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May 5, 2025

**VIA E-MAIL**

Riverside Planning Commission  
City of Riverside  
City Hall  
3900 Main Street  
Riverside, CA 92522  
Email: PC@riversideca.gov

Re: May 8, 2025 Planning Commission Meeting Agenda Item 4,  
Case No. PR-2025-001795 (Also Referred to as File No. 25-1637)

Dear Honorable Members of the Planning Commission:

This letter is sent with respect to the above-referenced agenda item for the Planning Commission's pending May 8, 2025 meeting.<sup>1</sup> As set forth in a letter to the City dated April 23, 2025, this office represents three of the applicants for the City's storefront retail cannabis business operating permits. The purpose of this letter is to correct several errors in the Memorandum prepared for the above-agendized item.

First, the Memorandum misrepresents the City Council's actions on March 25, 2025. The Memorandum states, "The City Council voted to modify the [Storefront Retail Commercial Cannabis Business] program." That is incorrect. The minutes for the meeting clearly demonstrate that the Council directed staff to draft an ordinance and resolution making modifications to the program. That ordinance and resolution will be subject to a separate vote, which has not yet occurred. Thus, the Memorandum suggests that the City Council has taken a final action that it has not in fact taken. This mischaracterization misleads the public, jeopardizes public faith in the City's actions, suggests a precommitment by the City to an outcome without a fair public hearing, and potentially violates the Brown Act.

Second, the Memorandum states that "Staff has not received public comments regarding this project." This is also incorrect. My partner Arthur Coon submitted an extensive comment letter, with exhibits, to the City on April 23, 2025, directed at the changes the City has proposed with respect to the Storefront Retail Commercial

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<sup>1</sup> The item is on the agenda as Case No. PR-2025-001795, but is elsewhere referred to in the online materials as File No. 25-1637. This letter is thus directed at and should be included in both file/case numbers.

Cannabis Business program. Obviously those changes extend to the matters the Planning Commission will be considering on May 8. Accordingly, we hereby request that the letter and exhibits be included in the file for Case No. PR-2025-001795/File No. 25-1637 (see footnote one) and to also be included as part of the administrative record for any action the Planning Commission and/or City Council may take with respect to the same. We have received confirmation from the Office of the City Clerk that the letter and attachments have been received; if this is incorrect, please notify me and I will have copies provided immediately.

Please do not hesitate to contact me if any of the foregoing is unclear or if you have any questions.

Very truly yours,

MILLER STARR REGALIA



Matthew C. Henderson

MCH:klw

cc: City Clerk ([city\\_clerk@riversideca.gov](mailto:city_clerk@riversideca.gov))  
City Manager Mike Futrell ([mfutrell@riversideca.gov](mailto:mfutrell@riversideca.gov))  
Interim City Attorney Rebecca McKee-Reimbold, Esq. ([rmckee@riversideca.gov](mailto:rmckee@riversideca.gov))  
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April 23, 2025

CC Date: 5-6-25

Item No.: 23

**VIA E-MAIL**

Mayor Patricia Lock Dawson  
Councilmember Phillip Falcone  
Councilmember Clarissa Cervantes  
Councilmember Steven Robillard  
Councilmember Chuck Conder  
Councilmember Sean Mill  
Councilmember Jim Perry  
Councilmember Steve Hemenway  
City Manager Mike Futrell  
City of Riverside  
City Hall  
3900 Main Street  
Riverside, CA 92522

Re: **Opposition Of Ranked Cannabis Business Permit Applicants OTC  
Riverside LLC, Packs Riverside LLC, And TAT RV LLC To City Of  
Riverside's Unlawful Moratorium And Proposed Amendments To  
Riverside Municipal Code ("RMC") Chapter 5.77 Regulating Cannabis  
Business Activities To Reduce Total Number Of Storefront Retail  
Commercial Cannabis Business Permits Allowed, Further Restrict Sale  
or Transfer of Permits, Further Restrict Locations For Cannabis Permits,  
And Add Parks As Additional Sensitive Use**

Dear Mayor Lock Dawson, Honorable Councilmembers, and City Manager Futrell:

**I. INTRODUCTION**

This office represents the above-referenced entities, OTC Riverside City LLC ("OTC"), Packs Riverside LLC ("Packs"), and TAT RV LLC (dba "The Artist Tree") ("TAT") (collectively, the "Ranked Applicants"), who were evaluated and selected as among the top eleven (11) highest-scoring applicants in the City of Riverside's ("City") rigorous and expensive merit-based application and selection process for storefront retail cannabis business operating permits within the City under Chapter 5.77 of the Riverside Municipal Code ("RMC"), which contains the City's Cannabis Business Activities Ordinance. We write on behalf of the Ranked Applicants to oppose the City's above-referenced proposed ordinance amendments and to demand that it immediately cease the unlawful moratorium it has imposed on the processing and

issuance of building permits and related storefront retail cannabis permits while it considers the ordinance amendments. The City's "pause" on the process is a de facto moratorium that is in clear violation of the substantive and procedural requirements and limitations of Government Code section 65858, and has prejudicially impacted the Ranked Applicants through the costly delays it has caused and because, under the applicable law absent the unlawful moratorium, their building and cannabis operation permits should already have been fully processed and issued ministerially to them.

All of the Ranked Applicants entered the City's process in good faith reliance on its published rules and deadlines as to the progression of permitting and the selection of permittees, scrupulously adhering to all City-mandated requirements, timelines, and conditions, including by investing significant financial resources in real estate holdings and development plans based on the City's current ordinance requirements and assurances of an objective, fair and transparent program. However, the recent unlawful actions taken (in the form of the above-referenced illegal moratorium) and proposed (in the form of the ordinance amendments) by the City have undermined the integrity of the City's process and placed the Ranked Applicants in an unfair and untenable position.

More specifically, the City's proposed adoption of the above-referenced amendments to RMC Chapter 5.77 would be in violation of law and subject to judicial invalidation because, inter alia:

- The City's now months-long "pause" on the entire permitting process – including both the processing and issuance of the building and storefront retail permits at issue – is in clear (and continuing) violation of Government Code section 65858. The City Council failed to adopt and extend, by the required four-fifths vote (or otherwise), an "urgency measure" interim ordinance including the specific evidence-supported legislative findings required by the statute in order to effect a moratorium on permit *issuance* (Gov. Code, § 65858(a), (b), (c)), and in no event is a moratorium on *processing* ever allowed. (*Building Industry Legal Defense Foundation v. Superior Court* (1999) 72 Cal.App.4th 1410, 1412-1413, 1415-1418.) The City's patently illegal moratorium has severely prejudiced the Ranked Applicants and tainted the City's entire course of conduct with illegality and a lack of due process.
- The proposed RMC Chapter 5.77 amendments are arbitrary, capricious, lacking any reasonable or rational basis or relation to the public welfare, and lacking any substantial evidence support in the record. The City's supposed supporting "evidence" for the proposed amendments is not reasonable, credible or of solid value; lacks any firm factual basis; and does not show any material change in circumstances since the City's 2023 adoption of the ordinance it now

seeks to amend, especially since the bulk of the alleged "evidence" is not at all new, but was in existence and presumably fully considered by the City Council when it previously acted on these issues in 2023.

- Under the circumstances of this case, the City had and has a ministerial duty, after proper submission and review of their Phase 2.3 site materials, to (1) continue to process and make a good faith and non-arbitrary final selection decision as to, and (2) issue building and commercial cannabis storefront retail permits to each of the Ranked Applicants. Moreover, the City cannot rely on any Ordinance or Resolution provisions purporting to confer "sole discretion" on the Council or City to "at any time" change the applicable rules, including but not limited to, the number of cannabis business permits issued (e.g., RMC § 5.77.100 E.1.); all such provisions are unlawful and invalid – facially and as applied here – as violative of substantive and procedural due process since they purport to authorize the exercise by City of unbridled discretion and arbitrary conduct, and lack any intelligible, objective or rational standards to guide the exercise of discretion.
- The City is also equitably estopped to deny the Ranked Applicants' permits, based on their reasonable and detrimental reliance on the provisions of the currently effective RMC Chapter 5.77, the City's representations to them in Phases 1 and 2 of the cannabis permitting process, and the extreme injustice that would result from not upholding an estoppel. (*City of Long Beach v. Mansell* (1970) 3 Cal.3d 462; *Kieffer v. Spencer* (1984) 153 Cal.App.3d 954.)
- Even though the proposed ordinance amendments indisputably constitute a "project" subject to review under the California Environmental Quality Act ("CEQA"; Pub. Resources Code, § 21000 et seq.), the City has failed to comply with CEQA and it cannot carry its heavy burden to establish any exemption on the factual record here.
- Adoption of the proposed unlawful Ordinance amendments would, if not set aside and if applied to the Ranked Applicants, result not only in the loss of the commercial cannabis storefront retail permits to which the Ranked Applicants are currently ministerially legally and equitably entitled, but will result in the loss of hundreds of thousands of dollars that they have invested, as expressly required by the City's permit process, and which – if the proposed amendments are adopted resulting in denial of their permits – they will seek to recover from the City.
- The City's resumption of processing permits for seven of the applicants without having adopted the unlawful Ordinance amendments treats

those amendments as if they were already in place. This de facto change in the law is illegal and violates the Ranked Applicants' rights under the Ordinance as set forth herein.

In short, unless the City immediately discontinues its unlawful permit processing and issuance moratorium, ceases to further proceed with its proposed adoption of the unlawful RMC Chapter 5.77 amendments, and fairly completes the established permitting process under the existing rules and standards that the Ranked Applicants have detrimentally relied on, the Ranked Applicants will be left with no alternative but to file an action (or actions) to invalidate the ordinance amendments if adopted, and to seek legal redress against the City for all resulting monetary damages.

## **II. BACKGROUND AND HISTORY**

### **A. The City Council's 2023 Adoption of the Cannabis Business Activities Ordinance and Adoption By Resolution No. 24048 of Related Procedure Guidelines And Application Review Criteria for Storefront Retail Commercial Cannabis Permits Was Preceded by Years of Consideration, Study, and Hearings.**

The City's framework for addressing licensed and regulated retail cannabis sales has a history that goes back almost eight years. Proposition 64 was passed in 2016. In response, the City Council began conducting workshops to investigate the matter of cannabis policy. In order to assist with this process, the City retained HdL Companies as a consultant. The City noted that HdL "[s]erves 300 cities, 44 counties and 79 transactions districts in six states," "has worked with over 50 local agencies providing outreach and education on developing marijuana Policies," and that its "staff is comprised of former policymakers and law enforcement personnel with marijuana expertise which has conducted over 10,000 compliance reviews and criminal investigations for state, county, and local government." (March 17, 2017 City Council Meeting Staff Presentation.)

