

# LAW OFFICE OF MARC CHYTILO, APC

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ENVIRONMENTAL LAW

July 5, 2019

Chairman Steve Lavagnino  
Santa Barbara County Board of Supervisors  
Santa Barbara County  
105 E. Anapamu Street, Fourth Floor  
Santa Barbara, California 93101

RE: Item 2, July 9, 2019, LUDC/CZO Amendments – Cannabis  
Item 3, July 9, 2019, Business License Ordinance Amendments – Cannabis

*Chair Lavagnino and Members of the Board of Supervisors:*

This office has engaged in air pollution and land use issues in Santa Barbara County for nearly 20 years concerning a broad range of topics. Our positions have always favored public health and safety, environmental and resource protection, and fostered compatibility among land uses. Like many in the community, our concerns over cannabis are rooted in the impacts that commercial-scale cannabis cultivation and processing operations can have upon surrounding land uses and occupants, not based on any judgment about cannabis in our society and community.

This letter is submitted on behalf of two community groups that have been impacted directly by cannabis operations, Cate School and Friends of Shepard Mesa, however there are dozens of other groups and individuals that have voiced objection over the impacts of commercial cannabis cultivation and processing upon their neighborhoods, residences, businesses, schools and the county at large. Most fundamental are the impacts to public health, especially health impacts to youth, elderly, and sensitive individuals and populations (such as persons with respiratory ailments like asthma and persons with chemical sensitivity). Impacts from odors emanating from illegal operations, from operations that have improperly expanded upon legal but nonconforming uses, and from operations that are within their rights as nonconforming uses and not yet subject to a regulatory requirement to abate their emissions have been felt throughout the County, and substantially interfered with many residents' quiet enjoyment of their homes, schools and businesses. In some cases, as a result of these operations, habitat has been destroyed, surface and groundwater mismanaged, artificial night lighting introduced into rural residential communities and natural resources areas, noise and traffic introduced into new areas, cultural resources damaged and other irreparable adverse impacts.

**Part A: Need for Immediate Legislative Action to Abate Nuisances.**

**1. Immediately Halt County Authorizations of Nonconforming Cannabis Operations and Abate the Ongoing Nuisances by Legislative Act**

We support and endorse the proposed urgency ordinances submitted by Santa Barbara Coalition for Responsible Cannabis. Make this hearing the first reading and adopt them next week, or on the fastest possible timetable.

If the Board is unwilling to adopt and advance the submitted urgency ordinance, these necessary immediate actions should be adopted as regular zoning ordinance amendments. Staff has proposed an alternative path, which if properly directed, might also address the immediate nuisances, by the adoption of a new, immediately applicable requirement under the Business License process. To effectively address the immediate problems, the Board must proceed to expeditious adoption of Standards for Interim Commercial Cannabis Cultivation And Processing Operations under Chapter 50, the Business Licensing authority, applicable immediately to all commercial cannabis cultivation and processing operations in the County, as detailed herein. Note that adjusting standards for the existing Business License process, which only applies after completion of the land use entitlement phase, would not address the immediate problems and nuisances your constituents are facing today. **By either authority, your Board must interject a set of immediately-applicable standards that stops illegal grows, limits nonconforming grows to the extent of operations on January 19, 2016, and immediately impose odor and emissions control requirements on all grows in the County.**

Your Board has received extensive testimony from members of the community, as well as requests from the Cities of Carpinteria and Goleta, to reign back the perpetuation of nonconforming commercial cannabis cultivation and processing operations that were supposed to have all been terminated by now. Cate continues to experience odors on its campus, and many of its students and other campus residents experience discomfort and adverse symptoms that appear related to exposure to air pollutants from cannabis operations (including cannabis odors, chemicals used to neutralize cannabis odors, carbon dioxide generators, vehicular exhaust and dust, etc). Attached as Exhibit 1 is a letter previously submitted to your Board on behalf of Cate on January 19, 2018, predicting virtually all of the problems that the County has since experienced as a result of systematically ignoring Cate's prior comments. Residents of Shepard Mesa are exposed to these same pollutants in their residences. Both groups traverse highway 192 adjacent to other non-conforming commercial cannabis cultivation and processing operations. Cate students and personnel, residents of Shepard Mesa and members of Friends of Shepard Mesa and other members of the public have been and are being harmed by the nuisances posed by both individual uncontrolled commercial cannabis cultivation and processing operations and by the hundreds of such operations throughout the Carpinteria Valley and the County.

We believe firmly that the County has authority to adopt the proposed Urgency Ordinance, or take a similar action based on a set of circumstances different from those that led to the County's previous

interim ordinance. See Gov. Code § 65858(f) (authorizing the County to adopt a further interim ordinance that prohibits or limits land uses when “the new interim ordinance is adopted to protect the public safety, health, and welfare from an event, occurrence, or set of circumstances different from the event, occurrence, or set of circumstances that led to the adoption of the prior interim ordinance.”

The hundreds of odor complaints, written objections from cities in the County, hundreds of objections from the County’s citizenry, air quality tests and physical evidence of rampant uncontrolled zoning violations at commercial cannabis cultivation and processing operations throughout the County establish a new set of ongoing nuisances that provides your Board the authority and mandate to act immediately. Alternatively, the SBCRC ordinances can be set for hearings and adopted as ordinary ordinances on next week’s agenda. **The community can no longer tolerate the conditions caused by the County’s previous decisions and the failed administration of the commercial cannabis cultivation and processing operations regulatory system, and your Board must act to abate these nuisances, terminate expanded nonconforming uses, and shut down illegal grows immediately.**

2. **Commercial Cannabis Cultivation And Processing Operations Are Causing An Ongoing Nuisance In Carpinteria Valley And Elsewhere**

a. **State Nuisance Authority**

California law defines a nuisance as follows:

**Civil Code § 3479. What constitutes a nuisance**

Anything which is injurious to health, including, but not limited to, the illegal sale of controlled substances, or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, or unlawfully obstructs the free passage or use, in the customary manner, of any navigable lake, or river, bay, stream, canal, or basin, or any public park, square, street, or highway, is a nuisance.

[emphasis added]

**Civil Code § 3480. Public nuisance**

A public nuisance is one which affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal.

**Civil Code § 3481. Private nuisance**

Every nuisance not included in the definition of the last section is private.

The California Clean Air Act provides:

a person shall not discharge from any source whatsoever quantities of air contaminants or other material that cause injury, detriment, nuisance, or annoyance to any considerable number of persons or to the public, or that endanger the comfort, repose, health, or safety of any of those persons or the public, or that cause, or have a natural tendency to cause, injury or damage to business or property.

Health and Safety Code § 41700.

**b. County Nuisance Authority – Nonconforming Uses**

Santa Barbara County Municipal Code § 35-1004 provides that “Any act or practice contrary to the provisions of this article shall be and the same is hereby declared to be unlawful and a public nuisance.” Santa Barbara County Municipal Code § 35-1004.B establishes that medical marijuana operations in existence on January 19, 2016 are legal nonconforming uses, but those uses are terminated by operation of law no later than June 15, 2019. *Id.*, § 35-1004.C.1.a & b. A further extension is possible for continuation (but not expansion) of a narrow category of medical cultivation locations if they are actively seeking a County permit. *Id.*, § 35-1004.C.2. Aside from that narrow exemption, all other legal nonconforming cannabis grows are terminated and are not allowable. The county lacks the power to waive or consent to violation of the zoning law. *Hansen Bros. Enters. v. Bd. Of Supervisors* (1996) 12 Cal. 4<sup>th</sup> 533, 564.

