Drought Management Plan

Purpose

This Drought Management Plan has been prepared to fulfil the requirement for the Board of Supervisors Ordinance NO. 3106, adopted on July 27th, 2021. This plan is designed to conserve Lake County's water resources given the current emergency drought conditions. This plan has been created in combination with the previously submitted & reviewed Water Use Management Plan which outlined the proposed projects water use practices. The proposed methods aim to reduce water use by providing the most efficient delivery system and having as many preventative measures as possible in place to reduce to wasted water.

Methods to conserving water

The proposed projects most important aspect to reducing the amount of water used for irrigation is by utilizing drip irrigation directly into the root system of each plant. According to the USDA Natural Resources Conservation Service Irrigation Guide ("Irrigation Guide." USDA, Sept 1997, https://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/nrcs144p2_033068.pdf) drip irrigation with proper water management, can be in the range of 80 to 90 percent effective for the area irrigated. Drip irrigation maximizes the efficiency by reducing the amount of water that is lost to evaporation as well as runoff. The greenhouses are fully enclosed so there is no potential for runoff, which allows for immediate recapturing of excess water underneath the cultivation beds to further maximize water use efficiency. Additionally, due to the greenhouses being fully enclosed they are capable of optimizing the internal environment. This means controlling the humidity and light level which reduces the amount of water needed to irrigate each plant.

The proposed project plans to supplement the soil with compost from the vegetative waste produced by the plants. The composted soils, elevated in nutrients will be mixed in the cultivation medium to further improve the soil health and ultimately increase its water-holding capacity. Mulch not only insulates and protects the lower soil levels from drying up, but also increases the rate of water absorption.

Water will only be delivered to the plants through the holding tanks and not directly from the well. The water storage tanks will be equipped with float valves to prevent overflow and runoff of irrigation water when full. Additionally, safety valves will be equipped to supply lines in case the flow of water needs to be stopped in an emergency situation.

Hydrology Report

The hydrology report was prepared by VanDerWall Engineering on September 6, 2021. Outlined below are key take away from the report, however for the full results please see the submitted hydrology report:

- The project does have an adequate water supply for the proposed irrigation use. However, the project must be limited to 1 acre of canopy and irrigated by dripline only.
- The proposed use of the well onsite does not interfere with surrounding wells.