

# DROUGHT MANAGEMENT PLAN

## VANN RANCH

The Urgency Ordinance approved by the Lake County Board of Supervisors on July 27<sup>th</sup>, 2021 (Ordinance No. 3106) requires applicants to provide a plan depicting how the applicants plan to reduce water use during a declared drought emergency. The proposed commercial cannabis cultivation operation would be composed of seven fenced outdoor cultivation areas, with up to 193,800 ft<sup>2</sup> of combined cannabis canopy. All water for the proposed cultivation operation would come from three existing onsite groundwater wells, and the proposed cultivation operation would have an annual water use requirement of approximately 7.6 acre-feet (2,478,717 gallons) per year/cultivation season, which includes 2,406,987 gallons per year for irrigation and 71,820 gallons per year for employees and the proposed Processing Facility.

Per the Water Conservation and Use requirements outlined in the State Water Resources Control Board's Cannabis General Order, the Applicant shall implement the following Best Practical Treatment and Control (BPTC) measures to conserve water resources:

- Regularly inspect the entire water delivery system for leaks and immediately repair any leaky faucets, pipes, connectors, or other leaks;
- Apply weed-free mulch in cultivation areas that do not have ground cover to conserve soil moisture and minimize evaporative loss;
- Implement water conserving irrigation methods (drip or trickle and micro-spray irrigation);
- Maintain daily records of all water used for irrigation of cannabis. Daily records will be calculated by using a measuring device (inline water meter) installed on the main irrigation supply line between the water storage area and cultivation area(s);
- Install float valves on all water storage tanks to keep them from overflowing onto the ground.

With the Water Conservation and Use requirements outlined above, the proposed cultivation operation would efficiently use water resources at all times. Additionally, Article 27 Section 27.11 of the Lake County Zoning Ordinance requires commercial cannabis cultivators using water from a groundwater well to install a water level monitor on their water supply well, and to regularly record readings from the continuous water level monitor. Well water level monitoring and reporting shall be performed as follows:

### **Seasonal Static Water Level Monitoring**

Seasonal monitoring of well water levels provides information regarding long-term groundwater elevation trends. The water level in the onsite groundwater well shall be measured and recorded prior to the start of the cultivation season (March/April), and once in the fall (November) after the cultivation season has ended. Data reported to the Lake County Community Development Department as part of the Project's annual reporting requirements shall include a hydrograph plot of all seasonal water level measurements for the onsite groundwater well.

### **Water Level Monitoring During Extraction**

The purpose of monitoring the water level in a well during extraction is to evaluate the performance of the well to determine the effect of the pumping rate on the water source during each cultivation season. This information can be used to determine the capacity and yield of the onsite groundwater well for determining pump rates and the need for water storage. The frequency of water level monitoring will depend on the source, the source's capacity, and the pumping rate. It is recommended that initially the water level be monitored twice per week or more, and that the frequency be adjusted as needed depending on the impact the pumping rate has on the well water level. Data reported to the Lake County Community Development Department as part of the Project's annual reporting requirements shall include a hydrograph plot of the water level readings during the cultivation season.

In addition to the monitoring and reporting described above, the Project's annual report shall include an analysis of the water level monitoring data, demonstrating whether or not use of the onsite groundwater well is causing significant drawdown and/or impacts to the surrounding area and what measures were taken to reduce impacts. If there are impacts, a revised Water Management Plan shall be prepared and submitted to the Lake County Community Development Department, for review and approval, demonstrating how the project will mitigate the impacts in the future.

### **DROUGHT EMERGENCY RESPONSE**

When a drought emergency has been declared for the area of the proposed cultivation operation, the Applicant may implement the following additional measures, as needed or appropriate to the site, to reduce water use and ensure both success of the cultivation operation and decreased impacts to surrounding areas:

- Install moisture meters to monitor how much water is in the soil at the root level and reduce watering to only what is needed to avoid excess;
- Cover the soil and drip lines with removable plastic mulch to reduce evaporation;
- Irrigate only in the early morning hours or before sunset;
- Cover plants with shaded meshes during peak summer heat to reduce plant stress and water needs;
- Add a soil amendments/ingredients to growing medium that retains water in a way to conserve water and aid plant growth/health. Soil amendments/ingredients such as peat moss, coco coir, compost, perlite, and vermiculite retain water and provide a good environment for cannabis to grow.

Additionally, to ensure both success and decreased impacts to the surrounding areas, the Applicant plans to reduce the outdoor cultivation/canopy area and water usage by 20 percent or more, when a drought emergency has been declared for the region. To reduce water usage by 20 percent or more, the Applicant will not plant 38,760 ft<sup>2</sup> or more of the proposed cultivation/canopy area. The cultivation/canopy area(s) to be left fallow will depend on when a drought emergency is declared (before or after the proposed cultivation/canopy areas have been planted), and the Applicant will prioritize the preferred cultivation/canopy areas over less desirable cultivation/canopy areas (based on cultivation experience). By implementing the Drought Management Plan outlined above, the estimated annual water demand for the proposed cultivation operation would be reduced from approximately 2,478,717 gallons to 2,439,957 gallons during periods of drought.