The City Council conducted the first workshop on March 7, 2017. In its presentation to the Council at that workshop, HdL advised the City to "[c]reate an ordinance which is well thought out and creates good policies for the long term." (March 17, 2017 City Council Meeting Staff Presentation.)

The Council then followed up with a second workshop on July 25, 2017. At that workshop, staff recommended that the Council "[p]rovide direction regarding any proposed policy, plan, and/or regulations of medical and recreation cannabis in the City" and "[d]irect staff to establish a moratorium on all commercial cannabis activity until a fully developed Cannabis Regulation Program can be fully developed for City Council approval." (July 25, 2017 City Council Meeting Staff Report.) The reason for the latter recommendation was to allow time for the City to develop an actual regulatory policy if it were not to ban cannabis outright: "staff recommends that if City

Council wishes to continue developing a regulatory policy other than a ban then it should establish a moratorium for both medical and recreational cannabis businesses until a fully developed Cannabis Regulation Program can be implemented." (*Ibid.*)

The Council followed staff's recommendation. On September 12, 2017, the City Council adopted a moratorium via Ordinance O-7391. That moratorium was not intended as a permanent ban; instead, it specifically contemplated "the adoption of a comprehensive marijuana ordinance that addresses both commercial marijuana activities and outdoor personal cultivation of recreational marijuana," which the Council noted "will take time and careful consideration and will require input from various community stakeholders and the general public." (Ordinance O-7391.) The City also recognized the impacts of illegal cannabis, noting that "the improper cultivation of marijuana poses an environmental health risk to the public and may create a public nuisance, including without limitation: offensive and irritating odor, degradation of air quality, excessive noise, risk of criminal activity, improper and/ or dangerous electrical alterations, and impairment of the general quality of life of property owners and occupants adjoining marijuana cultivation sites." (*Ibid.*) Thus, the Council stated that "it is necessary for the City to study the impact such [cannabis] uses will have on the public health, safety and welfare, and potentially revise the City's existing regulations or adopt new regulations." (*Ibid.*) The ordinance also recognized that this process would take time and careful study, stating "in order to address community concerns regarding the establishment of commercial marijuana activities and outdoor personal cultivation of recreational marijuana, it is necessary for the City to study the impact such uses will have on the public health, safety and welfare, and potentially revise the City's existing regulations or adopt new regulations..." (*Ibid.*) And the benefits of that process were also recognized: "the citizens of the City will benefit from a comprehensive and thoughtful local regulatory scheme that addresses the potential impacts of commercial marijuana activities and outdoor personal cultivation of recreational marijuana." (*Ibid.*) The ordinance concluded, "an interim moratorium on commercial marijuana activities and outdoor personal cultivation of recreational marijuana, is required to allow the City the opportunity to consider the various policy implications of authorizing recreational marijuana activity in the City and to develop a comprehensive approach to regulate marijuana-related activities." (*Ibid.*) Thus, the ordinance directed the study and drafting of such an approach: "The City Council hereby directs the Planning Division of the Community & Economic Development Department to consider and study impacts of commercial marijuana activities and outdoor personal cultivation of recreational marijuana and to create a comprehensive ordinance that addresses both." (*Ibid.*) The City Council expressly approved the 2017 moratorium under the auspices of Government Code section 65858. (*Ibid.*)

On October 24, 2017 the City extended the moratorium by ten months and fifteen days via Ordinance O-7395; also invoking the provisions of Government Code section 65858. Among the stated grounds for the extension was the following: "Additional time is required to ensure that prior to the adoption of any regulation, adequate security measures are implemented to ensure that the cultivation,

concentration or sale of marijuana in any location or premise does not negatively impact surrounding homes or businesses by increasing nuisance activity such as loitering or crime." (Ordinance O-7395.) The ordinance also noted: "The adoption of a comprehensive marijuana ordinance that addresses both commercial marijuana activities and outdoor personal cultivation of recreational marijuana will take time and careful consideration and will require input from various community stakeholders and the general public." (*Ibid.*) It went on, "it is necessary for the City to study the impact any new regulations regarding commercial marijuana activities and outdoor personal cultivation of recreational marijuana will have on the public health, safety and welfare." (*Ibid.*) The ordinance also stated, "The citizens of the City will benefit from a comprehensive and thoughtful local regulatory scheme that addresses the potential impacts of commercial marijuana activities and outdoor personal cultivation of recreational marijuana." (*Ibid.*)

The City Council held another cannabis workshop on January 9, 2018. The staff report for that meeting noted the following: "At the October 24, 2017 hearing to extend the moratorium on cannabis uses, City Council stressed the importance of developing cannabis-related regulations as soon as possible, and directed staff to come forward with a policy framework." (January 9, 2018 City Council Meeting Staff Report.) The report also set forth the following analysis:

As defined by the Bureau of Cannabis control, a Cannabis Retailer is a person licensed to sell cannabis goods to customers as "a retailer, microbusiness, or nonprofit." The retail component of the supply chain is by design the most visible segment of the commercial cannabis industry. As such, **retail sales locations have been subject to the most scrutiny.** Retail sales locations should be thoughtfully zoned, designed, and constructed in a manner that is suitable for the neighborhood to create the least amount of impact to the surrounding businesses and neighborhood.

In addition to being highly visible to the public, the retailer is at the end of the cannabis supply chain and thus where the inventory is under the most stringent control. The final product has been tested, packaged, labeled and accounted for down to the gram. Also retailers, tend to employ the fewest number of staff members and have the highest rate of employee retention among the license types such as cultivation or manufacturing. **Under robust security measures and accessible to the fewest number of employees, there is generally very little theft from a retail sale establishment. In the six years that Colorado has been overseeing commercial cannabis activities, there have only been 8 reported violent crimes at retail sales locations.**

Based on the current demand for retailer locations (dispensaries), **retail locations can generate substantial revenues compared to other retail establishments within jurisdictions.** For example, cannabis retailers currently generate on average \$933 per square foot, which exceeds other

retail stores such as Whole Foods (\$903), Walgreens (\$720), Wal-Mart (\$446), The Gap (\$334), Kohl's (\$228) and Dick's Sporting Goods (\$184). A reason for this that most retail stores take up much more space than dispensaries, cannabis retailers stock a lot of product into a relatively small amount of space, and the average price point for marijuana is attractive to consumers.

(*Ibid.*, emphasis added.)

The City then conducted another workshop on March 27, 2018, in part to receive a report from a delegation of officials who had undertaken a trip to Denver, Colorado to evaluate that city's approach to licensed cannabis production, manufacture, distribution, and retail sales. At that workshop, the City Council directed staff to prepare an ordinance effectively banning those activities in the City. (March 27, 2018 City Council Meeting Minutes.) On May 31, 2018, the Planning Commission declined to recommend that the City Council adopt such an ordinance. (July 10, 2018 City Council Meeting Agenda.) That decision was appealed to the City Council, which heard the matter on July 10, 2018. (*Ibid.*) The Council voted to approve that ordinance, to, in the City's own words, continue the existing "moratorium phase" to allow the City to "wait and see" how cannabis policy would play out in other areas. (Ordinances O-7431 & 7432; November 18, 2021 EDC Report.) As noted in a 2021 Economic Development, Placemaking and Branding/Marketing Committee (EDC) report:

Riverside has taken a "wait-and-see" approach for the past five years that has allowed us to watch the policy process play out in neighboring and similar-sized jurisdictions to identify roadblocks, cumulative impacts, and best practices of different approaches to regulation. While this has proven useful, it has kept the City from capturing a critical revenue source that instead has bled out to our neighboring jurisdictions.

(November 18, 2021 EDC Report.)

On September 18, 2021, the City was presented with a Notice of Intent to Circulate a Petition for a voter-sponsored measure to allow and regulate cannabis sales. This gesture prompted the City to revisit the policy and regulatory issues, even though no signatures were submitted to have the initiative measure placed on the ballot.

Thus, in November of 2021 the EDC addressed the need for a municipal ordinance addressing this issue. As the Committee report noted:

The City of Riverside has remained one of the largest cities in the State of California to continue the practice of prohibiting the commercial use of cannabis. This policy action has resulted in the City losing out on a

considerably large potential revenue source from an industry with large growth potential.

In Western Riverside County, 11 out of 18 incorporated cities have adopted local ordinances regulating and permitting commercial cannabis. The County of Riverside also allows for commercial cannabis sales in unincorporated Riverside County.

\* \* \*

With a potential ballot measure coming forward, now is the time for this City Council to act and move forward on the knowledge we have gained during this moratorium phase to implement an innovative and informed commercial cannabis policy in the City of Riverside.

The first step in doing so would be through ending the city-wide prohibition of commercial cannabis uses in the Riverside Municipal Code through the redaction of language in Chapters 19.147 (Downtown Specific Plan), 19.150.020 (Permitted and Incidental Uses Table), 19.220 (Specific Plan Overlay Zone), 19.342 (Marijuana Uses and Activities) and 19.485 (Home Occupations).

This would coincide with the introduction of a comprehensive ordinance detailing a regulated process for the legalization of commercial cannabis uses, including but not limited to land use restrictions, the license selection process, and enforcement mechanisms.

It is the opinion of the author of this report that the City should first tackle the legalization of retail cannabis uses immediately while taking a step back to further study the regulation of cultivation, processing, distribution, and manufacturing uses. These uses can be regulated through a separate amendment to the Code after further community input is received.

(November 18, 2021 EDC Report.)

The EDC report laid out a proposed regulatory framework that closely resembled what the City would eventually adopt. (November 18, 2021 EDC Report.) Permit applicants would be ranked based on their submittals, with a maximum number of 14 licensees. (*Ibid.*) Applicants would have to submit business plans, security plans, neighborhood engagement plans, and labor and employment plans, among other documents. (*Ibid.*) EDC followed up on this policy recommendation by directing City staff to create a draft ordinance that would address permitting, licensing, enforcement, taxation, and operation of retail cannabis outlets. (November 18, 2021 EDC Meeting Minutes.)



