

Site Management Plan



Implementation of Best Practical Treatment or Control Measures

In Fulfillment of Water Quality Order 2017-0023-DWQ

State Water Resources Control Board

Prepared for:

DNA Realty Holdings, LLC

1632 Broadway #449 Eureka, CA 95501

Humboldt County APN: 208-241-007 & 208-241-006

Prepared by:



**MOTHER EARTH
ENGINEERING**

661 G Street

Arcata, CA 95521

(707)-633-8321

As a condition of approval for enrollment into the Water Quality Order 2017-0023-DWQ for the cultivation, processing, manufacture, or distribution of cannabis, the owner or permittee shall indemnify and hold harmless Mother Earth Engineering, Inc. and its agents and employees for any claims, damages, or injuries brought by affected property owners or other third parties due to the commercial cultivation, processing, manufacture, or distribution of cannabis for medical use and for any claims brought by any person for problems, injuries, damages, or liabilities of any kind that may arise out of the commercial cultivation, processing, manufacture, or distribution of cannabis for medical use. As the preparer, Mother Earth Engineering, Inc. is not responsible for any water quality violations.

I/we agree to be responsible to the stated terms and conditions of the Order, and release Mother Earth Engineering, Inc., its employees, contractors, and consultants from any defense costs, including attorneys' fees or other loss connected with any legal challenge which may arise from implementation of said Order.

Landowner Printed Name: DNA Realty Holdings, LLC

Signature: _____ Date: _____

Permittee Printed Name: Albert Arnold

Signature: _____ Date: _____

Prepared by: Mother Earth Engineering, Inc.
920 Samoa Blvd., Suite #210
Arcata, CA 95521
(707) 633-8321

Site Management Plan prepared on: 09/24/2019

Signature: _____ Date: _____

General Information

Owner: DNA Realty Holdings, LLC
1632 Broadway #449
Eureka, CA 95501

Site Address: Ridge Road
Mad River, CA 95526
Humboldt County

Parcel: APN: 208-241-006 & 208-241-007
Parcel Centroid: 40.5149, -123.5526
Zoning: RA20-160, FR-B-5
Parcel Size: 80 Acrea (combined)
Cannabis Cultivation Area: 18,000 ft²
Disturbed Area: 81,434 ft²
HUC-12: 180101020302 – Bear Creek – Mad River

SWB WDID: 1_12CC417602

Facility Status: Tier 2 – Low Risk

1. INTRODUCTION

This Site Management Plan (Plan) was developed to report how the discharger is complying with the list of Best Practicable Treatment or Controls (BPTC's) listed in Attachment A, Section 2 of the State Water Resources Control Board (SWB) Order 2017-0023-DWQ (Order). The purpose of this Order is to provide a regulatory structure to minimize adverse impacts to water quality due to cannabis cultivation. Cannabis cultivators that are enrolled under this Order and compliant with its regulations will receive a conditional waiver for the discharges associated with cannabis cultivation. Using data from on Site assessments and office analysis; this Plan takes an inventory of all cannabis cultivation activities, land and resource management, and land stewardship practices to ensure the discharger is in compliance with the Order.

2. SITE LOCATION

The Site is located in the Mad River watershed in Central Humboldt County, approximately 13 miles south of Korb, CA. To reach the Site from Eureka, head north on US HWY 101, turning left onto Myrtle Avenue, then turning right onto Freshwater Road. Then take a right onto Kneeland Road, and then a left onto Butler Valley Road. The road is followed for several miles, after crossing over the Mad River the property will be on the right. The Site is located in Section 6, Township 4N, Range 3E. The property is located on the Korb USGS 7.5-minute quadrangle map. The parcel centroid is located at latitude 40.7566 and longitude -123.8803.

3. SITE DESCRIPTION

The property is located on flood plain flats in the Mad River Valley, with the cultivation area located approximately 350 feet from the Mad River at the closest point. The Mad River forms the property ranges from 2,500 ft to 2,725 ft above mean sea level, and is mainly surrounded by Montane-Hardwood Conifer, Douglas Fir and other species. The land is characterized as having low sloped grades to highly sloped grades and drains towards the both the southwest of the property into Butte Creek and to the North-East) of the property into a tributary to Butte Creek. The climate can be generalized by a pattern of high-intensity rainfall in the late fall until the early spring and hot, dry summers (weather narrative). Mean annual precipitation is approximately 70.5 inches. Soils within the property are primarily composed of Highyork-Elkcamp-Airstrip complex at 15 to 50 percent slopes, and Pasturerock-Coyoterock-Maneze complex at 15 to 50 percent slopes. The Little Van Duzen River is approximately 0.86 miles from the property.