**c. County Nuisance Authority – Cannabis**

Ironically, the County has no general Nuisance statute in its municipal code, although the cannabis regulations prohibit commercial cannabis cultivation and processing operations, *inter alia*, from constituting a public nuisance:

b. Nothing in this Section is intended, nor shall it be construed, to allow persons to engage in conduct that endangers others or causes a public nuisance.

LUDC, 35.42.075A.2.b & CZO § 35-44U.A.2.b.

The County Planning and Development Department and Air Pollution Control District have received hundreds of complaints concerning odors and emissions from commercial cannabis cultivation and processing operations in the past 3 years. These complaints and the relatively few responsive investigations and enforcement actions reflect the simple fact that commercial cannabis cultivation and processing operations, when allowed to emit air pollution, cause “injury, detriment, nuisance, [and] annoyance” to considerable numbers of persons and to the public which “endanger the comfort, repose, health, or safety of” those persons and the public.

The Cities of Goleta and Carpinteria have each held public hearings, receiving presentations on the County's commercial cannabis permitting and enforcement, and accepting extensive testimony from the public. Each City Council was presented with extensive testimony from their constituents on the ways that cannabis operations were adversely impacting city residents and businesses, and each found:

that the current County regulatory and enforcement actions are inadequate and that cannabis activities are having a negative effect on, or are threatening, public health, safety and welfare, elements of the local economy, property values, and the established rural, small town character in the City.

Carpinteria Resolution No. 5901, § 2; Goleta Resolution 19-\_\_\_\_, § 2.

Each City asked the Board of Supervisors to strengthen its regulation and control of commercial cannabis cultivation and processing operations.

UCSB Bren School Professor Patricia Holden, Ph.D. submitted a letter to Planning and Development Department Director Plowman on June 4, 2019 reporting the preliminary results of her on-going research into the health impacts of commercial cannabis cultivation and processing operations in Santa Barbara County. Dr. Holden identified preliminary health concerns associated with the industry, and notes APCD's failure to adopt performance criteria for protecting air quality in areas around and impacted by commercial cannabis cultivation and processing operations. Dr. Holden explains there are three separate air quality impacts: nuisance odors, ozone formation, and human health impacts. Attached as Exhibit 2.

Disciplined, double-blind medical research establishes that persons with chemical sensitivities, as a cohort in the general population, are particularly sensitive to terpenes. "Of 45 chemically sensitive patients in the study, 43 demonstrated sensitivity to terpenes." Further, the study showed the potential for terpenes to exacerbate the symptoms of chemical sensitivity, and recommended further research. Exhibit 3.

There can be little question whether existing commercial cannabis cultivation and processing operations, individually and collectively, are causing a nuisance upon the Carpinteria Valley and other areas of the County. Commercial cannabis cultivation and processing operations cause, and will cause emissions of odors and air pollution that are offensive to the senses, and require many residents to keep windows closed and restrict outdoor activities, a prima facie obstruction to the free use of property. Avocado orchards, conventional and organic, are unable to manage pests due to the presence of commercial cannabis cultivation and processing operations, wine tasting facilities have moved indoors, and schools, as one glaring example, have to air out classrooms every morning before students arrive. Commercial cannabis cultivation and processing operations have and will continue to interfere with the comfortable enjoyment of life or property until the County takes steps to abate the nuisance.

Immediate action to abate a nuisance in the coastal zone is fully within the County's present authority. Public Resources Code § 30005(b) (the Coastal Act does not limit "the power of any city or county or city and county to declare, prohibit, and abate nuisances.")

**Thus, the County has both the authority and obligation to immediately terminate all non-conforming commercial cannabis cultivation and processing operations that do not have legitimate provisional licenses.**

**3. Use of Chapter 50 to Create a New Set of Provisions "Standards for Interim Commercial Cannabis Cultivation And Processing Operations"**

The County has suggested that Chapter 50 may be used to achieve the termination of the many illegal nonconforming commercial cannabis cultivation and processing operations in the County. While we disagree with the narrow and miserly reading of the County's authority to regulate these sources under its zoning authority, we support prompt action by whatever means the County deems is appropriate and defensible.

Currently, the County's Business License program requirements are triggered only at the last step of the commercial cannabis cultivation and processing operation approval process. We hereby suggest the creation of an additional new interim step required immediately for every existing commercial cannabis cultivation and processing operation in the County, in addition to the existing "last stop" place for the issuance of a business license for newly authorized operations. In this way, Chapter 50 can and should be used to adopt the following standards to abate nuisances from commercial cannabis cultivation and processing operations in Santa Barbara County.

1. For those operations that have provisional licenses and an application for local entitlement and begun an environmental review process, the County should establish Standards for Interim Commercial Cannabis Cultivation And Processing Operations that accomplish the following in a timely fashion:
  - a. Affirmatively establish that all current commercial cannabis cultivation and processing operations are no larger or changed from what existed on that parcel on January 19, 2016. The burden of proof must be on the owner or operator to provide substantial evidence of the overall area of cannabis operations; the number and amount of adult and immature plants; the structures, equipment and facilities present; and the number of staff and annual production, submitted in a detailed affidavit under penalty of perjury. Any expansion from the levels of use documented to exist in January 19, 2016 are non-confirming and must be immediately terminated and the area(s) of expansion either returned to conventional crops or other legal uses or left idle. The County should revise or revoke provisional license authorizations that are based on expansion of grows beyond what existed on January 19, 2016.

- b. For those sites where it is demonstrated that cultivation may continue as legal nonconforming grows, require immediate use of effective odor control systems for all documented and continuing nonconforming commercial cannabis cultivation and processing operations. The County's interim air pollution control technology requirements should require that emissions be captured and treated by a Granulated Activated Carbon filtration system or other equally effective pollutant capture system (as is the standard in Humbolt, Sonoma (indoor and mixed light) and other jurisdictions). If an interim commercial cannabis cultivation and processing operation can demonstrate with substantial evidence the ineffectiveness of pollutant capture, it may apply, on an interim basis, an odor neutralization system capable of achieving a zero detection at the property line. If an interim commercial cannabis cultivation and processing operation can demonstrate with substantial evidence their inability to achieve zero odor detection at the property line but can prevent odors from being experienced in: 1) any residential area; 2) any school or facility where youth under 18 are present; and 3) any business serving the public, the non-conforming use may continue until such time as land use entitlements are approved and enforceable.
- c. Processing and Notification.
  - i. Applicants for local entitlements for commercial cannabis cultivation and processing operations must make continual process towards the perfection of their applications. Applications submitted to the County that are awaiting responses from the applicant and inactive for 60 days shall be deemed abandoned unless the applicant identifies the basis for the delay and requests an extension of not more than 60 days before the initial (or successive) 60 day period has expired.
  - ii. The County shall post on the County's website all Applicant submittals, including technical materials.

These are the minimal actions that can and should be undertaken immediately to abate nuisances from commercial cannabis cultivation and processing operations.

#### **4. Adopt an Objective Odor Standard – No Detect at the Property Line**

The County's cannabis ordinance lacks an objective or enforceable odor standard. The LUDC and CZO should be amended to require that odors from commercial cannabis cultivation and processing operations be non-detectable at the property line. This should apply to both AG-I lands, where air pollution control technology will be identified in an application, be evaluated in environmental review, and become part of the Project Description or a condition of approval. On AG-II lands, where the cultivation acreage should be limited to a small fraction of the total parcel (see below), on-site buffers must provide assurance that the smell will not reach the property line, using odor and air pollution control technology as appropriate.