The EDC held another meeting at which the City's cannabis policy was addressed on March 24, 2022.<sup>1</sup> (March 24, 2022 EDC Meeting Agenda.) The committee provided further direction to staff to draft amendments to three parts of the Municipal Code – Title 5 – Business Taxes, Licenses, and Regulations; Title 9 – Peace, Safety, and Morals; and Title 19 – Zoning. (March 24, 2022 EDC Meeting Minutes.) The EDC also directed staff to prepare a financial analysis on revenue from legal cannabis sales and to proceed with a ballot measure for a cannabis tax to be put before the voters in 2022. (*Ibid.*) Staff complied with these directives. (October 20, 2022 EDC Meeting Agenda, Staff Report, & Draft Municipal Code Provisions.) In October of 2022 the Committee directed staff to finalize the proposed changes to the Municipal Code and to forward the same to the Planning Commission and City Council for their respective consideration and action. (October 20, 2022 EDC Meeting Minutes.)

On December 8, 2022, the Planning Commission held an informational workshop on the proposed cannabis regulations. (December 8 Planning Commission Meeting Agenda & Memorandum.) The Planning Commission then unanimously recommended approval of the zoning amendments to the City Council on January 19, 2023. (December 8, 2022 Planning Commission Meeting Minutes.) The City Council then voted 5-2 to introduce the ordinances enacting the cannabis policy on February 28, 2023. (February 28, 2023 City Council Meeting Minutes.) The ordinances were finally adopted by the same vote of the City Council at its meeting on March 14, 2023. (Ordinances O-7628, O-7629, & O-7630.)

But the allowance of retail cannabis uses still required additional regulatory guidance for the permitting process per section 5.77.130 of the City's Municipal Code. Thus, on August 17, 2023, the EDC convened another meeting to discuss what permitting parameters should be in place. It directed staff to incorporate certain changes to the proposed ordinance and policy approach.

The final proposed application rules and procedures, captioned "Storefront Retail Commercial Cannabis Business Permit Procedure Guidelines and Application Review Criteria" ("Guidelines") came before the City Council on October 17, 2023. (October 17, 2023 City Council Meeting Agenda & Draft Guidelines.) In keeping with the prior analyses and research undertaken over the preceding six-plus years, the proposed permitting process was detailed and exhaustive. It was also based on a peer analysis of twelve other cities and their approaches to cannabis permitting and regulation, including Corona, Modesto, Sacramento, Stanton, Costa Mesa, Moreno Valley, San Bernardino, Stockton, Long Beach, Oakland, Santa Ana, and West Hollywood. (October 17, 2023 City Council Meeting Staff Report & Presentation.)

As discussed above, those procedures and criteria are quite specific, detailed, and exacting, demonstrating the time, attention, and lengthy process the cannabis

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<sup>1</sup> The City had the previous month also again retained HdL to assist with the analysis and drafting of a cannabis ordinance for the City.

standards had been subject to. (Resolution R-24048.) The City Council adopted the Guidelines via Resolution 24048, and it is that document that has induced and governed the Ranked Applicants' applications to and process with the City. (*Ibid.*)

In sum, the process leading up to the permitting process set forth in Resolution 24048 spanned almost seven years, included sixteen public meetings, with no fewer than ten by the City Council, as well as extensive research, factfinding, and the retention and advice of expert consultants.

**B. Overview of the City of Riverside's Application Process for Cannabis Business Storefront Retail Permits**

On November 15, 2023, the City released its Storefront Retail Cannabis Business Permit Application ("Application") to the public, and the application window ended on December 15, 2023. (See Exhibit 1: Application.) Pursuant to the Guidelines and Application, applicants were required to submit a comprehensive business plan, a background check form, a defense and indemnification form, and a non-refundable application fee of \$13,842.00. The Guidelines included a prohibition on verbal communications between applicants and City personnel, with communications only allowed in writing, submitted to the City Manager or his designee, and with responses to be published on the City's website ("Communication Policy"). (Resolution R-24048.)

The application process was bifurcated into two phases, with multiple steps in each phase. Phase 1, Step 1.1 included a review of the application materials by an "Independent Facilitator" selected by the City Manager or his designee. As part of Step 1.2, all applications granted clearance in Step 1.1 were reviewed, evaluated, and ranked pursuant to the City's merit-based criteria by a review panel consisting of City staff from various departments. The City received 42 total applications, and after Step 1.2, the Merit-Based Evaluation, the top 14 scoring applicants received provisional approval. (See Exhibit 2: Rankings.)

On February 2, 2024, the City notified each applicant via email that the City was extending the application review period. A follow up email dated February 28, 2024 informed all applicants that the City anticipated concluding the review process "soon". On March 12, 2024, the City emailed and posted an online notice of the provisional approval list, which included the following 14 top ranked applicants set forth below (with the Ranked Applicants' names and positions bolded, and as indicated below, several ties among the top scores):

- #1 STIIIZY Riverside LLC
- #2 SGI Riverside LLC
- #3 C4TP Retail A Inc.

- #3 Riverside Community Retail LLC
- #5 Community Oriented Riverside Retail LLC
- #5 Riverside Responsible and Compliant Retail LLC
- #7 Blaine St. RS LLC
- **#8 OTC Riverside City LLC**
- **#9 Packs Riverside LLC**
- #9 Riverside West Coast Retail LLC
- **#9 The Artist Tree Holdings LLC (TAT RV LLC)**
- #12 Catalyst Riverside Equity LLC
- #13 Haven Riverside LLC
- #13 Catalyst Riverside LLC

(See Exhibit 2.)

In the meantime, on November 28, 2023, the City Council voted to put forward Measure B on the March 5, 2024 ballot as authorized by City Council Ordinance 7661, which established Chapter 5.78, entitled "Cannabis Business Tax," of Title 5, "Business Taxes, Licenses and Regulations," of the Riverside Municipal Code, and which allows the City Council to impose, by resolution, an excise tax of up to ten percent (10%) on the gross receipts of all cannabis businesses within the City, subject to voter approval. The Riverside City Attorney published impartial analysis of Measure B, concluding that the cannabis tax would likely generate \$2,000,000 for the general fund on an annual basis. Measure B was indeed placed on the March 5, 2024 ballot, and was approved overwhelmingly by 61.47% of the registered voters in the City of Riverside.

Significantly, the exact language placed on the ballot was, "Shall the City of Riverside adopt an ordinance establishing a tax on all cannabis businesses at a maximum rate of 100 of the gross receipts of each business, potentially **generating \$2,000,000 or more** in revenues annually for unrestricted general revenue purposes, until repealed by voters?" (Measure B, emphasis added.) Clearly, the voters believed they would benefit from all 14 dispensaries operating. In contrast to the overwhelming popularity of Measure B, none of the newly elected City councilmembers obtained more than 55% of the vote in any of their respective wards. In fact, Measure B received more than double the votes in favor of its passage than all 4 newly elected

councilmembers *combined*.<sup>2</sup> There can be no serious question that the majority of voters in the City of Riverside want cannabis in their City and that they want 14 dispensaries that generate significant tax revenues for the City's general fund. The voters of the City of Riverside were promised 14 operational dispensaries generating at least \$2,000,000 in general fund tax revenue, not a 4-operator oligopoly and ensuing litigation over unlawful City actions with the aim of thwarting that promise.

On April 9, 2024, the City emailed instructions for Phase 2 (described below) of the application process to the top 14 applicants as listed above, including the Ranked Applicants. The requirements of Phase 2 were detailed, time sensitive, and quite expensive.

In Step 2.1, Location Selection, each applicant had 90 days to submit information regarding a compliant location, critically including both proof of control of the site (by executed lease or deed) and a non-refundable "Site Review" fee of \$17,864.00. Once received by the City, the Independent Facilitator reviewed the submitted locations, in order of applicant ranking to determine if the location had been already selected by a higher ranked applicant. Once a property was thus vetted, each applicant was required to obtain a Zoning Verification Letter ("ZVL") to confirm the Application's zoning compliance and required distance from any designated sensitive uses (Phase 2.2). After this zoning clearance, the City posted a list of each applicant's approved location on its website and provided written notice to the applicant.

Following the receipt of a ZVL from the City, under Step 2.3 (Site Submittal and Review), all applicants had 90 calendar days to submit required site/operational information for their approved location (including specific site diagrams, floor plans, elevations, exterior building photos, landscaping plan/photos, sign plans, security plans, and timelines). This required the applicants to incur further substantial expense in engaging engineers, architects, and other professional experts to comply with the City's exacting and extensive requirements. Per the Guidelines, the City was required to notify applicants within 30 days of their Phase 2.3 submission of its completeness

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Ward 1	Philip Falcone	2,961	51.16%
Ward 3	Steven Robillard	3,910	53.75%
Ward 5	Sean Mill	2,896	51.58%
Ward 7	Steve Hemenway	3,553	100.00%
Total Votes for Sitting Council		13,320	
Measure B-City of Riverside Cannabis Business Tax	YES	27,252	61.43%

and compliance with the City's rules. The Ranked Applicants all submitted compliant Phase 2.3 materials between Fall 2024 and early 2025. Accordingly, the Ranked Applicants should have been promptly notified that their Phase 2.3 submissions were complete, accurate and in compliance or of the need for any corrections or additions thereto, advanced to the final approval stage by December to March 2025, and thereafter promptly approved based on satisfaction of the final ministerial requirements and approvals discussed below. The City clearly failed to comply with the 30 day notice timeline set forth in the Guidelines with respect to TAT's Phase 2.3 submission. TAT submitted its Phase 2.3 materials on September 12, 2024, received comments from the City on November 8, 2024, and submitted responses to the City's comments on November 22, 2024; however, the City failed to provide any further notice that TAT's submission was complete or otherwise within 30 days of TAT's November 22, 2024 resubmission. In spite of OTC and Packs also submitting what they believe are fully compliant plans and drawings for the Site Submittal Review process, to date, they have not received any comments back from the City.

Under Step 2.4 (Final Permit Approval), within 180 days of notice of completion of Step 2.3, the City Manager is authorized to grant final permit approval if:

- Applicant has provided proof of property control via a lease or deed;
- Applicant has executed an Operational Agreement (required within 21 calendar days of completion of Step 2.3);
- Applicant has received their State Cannabis License (within 12 months of completion of Step 2.3, which may be extended by City Manager for up to 180 additional calendar days);
- Applicant has obtained a City Business Tax Certificate; and
- Applicant has obtained all required entitlements, such as building, fire, and occupancy permits.