4. FIELD AND ASSESSMENT METHODS

Office analysis and field inventory were used to determine the status of the property for enrollment in the Order. Pre-field inspection using aerial footage of the property was used to identify existing infrastructure, cultivation areas, watercourses, and the general layout of the property. The field inventory was conducted by Mother Earth Engineering staff on 07/22/2019. The inventory included GPS mapping of structures, water tanks, ponds, roads, cultivation Sites, and other infrastructure.

5. SITE INVENTORY

5.1. Site Map

Included with this report is an up to date Site Map showing all access roads, streams, stream crossings, cultivation Sites, disturbed areas, and other relevant Site features. See Attachment A.

5.2. Road Conditions

The private on-site road is accessed through a locked gate that joins Ridge Road. There are approximately 1.2 miles of roadway that were inspected on the site visit, including portions of Ridge Road, private access roads, and seldom used agriculture/quad paths. Conditions of the roadway vary throughout the property. There are portions of roadway that have been rocked with native gravel and are correctly sloped or have water bars installed. Portions of the roadway that require corrective action are listed in the table below.

Table 1: Inventory of access roads on Site.

Map ID	Road Condition	Corrective Measure

The private access roads are used only by employees. The private access roads are used daily with quads and off-highway vehicles. Conventional vehicle traffic on and off the property is estimated to be one trip per day.

5.3. Watercourses and Stream Crossings

There is are eight individual watercourses on the two parcels; two of which originate off of the property, and six with headwaters or spring sources within. There are three mapped watercourses that run off the downslope edge of the property, two Class II streams and one Class III. All of these watercourses drain directly into the Mad River. There are 12 stream crossing culverts located on the two parcels. All of the stream crossings are inventoried in the table below.

Table 2: Inventory of watercourses that run through the Site.

Map ID	Diameter	Type	Notes
SC-1	18"	Corrugated Metal	Stream crossing of a Class III watercourse.
SC-2	18"	Corrugated Metal	Stream crossing of a Class III watercourse.
SC-3	18"	HDPE	Stream crossing of a Class III watercourse.
SC-4	18"	HDPE	Stream crossing of a Class III watercourse.
SC-5	18"	HDPE	Stream crossing of a Class III watercourse.
SC-6	24"	HDPE	Stream crossing of a Class III watercourse.
SC-7	-	Ford Crossing	On legacy road that is no longer in use.
SC-8	24"	HDPE	Stream crossing of a Class III watercourse.
SC-9	48"	HDPE	Stream crossing of a Class II watercourse.
SC-10	-	Rocked Ford Crossing	Rocked Ford on a Class III watercourse.
SC-11	24"	HDPE	Stream crossing of a Class III watercourse.
SC-12	-	Ford Crossing	Crossing has been removed.

5.4. Water Storage

Water storage onsite consists of various HDPE tank arrays throughout the property. They have grouped by location, the table below gives the inventory.

Map ID	Number of Tanks	Tank Array Subtotal	Notes
TA-1	4x 5,000 gals 4x 3,000 gals 1x 1,500 gals 1x 500 gals	34,000 gals	Located on northern parcel, 208-241-006

TA-2	3x 3,000 gals 1x 1,500 gals	10,500 gals	Located on northern parcel, 208-241-006
TA-3	4x 5,000 gals 3x 3,000 gals	29,000 gals	Located on southern parcel, 208-241-007
TA-4	2x 3,000 gals 2x 1,500 gals	7,500 gals	Located on southern parcel, 208-241-007
TA-5	1x 3,000 gals 2x 1,000 gals	5,000 gals	Located on southern parcel, 208-241-007
TA-6	1x 5,000 gals 1x 3,000 gals	8,000 gals	Located on southern parcel, 208-241-007
TOTAL STORAGE		95,000 gals	Total on 208-241-006 & 208-241-007

The discharger has onstream pond that is proposed to be used for cannabis irrigation. This pond is indicated on the map as IM-1, it is currently in the process of being registered as an onstream impoundment SIUR.

5.5. Water Sourcing

Cannabis irrigation water is sourced from two surface water diversion points that are registered under H50220. These diversion points are indicated as POD-1 and POD-2 on the site maps.

5.6. Cultivation Areas

There are seven general cultivation areas spread amongst the two parcels. Each cultivation area is inventoried in the table below.