Currently, the odor standard (AG-I only) is the requirement that the applicant submit and implement an Odor Abatement Plan. LUDC § 35.42.075.C.5/CZO 35-44U.C.6. “The Odor Abatement Plan must prevent odors from being experienced within residential zones, as determined by the Director.” Id. This vague standard is flawed in several respects.

First, it applies only to residential zones. Most AG-I zones are not near residential zones, so this standard is inapplicable to most lands surrounding commercial cannabis cultivation and processing operations on AG-I lands. This standard does not protect Cate School, which is in an AG-I-10 zone. There are many residences on AG-I zoned parcels, but the vague language of the County’s odor standard does not establish whether the “prevent odor from being experienced in residential zones” refers to areas that are zoned for residential uses, or lands where residences exist, such as most developed AG-I parcels in the County.

Second, the reliance on a “determination of the Director” renders the standard arbitrary. As argued by G&K Farms, cannabis odors “are subjective and interpretative depending on the sensitivities of unique receptors.” Letter, Peter Candy, Hollister & Brace, June 3, 2019 to Santa Barbara County Planning Commission, for G&K Farms, page 4. The applicant contends that the County’s existing language “was never intended by the County to establish an objective standard for determining when an odor violation exists.” Id.

Finally, the standard is vague and meaningless, and as such, is unenforceable. The Planning Commission wrestled with the form of the odor standard with the G&K Appeal, and crafted additional language purporting to enhance the monitoring associated with demonstrating compliance with the illusory standard. Under the Planning Commission’s approach, PDD staff would visit the site quarterly to “conduct an inspection of the odor control system to assess its compliance with the requirements of this condition and § 35-44U.C.6. As part of each inspection, the County shall retain a professional engineer or certified industrial hygienist, at the applicant’s expense, to certify that the odor control system meets the requirements of this condition and § 35-44U.C.6.” While the condition of the Odor Abatement System is one step towards compliance, it does not address whether odor emissions are occurring. The “Requirements of the Condition” and § 35-44U.C.6 each require that the odor abatement plan “prevent odors from being experienced within residential zones as determined by the Director.” This additional requirement is far from clear, but appears to allow a third-party engineer or hygienist to substitute their determination of “experience of odors” in place of the Director’s. This subjective and ill-formed compliance standard is illusory and will be ineffective at protecting public health or preventing odor nuisances from continuing.

A “No-Detect” standard is an objective, enforceable standard that has been employed in a number of jurisdictions for various elements of cannabis. Compliance verification can be achieved through sampling protocols (Denver), infrared beam samplers (Fourier-transform infrared spectroscopy, aka FTIR) or hand-held sniffer devices such as the Nasal Ranger.



San Luis Obispo County has adopted the following cannabis odor standard:

8. Nuisance Odors. All cannabis cultivation shall be sited and/or operated in a manner that prevents cannabis nuisance odors from being detected offsite. All structures utilized for indoor cannabis cultivation shall be equipped and/or maintained with sufficient ventilation controls (e.g. carbon scrubbers) to eliminate nuisance odor emissions from being detected offsite.

§ 22.40.050

Santa Barbara County should adopt an equally clear and specific “no detect” of odors at or beyond the property line of any parcel containing commercial cannabis cultivation and processing operations. Applications should be required to include air pollution control systems capable of meeting that standard.

#### **5. Require Emissions Control, not Odor Neutralization**

Cannabis odors, and the chemicals used in neutralizing systems, have unknown human health effects, particularly during chronic exposure conditions. Exhibit 2. It is established that terpene exposure alone can impact persons with multiple chemical sensitivity. Exhibit 3. Although terpenes, a class of chemicals, are responsible for the distinctive odor, dozens of other chemicals are off-gassed from cannabis cultivation and processing, in addition to the unspecified chemicals. These emissions have potential consequence to criteria pollutants, as VOCs acting as ozone precursors. They also have significance as toxic, hazardous and/or respiratory irritants. While the science is nascent, human health effects have been observed within various populations in the Carpinteria Valley and elsewhere in the County.

The quantities of airborne chemicals emitted to the local atmosphere are significant. Applying applicant-supplied statements of the volume of the Ecosorb chemical product used in the Byers Neutralization system stated for the commercial cannabis cultivation, nursery and processing operations (between 3-6 gallons per day) that was recently heard by the Planning Commission, this one 8.17 acre operation will emit between 4.57 and 9.14 tons of aerosol spray into Carpinteria’s air per year. If all 186 acres of Carpinteria’s allowable grows used this system at these emissions rates, the Carpinteria valley airshed would receive between 104 and 208 tons of this chemical per year, or between 570 to 1140 pounds sprayed into the air each day. Cate’s students, faculty and staff, and the residents and visitors to Shepard Mesa, each downwind from the heart of the Carpinteria growing region, would inhale this product on a daily basis.

Dr. Holden concurs in her conclusions that limiting air pollution control requirements for commercial cannabis cultivation and processing operations to odor neutralization fails to assure protection of public health, and urges the County’s adoption of standards that prevent emissions from commercial cannabis cultivation and processing operations. Exhibit 2. Odor neutralization alone is insufficient

to protect public health. Emissions capture and filtration should be the County's standard in regulating commercial cannabis cultivation and processing operations.

**6. Public Review of Odor Abatement Plan (and Other Mitigation Plans)**

As the cannabis ordinance is currently configured, an applicant shall submit an Odor Abatement Plan, Lighting Plan, Security Fencing Plan, Landscape and Screening Plan, Noise Plan and Transportation Plan that is then subject to the exclusive review and approval of staff. There is no public review and comment process to review an Odor Abatement Plan entirely. These Plans are critical to avoid and reduce commercial cannabis cultivation and processing operation impacts on surrounding land uses, and should be circulated and made available for public review and comment.

**7. Other Use of Business License, Police Powers and Zoning Authority**

The Board should direct staff to move forward with the following additional actions, under the Business License authority or otherwise:

- A. Establish Regional Caps on Cultivation Acreage – identify a specific numerical cap on the total number of acres of commercial cannabis cultivation and processing operations in each region of the County. Total acreage caps are necessary to prevent excessive total amounts of cultivation, to distribute the burdens and benefits of the industry throughout the community to prevent having one or two regions from bearing the brunt of cannabis activities, and to allow a measured assessment and mitigation of environmental and community impacts.
- B. Establish an annual lottery or other program for controlling and allocating the number and location of permits each year.
- C. Set Strict Limits on Allowable Cultivation Acreage on any AG-II parcels and expand standards for setbacks and buffers. For example, Humboldt County allows, on parcels 320 acres or larger in size, up to 43,560 sq. ft. of Cultivation Area per 100-acre increment, up to a maximum of eight (8) acres. Additional forms of buffers and setbacks can be used to avoid impacting neighboring properties and uses. Greenhouses and indoor cultivation and processing facilities should require air pollution control.
- D. Disallow cannabis cultivation in Hoop Houses. Cannabis cultivated in Hoop Houses have particular and significant adverse impacts, including promoting pest populations, limited air pollution control opportunities, visual impacts, solid waste generation, light pollution, etc.
- E. Disallow License Stacking. Ballot and campaign materials for Prop 64 asserted that small and local growers would get a 5 year head start before large-scale, corporate cannabis cultivation would be allowed. License stacking conflicts with that goal, and has been the source of many issues facing the community today. Limit each parcel to one small license (10,000 square feet of cultivation) until at least 5 years from the date of Prop 64's passage, and then only after the development of additional regulations and environmental review.
- F. Sensitive Receptors Have Been Ignored. Research shows that certain populations are more sensitive to exposure to terpenes and cannabis-caused air pollution emissions. Exhibits 2 & 3,

CEQA and air quality law identify a larger set of individuals and facility types that are sensitive receptors for purposes of expanded buffers and other precautions. These include youth, the elderly, persons with respiratory ailments and vulnerability (such as asthma and chronic pulmonary and respiratory conditions) as well as facilities, including playgrounds, parks, gyms, rehab facilities, doctor's offices, medical facilities, hospitals and the like. The LUDC/CZO footnotes recognize only schools, day care centers and youth centers. This list should be expanded to protect public health and safety, and measures should be included to determine the potential for presence of unlisted sensitive receptors, including Individuals with chemical sensitivity. Buffers should be expanded, and the points of measurement clarified to measure the distance between the edge (property line) of the parcel with the commercial cannabis cultivation and processing operation to the nearest edge (property line) of the parcel owned or under the control of the operator of the facilities used by sensitive receptors, or, in the case of residences, places of business and other locations with individual sensitive receptors, their property line. Other California Counties have adopted separation distances between commercial cannabis cultivation and processing operations to reduce the cumulative effect. these strategies should be considered locally.

