Responses to Sierra Club Correspondence Dated May 17, 2021

Response to Comment 1

The commenter provides introductory comments regarding the Cannabis Land Use Ordinance (CLUO) EIR. The comment states that the EIR does not properly analyze odor emission impacts on residents and does not appropriately analyze greenhouse gas (GHG) emissions related to applicable policies to achieve carbon neutrality by 2030. As identified in responses to comments 9 through 13, and 17 through 22 below, the EIR adequately addresses odor emission impacts and GHG emissions consistent with the requirements of Public Resources Code Sections 21000–21189, the State CEQA Guidelines under the California Code of Regulations, Title 14, Division 6, Chapter 3, Sections 15000–15387, and County requirements.

Response to Comment 2

The commenter expresses their position that the mitigation measures proposed to address emissions resulting from implementation of the Draft CLUO are inadequate to meet the requirements of CEQA. As discussed further in the responses to comments 11, 12, and 17 below, the EIR impact analyses of odor impacts and GHG emissions identify feasible mitigation measures, existing regulations, and proposed standards in the Draft CLUO that will mitigate impacts to less than significant levels, consistent with the requirements of CEQA.

Response to Comment 3

The commenter references Final EIR Appendix E (Trinity Consultants Technical Memorandum Entitled "Modeling to Estimate Odor Impacts at Various Buffer Distances") and suggests the analysis underestimates odor impacts from outdoor facilities.

The purpose of the modeling conducted and identified in Final EIR Appendix E was to examine the relationship between distance and modeled ground-level odor concentrations. This analysis provided technical support for responses to comments received on the Draft EIR regarding how buffers of different sizes would address nuisance odor impacts countywide (Final EIR pages 3-19 through 3-24 and 3-432).

Odor analysis modeling conducted by Trinity Consultants indicates that the difference between no buffer and 500 feet is substantial in terms of odor control. It also indicates that increasing the buffer from 500 to 1,000 feet provides about half the gains in odor concentration reductions; and from 1,000 to 1,500 feet, the gains are dramatically diminished. This suggests that the optimum distance for buffers is somewhere between 500 and 1,000 feet. The Board has directed the use of 600-foot buffers for existing operators and 1,000-foot or greater buffers for new operators (see Draft CLUO Section 8-2.1408(DD)). These buffers are consistent with the findings of the Trinity analysis. Where site specific conditions merit such consideration, existing operators may request smaller buffers. Any such requests would be analyzed on a project-specific and site-specific basis for each cannabis use permit application.

The analysis was not intended to estimate the distance at which Draft CLUO odor thresholds identified in Sections 8-2.1408(CC) and 8-2.1408(DD) would be exceeded. The Draft CLUO

includes a proposed dilution-to-threshold (D/T) ratio of seven parts clean or filtered air to one part odorous air (7:1) measured at the property line of the site that applies without regard to the distance between the emitter and the receptor.

Cannabis use permit applicants will be required to submit an odor control plan (see Draft CLUO Section 8-2.1410[D][2]) as a component of their application to demonstrate compliance with thresholds in the Draft CLUO. This is an important point because both the buffers and the odor threshold apply for all cannabis uses. In other words, compliance with required buffers does not relieve the cannabis operator of the requirements to comply with the odor threshold. The specific geographic conditions at a particular site will be relevant considerations for individual use permit applications but will not change the odor threshold.

If a cannabis odor is a nuisance, the County will use its enforcement authority to abate the odor. Under the Draft CLUO, an odor nuisance is defined as a cannabis odor that is "persistent" which requires a finding of all of the following:

- Verified by persons of normal odor sensitivity;
- Present three consecutive days in any two-week period; and
- Exhibiting a D/T ratio of 7:1 or stronger at the property line of the cannabis operation.

Odor verifications at a cannabis site are typically conducted by two trained Cannabis Unit enforcement officers. Using a Nasal Ranger olfactometer, each enforcement officer takes odor readings at locations along the perimeter of the cannabis cultivation property line toward the direction of the reported odor complaint. The measurements at each monitoring location are separated by approximately 15 minutes. This odor verification process is used to document complaints and ultimately determine whether or not an odor nuisance exists.

