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MOTHERLODE CHAPTER

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VIA EMAIL

From: Alan Pryor, Chair of Sierra Club Yolano Group <ozone21@att.net>

To: Susan Strachan <Cannabis@yolocounty.org>
Phil Pogledich <Philip.Pogledich@yolocounty.org>

Re: Comments on the Draft and Final Environmental Impact Report (DEIR/FEIR) for the Yolo County Cannabis Land Use Ordinance

Date: May 17, 2021

Dear Ms. Strachan and Mr. Pogledich,

This correspondence provide comments on the above-referenced DEIR/FEIR on behalf of the Sierra Club Yolano Group.

In summary, the DEIR/FEIR does not properly analyze appropriate odor emission impacts on adjacent or nearby residents. Nor does the DEIR/FEIR appropriately analyze Greenhouse Gas (GHG) emissions related to applicable County policies to achieve carbon neutrality by 2030. 1

As such, inadequate mitigation measures are proposed for such emissions in a manner sufficient to meet the legal requirements of CEQA. The certification of the FEIR should thus not be approved by the Board of Supervisors as more fully explained in the following discussion. 2

Note that all direct quotes from the DEIR/FEIR or appendices are highlighted in italicized blue font for ease of review.

Impacts of Odor on Sensitive Receptors

Appendix E of the FEIR includes a Technical Memorandum Entitled Modeling to Estimate Odor Impacts at Various Buffer Distances by Trinity Consultants which discusses modeling performed to estimate the odor impacts on receptors at various distances from the cannabis odor emission source.

This technical memorandum attempts to model the odor threshold at various points downwind from cannabis facilities. The memorandum acknowledges that odors at levels of 50,000 ou (odor units) or more have been produced at cannabis greenhouse facilities but states that odor levels from outdoor grow facilities have not been comprehensively reported. The model arbitrarily then only includes odor impacts at levels of up to 20,000 ou. This could significantly underestimate the impacts of such odors impact produced by outdoor facilities in which odors are not contained by the greenhouse structure particularly if the odor is very "strong" as are some cannabis odors as discussed in the DEIR/FEIR. 3

The model further also only estimates odor concentrations at "minimum" wind speeds of 1.11 mph which does not allow for localized conditions in which stagnant air can allow odor units to accumulate to much higher levels 4

of concentration compared to when conditions are more windy. Such stagnant air conditions are more likely to exist in geographically-confined spaces such as Capay Valley in which hills and the mountainous terrain can reduce wind speeds and contribute to inversion layers which tend to hold contaminants down at ground level. The Trinity Consultants' Technical Memorandum acknowledges these variabilities in weather conditions and other uncontrolled variables (such as the strength of the odor) in their Memorandum by stating,

"It is important to note these graphical depictions represent odor concentration/strength. They do not factor in the intensity (e.g., weak vs. strong) or offensiveness (pleasant vs. unpleasant) of the odor). At the time of preparing this hypothetical modeling assessment, we did not identify literature supporting an acceptable buffer distance for cannabis odors, which is expected to vary on a number of conditions (indoor vs. outdoor cultivation, growing cycle, strain of plant, etc.). These conditions can impact the perceived strength of the odors.

It is possible if the odor were very weak, there wouldn't be much of a noticeable difference between a 500 ft and 1000 ft buffer. The opposite might also be true, ***if the odor were very powerful/overwhelming, perhaps there wouldn't be much difference between a 500 ft and 1000 ft buffer. Ultimately, the odor concentration/strength reduces with distance, but it is not possible to identify where on the graph the odor would stop being a nuisance, because a "nuisance" is dependent on more than odor concentration/strength (i.e. intensity and offensiveness)."(***Bold emphasis added*)*

The DEIR further specifically acknowledges these variables by stating

"*The mountains surrounding the SVAB create a barrier to airflow, which leads to the entrapment of air pollutants when meteorological conditions are unfavorable for transport and dilution. The highest frequency of poor air movement occurs in the fall and winter when high-pressure cells are often present over the SVAB. The lack of surface wind during these periods, combined with the reduced vertical flow caused by a decline in surface heating, reduces the influx of air and leads to the concentration of air pollutants under stable meteorological conditions. Surface concentrations of air pollutant emissions are highest when these conditions occur in combination with agricultural burning activities or with temperature inversions, which hamper dispersion by creating a ceiling over the area and trapping air pollutants near the ground.*"

4 cont.