- G. Develop and Implement an Odor Monitoring Network. Regions with extensive commercial cannabis cultivation and processing operations, including the Carpinteria Valley, need an APCD-administered odor monitoring network, as is required of other air pollution sources that have the potential to create odors. An odor monitoring network will assist in evaluating the effectiveness of air pollution control technologies, identify cumulative impacts, facilitate nuisance determinations and enforcement, and validate the objections of many residents concerning cannabis' regional impacts.
- H. Noticing and Hearing Processes are Inadequate. Many commercial cannabis cultivation and processing operations may be entitled with a Director-issued Land Use Permit, with no hearing, opportunity for public review and comment on proposed conditions or advance notice of pending action. Public hearings should be required for each commercial cannabis cultivation and processing operation entitlement. Public notice should be expanded to include a broader range of potentially impacted parcels (any that are visible from the project site, any locations within 1 mile, and all locations within an uncontrolled odor footprint). Notice should be provided not just at application submittal but also at application completeness determination, during the 30 day period before the decisionmaker takes action, and as a Notice of Final Action.

Additionally, the appeals period should not run until the inferior body's Action Letter is completed and released to the public. It is the County's usual practice to Issue the Action letter shortly after a decision, to allow any appeal to be informed by the County's official description of the action taken, For the G&K Farms project, the Planning Commission's Action letter was dated 16 days after the action, which imposed additional standards that were adopted 'on the fly' by the Planning Commission with no written version of the language circulated publicly before adoption. It is unfair to demand that decisions be made on an appeal before this formal statement of the prior action is released.

- I. Direct a CEQA initial study for all permits. Exemptions should be narrow. Conditions have changed and commercial cannabis cultivation and processing operations are promising to cause new significant impacts well beyond what was considered in the PEIR. The County's PEIR is out of date and each individual land use entitlement request to the County should be subjected to an individual environmental review process.

### **PART B: Planning Commission Recommendations**

Concerning the three issues presented to your Board from the Planning Commission, we offer the following comments.

#### **1. Prohibit Grows on All AG-I-5, AG-I-10, and AG-I-20 Zoned Parcels**

We support Board's Option 1 (January 29, 2019), and Commission's Alternative A (April 3, 2019) to revise the LUDC (and ultimately the CZO) to disallow commercial cannabis cultivation and processing operations on all AG-I-5, AG-I-10, and AG-I-20 zoned parcels.

The Planning Commission heard considerable testimony and concurred that conflicts with surrounding land uses establish that commercial cannabis cultivation and processing operations did not generally ever belong on AG-I lands, but reasoned that there might be a small number of AG-I parcels that were sufficiently remote from other uses and could house cannabis operations. Ultimately the Planning Commission chose the CUP path after discussing a process for prospective AG-I applicants to have their applications culled by a staff or Planning Commission review stage early in the application process. Unfortunately, this can create unrealistic expectations from applicants, create a path for frivolous appeals of denials, further straining the County's permitting system, and forcing impacted schools, residents and businesses to expend precious time, energy and resources to engage in opposing ill-advised applications on AG-I lands. We support a bright line standard prohibiting commercial cannabis cultivation and processing operations on all AG-I-5, AG-I-10, and AG-I-20 zoned parcels.

#### **2. Enhance Noticing Provisions for EDRN Residents**

Staff has proposed that all residents in an EDRN be notified when a commercial cannabis cultivation and processing operation is proposed within the EDRN. Friends of Shepard Mesa and Cate School request that this be expanded to require noticing to all EDRN residents when a commercial cannabis cultivation and/or processing operation is proposed within 1000' of the property line of any EDRN parcel. EDRNs typically experience higher residential densities than surrounding lands, and are more directly impacted by activities on parcels surrounding them because the ordinary and natural buffer between uses that is present between non-EDRN lots is reduced. Consequently EDRNs more acutely experience impacts from activities on adjacent non-EDRN parcels, and the expanded noticing is necessary to notify EDRN residents of proposed cannabis operations that may impact their quiet



Exhibits

1. Letter, Amy Steinfeld, Brownstein to Santa Barbara County Planning Commission, January 19, 2018, on behalf of Cate School
2. Letter, UCSB Bren School Professor Patricia Holden, Ph.D. to Planning and Development Department Director Plowman, June 4, 2019
3. Rea WJ, Restrepo C, Pan Y, Terpenes and Terpenoids in Chemical Sensitivity, Altern. Ther. Health Med. 2015 July-Aug.21(4): 12-7.

Brownstein Hyatt  
Farber Schreck

EXHIBIT 1

January 19, 2018

PLANNING & DEVELOPMENT	FILE #:	1
MEETING	DATE:	1-24-18

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Santa Barbara County Planning Commission  
Attention: Jessica Metzger  
123 East Anapamu Street  
Santa Barbara, CA 93101

RECEIVED

JAN 22 2018

RE: Public Comment re Draft County Cannabis Land Use Ordinance

S.B. COUNTY  
PLANNING & DEVELOPMENT  
HEARING SUPPORT

Dear Honorable Members of the Planning Commission:

Our office represents the Cate School (Cate), a boarding/day school with an on-campus population of 390 located in the rural foothills north of Carpinteria in the County of Santa Barbara (County). On behalf of Cate, we have reviewed the Revised Draft Cannabis Land Use Ordinance and Licensing Program (Draft Ordinance) released on January 3, 2018. Due to Cate's immediate adjacency to extensive agriculturally designated lands in the unincorporated area of the County, expanded cannabis-related operations in and around the Carpinteria Valley will directly and uniquely impact Cate, its students and faculty.

While Cate does not support the County's Cannabis Program, Cate recognizes the Planning Commission has an interest in in recommending an Ordinance that encourages commercial cannabis businesses to operate legally and safely. However, Cate is extremely disappointed that the Draft Ordinance allows an unlimited number of commercial cannabis operations, including outdoor cultivation, distribution and manufacturing in Ag-1 zones, despite numerous environmental studies that recognize this will result in significant impacts to prime agricultural soils, air quality (greenhouse gas emissions), noise, transportation and traffic. The Proposed Ordinance is far less stringent than those adopted or being considered by other jurisdictions, and, if adopted as drafted, will make it very difficult for the County to scale back the industry if mitigation measures prove ineffective and the severe impacts forecast in the County's Environmental Impact Report (EIR) materialize.