On April 16, 2024, the City emailed each ranked applicant a portal link for submitting all Phase 2 materials. On June 7, 2024, the City emailed each ranked applicant a notice of a 90 day extension of Step 2.1 Location Selection, extending the original deadline of June 10, 2024 to September 5, 2024.

**C. Ranked Applicants' Participation and Status in Phase 2 of City's Application Process**

The Ranked Applicants' participation and status in Phase 2 of the process is accurately set forth below.

**Step 2.1      Location Selection / City Approval**

*TAT (dba The Artist Tree)*

- Initial Property Submission: May 17, 2024.
- Resubmission: July 9, 2024.
- City Confirmation: October 3, 2024.

*OTC*

- Initial Property Submission: May 13, 2024
- Resubmission: August 21, 2024
- City Confirmation: October 15, 2024

*Packs*

- Initial Property Submission: June 8, 2024
- City Confirmation: October 3, 2024

**Step 2.2 Issuance of Zoning Verification Letter**

The Ranked Applicants received their ZVL's from the City on the dates set forth below:

- *TAT*: October 17, 2024
- *OTC*: October 15, 2024
- *Packs*: October 15, 2024

**Step 2.3 Site Submittal and Review**

As required within 90 days of receipt of a ZVL, each of the Ranked Applicants submitted their lengthy, detailed and costly Phase 2.3 materials on the dates shown below.

*TAT (dba The Artist Tree)*

- On September 12, 2024, TAT submitted its 2.3 materials, with receipt acknowledged by the City on October 23, 2024. The City then sent notice of review on November 8, 2024. TAT responded to the Notice of Review via email on November 21, 2024 and uploaded its response to the City's cannabis portal on November 22, 2024.

*OTC*

- On January 3, 2025 OTC submitted its 2.3 materials to the City and received confirmation from the City on January 6, 2025.

*Packs*

- On February 6, 2025, Packs submitted its 2.3 materials to the City.

**D. City of Riverside Unlawfully Imposes and Declares Moratorium Completely Halting All Cannabis Program Permit Processing And Issuance While City Council Proposes to Consider Major Cannabis Business Activities Ordinance Amendments**

Despite the Ranked Applicants' full compliance with all City requirements, substantial financial investments, and diligent completion of every mandated step in the process, the City staff – arbitrarily and without proper or legal justification in the form of the statutorily required City Council moratorium ordinance – abruptly halted the cannabis program for 90 days on or about January 7, 2025, causing significant financial harm and operational delays to the Ranked Applicants. The City did so in conjunction with the City Council's expressed desire to consider major amendments to the current Cannabis Business Activities Ordinance that would cut the number of authorized storefront retail permits in half, limit dispensaries to no more than one per ward, prohibit permit or ownership transfers absent one year of operation with the "full ownership/team structure as submitted", prohibit locating permitted dispensaries within 1,000 feet of each other, and adding parks as a sensitive use from which dispensaries must maintain a 600-foot distance.

**III. CITY'S ACTUAL AND THREATENED LEGAL VIOLATIONS**

**A. The Proposed Amendments to Riverside Municipal Code Chapter 5.77 Are "Arbitrary, Capricious and Without a Reasonable or Rational Basis" And They Lack Substantial Evidence Support**

The City Council's proposed amendments to Riverside Municipal Code ("RMC") Chapter 5.77 are unlawful and would be judicially invalidated if adopted and challenged because, inter alia, they are "arbitrary, capricious or [without] reasonable or rational basis." (*Wallace Berrie & Co. v. State Bd. of Equalization* (1985) 40 Cal.3d 60, 65.) Further, they lack substantial evidence support in the record.

The proposed RMC amendments arbitrarily reverse the policy course carefully and deliberately set by the Riverside City Council less than two years ago in 2023 and lack a rational basis or reasonable relation to the public welfare. Given the extensive hours of analysis and research undertaken by the previous Council, and the lack of any new information showing a material change in any relevant factual circumstances, this abrupt shift regarding the allowable number and location of cannabis retail permits appears to be purely political, driven by the results of the most recent City Council election without regard to the facts, the express purposes of the current ordinance, or the extensive research and findings supporting the current ordinance.

As discussed above and reflected in the record leading to the adoption of the City's current cannabis ordinance, the 2023 City Council engaged in detailed discussions and extensive public comment on key issues such as buffer distances, sensitive uses, permit limits, and zoning considerations for cannabis businesses. These years-long deliberations led to the adoption of the current ordinance, which established the permitting process that all listed applicants, including the Ranked Applicants, have been navigating and complying with – in good faith and at great expense – for over a year on pain of forfeiture of their right to pursue permitting. The City's unlawful moratorium on and arbitrary proposal to abruptly alter this process after its virtual completion, and at a point when building and retail permits should be ministerially issued to the successful applicants, improperly deprives each of the Ranked Applicants of their opportunity and right to obtain a cannabis retail license in the City.

The five RMC modifications solicited by the current Council and proposed by staff – (1) reducing the total number of storefront retail permits from 14 to 7, (2) requiring each of the 7 permits to be allocated one per ward, (3) mandating one year of operation with the “full ownership/team structure” prior to transfer or sale (with no exception for death or incapacity), (4) imposing an additional 600-foot buffer requirement (from public and private parks), and (5) mandating a new 1,000-foot separation between cannabis retailers – are irrational, unnecessary, and unsupported. For example, many California cities that regulate commercial cannabis through zoning and permit limits do not impose distance requirements between cannabis retailers, because the regulatory counterweights of required distance from sensitive uses, zoning restrictions and reasonably limiting the total number of permits achieves the same goal while still allowing economic competition and the additional security benefits provided by well-regulated co-located dispensary uses. Examples of municipalities that have successfully adopted this approach are: Blythe, Cathedral City, Coachella, Oxnard, Port Hueneme, Culver City, Benicia, Davis, Goleta, San Bernardino, San Luis Obispo County, Alameda, Palm Desert, Brisbane, Carson City, Chico, Calexico, Sonoma, Grover Beach, La Mesa, West Hollywood, Hawthorne, and Montebello, to name a few.

One substantial “counterweight” here is RMC section 5.77.350, which ensures each retail dispensary business will employ extensive safety and security measures that will inevitably enhance, not imperil, public safety in instances of co-located stores. (See Ordinance O-7661.) These measures include, without limitation:

- Exterior lighting with motion sensors for after-hours security.
- Anti-loitering requirements.
- Limited access areas.



- 24-hour high5 definition, color security surveillance cameras covering all entrances and exits, all publicly accessible interior spaces, and all interior spaces where cash, currency or cannabis is regularly stored, or where cannabis could be diverted, with video recordings to be maintained at least 90 days and made available to the Police Chief on request, and with remote monitoring by the City enabled.
- Real time monitoring through sensors of all entries into and exits from all secure areas by a state-licensed security company.
- Panic buttons to directly notify police and alert dispatch should incidents occur.
- Professionally installed, maintained, and permitted alarm system monitored in real time by a state-licensed security company.
- 24-hour-a-day, on-site state-licensed security personnel, or alternative security with after-hours patrol authorized by City Manager.
- Back up system to ensure locks are not released and premises remain secure during a power outage.
- Designated security representative/liaison to City Manager with extensive duties and qualifications.
- Requirements to promptly notify City of any discovered inventory discrepancies, diversions, theft, criminal activity, or any other security breach.

These detailed and extensive security requirements (which are only a portion of those required by the ordinance) would deter crime and make commercial cannabis storefront retail premises among the most, if not the most, secure business premises in the City.

Notably, the above facts and security regulations are not accounted for or even mentioned in the City's most recent staff report or other "evidence" considered in conjunction with the City's proposed ordinance revisions. (March 25, 2025, City Council Staff Report.) In terms of potential crime impacts and otherwise, the conclusions expressed in the Police Department's accompanying report entitled "Retail Sales of Cannabis – Health and Safety Impacts on Riverside Communities" (hereafter, the "Cannabis Report") are unsupported and arbitrary, fail to address or further the stated goals of the City's current ordinance (which include retail access to cannabis by residents), and fail to provide any rational basis or substantial evidence support for the proposed RMC amendments concerning, inter alia, distance, location, and number of permits. The Cannabis Report lacks recent or reliable information, or even relevant or confirmable data; its claims consist for the most part of unsupported

anti-cannabis legalization opinions that are entirely inconsistent with the facts and current research, as well as the fundamental premises of the City's existing Cannabis Business Activities Ordinance.

The "methodology" used in the Cannabis Report to estimate or predict future crime statistics or occurrences that would result from permit processing and issuance proceeding under the current ordinance is patently unreasonable and inadequate because it analogizes to an entirely different and incomparable scenario. Simply put, there is no rational basis for using crime statistics relating to five tobacco shops operating as illegal cannabis dispensaries as a proxy for crime impacts reasonably to be expected from legal dispensaries fully vetted, authorized, and regulated under the City's rigorous current RMC Chapter 5.77 regulations and the onerous cannabis regulations imposed by the state of California. (But see Cannabis Report, at p. 7 ["we chose to analyze the calls for service history within a 500-foot radius of five retail tobacco locations we know are acting as unpermitted cannabis dispensaries. We chose to look at one year of calls for service before and after the establishment first opened."].) A valid methodology would have been to analyze data from similarly regulated cannabis retail stores operating legally in similar cities, but the Cannabis Report **concededly lacks any such relevant data**. (*Id.*, at p. 2 [claiming its "research ... attempted to obtain data from local jurisdictions that currently allow the retail sales of cannabis [but] ... the local jurisdictions were unable to accommodate our requests ..."].) While the Cannabis Report fails to disclose where, how, and to whom it made any such requests for relevant local data, it is apparent that with several neighboring cities currently permitting cannabis sales – many of which are cited in the City's most recent staff report for their cannabis land use regulations – relevant crime data specific to legal California dispensaries should have been readily obtainable through public records requests or other channels available to the City. That the Cannabis Report's preparers did not diligently seek, obtain, or produce such data strongly supports an inference that the omitted evidence would not have supported, but rather, would have further materially undermined the Report's already unsupported conclusions. (See Evid. Code, § 412 ["If weaker and less satisfactory evidence is offered when it was within the power of the party to produce stronger and more satisfactory evidence, the evidence offered should be viewed with distrust."].)

