

MEMORANDUM



Date: November 4, 2020

To: David Gallegos
2450 Huasna Rd
Arroyo Grande, CA

From: Shannon Jessica, PE
Wallace Group
612 Clarion Ct.
San Luis Obispo, CA 93401

Subject: Water Use Evaluation for Proposed Cannabis Cultivation (APN: 047-271-031)

CIVIL AND
TRANSPORTATION
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WATER RESOURCES

Wallace Group has been retained to estimate the water demand for a proposed cannabis cultivation operation in San Luis Obispo County. The proposed cultivation, located at 2450 Huasna Road in Arroyo Grande includes the following:

- Outdoor cultivation – 2 acres (87,120 sf) plant canopy
- Ancillary Nursery – 21,780 sf plant canopy

The recently adopted Cannabis Land Use Ordinance for San Luis Obispo County requires that applicants submit a detailed water management plan as part of the application package. The following memorandum has been developed to outline the estimated water demand for the proposed cultivation project.

Published water use values have not yet been consistently established in the industry, however the Central Coast Regional Water Quality Control Board (RWQCB) cannabis development team uses an estimate of 0.03 gal/sf canopy/day for outdoor cannabis plants and an application rate of 0.1 gallons per square foot of canopy for indoor grow operations. These values are derived from the *Santa Cruz County Draft Environmental Impact Report (EIR) for the Commercial Cannabis Cultivation and Manufacturing Regulations and Licensing Program (August 2017)*¹. In section 3.0, pages 3-16 and 3-17 of the EIR, it is described that the water application rates used are derived from a study in Humboldt County by Milewide Nursery². The Milewide Nursery study includes a breakdown of the per yield water use. The study based their results on a 90-day cycle and estimate that two growing cycles could be completed in a year for outdoor cultivation, and an estimated 270 days growing season, or 3 cycles per year, for indoor cultivation.

This project includes outdoor cultivation elements, and the estimated water demand is outlined in Tables 1 and 2. Local evapotranspiration data was used to extrapolate the

¹Santa Cruz County Draft Environmental Impact Report (EIR) for the Commercial Cannabis Cultivation and Manufacturing Regulations and Licensing Program (August 2017)
[http://www.sccoplanning.com/PlanningHome/Environmental/CEQAInitialStudiesEIRs/CannabisRegulationsEnvironmentalReview/CannabisEnvironmentalImpactReport\(EIR\).aspx](http://www.sccoplanning.com/PlanningHome/Environmental/CEQAInitialStudiesEIRs/CannabisRegulationsEnvironmentalReview/CannabisEnvironmentalImpactReport(EIR).aspx)

² <https://humboldtgrower.wordpress.com/2015/05/07/may-2015-humboldt-county-cannabis-water-use-study/>

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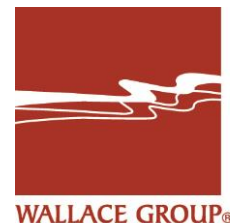


annual outdoor water use to monthly estimates. The project sits within the Sant Maria Groundwater basin fringe area and therefore will not be required to provide an offset for new water demand.

Use	Rate	Gross Demand (gallons/year)	Gross Demand (AFY)
Outdoor Cultivation: Green Houses 2 Acres	87,120 sf canopy x 0.03 gal/sf/day x 180 days	470,448	1.44
Ancillary Nursery: 21,780 sf	21,780 sf x 0.1 gal/sf/day x 365 days	794,970	2.44
Estimated Water Demand			3.88

Month	ET _o (in)**	Outdoor ET _o (%)	Outdoor Cultivation Water Use/Month (AF)	Indoor Water Use/Month (AF)	Total Water Use/Month (AF)
November	2.60	-	-	0.20	0.20
December	2.13	-	-	0.20	0.20
January	1.95	-	-	0.20	0.20
February	2.21	-	-	0.20	0.20
March	3.58	-	-	0.20	0.20
April	4.41	13.9%	0.20	0.20	0.40
May	4.52	14.2%	0.21	0.20	0.41
June	5.38	16.9%	0.24	0.20	0.45
July	5.31	16.7%	0.24	0.20	0.44
August	5.01	15.7%	0.23	0.20	0.43
September	3.68	11.6%	0.17	0.20	0.37
October	3.50	11.0%	0.16	0.20	0.36
Total	44.28	100%	2.17	2.24	3.88

**Evaporation data from Nipomo weather station - CIMIS station #202 (April 2018 to March 2019)



California Department of Fish and Wildlife

Because the project will be using an existing groundwater well for water supply, the owner will not need to obtain a General Agreement or Lake or Streambed Alteration (LSA) permit through California Department of Fish and Wildlife (CDFW). However, annual licenses for cannabis cultivation issued by California Department of Food and Agriculture (CDFA) will require the owner to demonstrate by written verification from CDFW that an LSA Agreement is not required. This is accomplished by submitting a self-certification application on the CDFW webpage and obtaining written correspondence from CDFW verifying that the LSA is not required for this project.

Regional Water Quality Control Board

Some cultivation activities can generate wastewater such as hydroponic solutions, irrigation tail water, and sanitation activities, etc. Typically, wastewater will be discharged either into a community collection system or to an onsite wastewater treatment system (septic tank/leachfield). These activities will be monitored through the Regional Water Quality Control Board for on-site disposal systems.

Regardless of the process wastewater discharge strategy, the RWQCB will require that outdoor cultivation operations enroll in the General Waste Discharge Requirements for Waste Associated with Cannabis Cultivation Activities (Cannabis General Order). The Cannabis Policy and General Order apply to commercial cannabis cultivation activities and enrollment in the General Order will be required for all commercial cultivation activities. The tier determination will need to be finalized by the RWQCB once an application has been submitted and reviewed by Board staff.

Coverage under the General Order is obtained by applying through the online application portal on the Regional Water Quality Control Board website. After the application is submitted and the application fee paid, the RWQCB will issue a Notice of Applicability (NOA). The NOA can be presented to the CDFA to obtain a commercial cannabis cultivation license. The application portal is located at: www.waterboards.ca.gov/cannabis.