I. COMMENTS ON DRAFT ORDINANCE

A. Impacts on Cate and the Public

The recent conversion of greenhouses from the cultivation of cut-flowers to cannabis in the Carpinteria Valley has already significantly impacted Cate's daily operations with its powerful odor which is present throughout the campus and the surrounding area day and night. Numerous complaints have been filed with the County concerning the nuisance, quality of life, and health

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effects of excessive exposure to cannabis operations. If cannabis becomes more prevalent in this region, the associated impacts, including odor, traffic, light pollution, distribution locations, criminal activity and potential health concerns will only increase. The cultivation and processing of cannabis in the vicinity of Gate presents a significant concern for the health and well-being of the young people in Gate's care.

#### **B. Deficiencies in Draft Ordinance**

In its current form, the Draft Ordinance and recommendation will adversely impact the quality of life in Carpinteria Valley (and throughout the County). Our primary concerns are:

- It favors the interests of the cannabis industry over local residents and the public health, safety, and welfare of the community.
- It does not place a cap on the number of permits that the County can issue for commercial cannabis operations.
- It allows outdoor cannabis cultivation and distribution and manufacturing activities in Ag-1 zones, thereby permitting cannabis businesses to locate in close proximity to schools and residences.
- It does not require a permittee's Odor Abatement Plan to reduce odors experienced in Ag-1 zones.
- The County's permitting process for new cannabis businesses is unclear. Specifically, there does not appear to be an opportunity for public input from interested parties when an application for a new cannabis permit is filed with the County.
- The environmental documents do not sufficiently analyze impacts on public safety, housing, or waste disposal.
  - The EIR does not adequately analyze whether the Carpinteria Sheriff Substation will be sufficiently staffed to handle cannabis-related crime.
  - Data has shown that quantities of cannabis byproduct waste are much larger than anyone has anticipated.
  - Santa Barbara County's housing crisis will only be exacerbated by an influx of additional people into this region.
- It ignores the recent shift in federal law regarding cannabis. (See Attorney General Jeff Sessions January 4, 2018 Memorandum rescinding previous federal prosecutorial guidance that had been issued during the Obama administration.)

#### **II. RECOMMENDATIONS TO PROTECT THE COMMUNITY**

As the EIR recognizes, the Ordinance, as written, will have a number of severe impacts on air quality, transportation and prime soils. While we commend the County for attempting to



address unregulated and illegal cannabis activities, the solution is not to allow an unlimited number of cannabis operations in the County. This is short-sited and favors the interests of the cannabis industry over local residents and the public health, safety, and welfare of the community.

Cate does not support legalization of commercial cannabis operations in the County, but in the event the County approves a Cannabis Program, it must consider the following:

**A. Cap and Phasing of Cannabis Cultivation Operations (Alternative 3)**

The Draft Ordinance rejects the EIR alternative that would result in substantial reductions in the severity of many impacts by limiting the number of permits that the County can issue (Alternative 3). Cate supports Alternative 3 (Reduced Registrants), which would permanently cap the total number of cannabis permits. In addition, the County should consider limiting the number of cannabis permits that it issues on a sub-regional basis (e.g. Carpinteria Valley). This will reduce the concentration of impacts in certain areas, ensure that no one region is unduly impacted by cannabis businesses, and prevent a runaway industry that replaces traditional agriculture. We also recommend that the County phase-in the issuance of permits so that it has time to evaluate the impacts and efficacy of the proposed mitigation measures.

**Proposed Language:** The maximum number of cannabis operations in the County shall be limited to 962 (with specific caps per region). The County shall only issue 30 permits per year.

**Support:** The cap on permits was already analyzed in the EIR as Alternative 3. The EIR found compared to the project, Alternative 3 would result in fewer severe impacts by limiting the extent of cannabis development. Accordingly, the EIR identified Alternative 3 as the Environmentally Superior Alternative. In addition, the EIR provides, "Alternative 3 would give the County the flexibility and opportunity to bring a much more limited cannabis industry into compliance with the County Code and the County Comprehensive Plan while minimizing adverse effects to the environment." (DEIR, ES-8.)

At the January 10 Planning Commission Hearing, there was a brief discussion about why Alternative 3 could not be adopted. In essence, there was concern it would not meet the main objective of the Project—to facilitate a "robust and sustainable legal industry." This is false. First, this is based on the flawed assumption that Objective 1 is the main objective of the Project. The EIR does not provide so, and this rationale ignores the nine other key Project Objectives, including protection of the community. Second, there is no evidence in the record that capping the number of permits would hamper the cannabis industry, which, as the HDL Fiscal Analysis provides, may even be contracting. In addition, we were informed that less than 30 applications were filed with the State for cannabis permits within the County. Even the Fiscal Analysis commissioned by the County assumes that there would only be 157 to 626 cultivation operations in the County at buildout. (HDL Fiscal Analysis, p. 27.) It is unclear why the County would consider allowing an unlimited number of permits on day 1 when a conservative program that limits and phases-in cannabis operations would protect existing operators, result in new revenue to County, and reduce impacts. This should not be an "all-or-nothing" approach.

Contrary to what we heard on January 10, it is well within the County's discretion to approve Alternative 3, which was fully analyzed in the EIR. It is concerning that the Planning Commission



is considering recommending a slightly-modified version of the Project, which will still result in five Class 1 significant and unavoidable impacts, instead of the "Environmentally Superior Alternative." We understand the County needs additional funding, but at what cost? Putting the community at risk to support an industry that will provide the County with an unknown quantity of revenue<sup>1</sup> and will result in numerous significant and unavoidable impacts is unwise and near-sighted.

In addition, other jurisdictions have placed reasonable caps on the number of permits issued. (See San Luis Obispo County Cannabis Ordinance, §22.40.050(A)(2) (capping no. of cultivation operations at 141).) In addition, alcohol is regulated in a similar fashion. Since 1939 the number of liquor licenses has been limited. At present, the ratio is one on-sale general license for each 2,000 persons in the county in which the premises are situated and one off-sale general license for each 2,500 persons. (See California Alcohol Beverage Control Regulations, § 23817.5.) The County of Los Angeles is also considering a "Strategic Permitting Phase-in" of cannabis activities where it would permit in the first three years a maximum of 10 cultivators, 10 manufacturers, 10 distributors, and 10 testing laboratories. (See January 23, 2018, Los Angeles Board of Supervisors Recommendation, available at <http://cannabis.lacounty.gov/proposed-policies/>.) If the County adopts a lax Ordinance (that is less stringent than its neighbors) with no limits or phasing period, growers from throughout the state may flock to this County before the County has time to study the impacts of this industry or dedicate the resources needed to carefully review each application.

**B. Prohibition on Outdoor Cultivation and Manufacturing and Distribution in Ag-1 Zone Districts (Alternative 1)**

Outdoor cannabis growers have not demonstrated they can sequester odors. Outdoor cultivation, manufacturing and distribution also presents significant safety concerns for neighboring properties in Ag-1 zones.

**Proposed Language:** Outdoor cultivation, Manufacturing and Distribution shall not be permitted in Ag-1 Zone Districts.

**Support:** This was already fully analyzed in the EIR as Alternative 1. The EIR found compared to the Project, Alternative 1 would lessen impacts within the urbanized areas of the County and reduce land use compatibility impacts. (See DEIR, 4-18 to 4-34.) Alternative 1 is a win-win solution because it would reduce potential environmental impacts associated with the Project, specifically those related to odor and land use compatibility. Under this Alternative, cannabis cultivation, manufacturing, and distribution activities would continue to be allowed in rural agricultural areas (AG-II zone district only), commercial, and industrial zone districts.