In the absence of such relevant data, another potentially valid methodology the Cannabis Report might have employed would have been comparison to a similarly regulated and legal industry in Riverside, such as retailers with off-site liquor licenses, but, again, no discernible effort to obtain such data was made by the Cannabis Report's preparers. And, again, while crime associated with a handful of tobacco shops illegally operating as cannabis dispensaries in the City may indicate a failure on the part of local law enforcement, but it has no logical relevance or predictive value regarding crime that might potentially or reasonably be expected to result from the legal operation of the heavily vetted, regulated, and secure dispensaries permitted under the City's current stringent cannabis ordinance and regulations. Crime naturally – if not by definition – increases around *illegal* businesses, regardless of the type of illicit activity involved. The distance between tobacco shops illegally selling

intoxicating hemp and cannabis products – whether 1,000 feet or 10 feet apart – has no impact on crime statistics because those businesses by definition operate outside the law, seeking to evade detection, taxation and regulation. In contrast, the Ranked Applicants here are fully committed to following the City's currently established permitting process, complying with all applicable laws, making significant property improvements, providing jobs, generating additional tax revenues and generally enhancing the economic health of the City as a whole.

Moreover, this exact issue has already been studied – in literature unsurprisingly ignored by the Cannabis Report – and the conclusion was that crime around tobacco shops and off-sale alcohol outlets does, indeed, increase – but not around licensed dispensaries. The on-point study (which is not even acknowledged by the Cannabis Report) concluded that the two are simply not comparable. (See Andrew M. Subica, Jason A. Douglas, Nancy J. Kepple, Sandra Villanueva, Cheryl T. Grills, *The geography of crime and violence surrounding tobacco shops, medical marijuana dispensaries, and off-sale alcohol outlets in a large, urban low-income community of color*, available at <https://www.sciencedirect.com/science/article/pii/S0091743517305078>.) Yet, such an inapt comparison forms virtually the *entire* basis of the Cannabis Report's flawed and unsupported conclusion that dispensaries legally permitted and operating under the City's stringent regulations will increase crime in surrounding areas.

Citing outdated 2017 studies – which notably are not new information and were available long before the City adopted its 2023 Cannabis Business Activities Ordinance and regulations – the Cannabis Report relies on reported statistics from just two cities, Denver, Colorado and Long Beach, California, to try to bolster its flawed and unsupported conclusions. (See Cannabis Report, at p. 7 [“One study looked at Denver, Colorado and Long Beach, California and found that both cities showed an increase in property crimes. The study showed mixed results regarding violent crime, with no increase in the City of Denver, however violent crime increased in the areas adjacent to marijuana dispensaries in the City of Long Beach (Freishler, Gaidus, Tam, Ponicki, & Gruenwald, 2017).”].) But the information is nearly a decade old; moreover, Denver has an entirely different regulatory regime and more than twice the City of Riverside's population, and Long Beach is a much larger city that was plagued with considerable crime both before and after cannabis dispensaries were legalized – facts that are conveniently omitted from the Cannabis Report. (Exhibit 3: Census Data for Cities of Denver, Long Beach and Riverside.)

A much more apt comparison would be to the documented experience of the City of Santa Ana, which has approximately the same population as Riverside and was the first city in Orange County to approve retail sale of Adult-Use Cannabis. As documented in the Report of the Orange County Grand Jury (2020-2021) entitled “‘Pot Luck’: Santa Ana's Monopoly on Licensed Retail Adult-Use Cannabis in Orange County” (the “OC Grand Jury Report,” Exhibit 4). Based on extensive internet, legal, and documentary research, and interviews with City officials and employees, and professional experts and cannabis proprietors and employees not employed by the

City, as well as numerous site visits by grand jurors to observe the operations, staff, clientele, and premises of licensed retail dispensaries, the OC Grand Jury Report found that Santa Ana experienced significant and highly beneficial increases in City revenues with no reported increase in criminal activity as a result of its ordinance. (OC Grand Jury Report, at pp. 1, 3.) Santa Ana's retail cannabis ordinance, which generally resembles Riverside's current Cannabis ordinance, allows a total of 30 dispensaries, and as of April 15, 2021, 23 dispensaries were open and legally operating, with great community benefits. (*Id.* at pp. 3-5.) Critically, per the OC Grand Jury Report, based on interviews with City officials and staff, and through planning, building, code enforcement, and police enforcement efforts, the number of unlicensed dispensaries operating illegally in Santa Ana decreased dramatically from 120 to "less than a handful" since the ordinance became effective. (*Id.* at p. 4.) It stated: "The reality is that shutting down the unlicensed, illegally operating dispensaries will increase business for the licensed facilities, thereby increasing the City's tax revenues" and resulting in "a win-win for both the licensed dispensaries and the City of Santa Ana." (*Id.* at p. 5.) Further, and importantly, Police and Code Enforcement staff verified "there has been no apparent increase in criminal activity in the areas surrounding ...dispensaries" and in this connection the report noted the enhanced security mandated by the city's ordinance for such businesses, which—based on the Grand Jury's personal inspections—were clean, well-managed, and extremely secure. (*Ibid.*) Finally, both the already-realized and expected future financial benefits to the city and its programs, particularly youth programs, were extensive, and the resulting "reduction in illegal/unlicensed shops has improved community safety for both customers and residents." (*Id.* at pp. 6-7.)

In sharp contrast, the City of Riverside's Cannabis Report fails to provide relevant data or information, or any valid apples-to-apples comparison of crime statistics, instead relying on outdated 2017 data rather than presenting current crime statistics specific to legally operating cannabis dispensaries. The Cannabis Report's selective use of largely irrelevant data creates a highly misleading narrative, making the Cannabis Report an unreliable and unreasonable basis for modifying the existing ordinance; and, importantly, it also fails to address the specific issues and concerns previously expressed by the City Council.

The Cannabis Report's biased approach is further evidenced by the complete logical disconnect between its stated purpose and the nature of the "analysis" it includes. At page 2 of the Report, its first enumerated paragraph states a purpose to "study the effects of geographic density, proximity to sensitive receptors and other health and safety concerns **in furtherance of the stated goals of the cannabis business activities ordinance** and other related ordinances, including ... **retail access by residents** and/or protection of health and safety of the residents from negative impacts." (Cannabis Report, p. 2, emphasis added.) Yet after that initial "lip service" the Report never once recites or analyzes the current ordinance's stated goals, including, but not limited to, providing residents with retail access to cannabis, or how to further those relevant goals. The Cannabis Business Activities Ordinance's

stated goals – which should have been the Cannabis Report’s lodestar – are set forth clearly in RMC section 5.77.020, which states:

“It is the purpose and intent of this chapter to implement the provisions of the Medicinal and Adult Use Cannabis Regulation and Safety Act (“MAUCRSA”) to accommodate the needs of medically ill persons in need of cannabis for medicinal purposes as recommended by their health care provider(s) and to provide access to same. It is also the purpose and intent of this chapter to provide access to adult-use cannabis for persons aged 21 and over as authorized by the MAUCRSA, while imposing sensible regulations as to use of land to protect the City’s residents, neighborhoods, and businesses from disproportionately negative impacts. It is the purpose and intent of this chapter to regulate the commercial sale, delivery and testing of cannabis and cannabis products in a responsible manner to protect the health, safety, and welfare of the residents of the City and to enforce rules and regulations consistent with state law.”

(Ordinance O-7628, RMC, § 5.77.020.)

Rather than tailoring its research and focus to address and further these goals pursuant to its stated purpose, the Cannabis Report immediately veers into an all-out, “Reefer Madness”-style propaganda piece attacking the fundamental policy wisdom of medicinal and adult-use cannabis legalization generally, under both California law and the City’s ordinance. It thus leads off its “Overview” section at pages 3 to 4 with a lengthy anti-legalization statement released in late 2024, on the eve of the seventh anniversary of legal marijuana sales in California, by Dr. Kevin Sabet, the leading opponent of marijuana legalization in the United States and co-founder of “Smart Approaches to Marijuana” (“SAM”). Founded in Denver in 2013, SAM is the leading organizational opponent of marijuana legalization in this country. Sabet’s policy opinions about the effectiveness and desirability of California’s (and other states’) marijuana legalization legislation may be interesting to some, but they are irrelevant to the specific issues here and do not “write on a clean slate”: like it or not, commercial cannabis business activities have long been legal and regulated under California state law and since at least 2023 are legal and regulated under the City’s laws, as well.<sup>3</sup> The fundamental charge of the Cannabis Report’s preparers was not to support a

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<sup>3</sup> It is notable that despite SAM’s anti-legalization efforts in the last 5 years, at least seven (7) states – Arizona, Montana, New Jersey, South Dakota, Virginia, New Mexico and New York – have moved forward with legalization through popular ballot measures or the legislative process, while legalization did not advance in three states, North Dakota, Hawaii and Maryland.



referendum on the basic policy issue of legalization or the wisdom of an individual's decision to use legally available marijuana, but, rather, to research specific factual issues in furtherance of the goals of the City's existing ordinance – a charge it clearly failed to follow. (January 7, 2025 City Council Meeting Minutes.)

But even taken on its own terms, the Cannabis Report fails to constitute or provide substantial evidence in support of any of its conclusions. Sabet's conclusions about the prevalence of contaminated product cite "one study" limited to "57 samples of concentrates sold for dabbing in California" – a limited sample of one type of high potency manufactured products insufficient to draw any broad conclusions about adverse health effects and hospitalization from legal medical and adult cannabis use more generally. (Exhibit 5: Sabet Report.) The study Sabet cited to claim that recreational marijuana legalization ("RML") led to increased use among California adolescents also found that "[o]verall, RML was not significantly associated with frequency of past-30-day-use among users" and concluded that despite RML's association "with an increase in adolescent marijuana use in 2017-2018 and 2019" the institution of "[e]vidence-based prevention programs and greater local control on retail marijuana sales may help to reduce marijuana availability and use among adolescents." Notably, as with alcohol, use of recreational marijuana by individuals under age 21 is *illegal* and this prohibition would be strictly enforced under City's current ordinance. (See RMC §§ 5.77.370 I, 5.77.380 B, 5.77.400 A.)

While Sabet claims an independent "investigation in San Diego" "found that 30% of marijuana samples purchased from licensed retailers in Southern California lab-tested positive for pesticides" (citing Grover & Coral, 2019), the alleged study is not provided nor is any detail given regarding the types of source or sample size and locations of the allegedly tested products. (Cannabis Report, pp. 4-5.)

