

**Cultivation/Operations Plan**  
**APN:208-251-002/APP#12498**  
**Mad River Medicinals**



The following plan describes the general operations for managing a 18,500 sq ft outdoor cultivation site. The site plan shows the applicant's current reduced square footage amount of 14,957.25.

**1. Water Use**

Water from the permitted well is used for cultivation. A winter diversion is also allowed as a backup source and registered with Diversion of Water Rights (H507266). The site currently has the capacity to store 7,500 gallons in water tanks. The applicant was awarded DCC grant funding and will implement an additional (13) 5,000 gallon water tanks for onsite storage. This will bring the total site storage capacity to 65,000 gallons.

An electric pump directs water to the storage tanks which are then gravity fed to the garden. Site is then watered with manual watering. All irrigation will be dispersed to maximize water conservation.

During the beginning of the grow season, clones are watered 2-3 times per week as needed. Once fully planted in greenhouses, irrigation increases up to once per day. Carefully managed irrigation, with immediate oversight, along with vegetation around the gardens are used to reduce the possibility of irrigation runoff.

1.a Water use by month for 18,500 sq ft of cultivation area:

Jan	Feb	Mar	Apr	May	June
0	0	0	0	0	38,570
July	Aug	Sept	Oct	Nov	Dec
58,570	41,500	29,830	21,530	0	0

Estimated total annual water use= 190,000 gallons

**2. Watershed Protection**

To protect nearby watershed areas and nearby habitat the site will be managed to meet standard conditions and follow best practices in accordance with guidelines provided by the State Water Resources Control Board (SWRCB). These practices address erosion control and drainage features, spoils management, water storage and use, irrigation runoff, fertilizers and pesticides, and stream and wetland buffers when applicable.

The most active steps for this site will include:

- Moderate road shaping and ditch-relief used to optimize drainage to stable areas
- Out-sloping maintained to ensure proper capture and capacity of seasonal flow
- Usage of vegetative ground cover and gravel for added sediment control
- Application of straw mulch to exposed soils to minimize erosion

The grower, designated as the “Discharger”, is enrolled in the SWRCB Waiver of Waste Discharge as a Tier I Discharger (WDID: 1\_12CC416819). A copy of the Site Management Plan (SMP) will be kept onsite for ongoing site management and regulatory inspections.

**3. Power Source**

The site uses a 1.7kW solar system along with a Honda EU6500 backup generator for electricity. The Honda generator is rated by the manufacturer at under 60dB, requiring enclosure and placement away from the property line, to meet noise restrictions required by environmental regulations. Generator use is generally relegated to back-up for the solar system and results in minimal use. Usage peaks early in the year at 17.2kWh per day for the initial nursing of clones, depending on the need for and duration of supplemental lighting and ventilation, this period represents no more than 30 days. Use is 2-3 hours per day for 30-60 days of the year (during the fall/winter season when solar power is not optimal).

**4. Onsite Structures**

Existing Structures		
AG Storage Shed	8'x20' (160 sq ft)	Amendment/Pesticide Storage, Fuel and Refuse Storage
AG Storage Shed	30'x60' (1,800 sq ft)	Drying, Harvest Product Storage and Amendment/Pesticide Storage
(P) AG Storage Shed	20'x40' (800 sq ft)	Drying Area
Residence (Domestic)	2,750 sq ft	Main Residence

**5. Materials Storage**

Currently there are primarily natural fertilizers utilized in the cultivation process and include:

- Soilscape Solutions': Mothership Mix
- Soilscape Solutions': Potent Grow
- Soilscape Solutions': Double Depper Mix

The primary pesticides used to control mites and powdery mildew are:

- Plant Therapy

The site has 2 AG storage sheds to store amendments. Materials are kept in their original containers with product labels in place and legible. Appropriate Safety Data Sheets (SDS) are kept onsite as a component of the cultivator's SMP.

Fuel is stored within an onsite storage shed with secondary containment, along with a Spill Prevention, Countermeasures, and Cleanup (SPCC) kit. As a safety measure, kits provide a supply of clean-up materials in the event of accidents, and are kept within fuel storage areas.

**6. Waste Management**

Unusable plant waste is disposed of in the compost area. Other solid waste is stored in containers with covers and transported to the Eel River Resource Recovery, on a weekly basis. Recyclables are taken monthly. Materials intended for reuse are stored in a clean and safe manner to be managed and reused as needed.

Portable toilets and handwashing stations will be provided onsite for any future proposed employees.