**C. Anti-Concentration Regulation to Prevent Concentration or Clustering**

Cannabis should be regulated like any other "vice" industry (i.e. adult bookstores) by requiring that operations not be sited near each other to avoid concentration of adverse impacts.

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<sup>1</sup> The HDL Fiscal Analysis predicts that revenue from legal cannabis operations could generate between \$4 to 64 million/year but concedes it is not possible to know what percentage of those businesses will "actually succeed in this emerging industry." (HDL Fiscal Analysis, p. 37.)



Cannabis operations, because of their very nature, are recognized as having serious objectionable operational characteristics, particularly when several of them are concentrated thereby having a deleterious effect upon the adjacent areas. Special regulation of these businesses is necessary to insure that these adverse effects will not contribute to the blighting or downgrading of the surrounding lands. The primary purpose of these regulations is to prevent the concentration or clustering of these businesses in any one area.

**Proposed Language:** No new Cannabis Business shall be permitted to locate within 500 feet of an existing Cannabis Business. (This could be coupled with an exemption for existing legal operations.)

**Support:** The County of Santa Barbara currently has a non-concentration law applicable to Sexually Oriented Businesses. (See Chapter 35 of the Santa Barbara County Code, § 35-805). Cannabis businesses should be regulated no differently than adult businesses.

**D. Strengthening the Odor Abatement Plan**

As written the standard that requires odors to be reduced to "[t]he maximum extent feasible as determined by the Director" is too subjective. (See Development Standard, C(7).) As discussed at the January 10 Planning Commission Hearing, to protect sensitive receptors, the Odor Abatement Plan must include a provision that limits odors from leaving the property. In the event that the Planning Commission does not include this language, the Odor Abatement Plan must apply in Ag-1 zones, not just to odors experienced in residential zones.

**Proposed Language:** All cannabis cultivation shall be sited and/or operated in a manner that prevents cannabis nuisance odors from being detected offsite.

**Support:** See San Luis Obispo Cannabis Ordinance, §22.40.050(D)(8).

**E. Increase in Buffer**

Based on existing medical cannabis cultivation operations in the Carpinteria Valley, it is clear that the 600 foot buffer is insufficient to prevent odors at schools. The setback from schools should be increased to 1000 feet to reduce the identified impacts on schools. The County's own "Odor Abatement Plan," which requires that contact information be provided to all owners of property located within 1,000 feet from a cannabis operation, demonstrates that 600 feet is insufficient to protect sensitive receptors. (See General Development Standards, h.)

**Proposed Language:** Cannabis cultivation and cannabis nurseries shall not be located within one thousand (1,000) feet from any pre-school, elementary school, junior high school, high school, library, park, playground, recreation or youth center, licensed drug or alcohol recovery facility, or licensed sober living facility.

**Support:** On November 27, 2017, San Luis Obispo County approved a 1000 foot setback from schools and other sensitive receptors. (See San Luis Obispo Cannabis Ordinance 22.40.060(D)(1) and 23.08.424 (d)(1)). The County of Los Angeles is also considering a 1000 foot buffer from schools. (See <http://cannabis.lacounty.gov/proposed-policies/>.)

**F. Further Public Safety Studies**

Before approval, the County must determine if the Carpinteria Sheriff Substation will be sufficiently staffed to handle cannabis-related crime, including increased drug cartel activities due to the fact that cannabis is very profitable and is a cash-based economy.

**G. Annual Survey and Monitoring Report.**

The Ordinance should include a requirement that the County conduct a comprehensive annual survey and monitoring report to ensure that licensed cultivators are abiding by license and permit conditions, and to identify and take actions to address illegal cannabis activities.

**Language:** Comprehensive annual survey and monitoring activities shall be conducted, and conveyed in an Annual Survey and Monitoring Report to the Board of Supervisors, with recommendations regarding enforcement staffing and resources. At least 50 percent of licensed cultivation and manufacturing sites shall be evaluated and reported upon each year in an Annual Survey and Monitoring Report. The survey shall be implemented by the Cannabis Licensing Office once per year, and the list of monitored and surveyed items shall be approved by the County Cannabis Licensing Official, Planning Director and Agricultural Commissioner within one year of adoption of the proposed Program.

At completion of the annual survey and monitoring efforts, the data shall be assembled into an Annual Report available for review by the County Board of Supervisors. The Annual Report shall contain recommendations regarding enforcement and staffing resources, to provide a feasible level of funding for an effective enforcement program.

**Support:** See Santa Cruz Cannabis EIR, MM AT-1.3b (Annual Survey and Monitoring Report).

**H. Additional Information on Permit Issuance**

As discussed at the January 10 Meeting, it is unclear whether the approval of a permit is a discretionary or ministerial action and whether there will be a formal opportunity for public comment on a permit-by-permit basis. The Ordinance simply provides that most cannabis operations have to obtain a "Permit determined by Specific Use Regulations." We look forward to hearing the staff presentation on this issue that was requested by the Planning Commissioners on January 10.

We recommend that the County require a hearing and provide adequate public notice (to all owners of property located within 1,000 feet) before each new cannabis permit approval. We also recommend that CUPs be required for cannabis cultivation, nursery, microbusinesses and manufacturing operations within Ag-1 zones, not just within an EDRN.

**Support:** The County of Los Angeles is considering developing the following smart permitting policies, which we request the County consider: (1) Establishing a five-member Cannabis Commission to conduct public hearings for cannabis business applications; and (2) The Commission would exercise discretion to approve, conditionally approve, or deny applications, and would be authorized to impose conditions of approval as necessary to mitigate impacts



associated with a proposed cannabis business. (See <http://cannabis.lacounty.gov/proposed-policies/>.)

### III. CONCLUSION

The best interests of the County are served by initially adopting a very conservative approach to all aspects of cannabis cultivation, processing and sales. The ink is hardly dry on the state guidelines or EIR and this is completely new territory for all permitting agencies. A process allowing the legitimization of existing illegal cannabis operations and the creation of new cannabis operations before the proper regulatory controls are in effect could exacerbate current impacts on Carpinteria residents and lead to future complications the County may not be anticipating.

The entire County is at risk if the Ordinance, as drafted, is sent by the Planning Commissioners to the Board of Supervisors on January 23. We ask that the Commissioners take a hard look at the Ordinance and incorporate much-needed safeguards and conduct additional analysis. We understand the Board is anxious to put a Cannabis Program in place, but the Planning Commission and Board must recognize that many South County residents have been severely impacted by the fires and mudslides and thereby need additional time to process and understand this Ordinance before it is finalized. In light of the extraordinary circumstances, it would violate due process to move forward without providing additional time for public input. A month-long extension for the Board to consider an Ordinance with long-term consequences will not materially impact existing illegal operations in the County.

Cate thanks the Commissioners for considering these comments and suggested edits to the Draft Ordinance. Should you have any questions or require additional information, I can be reached at 805-882-1409.

Respectfully Submitted,



Amy M. Steinfeld

cc: County Board of Supervisors, [sbcob@co.santa-barbara.ca.us](mailto:sbcob@co.santa-barbara.ca.us)

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AGENDA ITEMS	
ITEM #:	4
MEETING	
DATE:	6/5/19

Ms. Lisa Plowman, Director  
S.B. COUNTY  
Jeffrey Wilson, Deputy Planning & Development Director  
Department of Planning & Development  
County of Santa Barbara  
123 E. Anapamu Street  
Santa Barbara, California 93101

**Subject:** Santa Barbara County Land Use and Development Code; Article II – Santa Barbara County Coastal Zoning Ordinance Establishing Regulations for the Cultivation, Manufacture and Distribution of Commercial *Cannabis* for Adult Use as Adopted February 6, 2018.

