators shall regularly inspect for and repair all leaks of the storage system.</p> <p>Nothing in this requirement supersedes other applicable state, county, or local requirements for the installation of wastewater tanks or storage containers, whichever is more stringent shall apply.</p>



122.	<p>Cannabis cultivators shall retain, for a minimum of five years, appropriate documentation for any industrial wastewater collected to a storage tank for disposal at a permitted wastewater facility that accepts cannabis cultivation wastewater. Documentation for hauled industrial wastewater shall include, for each delivery, the following:</p> <ul style="list-style-type: none"> <li>a) A receipt that shows the date of pickup and the name, address, license plate number, and license plate issuing state for the industrial wastewater hauler;</li> <li>b) A copy of the wastewater hauler's permit; and</li> <li>c) The quantity of industrial wastewater picked up, in gallons.</li> </ul> <p>Documentation shall be made available, upon request, to Water Boards or CDFW staff and any other authorized representatives of the Water Boards or CDFW.</p>
<b>Refuse and Domestic Waste</b>	
123.	<p>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 (including food sources) does not contaminate soil or enter the riparian setback or waters of the state.</p>
124.	<p>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.</p>
125.	<p>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.</p>
<b>Winterization</b>	
126.	<p>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.</p>
127.	<p>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.</p>
128.	<p>Cannabis cultivators shall not operate heavy equipment of any kind at the cannabis cultivation site during the winter period, unless authorized (1) in a site management plan as described below, or (2) for emergency repairs contained in an enforcement order issued by the State Water Board, Regional Water Board, or other agency having jurisdiction. Use of heavy equipment (e.g. agricultural equipment) for routine cannabis cultivation soil preparation or planting may be authorized in a site</p>

	<p>management plan approved by the applicable Regional Water Board Executive Officer or designee if both of the following conditions are met:</p> <ul style="list-style-type: none"> <li>a) all soil preparation and planting activities occur outside of the riparian setbacks; and</li> <li>b) all soil preparation and planting activities are located on an average slope equal to or less than five percent (5%) (e.g., valley floor).</li> </ul>								
<b>129.</b>	<p>Cannabis cultivators shall apply linear sediment controls (e.g., silt fences, wattles, etc.) along the toe of the slope, face of the slope, and at the grade breaks of exposed slopes to comply with sheet flow length<sup>29</sup> at the frequency specified below or as authorized in a site management plan approved by the applicable Regional Water Board Executive Officer or designee.</p> <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th style="text-align: center;">Slope (percent)</th> <th style="text-align: center;">Sheet Flow Length Not to Exceed (feet)</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">0 – 25</td> <td style="text-align: center;">20</td> </tr> <tr> <td style="text-align: center;">25 – 50</td> <td style="text-align: center;">15</td> </tr> <tr> <td style="text-align: center;">&gt;50</td> <td style="text-align: center;">10</td> </tr> </tbody> </table>	Slope (percent)	Sheet Flow Length Not to Exceed (feet)	0 – 25	20	25 – 50	15	>50	10
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25 – 50	15								
>50	10								
<b>130.</b>	<p>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.</p>								
<b>131.</b>	<p>Cannabis cultivators shall stabilize all disturbed areas and construction entrances and exits to control erosion and sediment discharges from land disturbance.</p>								
<b>132.</b>	<p>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 storm water. The cannabis cultivator shall have adequate cover and berm materials available onsite if the weather forecast indicates a probability of precipitation.</p>								
<b>133.</b>	<p>Cannabis cultivators shall apply erosion repair and control measures to the bare ground (e.g., cultivation area, access paths, etc.) to prevent discharge of sediment to waters of the state.</p>								
<b>134.</b>	<p>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 do not adequately protect water quality.</p>								

<sup>29</sup> Sheet flow length is the length that shallow, low velocity flow travels across a site.