Upon determination of a nuisance odor, the County will initiate a three-level correction system consisting of the following:

- Alert
- Warning citation
- Notice of Violation followed by abatement, which could include suspension, revocation, or modification of the cannabis use permit

Cannabis odor is conservatively acknowledged in the EIR as a significant and unavoidable impact, notwithstanding application of the above Draft CLUO standards and application of Mitigation Measure AQ-1. The reasons given are as follows (Draft EIR pages 3.3-29 through 3.3-38):

- Cannabis remains a controversial activity.
- Some neighbors have expressed that they are very sensitive to the odor and find it to be highly objectionable.

- The proposed regulatory threshold is not zero-detect, which means that some odor will be detectable and will be considered acceptable under the regulations.
- Odor exceedances in excess of the allowable level may be higher in early years as the industry and technology evolve, despite the fact that enforcement will occur under the ordinance.

The comment questions the odor emission rate of 20,000 odor units assumed in the analyses. Because the odor emission rate is directly proportional to modeled ground-level concentration, the assumed odor emissions rate is not relevant. The relationship can be appropriately demonstrated using any modeled emission rate. In other words, whether the analysis had assumed an emission rate of 1 odor unit (ou) or 50,000 ou, the findings (i.e., the impact of distance on modeled ground-level concentrations) would have been the same.

Often the purpose of modeling is to model emissions and compare the results to some numerical standard; in that case accuracy of the emission rate is important. However, that was not the purpose of this analysis; rather, the goal was to show how the ground level concentrations reduced over distance. While there are many variables that go into the modeling, the model results are proportional to the emission rate, meaning if the emission rate is doubled, the modeled concentration at every location will double. For example, if the model predicts that an emission rate of 20,000 OU from a site would result in 50 OU at a property line and 5 OU at a distance of one mile, we could predict without running the model that a modeled emission rate of 40,000 OU would result in 100 OU and 10 OU respectively (i.e., doubled emission rate, doubled concentrations). The goal of the modeling in Final EIR Appendix E was to show the percent reduction over distance; the magnitude of the emission rate/ambient concentrations was not relevant.

Response to Comment 4

The commenter questions the assumed wind speeds of 1.11 miles per hour (mph), suggesting it fails to consider odor impacts should stagnant air conditions occur. As described in response to comment 3, the modeling in Final EIR Appendix E was conducted to examine at a general level the relationship between distance and odor; therefore, use of site-specific meteorological data was not appropriate. The modeling appropriately relied on the default minimum wind speed provided by the U.S. Environmental Protection Agency.

Measuring odor is complicated. Factors such as frequency, intensity, duration, offensiveness, and location are all relevant. Since 2017, the County has received 42 complaints regarding cannabis odor from 16 likely licensed sites.[1]