Dear Ms. Plowman:

I have been asked by my concerned neighbors in the More Mesa Eastern Goleta Valley area of Santa Barbara to examine the process set out in the above-referenced Santa Barbara County Land Use and Coastal Zone ordinances for mitigating the potentially adverse public health and environmental impacts which may result from the cultivation and manufacture of commercial *Cannabis* in proximity to residential neighborhoods. In particular, I have looked into and will explain how these impacts may manifest themselves on persons residing within the coastal areas of southern Santa Barbara County.

**A. Introduction and Background.** I am a Professor in the Bren School of Environmental Science & Management at the University of California, Santa Barbara (UCSB) where I lead research in environmental problem solving, and teach courses in waste treatment, pollution remediation, environmental microbiology, and biogeochemistry. For more than twenty years at UCSB, my research has informed water quality management (including in collaboration with, or in service to, the City of Santa Barbara or the County of Santa Barbara), soil processes, and risk assessment of emerging contaminants. Most recently, funding pending from the UC Office of the President will allow my researching—with collaborators from UCSB plus three other universities in California—the environmental consequences of tobacco products and of *Cannabis* cultivation and product use.

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Thus, my interest in this subject and my concerns as expressed in this letter - while, admittedly personal in nature - are also nonetheless thoroughly professional as well as carefully informed by my expertise across various academic disciplines and my own professional research and experience. In addition, my husband is a retired private-sector engineer who designed water and wastewater facilities worldwide for over thirty years, and he shares my concerns over the potential negative health impacts related to *Cannabis* and the potential difficulty of properly engineering a workable system which adequately mitigates the possible environmental and nuisance impacts of *Cannabis* cultivation. In short, we are both technically trained and educated (e.g. my degrees are B.S., M.S. and M. Eng. in Civil and Environmental Engineering from the University of Tennessee, Purdue University, and UC Berkeley, respectively, plus a Ph.D. in Soil Microbiology from UC Berkeley) professionals. My own doctoral dissertation (UC Berkeley) regarded mechanisms of biodegradation of a volatile organic compound (VOC) in soil environments, a topic highly relevant to the issues discussed herein. As a result of our training and experience, we have some significant concerns about the current rush to cultivate and manufacture adult-use *Cannabis* in our area of Santa Barbara County in the absence of systematically researching how to do so while protecting human and environmental health.

I should also state that one of the reasons I agreed to do this work and to prepare this letter is my professional opinion that the "mitigation" pre-conditions written into the above-referenced County *Cannabis* land-use regulation adopted by the Board of Supervisors in February 2018 are unproven to be effective in actually mitigating the potentially adverse health and environmental impacts of commercial *Cannabis* on people living in proximity to these commercial operators. This is particularly true for those measures mandated by the County ordinances for eliminating noxious odors from *Cannabis* - measures which apparently ignore the need to not just eliminate noxious odors, but to protect the public from the related and concurrent environmental pollution which could result from the commercial cultivation of *Cannabis*.

**B. Health Concerns Related to Noise and Air Quality Degradation.** My primary health concerns relate to the noise and inevitable failure consequences of what will ultimately be needed to prevent degradation of air quality. The production of *Cannabis* on commercial scales is a new endeavor whose environmental threats have been hypothesized but, at this point, remain uncertain.<sup>1</sup> While the human health implications of *Cannabis* use, whether medicinal or recreational, are also uncertain, it is telling that the National Academy of Sciences does not address potential environmental health concerns, and the reasons for this are clear - there simply is not yet enough known about such concerns.<sup>2</sup>

However, the following is known and well-established:

- *Cannabis sativa* (marijuana) plants, like many natural and agricultural plants, emit various types of terpenes<sup>3</sup> which are chemicals that are broadly categorized as biogenic volatile organic compounds (BVOCs).<sup>4</sup>



- BVOCs are responsible for the noxious odors associated with *Cannabis*,<sup>5</sup> but it is the BVOCs, not the odors per se, that have the potential to undermine human health and environmental quality. This is an important distinction, as the regulatory discourse in Santa Barbara County currently only regards “odors” when it is actually the emissions to the ambient environment of the odorous compounds—the *Cannabis* BVOCs whose smells simply confirm their presence at olfactory thresholds—that should be controlled to protect air quality and human health.
- *Cannabis* terpenes, like other biogenic terpenes, have the potential to be precursors of ground level ozone<sup>4,6</sup> which is regarded by the U.S. Environmental Protection Agency (U.S. EPA) as a serious human health threat.<sup>7</sup>
- To form ozone, *Cannabis* BVOCs would react with other substances in the atmosphere, under specific, but not unusual, ambient conditions.<sup>6</sup> Such potential for ozone formation from *Cannabis* BVOCs was recently estimated using *Cannabis* BVOC emissions measured on a per plant basis.<sup>4</sup>
- *Cannabis* BVOCs could outweigh other ozone-forming compounds in urban areas, depending on many factors including *Cannabis* cultivation extent.<sup>1</sup>

**C. Recommended Air-Quality Mitigation Measures.** While the atmospheric chemistry and real ozone forming potential of *Cannabis* greenhouse operations are not currently estimable for the Eastern Goleta Valley where I live, or elsewhere in Santa Barbara County, the potential is scientifically logical, i.e. supported sufficiently by published research to date. Consequently, Santa Barbara County should require that cultivation projects prevent *Cannabis* BVOCs and particulate emissions to the atmosphere, including from greenhouses such as in my neighborhood. To prevent air emissions, at least the following conditions of approval would be needed for *Cannabis* cultivation applications, including in my neighborhood:

- Insist, for any cultivation project condition of approval, that the greenhouse structures can fully contain and prevent emissions. In my neighborhood, the existing 1950s era greenhouse structures, given their dilapidated and obviously irreparable states, must be replaced with new greenhouses. These extremely dilapidated structures simply cannot be retrofitted to efficiently and effectively contain *Cannabis* air emissions that have the potential for unacceptable health consequences, no matter what supposedly “state-of-the-art” emissions control systems are proposed.
- Require fully and properly engineered air handling and control systems to prevent release of *Cannabis* BVOCs and other emissions into the air surrounding any growing facility. More experienced regulators elsewhere, for which some examples were at one time compiled<sup>8</sup> (and which are retrievable via internet searching,<sup>9</sup>) appear to have such requirements of *Cannabis* applicants. Yet, currently, the Santa Barbara County Air



Pollution Control District (APCD) Advisory<sup>10</sup> recommends and requires only unnamed non-specific “deodorizing systems” for “odor abatement”.

Given the potential health risks associated with *Cannabis* cultivation air emissions, it is surprising that the Santa Barbara County APCD does the following: 1. fails to recognize in its most recent Advisory the emissions, and thus air quality, issues posed by *Cannabis* cultivation, 2. focuses instead on mere symptoms (“odor”), and 3. implicitly endorses “deodorizing systems” which could—by their own uncertain emissions of other VOCs and additive chemicals – actually exacerbate ground-level ozone formation and thus compound threats to the health of humans and other biological receptors near *Cannabis* growing operations. *In my opinion, there are too many unknowns to simplistically accept “deodorizing” as an actual and real solution to protecting public health and the environment.*

- Require air quality monitoring and facility inspections to ensure that emissions are controlled from any *Cannabis* greenhouse growing operation.
- For those *Cannabis* projects which required a County public hearing prior to their initial approval, to mandate a one-year “compliance review hearing” before the County Board or Staff member which issued the original permit approval in order to substantiate that the emissions control system has been operating correctly and effectively and without significant complaints from nearby residents and owners.