Cannabis emits both very strong "skunk-like" odors with the highest concentrations when nearing harvest. Since cannabis is a fall-harvested crop, it is entirely reasonable that very low wind speeds can occur at some time and substantial odors develop sufficient to adversely affect the welfare of a downwind resident receptor. These conditions can result in accumulations of odor molecules rather than dilution over distance as is otherwise asserted to always occur in the odor dispersion models.

5

Further, if a complaint were registered there would certainly be a time lapse between the initiation of a complaint and a visit by a County inspector at which point meteorological conditions could change substantially reducing the odor level by the time of the inspection (e. increase in wind speed, change in direction of wind speed, or temperature change). As such, an odor "violation" may not be issued by an inspector even though substantial exposure by the resident receptor occurred.

6

The DEIR also only identifies "Sensitive Receptors" as follows,

"*Sensitive receptors relative to air quality conditions are locations where human populations, especially children, seniors, and persons with poor health are found, and there is reasonable expectation of continuous human exposure according to the averaging period for ambient air quality standards. Sensitive receptors defined by the 2030 Countywide General Plan (General Plan) include residential-designated land uses, hospitals, schools, hotels and lodgings, and neighborhood parks (Yolo County 2009:CO-83). In general, these sensitive receptors are concentrated in the incorporated cities and unincorporated communities in the County; however, scattered rural residences are also located throughout the undeveloped or rural lands. Rural residences located in agricultural designated land areas of the County are not considered sensitive receptors under the General Plan.*"

7

However, many individual are far more "sensitive" to offensive odors than others and these individuals are far more likely to be physiologically and psychologically adversely impacted by offensive odors than "non-sensitive" individuals. This is explicitly acknowledged in the DEIR which states,

"*Environmental Setting," odors are generally regarded as an annoyance rather than a health hazard. However, manifestations of a person's reaction to foul odors can range from psychological (e.g., irritation, anger, or anxiety) to physiological (e.g., circulatory and respiratory effects, nausea, vomiting, and headache). Odor is inherently complex because it is often caused by a mixture of chemical substances and has subjective components associated with human perception by the olfactory senses. Thus, the impact analysis qualitatively evaluates the potential of cannabis uses to create odors that create a public nuisance or adversely affect nearby residents or businesses using existing odor complaint data and research on odor control*. "

8

The DEIR itself thus implicitly acknowledges the insufficiency of a qualitative assessment of the potential that cannabis farming will create odors sufficient to induce physiological or psychological adverse impacts on sensitive receptors particularly given the nature of cannabis to emit very strong "skunk-like" odors in the fall when wind speeds are minimum. The County readily acknowledges the existences of these strong odors as evidenced by the large number of complaints reportedly received by the County in the years 2018-2020.

9

For all the above reasons, a substantial adverse impact to a physiologically and psychologically "sensitive resident receptor" is likely to occur and adversely impact the sensitive receptor's psychological and physiological well-being and these impacts can occur at distances greater than the maximum 1,000 ft analyzed bin the Technical Memorandum. As a result, these odor impacts can be "significant and unavoidable" which determination is not recognized in the FEIR assessment.

10

Further, the minimal currently proposed mitigation measures are insufficiently identified in meeting the following County policies,

"*• Policy CO-6.1: Improve air quality through land use planning decisions*

• Action CO-A105: For discretionary permits, require agricultural Best Management Practices regarding odor control, stormwater drainage, and fugitive dust control where appropriate

• Policy CO-6.6: Encourage implementation of YSAQMD Best Management Practices, such as those that reduce emissions and control dust during construction activities."

11

The DEIR also states,

"Section 8-2.1408(DD) Odor Control:

1. The allowable threshold for cannabis odor shall be defined as a maximum 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. Cannabis odor at or below this threshold shall be considered acceptable and shall not be considered a nuisance. Indoor and mixed light uses must install and maintain the following minimum equipment: an exhaust air filtration system with odor control that effectively minimizes internal odors from being emitted externally; an air system that creates negative air pressure between the facilities interior and exterior so that odors outside of the facility will not exceed the maximum dilution-threshold (allowable threshold), as defined herein; or other odor control system which effectively minimizes odor to a level compliant with the allowable threshold.