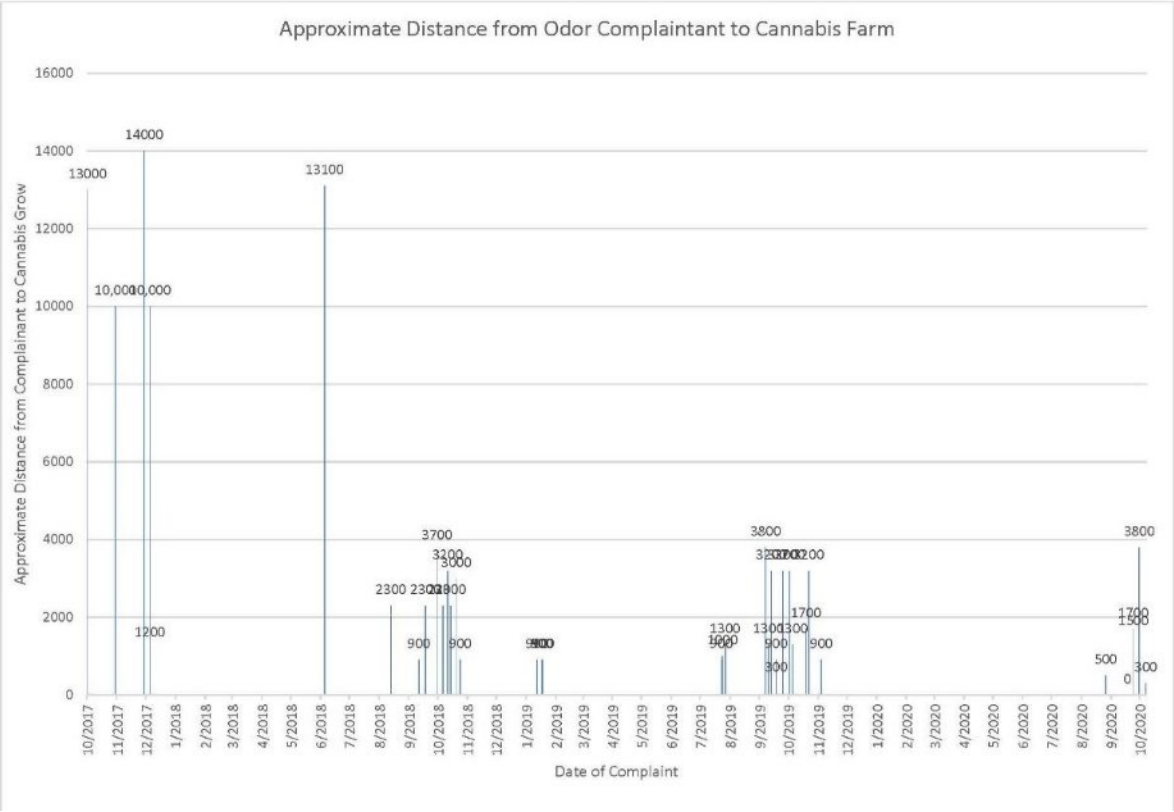
- 6 in 2017 (from 4 likely sites)
- 10 in 2018 (from 4 likely sites)
- 17 in 2019 (from 9 likely sites)

[1] It is not always possible to determine the exact source of the odor. Enforcement staff attempt to identify the most likely site; however, in some cases the odor may have been associated with more than one site.

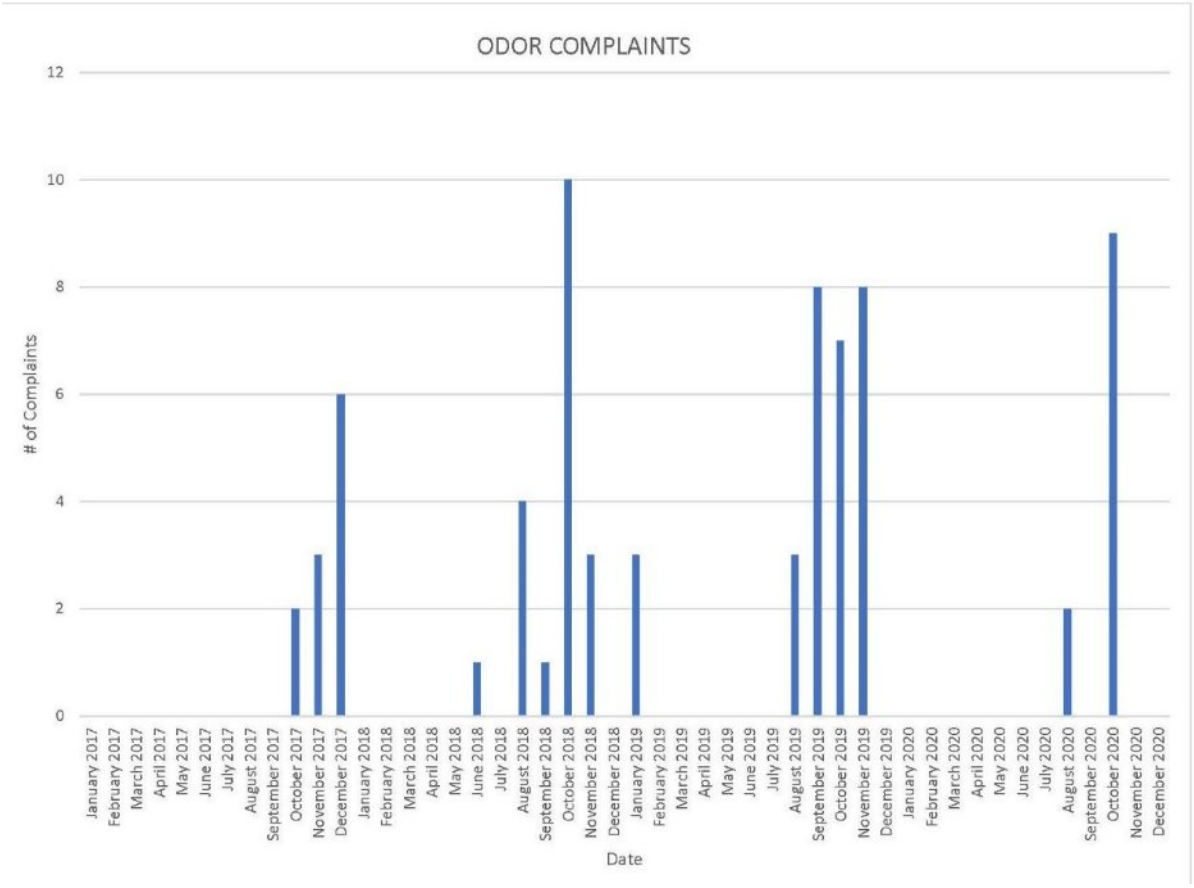
- 6 in 2020 (from 5 likely sites)

