NORTH BAY | CIVIL CONSULTING

Drought Management Plan

For

Flying O Farm

Cultivation Operations

Project Name: Flying O Farm

Project Location: 11540 Bachelor Valley Road, Witter Springs, CA 95493

Risk Level: Tier 2 Low

Client: Alex Rashed

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Date: April 22, 2022

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INTRODUCTION AND PURPOSE

The purpose of this Drought Management Plan is to provide the information required by Ordinance 3106 for Flying O Farm. Ordinance 3106 requires a Drought Management Plan (DMP) delineating how the applicant proposes to reduce water use during a declared drought emergency.

PROJECT LOCATION

The project is located at 11540 Bachelor Valley Road, Witter Springs, CA 95493 (APN: 002-024-22). The project site is located approximately 2.2-miles North of Tule Lake.

WATER REDUCTION MEASURES

This project proposes reduction measures that will assist in reducing water loss and minimize the total amount of water use for the proposed project. During drought conditions water availability for the county will be at a critical low. Droughts can reduce the water availability and quality necessary for productive farms, ranches, and grazing lands. It can also contribute to insect outbreaks, increases in wildfire, and altered rates of carbon, and nutrients impacting agricultural production and critical ecosystem services. The proposed water reduction measures are as follows:

Daily Monitoring and Leak Inspection:

Routine inspections of water lines will be made to ensure there are no leaks present. Daily monitoring of the water system shall be conducted and documented to identify any rise or deviation in daily water usage.

Drip Irrigation:

Drip irrigation will be the sole method of watering the cultivation site. Drip irrigation can save up to 80% more water than conventional irrigation methods and can contribute to increased crop yields.

Irrigation Scheduling:

Irrigation scheduling utilizes watering during cooler parts of the day, reducing the amount of water loss due to evaporation. Sensors can be implemented to detect soil moisture levels and soil temperature to further accurately determine when watering is necessary.

Compost and Mulch:

Compost and mulch will be implemented to all cannabis plant soil. Compost or decomposed organic

matter used as fertilizer improves soil structure, increasing the soil's water-holding capacity. Mulch will consist of organic materials such as straw or wood chips that will be spread on top of the soil to conserve moisture. Mulch breaks down into compost, further increasing the soil's ability to retain water.

Cover Crops:

Cover crops will be implemented to all cannabis plants. Cover crops use perennial grass to protect the bare soil that surrounds a cannabis plant. Cover crops reduce weeds and increase soil fertility and organic matter, improving compaction and prevention of erosion. In addition, cover crops benefit the ability of water to penetrate the soil and retain water, improving the soil's water-holding capacity.

Organic Practices:

The proposed cultivation site will be certified organic. Use of organic materials and amendments prevents toxic pesticides from affecting waterways and the overall environment. Healthy soil that is rich in organic matter and microbial life serves as a sponge that delivers moisture to plants and improves the recharge. Organic cultivation can recharge groundwater supplies up to 20 percent.

Conservation Tillage: (For In-ground Cultivation)

Conservation tillage uses specialized plows or other implements that partially till the soil but leave at least 30 percent of vegetative crop residue on the surface. Similar to cover crops, conservation tillage helps increase water absorption and reduce evaporation, erosion, and compaction.