Sabet and the Cannabis Report reference and selectively quote a 2024 Los Angeles Times article on allegedly excessive pesticide contamination above regulatory levels mostly in vapes and pre-rolled joints, but the article – and by extension the Cannabis Report crediting it – ironically singles out STIIIZY as the alleged main offender in two of the primary areas of concern expressed in the Report: product contamination and tobacco retailers illegally selling marijuana. Thus, STIIIZY allegedly sold a vape with 60 times the maximum amount of pymetrozine allowed by federal regulators in cigarettes, and also allegedly illegally sold hemp vapes above legal THC limits in tobacco retail locations operating without cannabis business permits. (See Cannabis Report, pp. 4-5.) The incongruity of STIIIZY being the City's top-ranked applicant (STIIIZY Riverside LLC) and second-place ranked applicant (SGI Riverside LLC) among the 14 listed and ranked applicants should not be missed and is further underscored by Riverside Vice's alleged targeting of 42 tobacco retailers out of 232 in the City and determining 30 (71%) were illegally selling cannabis projects. (*Id.* at p. 6.) This logical disconnect is further amplified by the Cannabis Report's mention of several lawsuits against STIIIZY alleging it uses "cheaper, illegal cannabis" to gain competitive advantage and that its founder and former CEO Tony Huang was arrested by LAPD for allegedly operating multiple illegal cannabis

dispensaries and cultivation sites. (The Cannabis Report might also have mentioned, but did not, that STIIIZY is also currently under investigation in New York for allegedly illegally selling products there that were made in California and other states.) All of which begs the question: if the City credits the hearsay LA Time article and the Cannabis Report identifying STIIIZY products sold in smoke shops throughout Riverside as factual and “substantial evidence,” how can it simultaneously rank STIIIZY as its top 2 storefront retail applicants? How can STIIIZY be both the poster child for bad actors as the basis for eliminating 7 of 14 licenses and at the same time, receive 2 of the remaining 7 permits? It should be very evident that something is very wrong with the picture that the City is attempting to paint in support of its unlawful actions here. And, while Ranked Applicants have not had the opportunity to obtain and review all communications between STIIIZY and individuals at the City of Riverside, there is evidence of ex parte communications in violation of the City’s communication moratorium about at least one of the same issues as to which Council seeks to amend the current ordinance: the number of permits allowed in the City. (See Exhibit 6: City Emails with STIIIZY.)

The Cannabis Report’s citation of old and incomplete statistics from traffic accidents and emergency room visits in Canada, allegedly related to legalized marijuana use, and other disjointed traffic statistics, are not new or current information and in reality prove nothing except that individuals occasionally engage in illegal and criminal behavior in the form of driving while intoxicated, whether under the influence of alcohol, marijuana or otherwise. While such “junk statistics” and recitation of a smattering of alleged adverse health effects may be deemed persuasive arguments by anti-legalization advocates like Sabet – and, apparently, the City’s Police Department – they fail to address the factual issues that were the focus of the Council’s specific direction for the Cannabis Report.<sup>4</sup>

The Cannabis Report likewise provides no meaningful illumination of possible negative effects on surrounding businesses, as to which the Report merely observes there is “no clear guidance” except that locating a dispensary does not affect an existing liquor license in California. (Cannabis Report, at p. 11.) In other words, no negative effect.

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<sup>4</sup> It is no surprise that the most current relevant research contradicts the Cannabis Report’s broad and unsupported conclusions as to alleged increases in suicides and prevalence of use resulting from legalization. (See CATO Institute: The Effect of State Marijuana Legalizations: 2021 Update, By Angela Dills, Sietse Goffard, Jeffrey Miron, and Erin Partin, February 2, 2021 | Number 908 Page 8, Figure 7 [“the Appendix displays the yearly state suicide rate, relative to the national rate, before and after legalization (vertical line) for each state that legalized marijuana between 1999 and 2018. It is difficult to see any association between marijuana legalization and changes in suicide trends.”]; see also, p. 5, [““Legalizing states display higher and increasing rates of use prevalence, but these patterns existed prior to legalization.”].)

The Cannabis Report's assertion that "cannabis legalization fuels the black market" is based on speculative assumptions, hearsay, and unprovable hypotheses, as black market operations are obviously illegal businesses whose prevalence stems more from law enforcement failures than regulated and legal cannabis operations. It is also directly contradicted by the findings of the Orange County Grand Jury that in Santa Ana—a city with the same population as Riverside— illegal dispensaries dramatically decreased from 120 to "less than a handful" under operation of that city's similar cannabis ordinance. (OC Grand Jury Report, at p. 4.) Further, this section of the Cannabis Report again ironically cites STIIZY's former CEO as "an example of how the legal market boosts the profits of the illegal market and vice versa." Legalized cannabis operations' alleged conflicts with Blue Zone Project goals are similarly contrived "make-weights" stemming from general opposition to any form of legalized marijuana, rather than being connected with any of the specific land use issues actually within the Cannabis Report's assigned purview.

In summary, the Cannabis Report provides no rational basis or substantial evidence support for modifying the current ordinance as to the number of permits allowed, or the location of and distance between permits, or between permits and sensitive uses, and any proposal to do so at this time is arbitrary and capricious. This effort appears to be wholly driven by anti-cannabis politics, bias and/or fear, rather than facts, and also occurs with woefully minimal consideration of economic impacts and community benefits. Neither the Cannabis Report nor the most recent City Council staff report meaningfully addresses such concerns – except to note lower-than-anticipated state tax revenues, and that the City's currently contemplated actions will cost it at least \$1,000,000 in annual revenues according to the City Attorney's impartial analysis of Measure B<sup>5</sup>. (City Attorney Impartial Analysis of Measure B.) The Cannabis Report entirely overlooks the lost economic and local tax benefits of allowing 14 properties to be developed, 14 businesses to create jobs, and local vendors to benefit – choosing instead to recommend cutting that number to just 7 stores, operated by 4 ownership groups. Rather than taking a forward-thinking approach, in line with State law and its past well-considered decisions, the City is undermining its own ordinance's stated goals and the City's economic growth based on seemingly contrived agendas and irrational biases that have long been debunked. (See Exhibits 7-15: Recent Studies and Publications on Cannabis Crime, Healthy and Safety issues.)

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<sup>5</sup> The Riverside City Attorney's Office published an impartial analysis of Measure B, estimating \$2,000,000 in annual tax revenue assuming the operation of 14 dispensaries City wide; thus a 50% reduction would logically result in a 50% reduction in estimated revenues. There is no related analysis about anticipated City tax revenue were when all licenses are to be controlled by just 4 entities.



**B. The City Had a Ministerial Duty to Complete the Permit Process, Make a Final Decision and Issue Each Ranked Applicant a Building Permit and Business Activities Permit After Proper Submission and Review 2.3 of the Site Materials.**

Under the circumstances of this case, the issuance of a building permit by the City following its cannabis merit-based application process is a ministerial duty, constituting a mandatory and non-discretionary act that the City is legally obligated to perform once applicants have satisfied all of the City's specific legal requirements, as the Ranked Applicants have done here. (*Munns v. Stenman* (1957) 152 Cal.App.2d 543, 557.) A ministerial duty is one in which a public official or agency is required to act according to a prescribed legal framework, without exercising personal judgment or discretion; execution and verification pursuant to already established policy are ministerial acts.

In the context of the City's merit-based cannabis application process, once a selected applicant has adhered to all established requirements, met filing deadlines, and paid the necessary fees imposed by the City, the issuance of a building permit is mandatory. (*McCombs v. Larson* (1959) 176 Cal.App.2d 105, 108-109.) As its staff has previously acknowledged, the City's role at this stage is solely to verify compliance with objective criteria. Because the applicant has already demonstrated eligibility through the structured merit-based process, the City lacks discretion to deny or delay the permit absent a clear legal basis. As such, the City must issue the permit in accordance with applicable laws and regulations.

**C. The City Must Immediately Terminate Its Ongoing Moratorium on Processing and Issuing Permits, Which Is Patently Unlawful Under the State Planning and Zoning Law, and if the Proposed RMC Chapter 5.77 Amendments Are Adopted They Will Be Invalid and Void for that Additional Reason.**

At some point prior to January 7, 2025 (on which date the City Council formally voted to adopt the unlawful moratorium), City staff, presumably under direction from the Council and/or City Manager, "paused" the entire cannabis business activities permitting process, placing a de facto moratorium on all further processing or issuance of building permits and operational permits for storefront retail uses. The purpose of the moratorium was to allow the Council to consider the proposed amendments to RMC Chapter 5.77; it is unclear whether the Council or City staff intended to, or believe the City did, formally further extend the moratorium by Council action or direction of the Council on March 25, 2025, but what is crystal clear is that the City is treating the permit processing and issuance moratorium as continuing in effect, as it has plainly not resumed the permitting program pursuant to the provisions of its currently effective Cannabis ordinances. The City's continuing moratorium is illegal and in violation of Government Code section 65858, which provides in relevant part as follows:

(a) Without following the procedures otherwise required prior to the adoption of a zoning ordinance, the legislative body of a county, city, including a charter city, or city and county, to protect the public safety, health, and welfare, may adopt as an urgency measure an interim ordinance prohibiting any uses that may be in conflict with a contemplated general plan, specific plan, or zoning proposal that the legislative body, planning commission or the planning department is considering or studying or intends to study within a reasonable time. That urgency measure shall require a four-fifths vote of the legislative body for adoption. The interim ordinance shall be of no further force and effect 45 days from the date of adoption. After notice pursuant to Section 65090 and public hearing, the legislative body may extend the interim ordinance for 10 months and 15 days and subsequently extend the interim ordinance for one year. Any extension shall also require a four-fifths vote for adoption. Not more than two extensions may be adopted.

(b) Alternatively, an interim ordinance may be adopted by a four-fifths vote following notice pursuant to Section 65090 and public hearing, in which case it shall be of no further force and effect 45 days from its date of adoption. After notice pursuant to Section 65090 and public hearing, the legislative body may by a four-fifths vote extend the interim ordinance for 22 months and 15 days.

(c) The legislative body shall not adopt or extend any interim ordinance pursuant to this section unless the ordinance contains legislative findings that there is a current and immediate threat to the public health, safety, or welfare, and that the approval of additional subdivisions, use permits, variances, building permits, or any other applicable entitlement for use which is required in order to comply with a zoning ordinance would result in that threat to public health, safety, or welfare.

....

(d) Ten days prior to the expiration of that interim ordinance or any extension, the legislative body shall issue a written report describing the measures taken to

alleviate the condition which led to the adoption of the ordinance.