2. Applicants shall submit the following information: a. Identification and description of cannabis odor emitting activities and nature and characteristics of emissions. b. Description of procedures and engineering controls for reducing/controlling odors. c. Certification by a Professional Engineer or Qualified Odor Professional that the procedures and engineering controls proposed to control cannabis odors are consistent with accepted/available industry-specific best control technologies

12

and methods designed to abate odor and will be effective in abating cannabis odors to the maximum dilution-to-threshold (allowable threshold), as defined herein, measured at the property line of the site. This shall be submitted in the form of an Odor Control Plan, subject to regular monitoring and reporting.

3. Odor control for outdoor activities may include different plant strains, smaller grow areas, relocation of outdoor activities indoors or in a mixed light facility, use of site design or other technology, odor easements over neighboring property, and/or other methods proven to be effective and accepted by the County."

12 cont.

In no cases are mitigation measures proposed in the CLUO that mandate the specific Best Management Practices that will sufficiently reduce for odor control in either indoor or outdoor farming operations. For instance, a Best Management Practice might require that all cannabis farming occur in indoor greenhouses that utilize off-gas organic destruct or odor capture technology such as thermal or catalytic destruct units or odor capture by granular activated carbon in the air or following water wash capture. Or setback requirements for outdoor cannabis farming of substantially greater than 1,000 feet from resident receptors could be imposed to offer conclusive substantial dilution of offensive odors

However, the DEIR concludes that,

"Because the CLUO would not conflict with or obstruct implementation of policies and regulations related to air quality and odor, this impact, would be less than significant for all alternatives.

Mitigation Measures
No mitigation is required for any of the alternatives."

13

The conclusions of the DEIR/FEIR are thus objectively at odds with policies and objectives otherwise disclosed and discussed within the DEIR/FEIR. For the reasons described above, the lack of appropriate mitigation is objectively insufficient to protect sensitive resident receptors from the adverse physiological and psychological impacts of odors from neighboring cannabis farming operations and the certification of the FEIR thus cannot occur without correcting these deficiencies.

_____.

Adverse Impacts of GHG Emissions on Yolo County Climate Goals

The DEIR states the following in terms of GHG emission reductions

"*Yolo County Climate Action Plan*
Yolo County adopted its Climate Action Plan (CAP) on March 15, 2011. The Countywide GHG Emissions inventory for 2016 was updated in October of 2018 (Ascent 2018). The CAP commits the County to reducing GHG emissions to 1990 levels by 2020, 27 percent below 1990 levels by 2030, 53 percent below 1990 levels by 2040, and 80 percent below 1990 levels by 2050. The 2011 CAP satisfied the requirements of General Plan, Action CO-A117, which called for the County to create a GHG Emissions Reduction Plan and/or CAP."

14

Based on the 2011 CAP, there were a number of GHG reduction measures in the CAP that are relevant to cannabis cultivation uses in terms of meeting the 2011 CAP GHG emission reduction goals as follows:

- 1990 levels by 2020
- 27% below 1990 levels by 2030
- 53% below 1990 levels by 2040
- 80% below 1990 levels by 2050

(YOLO COUNTY CLIMATE ACTION PLAN: A Strategy for Smart Growth Implementation, Greenhouse Gas Reduction, and Adaptation to Global Climate Change, Update 2016)including

However, the DEIR/FEIR does not include a discussion of the impacts of GHG emissions in light of the most recent Yolo County approval of a resolution calling for carbon neutrality in Yolo County by 2030, as follows:

RESOLUTION 20-114 - A Resolution Declaring a Climate Crisis Requiring an Urgent and Inclusive Mobilization in Yolo County ("2020 Climate Emergency Mobilization Resolution"). This resolution was passed and adopted by the Yolo County Board of Supervisors on September 29, 2020. This far-reaching policy enacted by the Board of Supervisors includes the following language.