**It is beyond the scope of this letter to fully research and attempt to recommend best practices for emissions controls at *Cannabis* greenhouse operations. Yet it is fairly obvious that the current flood of *Cannabis* applications have not addressed the real concerns of noxious and potentially hazardous air emissions, since most, if not all, of those applications propose a deodorizing approach instead of emissions control, and do so for dilapidated greenhouses.**

Moreover, as recently summarized and as recognized in the County’s *Cannabis* zoning regulations, potentially harmful *Cannabis* emissions may be significantly removed by carbon (activated, presumably) filtration,<sup>6</sup> which would require an engineered design—for air handling and treatment technology performance plus operations. I am particularly interested, and have started research as such, in biofiltration as an alternative approach for removing *Cannabis* BVOCs from captured emissions, since such an approach could have many advantages.<sup>11</sup> In my judgment, physicochemical (e.g. activated carbon) and biological (e.g. biofiltration) approaches for odor scrubbing are well-established and mature technologies that could be engineered and adapted for *Cannabis* greenhouse grow emissions control.

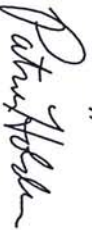
**D. Establish and Adopt a Systematic Scientific Basis for Health and Environmental Protection.** I strongly advocate that the County revisit its current ordinance to reflect a more thorough and systematic, scientifically-based, evaluation of *Cannabis* cultivation for its potential health and environmental impacts. There is currently a lack of definition, and rigor, that belies what the citizens of this County deserve and expect. These issues are propagated into the recent



APCD Advisory.<sup>10</sup> Besides the APCD's Advisory's conflation of "odor" with "VOCs" (when the former is a symptom of the latter), there is a conflation in the Advisory of various inequivalent approaches to protect air quality. In part 3b, the APCD Advisory refers to "activated carbon filtration systems" and "deodorizing systems" in one parenthetical expression, as examples of "odor abatement" and, in doing so, imply that these are equivalent technologies.<sup>10</sup> Not only is this incorrect, but the presentation is diffuse, without reference to any specific system or its performance criteria. There is no specific basis presented for the APCD's recommendations for "HEPA" filters for smoking lounges, for example, and the U.S. EPA technical summary that is cited has no specific recommendations for *Cannabis* BVOCs or other air pollutants. In part 3a, the APCD again conflates measures to "abate odors" by co-listing "containment, ventilation, filters, control and/or deodorizing systems". As stated previously, firstly the recommendation emphasizes odors and not BVOCs. This is problematic, as emitted BVOCs in amounts below an odor threshold are uncertain with regards to their potential to contribute to health or environmental impacts. Secondly, in not systematically describing the objectives of these inequivalent measures, the APCD confuses in that: 1) "containment" and "ventilation" are not odor abating measures but rather are measures for air handling within entire facilities, 2) "filters" has a diffuse to no meaning in this context, and 3) "control" might well be equivalent to "containment" achieved by an appropriate technology, but neither "control" of odors nor "containment" of emissions is necessarily achieved by a "deodorizing" system. The APCD "strongly recommends the use of odor abatement measures that are designed by a professional engineer or certified industrial hygienist" but states no criteria for performance and makes no mention of a burden of proof that any proposed systems, albeit by licensed professionals, will perform in a manner that protects human health and the environment.<sup>10</sup> Given the novelty of the *Cannabis* industry in California, not taking direct responsibility for setting performance criteria and establishing a means by which air quality can be protected from *Cannabis* emissions constitutes an abdication of responsibility by the APCD and, therefore, the County.

**E. Conclusion.** Assuming that the County-permitted *Cannabis* projects are to be ultimately held fully and effectively responsible for containing the adverse air emissions which they create, then the air handling and control systems mandated for that purpose should be established and proven technologies which do not generate excessive noise in peaceful neighborhoods. I, along with many immediate neighbors, as well as many other Santa Barbara County residents and property owners, expect Santa Barbara County to seriously attend to all aspects of the potential health and environmental concerns associated with the cultivation and manufacture of *Cannabis* — especially how commercial *Cannabis* operations will be compatible with the surrounding neighborhoods, will contain their adverse air emissions, and will not negatively impact the current quality of life and the environment of Santa Barbara County.

Sincerely,



Patricia A. Holden, Ph.D.

Resident, 1205 Anderson Lane, Santa Barbara CA 93111

cc: Santa Barbara County Board of Supervisors  
Santa Barbara County Planning Commission members  
Dennis Bozanich, Santa Barbara County CAO's office  
Daniel Kleman, Deputy Director, County Planning & Development

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[Altern Ther Health Med](#), 2015 Jul-Aug;21(4):12-7.

## Terpenes and terpenoids in chemical sensitivity.

Rea WJ, Restrepo C, Pan Y.

### Abstract

**CONTEXT** : Terpenes and terpenoids are a diverse class of organic compounds produced by a variety of plants, particularly conifers. Chemically sensitive patients can be targeted by terpenes and terpenoids, resulting in a triggering of symptoms and pathology. Often patients cannot clear their symptoms from exposure to chemicals unless terpenes and terpenoids are avoided and neutralized along with chemical avoidance and treatment.

**OBJECTIVE**: This article evaluates the presence, diagnosis, and treatment of terpenes exposure in chemically sensitive patients.

**DESIGN**: A double-blind, placebo-controlled, 2-part study was designed to establish the chemically sensitive state of the patients in part 1, followed by a second set of challenges to determine each patient's concurrent sensitivity to terpenes and terpenoids in part 2. In all of the challenges, normal saline was used as a control. A case report illustrates the history of 1 patient and describes the authors' treatment methods.

**SETTING**: The study was developed and conducted at the Environmental Health Center of Dallas (EHC-D) because the environment within the center is 5 times less polluted than the surrounding environments, as determined by quantitative air analysis and particulate counts.

**PARTICIPANTS**: A total of 45 chemically sensitive patients at EHC-D with odor sensitivity to terpenes. The cohort included 18 males and 27 females, aged 24-62 y. Intervention • Patients were deadapted (4 d) and evaluated in a 5-times-less-polluted environment, which was evaluated using air analysis and particulate counts. After deadaptation, the patients were challenged by inhalation in a controlled, less-polluted glass steel booth inside an environmentally controlled room with an ambient air dose of the toxics in the order of parts per billion (PPB) and parts per million (PPM). These toxics included formaldehyde, pesticide, cigarette smoke, ethanol, phenol, chlorine, new sprint, perfume, and placebo. They were also challenged intradermally with extracts of volatile organic compounds (VOCs), including formaldehyde, orris root, ethanol, phenol, cigarette smoke, chlorine, newsprint, perfume, terpenes, terpenoids, and placebo.

**OUTCOME MEASURES**: Inhaled challenges recorded pulse, blood pressure, peak bronchial flow, and other signs and symptoms 30 min before and at 15-min intervals for 2 h postchallenge. Intradermal challenges recorded wheal size and the provocation of signs and symptoms.

**RESULTS** : Different numbers of patients were tested for each terpenes source because of time-related factors or the cumulative effect of testing, which made patients unable to continue. Of 45 chemically sensitive patients in the study, 43 demonstrated sensitivity to terpenes.

**CONCLUSIONS**: This particular patient group was positive for a number of toxic and nontoxic chemicals provoking their symptoms. This study shows there was a connection between VOCs, other chemicals, and terpenes in chemically sensitive patients in a prospective cohort study. It has also shown the potential for terpenes to exacerbate symptoms of chemical sensitivity. Further research on this topic is recommended.

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