Table 3: Inventory of cultivation areas and associated characteristics.

Map ID	Cultivation Activity	Area Description	Distance to Closest Water Body (ft)	Water Body Classification
CA-1	Outdoor – 2,000 s.f. Greenhouse – 2,700 s.f. Greenhouse – 2,100 s.f.	Sole cultivation area on northern parcel	80	This cultivation area is approximately 80 feet from the Class III stream to the west.
CA-2	Hoophouse – 800 s.f.	Natural light hoophouse cultivation	120	Spring/headwaters of Class III watercourse that is impounded in pond IM-1
CA-3	Hoophouse – 1,056 s.f. Hoophouse – 1,960 s.f.	Two natural light hoophouses	63	Class III impoundment, IM-1
CA-4	Hoophouse – 2,069 s.f.	Hoophouse	192	Class II watercourse
CA-5	Outdoor – 7,000 s.f.	Outdoor	61	Class III watercourse
CA-6	Outdoor – 2,000 s.f.	Outdoor	63	Class III watercourse
CA-7	Hoophouse – 2,458 s.f.	Hoophouse	152	Class II watercourse

5.7. Support Buildings

There are support building spread throughout the two parcels. An inventory of all support buildings is found in the table below.

Table 4: Inventory of all support buildings on site.

Map ID	Building Dimension	Use	Materials Stored	Additional Comments
SB-1	20' x 53'	Storage and processing building	Equipment storage	No fuel or nutrients
SB-2	10' x 12'	Cultivation related storage	Nutrients and amendments	-
SB-3	10' x 12'	Cultivation related storage	Fuel	-
SB-4	14' x 34'	Cultivation related storage	Nutrients and amendments	-
SB-5	20' x 30'	Cultivation related storage	Fuel and equipment storage	-
SB-6	15' x 30'	Cultivation related storage	Nutrients and amendments	-
GS-1	10' x 12'	Generator Shed	Generator and fuel	-
GS-2	10' x 12'	Generator Shed	Generator and fuel	-
PB-1	10' x 12'	Processing Building	Plant processing, drying, and storage	No fuel or nutrients
PS-1	-	Fixed propane tank, 500 gals	Propane	-

5.8. Land Disturbance

Land areas where natural conditions have been altered in any way that causes an increase in sediment discharging from the property are considered disturbed land. Disturbed area includes cultivation areas, cultivation materials storage, buildings, water storage, and roadways that area not maintained consistent with the Handbook for Forest, Ranch, and Rural Roads. The total disturbed land according to onsite and aerial survey is 81,434 ft².

5.9. Legacy Waste Discharge Issues

Due to being located in Regional Water Quality Control Board Region 1 legacy waste discharge issues must be identified and discussed in the Site Management Plan. There are no legacy waste discharge issues on Site.

5.10. Erosion Prevention BPTC Measures

Erosion prevention controls consist of gravel on access roads and straw wattles at the perimeter of disturbed areas. All erosion control measures shall be replaced and upgraded as needed. Additional erosion prevention controls that are recommended are listed in Section 11.

5.11. Maintenance Activities

The discharger will maintain a Road and Drainage Feature Maintenance Log. A page of this log is included with this report. Storms that produce 0.5 inches of precipitation within 24 hours or over 1 inch over the course of 7 days shall trigger an inspection of all roads, ditches, culverts and their outfalls, and any other drainage features. This same inspection shall occur prior to the onset of the wet season (e.g. September before regular rain events begin). Dischargers shall inspect the condition of the roads and drainage features. Any woody debris that is found at drainage inlets should be removed to prevent any blockages. Any sediment buildup that impacts access road or drainage feature performance shall be removed and stabilized outside of the riparian setbacks. Stabilization of sediment will be achieved by one of the following methods:

- Reused in contained vegetable or ornamental gardening beds that are located outside of the riparian setbacks.
- In contained stockpiles that are covered when not in use. These stockpiles can then be used when amending/reusing cultivation medium.
- Transported contained and covered to the closest transfer station to be green wasted.

6. AGRICULTURAL CHEMICAL BPTC MEASURES

6.1. Inventory of Agricultural Chemicals

Table 10 lists all off the agricultural chemicals in use on Site. All agricultural chemicals are used and stored in a manner that prevents those chemicals from entering the riparian setbacks or waters of the State. All chemical usage is in accordance with the label instructions. Agricultural chemicals are applied at agronomic rates. No restricted pesticides are allowed on the Site.