"*WHEREAS, historically Yolo County actions have put it in the forefront of the green movement including adoption in 2009 of the Yolo County 2030 General Plan with more than 350 climate change related policies; among them: the 2011 adoption of a Climate Action Plan (CAP) to: r****educe GHG emissions to 1990 levels by 2020, 27% below 1990 levels by 2030, 53% below 1990 levels by 2040, and 80% below 1990 levels by 2050; address economic and social adaptation to the effects of climate change; and implement detailed strategies and measures to achieve these goals and contribute to State and international climate protection efforts****;*" (**Bold emphasis added**)

and

"*NOW, THEREFORE, BE IT RESOLVED that Yolo County declares climate change a crisis requiring urgent and immediate mobilization of public* ***and private resources to develop and implement a climate and sustainability plan that identifies and integrates current and future actions needed to achieve a just economic recovery and transition to a countywide carbon negative (climate-positive) footprint by 2030***." (**Bold emphasis added**)

and

"*BE IT FURTHER RESOLVED, Yolo County shall, by March 1, 2021 create a working advisory body to develop and propose a new Climate Action Plan (Yolo County 2022 Climate Action Plan) designed* ***to reduce all greenhouse gas emissions in Yolo County and achieve a carbon negative footprint by 2030***." (**Bold emphasis added**)

and

"*BE IT FURTHER RESOLVED,* ***Yolo County will consider and adopt sustainability, greenhouse gas (GHG) and co-pollutant carbon-footprint and ecological impact statements for relevant Yolo County Commissions and Board of Supervisor agenda action items in the same manner as fiscal impact statements are currently considered and adopted****;*" (**Bold emphasis added**)

15

The DEIR does discuss Renewable Energy Requirements for indoor growing cannabis farming applications as follows

"*• Section 8305. Renewable Energy Requirements. Beginning January 1, 2023, all indoor, tier 2 mixed-light license types of all sizes, and nurseries using indoor or tier 2 mixed-light techniques, shall ensure that electrical power used for commercial cannabis activity meets the average electricity greenhouse gas emissions intensity required by their local utility provider pursuant to the California Renewables Portfolio Standard Program, Division 1, Part 1, Chapter 2.3, Article 16 (commencing with Section 399.11) of the Public Utilities Code. As evidence of meeting the standard, licensees shall comply with the following:*
(a) If a licensee's average weighted greenhouse gas emission intensity as provided in Section 8203(g)(4) is greater than the local utility provider's greenhouse gas emission intensity, the licensee shall provide evidence of carbon offsets from any of the following sources to cover the excess in carbon emissions from the previous annual licensed period:
(1) Voluntary greenhouse gas offset credits purchased from any of the following recognized and

16

reputable voluntary carbon registries:
(A) American Carbon Registry;
(B) Climate Action Reserve;
(C) Verified Carbon Standard.
(2) Offsets purchased from any other source are subject to verification and approval by the Department. (b) New licensees, without a record of weighted greenhouse gas emissions intensity from the previous calendar year, shall report the average weighted greenhouse gas emissions intensity, as provided in Section 8203(g)(4), used during their licensed period at the time of license renewal. If a licensee's average weighted greenhouse gas emissions intensity is greater than the local utility provider's greenhouse gas emissions intensity for the most recent calendar year, the licensee shall provide evidence of carbon offsets or allowances to cover the excess in carbon emissions from any of the sources provided in Subsection (a)."

The DEIR also states,

"*Section 8-2.1408(O) Energy Use: Permittees shall demonstrate availability of adequate energy, and compliance with applicable local and regional energy saving goals. Permittees shall demonstrate use of energy efficient best practices for each proposed use type. Onsite generation of energy from clean and/or renewable sources is encouraged. Permittees shall purchase or generate a minimum of 50 percent renewable power through the Valley Clean Energy Alliance or other available energy purveyor. CDFA licensees must satisfy the requirements of Section 8305, Renewable Energy Requirements, of the CDFA Regulations (effective January 1, 2023).*"
…