The distance between the complainant and the likely odor source ranged from 335 feet (0.06 miles) to 14,000 feet (2.7 miles). The mean (average) of the data is 3,405 feet, the median (middle value) is 2,300 feet, and the mode (most frequent value) is 863 feet. The first graph below depicts complaints over time by distance from the likely source. It is interesting to note that in the first year of the program (2017), odor complaints were received from very large distances,[2] but with one exception, that did not occur in subsequent years. Possible explanations include (a) a greater sensitivity to odor in the first year of licensing; and/or (b) cannabis cultivators are increasingly planting different plant strains that emit less of a "skunky" odor and more of a "fruity" or "citrusy" odor.

Also noticeable in the first graph is that distances get smaller over time and are concentrated in the fall months, which is when outdoor harvest generally occurs. The second graph, which plots numbers of complaints against month and year, more clearly shows this correlation. For outdoor cultivation, harvest generally occurs in the September-to-November time period. As depicted below, the complaints align with this period on a regular basis.



[2] Those data points skew the mean. If the six complaints reflecting odor travel distances of greater than or equal to 10,000 feet are excluded from the calculation, the mean drops by over 50 percent to 1,826 feet.



Response to Comment 5

The commenter indicates that very low wind speeds may allow accumulation of odor in an area rather than dilution. Even in very low wind conditions, there is likely to be some mixing of air, and by extension, dilution from where the odorous activities are occurring to the nearby resident receptors. While air stagnation is a real phenomenon, it's likely not as common on a local scale (individual operations/nearby resident receptors) because there are not significant terrain influences around each specific area to prohibit horizontal, localized movement of winds. Please also see responses to comments 3 and 4 regarding wind considerations with each application, odor control requirements, odor emission thresholds, and enforcement.

Response to Comment 6

The commenter expresses concern that meteorological conditions may change between the point in time that an odor complaint is made and the time of the County inspection. When a complaint is received via the County's online cannabis complaint form, the weather conditions at the time of the complaint are automatically recorded. Since meteorology plays a role in cannabis odors, the County tries to verify the complaint on a day and time when the weather conditions at the time of the complaint can best be replicated (Draft EIR page 3.3-34).