(e) When an interim ordinance has been adopted, every subsequent ordinance adopted pursuant to this section, covering the whole or a part of the same property, shall automatically terminate and be of no further force or effect upon the termination of the first interim ordinance or any extension of the ordinance as provided in this section.

(f) Notwithstanding subdivision (e), upon termination of a prior interim ordinance, the legislative body may adopt another interim ordinance pursuant to this section provided that 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.

....

(Gov. Code, § 65858(a)-(f).)

As stated in *California Charter Schools Association v. City of Huntington Park* (2019) 35 Cal.App.5th 362, 368: "The general purpose of Section 65858 is to allow a local legislative body to adopt interim urgency zoning ordinances prohibiting land uses that may conflict with a contemplated general plan amendment or another land use measure proposal which the legislative body is studying or intends to study within a reasonable period of time." (*Id.*, quoting *216 Sutter Bay Associates v. County of Sutter* (1997) 58 Cal.App.4th 860, 869.) While such an interim urgency zoning ordinance is within a City's police power, the legislative body cannot adopt or extend such an ordinance "unless [it] contains legislative findings that there is a current and immediate threat to the public health, safety, or welfare, and that the approval of additional subdivisions, use permits, variances, building permits, or any other applicable entitlement for use which is required to comply with a zoning ordinance would result in that threat to public health, safety, or welfare." (*Id.* at 368-369, quoting Gov. Code, § 65858, subd. (c).)

The "current and immediate threat" required by the statute to support a moratorium ordinance must arise from facts showing an *approval* of an entitlement is *imminent*, and mere *processing* of a development application does not constitute or qualify as a "current or immediate threat." (*Id.* at pp. 369-370; see also *Building Industry Legal Defense Foundation v. Superior Court* (1999) 72 Cal.App.4th 1410, 1413; Gov. Code, §§ 65858, subds. (a), (c).) The plain language of the statute

precludes a city from adopting an interim ordinance prohibiting the processing of development applications. (*Building Industry Legal Defense Foundation, supra*, 72 Cal.App.4th at 1412, 1415-1418; see *id.* at pp. 1418-1419 ["Although the Legislature could have tied adoption of an interim ordinance to the submission or processing of a development application, it chose to set the bar higher, restricting its application to situations where an approval of an entitlement for use was imminent."].)

Here, the City has instituted a patently illegal moratorium on both processing and issuance of permits, without complying either in form or substance with any of the requirements or limitations of the controlling state law. The City's failure to comply with Government Code section 65858's requirements prior to instituting its moratorium has prejudiced the Ranked Applicants, who would have been able to successfully oppose any moratorium ordinance – on the grounds that City could not make the required findings, *inter alia* – had City followed the proper procedures prior to instituting it, thus compelling the City to continue to timely process and issue permits under the current law. The delays resulting from City's unlawful conduct have not only resulted in withholding of the permits to which the Ranked Applicants are ministerially entitled, but have caused the Ranked Applicants substantial monetary damages in the form of additional rents, mortgage payments and carrying costs while being prevented from opening and operating their businesses. The City must immediately terminate its unlawful moratorium and resume processing and granting permits under the current law's standards.

**D. The City Is Estopped to Adopt or Apply the Proposed Amendments to the Ranked Applicants.**

Under California law, the doctrine of promissory estoppel precludes a party from reneging on commitments upon which others have reasonably and foreseeably relied to their detriment. The elements of promissory estoppel are well established:

1. A clear and unambiguous promise;
2. Reasonable and foreseeable reliance by the promisee;
3. Actual reliance on the promise, leading to substantial detriment; and
4. Injustice that can be avoided only by enforcing the promise. (See Restatement (Second) of Contracts § 90; *Kajima/Ray Wilson v. Los Angeles Cty. Metro. Transp. Auth.* (2000) 23 Cal.4th 305, 310.)

In the words of the California Supreme Court:

The doctrine of equitable estoppel is founded on concepts of equity and fair dealing. It provides that a person may not deny the existence of a state of facts if he intentionally led another to believe a particular circumstance to be true and to rely upon such belief to his detriment. The elements of the doctrine are

that (1) the party to be estopped must be apprised of the facts; (2) he must intend that his conduct shall be acted upon, or must so act that the party asserting the estoppel has a right to believe it was so intended; (3) the other party must be ignorant of the true state of facts; and (4) he must rely upon the conduct to his injury.

(*Strong v. County of Santa Cruz* (1975) 15 Cal.3d 720, 725.)

Equitable estoppel is applied against the government where justice and right require it and "in the considered view of a court of equity, the injustice which would result from a failure to uphold an estoppel is of sufficient dimension to justify any effect upon public interest or policy which would result from the raising of an estoppel." (*City of Long Beach v. Mansell* (1970) 3 Cal.3d 462.) Its application to a public agency such as the City "rests upon the belief that government should be held to a standard of 'rectangular rectitude' in dealing with its citizens." (*People v. Department of Housing & Community Dev.* (1975) 45 Cal.App.3d 185, 196.)

Of particular relevance here is *Kieffer v. Spencer* (1984) 153 Cal.App.3d 954, in which the City of San Gabriel changed the rules midstream on applicants seeking to open video game arcades. As the court concluded in that case:

The record reveals a picture which offends ordinary concepts of fairness and justice. Petitioners were simply exercising their rights as citizens to commence and operate legitimate business entities within RPI. Insofar as the records show, they attempted to cooperate with officials of RPI. They relied, not only to their immediate detriment, but to the continuing detriment which invariably results when wrongdoing, whether intentional or not, is not faced squarely but is reinforced and ratified by continuous efforts to clothe it in legal respectability. We conclude that RPI was estopped from depriving petitioners of the permits which had in effect been granted July 9, 1981, at the time RPI chose to pursue a course of conduct (for reasons not entirely clear) not only detrimental to petitioners but to public trust in local government.

(*Id.* at p. 964.) The same is true here. As in the *Kieffer* case, here the City of Riverside required applicants to proceed through a structured, multi-phase licensing process. In Phase 1 and Phase 2, applicants were required to:

- Pay over \$30,000 **each** in non-refundable fees to participate in the process;
- Secure real estate suitable for cannabis operations;
- Engage in planning and compliance efforts to meet City requirements;

- Prepare for eventual licensure based on successful completion of these steps.

The City's explicit representations and established process created not merely a reasonable expectation, but a binding commitment that applicants who fully complied with these requirements, as the Ranked Applicants have demonstrably done would be granted all necessary approvals, beginning with a building permit and culminating in a cannabis business license. By adopting the Guidelines, the City effectively induced Ranked Applicants to seek the requisite permits under its auspices. Moreover, by limiting the application period to thirty days (see Guidelines, section III.A), the City effectively forced Ranked Applicants to commit to the process extremely quickly, which naturally limited their ability to assess and mitigate against risk. That procedural choice on the City's part necessarily entailed a concomitant commitment by the City to adhere to the protocols as set forth in the Guidelines and the City's cannabis ordinances and not change them mid-stream. The City's current and proposed actions constitute a clear breach of this legal and ethical commitment.

Given the unique and multidimensional nature of the permitting process for cannabis businesses in the City, the injustice suffered by the businesses slated to be eliminated from the process is astronomical and far outweighs any adverse effect on public policy that would result from raising an estoppel.

The Ranked Applicants, acting in good faith and in reasonable reliance on the City's explicit representations and established process, invested substantial and irrecoverable resources that they would not have expended had they known the City would act in bad faith and fail to honor its commitments. These financial burdens include, but are not limited to:

- Leasing or purchasing commercial properties in reliance on the City's requirements;
- Investing in site documents, including architectural plans, engineering plans, and renderings;
- Paying City-imposed, non-refundable fees, by designated deadlines to remain compliant with and preserve rights under application process requirements; and
- Lost business opportunities in being an early mover and the ability to open quickly.

The Ranked Applicants justifiably and detrimentally relied on the City's explicit representations and promises by securing leases or purchasing property, thereby assuming substantial and ongoing financial obligations—including rent, mortgage payments, and other carrying costs—that they would not have otherwise undertaken, as part of Step 2.1. In addition, the Ranked Applicants incurred substantial additional costs associated with the preparation of site plan materials, as required in Step 2.3.

The Ranked Applicants also paid multiple non-refundable fees to the sum of tens of thousands of dollars each, all due by City imposed deadlines, in addition to lost business opportunities and revenues as a result of these unreasonable and illegal delays.

Should the City Council amend the current ordinance, reducing the number of cannabis licenses from 14 to 7, each of the Ranked Applicants that are denied permits under the unlawful ordinance amendments will suffer both irreparable harm in the form of business licenses and opportunities of which they will be deprived, and substantial harm in the form of out-of-pocket and lost profits monetary damages. As provided for above, each of the Ranked Applicants paid mandatory, non-refundable fees of \$13,842.00 (Application Fee) and \$17,864.00 (Site Review Fee) to the City, as well as other expenses totaling \$100,000+ per applicant, such as legal fees, architectural fees, and real property expenses (acquisition, insurance, taxes, rent, maintenance and improvement, etc.). This list is not meant to be exhaustive and Represented Applicants in no way limit or waive any claim to damages they may have now or in the future.

Under the relevant facts here, the City's failure to issue the requisite permits and licenses, despite the Ranked Applicants' full and documented compliance with all stipulated requirements, constitutes a clear case of detrimental reliance under California law and represents a breach of the City's duty of fair dealing. (See *HPT IHG-2 Properties Trust v. City of Anaheim* (2015) 243 Cal.App.4th 188.) It would be grossly inequitable and constitute unjust enrichment for the City to retain and benefit from collected fees and compel applicant expenditures while failing to provide the promised regulatory pathway to licensure, particularly given the City's role as a public entity with a duty to "turn square corners" and act in good faith in dealing with its citizens. Finally, to the extent the City's Guidelines and ordinances regulate Ranked Applicants as opposed to the use of real property, the City cannot rely on its police power to regulate land use in justifying its suddenly revised approach. (See *The Park at Cross Creek, LLC v. City of Malibu* (2017) 12 Cal.App.5th 1196, 1209.) It is therefore clear that the City can be estopped from changing the rules on Ranked Applicants in the middle of the process.