*"CLUO Section 8-2.1408(O) would require all cannabis uses to procure at least 50 percent of their energy demand from renewable sources and mobile-source emissions are anticipated to decrease due to federal and state regulations, which aligns with both the Yolo County CAP and the 2017 Scoping Plan. Other performance standards included in the CLUO would further align with these adopted GHG reduction plans. For example, the cultivation sites permitted under the CLUO would be required to be consistent with Measure A-3 of the Yolo County CAP which addresses reduction in energy use in agricultural pumping. Additionally, all existing buildings used for cultivation or noncultivation purposes would be required to be consistent with Measure E-6 of the Yolo County CAP which addresses reduction in water consumption through increased plumbing fixture efficiency. Because the proposed CLUO is silent on the requirement to be consistent with the CAP, t**his impact is conservatively identified as potentially significant...***" (Bold emphasis added)

16 cont.

In fact, however, <u>the potential significance is even more pronounced and unavoidable because the proposed CLUO is silent on the requirement that the project be consistent with Yolo County's Emergency Climate Resolution</u>. Rather than reducing GHG emissions consistent with the Emergency Climate Resolution, adoption of the CLUO could actually allow increased GHG emissions which is in direct conflict with the 2011 CAP and the 2020 Climate Emergency Mobilization Resolution. This is because such power purchases anticipated in the CLUO are only required to have up to a 50% renewable component. Thus, substantial additional energy could be purchased or generated by a cannabis farming operation that is not renewable and could generate substantial additional annual GHG emissions.

17

Indeed, the DEIR estimates the following GHG emissions associated with construction and operation of cannabis sites by license type.

18

Table 3.8-2 GHG Emissions Associated with Construction and Operation of Cannabis Sites for Each Cannabis Use Type[1]

Cannabis Use	GHG Emissions	
	Construction ($MTCO_2e$)	Operation ($MTCO_2e$/year)
Cultivation		
Outdoor	113	43
Mixed Light	161	516
Indoor	112	198
Noncultivation		
Nursery	201	242
Processing	48	18
Distribution	43	11
Retail	46	16
Microbusiness	45	12
Manufacturing	46	15
Testing	58	15

Notes: GHG = greenhouse gas; $MTCO_2e$/year = metric tons of carbon dioxide equivalent per year.

1. Includes CLUO requirement of 50-percent renewable electricity procurement at individual cannabis sites, as well as compliance with 2019 California Energy Code.

Source: Modeling conducted by Ascent Environmental in 2019

18 cont.

For the County to maintain its goal of achieving carbon neutrality by 2030 as stated in the 2020 Climate Emergency Mobilization Resolution or meet the GHG reduction targets established by the 2011 CAP, proposed new and existing new development projects must achieve at least carbon neutrality by using substantially renewably produced energy. 19

However, as discussed above the newly proposed CLUO only contains requirements that all purchased energy for Cannabis farming simply meet the 50% renewable energy component and does not further mitigation. Without such mitigation, the project will fail to meet the 2020 Climate Emergency Mobilization Resolution net carbon neutral goal and the CLUO is thus in direct conflict with approved County policies which conflicts must be resolved through appropriate mitigation measures reducing local GHG emissions or through purchase of "approved" GHG emission allowances. 20

Further, if purchases of such sufficient GHG allowances are made from the State Cap and Trade Program Auction to fully mitigate all remaining emissions, it may nor actually result in local carbon neutrality as required by the County policy. Instead, the applicant must purchase any such greenhouse gas allowances only from local sources of available carbon credits or the County must ensure an allocation from the State GHG Allowance Fund to return that amount to the County for local GHG mitigation efforts offsite from the subject development. 21

Failure to provide for such mitigation will mean that the DEIR *Conflicts with an applicable plan, policy or regulation of an agency adopted for the purpose of reducing the emissions of GHGs and such mitigation must be required before the DEIR can be properly certified.*

Because the DEIR only proposes to mitigate GHG emissions up to 50% with renewable energy sourced electricity, the remaining unmitigated GHG emissions produced by the cannabis farming operations conflict with the more recent County policies requiring carbon neutrality by 2030 22

In summary, the DEIR has substantial deficiencies which render it non-compliant for CEQA purposes and the DEIR/FEIR can thus not be properly certified unless these deficiencies are corrected.

Respectfully submitted

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