Response to Comment 7

The commenter cites information from the Draft EIR under "Sensitive Receptors" on pages 3.3-10 and 3.3-11. This description of sensitive receptors is consistent with General Plan Action CO-A107. Draft CLUO Section 8.2-1408(E) identifies "sensitive land uses" requiring buffers from cannabis uses as:

- Off-site individual legal residences located on parcels under separate ownership in any zone
- Residentially zoned land
- Public parks
- Licensed day cares
- Recognized places of worship
- Public or licensed private schools
- Licensed treatment facilities for drugs or alcohol
- Licensed youth centers
- Federal lands held in trust by the federal government or subject of a trust application for a federally recognized Tribal government

Response to Comment 8

The commenter states that individuals have differing sensitivity to odors. The comment cites the third full paragraph on Draft EIR page 3.3-10. The EIR impact analysis assumes all individuals may be sensitive to nuisance odor emissions and does not reach conclusions based on the sensitivity of the individual. Based on review of available technical studies, volatile organic compound (VOCs) emissions from cannabis typically do not pose a direct threat to human health (Draft EIR page 3.3-8 and Final EIR page 3-108). The EIR does acknowledge that exposure to unpleasant odors may affect an individual's quality of life and sense of well-being. As noted in response to comment 3 above, the Draft CLUO establishes an odor threshold with a D/T ratio of 7:1 to address potential nuisance impacts under Section 8-2.1408(CC) and 8-2.1408(DD) of the Draft CLUO. The 7:1 D/T threshold reflects the level most often used by regulators to control odor to an acceptable exposure level based on field data in a variety of situations (Draft EIR pages 3.3-9 and 3.3-10 and Final EIR page 3-313).

Response to Comment 9

The commenter questions the adequacy of the assessment of odors. The EIR odor impact analysis is based on substantial evidence that consists of available technical reports on odors, County odor complaint data, and the expertise of Trinity Consultants (odor technical experts). As described in responses to comments 3 and 4, the Draft CLUO contains various regulations and performance standards that address potential nuisance odors. As noted above in response to comment 4, the County received 42 complaints regarding cannabis odor in the 4-year period from 2017 through 2020. It is unclear whether, in characterizing the number of complaints as "large," the commenter was aware of this information.

Response to Comment 10

The commenter concludes that a significant and unavoidable odor impact may occur. This is consistent with the conclusions in the EIR for Impacts AQ-4 and CUM-3, for all alternatives.

Response to Comment 11

The commenter concludes that the proposed mitigation measures are insufficient in meeting County General Plan Policies CO-6.1 and CO-6.6 and Action CO-A105. The County is not in agreement and notes that this conclusion takes an insufficiently narrow view of General Plan consistency. The Draft CLUO includes rigorous controls, performance standards, and enforcement for odor that will apply to all permittees (see response to comment 3). The impact analysis properly assumes application of these requirements in addition to identified mitigation.

Response to Comment 12

The commenter expresses disagreement with the mitigation measure as proposed and suggests a preference for indoor cultivation or increased setbacks. As identified in response to comment 3, the Draft CLUO sets forth a clear and enforceable odor concentration limit of 7:1 D/T ratio measured at the property line of the cannabis site. The Draft CLUO also identifies performance standards to address a range of possible future cannabis use types and circumstances. Odor control technology will continue to improve over time, and the ordinance is drafted to allow for the use of appropriate technology over time. The odor control plan required in Draft CLUO Section 8-2.1408(DD) will require certification by a Professional Engineer or Qualified Odor Professional to meet industry standard best practices and to meet the established ambient thresholds. Further, the odor control plan must be submitted to and approved by the County. This mitigation approach is consistent with the requirements of State CEQA Guidelines Section 15126.4(a)(1)(B). If during the course of operation, an applicant is unable to meet the identified odor control standard, they will be subject to enforcement. See response to comment 3 above. In addition, to ensure active consideration of effectiveness over time, the Draft CLUO has a mandated review of effectiveness every 2 years (Draft CLUO Section 8-2.1413).

Response to Comment 13

The commenter reiterates comment 12. Please see response to comment 12 above, as well as all prior responses. The County does not concur with, nor do the facts substantiate, the commenter's conclusion that the Final EIR is defective and/or cannot be certified.

Response to Comment 14

The commenter cites a portion of the description of the Yolo County Climate Action Plan (CAP). This description is provided on Draft EIR page 3.8-11. GHG emissions impacts are addressed in Impacts GHG-1 and CUM-8.