Table 5: Inventory of all agricultural chemicals in use on Site.

Agricultural Chemical Name	Agricultural Chemical Type	Method of Storage	Storage Location	Description of Use
	Amendment / Fertilizer / Pesticide /	Secondary Containment	Fertilizer and Pesticide	During growing season at no more than agronomic rates.

	Herbicide / Rodenticide		Storage Area	
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6.2. Agricultural Chemical Container Disposal

Empty agricultural chemical containers are disposed as per their label instruction. If the discharger is unsure of proper disposal method, they will contact their local Waste Management or Transfer Center Facility for instruction. Until proper disposal, empty containers will be kept in heavy duty plastic totes or heavy-duty contractor bags stored in weatherproof shelter.

7. PETROLEUM PRODUCT BPTC MEASURES

7.1. Inventory of Petroleum Products

Table 11 lists all off the agricultural chemicals in use on Site. All petroleum products are used and stored in a manner that prevents those chemicals from entering the riparian setbacks or waters of the State. All fuel usage and storage is in accordance with the label instructions.

Table 6: Inventory of all petroleum products used on Site.

Petroleum Product	Associated Equipment	Method of Storage	Storage Location	Description of Use
Propane	Propane Tanks	500 gallon fixed tank, miscellaneous portable tanks	PS-1	Used for domestic appliances, heaters
Gasoline	Backup Generator	Approved portable storage tanks in secondary containment	SB-3, SB-5	Off highway vehicles, generators

8. SPILL PREVENTION AND CLEANUP

There are spill kits located in all generator sheds for immediate use to clean up any agricultural chemical or petroleum product spills. Discharger will maintain spill kits by restocking whenever any materials are used.

9. TRASH/REFUSE AND DOMESTIC WASTEWATER BPTC MEASURES

9.1. Inventory of Refuse Sources on Site

Refuse Source	Type	Storage Location	Disposal Process
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Residential	Domestic Waste	Self-haul Waste Area	Bagged and delivered to transfer station weekly
Cultivation	Agricultural Waste	Self-haul Waste Area	Bagged and delivered to transfer station weekly

9.2. Inventory of Wastewater Sources on Site

Wastewater Source	Treatment Type	Treatment System Location	Additional Notes
Residential	Portable Toilet	Hauled offsite	

10. WINTERIZATION BPTC MEASURES

All applicable erosion control and sediment prevention measures prior to the beginning of the winter period beginning, which is November 15 to April 1. All soil stockpiles and spoils must either be properly disposed of or fully contained and weatherproofed during this period. Any seasonal roads shall be blocked off during this period. No heavy equipment will be used during the winter period.

11. SUMMARY OF BPTC MEASURES

Below is a summary of the BPTC measures that are either underway or yet to be completed. These measures must be completed prior to the start of the winter period, November 15 unless specified as a year-round activity (e.g. No 54, No 84).

BPTC Measure Number	Location (Map ID or General Area)	BPTC Measure and Directive
10	Throughout property, on all	Cannabis cultivators shall incorporate erosion control and sediment detention devices and materials into the design, work schedule, and implementation of

	downslope perimeters of disturbed areas	<p>the cannabis cultivation activities. The erosion prevention and sediment capture measures shall be effective in protecting water quality.</p> <p>All disturbed areas need the appropriate erosion controls installed and mulching/seeding incorporated to stabilize all areas.</p>
11	Throughout property, on all downslope perimeters of disturbed areas	<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>Any straw wattles using plastic netting materials shall be replaced with natural fiber weave erosion controls.</p>
15	Throughout property	<p>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 . Existing access roads shall be upgraded to comply with the Road Handbook.</p> <p>All roadways shall be rocked with gravel and have appropriate features installed to drain roadway. It is recommended that locations labeled RD on the site map should have rolling dips installed.</p>
59	CA-6	<p>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.).</p> <p>Loose soil stored near CA-6 shall be contained using tarps and/or sediment control devices. The same shall be applied to any loose soil generated on site.</p>
99	Throughout property	<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 drips equates to 50 gallons per day (1*2*50*0.5) of water used for irrigation). Cannabis cultivators shall retain, for a minimum of 5 years, irrigation records at the cannabis cultivation site and shall make all irrigation records available for review by the Water Boards, CDFW and any other authorized representatives of the Water Boards or CDFW.</p> <p>Discharger shall keep daily records of all water used for cannabis irrigation.</p>