**7. Cultivation Activities**

<b>Jan-Feb</b>	<input type="checkbox"/> Submit SWRCB enrollment annual report <input type="checkbox"/> Install and repair any infrastructure <input type="checkbox"/> Perform initial site inspection
<b>Mar-Apr</b>	<input type="checkbox"/> Conduct and record inventory of amendments and verify proper storage <input type="checkbox"/> Begin tilling soil and amendments to prepare for planting

	<ul style="list-style-type: none"> <li><input type="checkbox"/> Obtain clones</li> <li><input type="checkbox"/> Begin daily plant inspections</li> <li><input type="checkbox"/> Check water meters and record monthly usage</li> <li><input type="checkbox"/> Conduct regular site inspections and make repairs as needed</li> </ul>
<b>May-Jun</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Add nutrients as needed</li> <li><input type="checkbox"/> Transfer plants to larger pots to complete vegetative growth stage</li> <li><input type="checkbox"/> Transplant to final beds in cultivation area</li> <li><input type="checkbox"/> Add bamboo posts to plants for stability</li> <li><input type="checkbox"/> Top and prune plants</li> </ul>
<b>July-Aug`</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Top and prune plants periodically</li> <li><input type="checkbox"/> Conduct regular site inspections and make repairs as needed</li> <li><input type="checkbox"/> Check water meters and record monthly usage</li> </ul>
<b>Sep-Oct</b>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Harvest crop by hand</li> <li><input type="checkbox"/> Dry Crop</li> <li><input type="checkbox"/> Crop will be transferred to an offsite licensed facility for trimming and processing</li> <li><input type="checkbox"/> Remove and compost plant waste following harvest</li> </ul>

**8. Soil Management**

Amendments are applied based on standard practices. Items are purchased, applied, stored and inventoried. Tilling is done within the soil beds and pots at the beginning of the season. Once completed and soil has been prepared, planting can begin. Following the harvest, reusable soil is properly contained within the beds until the next season.

**9. Cultivation Cycles**

The site produces one outdoor crop cycle. In March, planting begins with clones in the propagation area. Plants are then transplanted to the garden beds. Harvest usually occurs in October, but can vary depending on environmental factors including weather, pests, and plant strains.

**10. Plant Management**

During the cultivation cycles, plants are inspected daily. Irrigation is monitored and adjusted based on impact of various factors, mainly heat and precipitation. Once plants are placed into garden beds, they are carefully maintained with periodic topping and pruning until ready to harvest.

### **11. Processing Practices**

After being harvested, the cannabis is dried in an AG shed onsite. The dried product will then be transferred to an off site licensed facility for trimming, processing, and packaging of the final product.

### **12. Staffing**

The site is a family farm currently not hiring part-time or full-time employees. Harvesting is done with the support of one family member also residing on the property. There are two people onsite at peak season operating the farm.

### **13. Security Measures**

A number of security measures have been established on the site. They include:

- Road access is restricted by locked gates. Gates are of heavy steel construction with a steel combination lock.
- A guard dog provides onsite protection against human intruders and invasive wildlife.
- A six foot fence encloses cultivation perimeters
- Surveillance cameras provide additional monitoring .

### **14. Health and Safety**

The site currently has no employees and no plans of hiring any employees. In the future, if employees are hired this site will be operated as an “agricultural employer” as defined by the Alatorre-Zenovich-Dunlap-Berman Agricultural Labor Relations Act of 1975 (Part 3.5 commencing with Section 1140) of Division 2 of the Labor Code, and comply with all applicable federal, state, and local laws and regulations governing California Agricultural Employers.

### **15. International Dark Sky Standards**

The farm is an outdoor farm with no artificial light being used within the canopy areas. The propagation area with supplemental lighting will be properly maintained to avoid being visible from any neighboring property between sunset and sunrise. The site will comply with International Dark Sky Association standards for Lighting Zone 0, and prevent light spillage which may impact local wildlife. Any and all complaints received in writing regarding light spillage will be corrected within 10 business days from the date of receipt.

#### 14. Site Improvements

Several dead and/or dying trees were removed in 2018. The stumps were left to decompose naturally, so as to not disturb the surrounding soil.

Remediation for the relocation of a small corner of a temporary greenhouse was enacted. This relocation was due to being in proximity to a waterway. Utilization of bioswales and the reseeded of native grasses allowed the area to return to pre-cultivation conditions.

A proposed AG exempt structure will be used for drying.