Response to Comment 15

The commenter states that the EIR does not address impacts associated with County Resolution 20-114, "A Resolution Declaring a Climate Crisis Requiring Urgent and Inclusive Mobilization in Yolo County." On September 29, 2020, the Board of Supervisors adopted Resolution 20-114

related to climate change. This resolution describes the creation of a working advisory group to revise the County's existing (2011) Climate Action Plan. It identifies the make-up of the advisory group and sets a goal of March 2022 for development of a draft revised CAP for public review. The resolution describes that the revised CAP will "achieve a negative carbon footprint by 2030." The resolution also states that the County will consider adding "sustainability, greenhouse gas (GHG) and co-pollutant carbon-footprint and ecological impact statements" for relevant commission and Board of Supervisor agenda action items. Amendment of the existing County CAP to change the current adopted GHG reduction goals has not occurred. Also, County protocols for staff reports have not yet been changed to require additional information related to carbon footprint statements for agenda items. For the subject project, the EIR appropriately assesses consistency with current General Plan policies and requirements of the adopted CAP related to climate change and GHG reduction.

Response to Comment 16

The commenter cites state renewable energy regulations applicable to cannabis cultivation, Draft CLUO standards for energy efficiency and renewable energy use, and impact conclusions from the EIR. This information is provided on Draft EIR pages 3.8-6, 3.8-14, and 3.8-16 through 3.8-18.

Response to Comment 17

The commenter states that the Draft CLUO would conflict with County Resolution 20-114 and the County's 2011 CAP because it could allow increased GHG emissions associated with limiting renewable energy to 50 percent of power used. Please see response to comment 15. As identified on Draft EIR pages 3.8-14 and 3.8-15, Draft CLUO Sections 8-2.1408(A), 8-2.1408(F), 8-2.1408(O), and 8-2.1408(Z) would be consistent with the following CAP measures:

- Measure A-1: Reduce nitrogen fertilizer application rates.
- Measure E-2: Reduce energy consumption in existing non-residential units.
- Measure E-3: Reduce energy consumption in new non-residential units.
- Measure E-4: Increase on-site renewable energy generation to reduce demand for grid energy.
- Measure E-7: Promote weather-based irrigation systems and water-efficient turf management.

Implementation of Mitigation Measure GHG-1 requires compliance with the applicable provisions of the CAP, including energy efficiency measures for irrigation pumps and water efficiency requirements for buildings. This mitigation was integrated into Section 8-2.1408(O) of the Draft CLUO and this section was further modified (after receipt of the comment letter) by the Board of Supervisors to include a requirement that permittees be conditioned to achieve Valley Clean Energy Alliance ultra-green or equivalent standard (100 percent renewable and 100 percent carbon-free).

For these reasons, the commenter's conclusion that the Draft CLUO would allow increased GHG emissions in conflict with the CAP and Resolution No. 20-114 is not supported by the facts.

Cannabis cultivation is an agricultural land use that is both contemplated and fully consistent with the County CAP. Other cannabis uses (such as manufacturing, retail, and other commercial uses) are similarly consistent with allowed land uses in the applicable zone categories identified in Draft CLUO Section 8-2.1407 and thus already contemplated in the County's CAP. Please see response to comment 15 regarding the resolution.

Response to Comment 18

The commenter cites Draft EIR Table 3.8-2. This table appears on Draft EIR page 3.8-15 and provides estimates of potential construction and operation emissions by cannabis use type.

Response to Comment 19

The commenter states their position that proposed new and existing new development projects must achieve carbon neutrality by using substantially renewably produced energy. Please see responses to comments 15 and 17.

Response to Comment 20

The commenter summarizes their understanding of the Draft CLUO and County Resolution No. 20-114. Please see responses to comments 15 and 17.

Response to Comment 21

The commenter offers their perspective regarding carbon offsets and local GHG policies. The comment is noted; the County appreciates this perspective.

Response to Comment 22

The commenter restates their position regarding GHG emissions, County policies, and the Draft CLUO EIR. Please see responses to comments 15 and 17. The commenter concludes by stating their position that the EIR is deficient and should not be certified. Please see the responses above that factually refute this contention. The commenter's position is noted for the record. Thank you for participating in the process.