**E. The City Must Fully Comply With CEQA Prior To Adopting The Proposed Amendments To RMC Chapter 5.77 And Cannot Claim An Exemption On The Factual Record Before It**

The City also has thus far utterly failed to comply with the California Environmental Quality Act ("CEQA": Pub. Resources Code, § 21000 et seq.) in its consideration of the proposed ordinance amendments, which are clearly a "project" subject to CEQA review. (*Union of Medical Marijuana Patients, Inc. v. City of San Diego* (2019) 7 Cal.5th 1171 [holding cannabis ordinance due to its nature was "project" subject to CEQA review]). Further, the City cannot rely on the so-called "common sense" exemption (CEQA Guidelines, § 15061(a)(3)) – as it did with initial adoption of the ordinance in 2023 – because that exemption is only applicable

Mayor Patricia Lock Dawson  
City Councilmembers  
City of Riverside  
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"[w]here it can be seen with certainty that there is no possibility that the activity in question may have a significant effect on the environment" (*ibid.*; *Muzzy Ranch Co. v. Solano County Airport Land Use Com.* (2007) 41 Cal.4th 372, 380), and the burden is on the party asserting the exemption to show it applies as a factual matter based evidence in the record. (*Rominger v. County of Colusa* (2014) 229 Cal.App.4th 690, 704.) The City here cannot show based on the limited factual evidence in the record that it can be seen with certainty that the proposed ordinance amendments will not have any significant environmental impacts (such as causing retail construction, related noise, changes in traffic patterns and impacts, changes in law enforcement patterns and resources, etc.). Full CEQA review and, depending on the resulting evidence and analysis, a Negative Declaration, Mitigated Negative Declaration, or EIR will be required as CEQA compliance here before the proposed ordinance amendments could be adopted. If the Ranked Applicants succeed in voiding the City's ordinance amendments on CEQA grounds, they will also be entitled to all their reasonable attorneys' fees incurred in that effort. (Code Civ. Proc., § 1021.5.)

#### IV. CONCLUSION AND DEMAND

The Ranked Applicants demand that the City immediately terminate its unlawful processing and permitting moratorium, proceed with the licensing process under its current ordinance and regulations, and refrain from making the proposed changes to the cannabis provisions of RMC Chapter 5.77. The City must honor the governing law and its commitments and provide the necessary approvals to the Applicants, who have demonstrably met all requirements and invested significant resources in reliance on the City's own established process and representation. Should it fail to do so, the Ranked Applicants will pursue all legal avenues of relief to compel the City's compliance with the law.

Very truly yours,

MILLER STARR REGALIA



Arthur F. Coon

enclosures

cc: City Clerk (clerk@riversideca.gov, w/encls.)  
Community and Economic Development Department  
(econdev@riversideca.gov, w/encl.)  
Cannabis Facilitator (cannabis@riversideca.gov, w/encls)



# **EXHIBIT 1**



# City of Riverside Community & Economic Development

## STOREFRONT RETAIL COMMERCIAL CANNABIS BUSINESS PERMIT APPLICATION

City Council Resolution 24048, adopted October 17, 2023, established the process for reviewing Storefront Retail Commercial Cannabis Business Permit (CCB) applications. Additionally, City Ordinance 7628, adopted March 14, 2023, established Municipal Code regulations related to the Storefront Retail Commercial Cannabis program, which are set forth in Riverside Municipal Code Chapter 5.77. These documents are available online at:

[https://library.municode.com/ca/riverside/codes/code\\_of\\_ordinances?nodeId=PTIICOOR\\_TIT5BUTALIRE\\_CH5.77CABUAC](https://library.municode.com/ca/riverside/codes/code_of_ordinances?nodeId=PTIICOOR_TIT5BUTALIRE_CH5.77CABUAC)

All applications must be electronically submitted through the [City's cannabis portal](#) beginning November 15, 2023 at 7:30AM and concluding on December 15, 2023 at 5:00PM. Late submittals will not be accepted. It is the sole responsibility of the applicant to submit their completed application, including all required attachments, prior to the conclusion of the application period. The City of Riverside is not responsible for any errors or late submittals by applicants.

The applicant will be required to submit an application form, a background form, a defense and indemnification form, a business proposal, and proof of payment of Phase 1's Application Review fee. Description of all Storefront Retail CCB Permit application components are listed in the checklist provided on the City's cannabis webpage. All submitted material must follow all guidelines, ordinance, and policy set forth by the City Council.

All questions must be submitted to the City by email to [Cannabis@RiversideCA.gov](mailto:Cannabis@RiversideCA.gov) and will be answered within two days of receipt in the order received, via the City's Cannabis webpage. No communication regarding the Storefront Retail CCB Permit should be directed to any elected or appointed City official or City staff, except for the City's Cannabis Project Manager. Additionally, applicants can subscribe to the e-notification list through the City's Cannabis webpage: <https://www.riversideca.gov/cannabis>

To ensure fairness and avoid misunderstandings, all communications must be in written format and submitted only to [Cannabis@RiversideCA.gov](mailto:Cannabis@RiversideCA.gov). Any verbal communications will not be considered or responded to. All questions received by the application due date will be logged and reviewed. A response will be provided publicly via an update on the cannabis web portal on the City's website.

### Application Packet and Review Process

Application packets shall be organized in the same order as the checklist with page three of this document on top. An application that is missing any of the required components will be disqualified, and the applicant will be notified within one (1) business day of determination.

All Storefront Retail CCB Permit applications submitted shall be reviewed, and complete applications granted application clearance will be evaluated, scored, and ranked by a review panel composed of City staff selected by the City Manager. The review panel Evaluation Period will run for forty-five (45) calendar days from the date the application period closes. Each application will be ranked and applicants will be notified when ranking is available. The top 14 applicants shall receive Provisional Approval advancing to Phase 2 - Application Final Approval.

## **Filing Deadline**

Applications for Storefront Retail CCB applications must adhere to the filing deadline of December 15, 5:00PM, as noted on the City's cannabis webpage (link above). Any incomplete application received may result in disqualification unless it is resubmitted in its entirety before the deadline expires. The City Manager, at his/her sole discretion, may extend the length of the application period on terms he/she specifies. Notice and terms for any such extension will be posted on the City's cannabis webpage.

## **Fees**

Each applicant must pay application fees to cover the costs incurred by the City in the application process. Riverside Municipal Code Chapter 5.77.130.F, pursuant to Resolution 24048 and Resolution 24053, requires applicants to submit an initial Application Review fee.

Fees are to be paid at the City of Riverside's Treasury Department, located on the first floor of City Hall prior to application submittal. City Hall is located at 3900 Main Street, Riverside, CA 92522, and is open from 8:00AM to 5:00PM, Monday through Friday. All city business shall occur during these business hours. Applicants are required to pay the Phase 1 application review fee with a money order or cashier's/certified check. Applicants will receive a receipt of payment to upload with their respective application submittal. Payment can be made anytime during normal business hours, excluding holidays.

All Storefront Retail CCB Permit applicants shall submit a City Treasury Department receipt of payment for the initial Phase 1 Application Review fee with their Storefront Retail CCB Permit application. Applicants that proceed past Phase 1 will be required to submit an additional Site Review fee to proceed to Phase 2 review. Applications that fail to pay and upload the Phase 1 Application Review receipt by the filing deadline will be deemed ineligible. The flat fee for Phase 1 is as follows:

**Phase 1:** Application Review fee – \$13,842

## **City's Reservation of Rights**

Pursuant to Riverside Municipal Code Chapter 5.77.120, the City Manager reserves the right to reject any application undergoing the review process at any given time. Persons submitting applications assume the risk that all or any part of the cannabis business permit program, or any particular category of permit potentially authorized under Riverside Municipal Code Chapter 5.77, may be canceled at any time prior to permit issuance. The City further reserves the right to request and obtain additional information from any candidate submitting an application. In addition to a failure to comply with other requirements in Riverside Municipal Code Chapter 5.77, an application may be rejected for any of the following reasons:

1. The application was received after the designated time and date of the deadline.
2. The application did not contain the required elements, exhibits, or was not organized in the required format.
3. The application was considered not fully responsive to the request for a permit application, i.e., was substantially incomplete.

Applicants may appeal the decision of the City Manager pursuant to Riverside Municipal Code Chapter 5.77.220.

Cannabis Business Name: \_\_\_\_\_  
Trade name of the business (DBA) if applicable, or legal name of the business

Applicant Name: \_\_\_\_\_  
Name of owner (person) submitting application

### 1. Applicant / Business Entity:

Applicant (Owner): \_\_\_\_\_  
Business Entity (add DBA if applicable): \_\_\_\_\_  
Mailing Address Street: \_\_\_\_\_  
City/State/Zip Code: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_

### 2. Primary Contact Information

Applicant's Representative/Contact: \_\_\_\_\_  
Representative / Contact Title: \_\_\_\_\_  
Company DBA (if applicable): \_\_\_\_\_  
Relationship to Applicant: \_\_\_\_\_  
Mailing Address Street: \_\_\_\_\_  
City/State/Zip Code: \_\_\_\_\_  
Phone Number: \_\_\_\_\_  
Email: \_\_\_\_\_  
Date of Birth: \_\_\_\_\_

### 3. Business Entity Status

Check one:

- ☐ Limited Liability Company
- ☐ General Partnership
- ☐ Limited Partnership
- ☐ Corporation (or foreign corporation)
- ☐ Limited Liability Partnership
- ☐ Other: \_\_\_\_\_

Attach formation documents (e.g., articles of incorporation, operating agreements, partnership agreements, and fictitious business name statements).

Attach proof of registration with, or a certificate of good standing from, the California Secretary of State.

#### 4. Cannabis Activity Denials, Suspensions, or Revocations

List any of the owners, officers, or managers that have previously, within the last five years, been denied the right to conduct any commercial cannabis activity in any jurisdiction and/or whether such person's authorization to conduct any commercial cannabis activity in any jurisdiction has been suspended or revoked. Applicant(s) shall provide the type of license or permit applied for, the name of the licensing/permitting authority that denied, suspended, or revoked the application or license/permit, the date of denial, suspension, or revocation, the length of suspension, if applicable, and the basis of the denial, suspension, or revocation.

- ☐ Check this box if the applicant has not had any prior commercial cannabis activity denials, suspensions, or revocations.

##### Denial, Suspension, or Revocation Details

License type: \_\_\_\_\_

Authority: \_\_\_\_\_

Date of denial: \_\_\_\_\_

Reason for denial:

---

##### Denial, Suspension, or Revocation Details

License type: \_\_\_\_\_

Authority: \_\_\_\_\_

Date of denial: \_\_\_\_\_

Reason for denial:

## 5. Criminal Convictions

Pursuant to Riverside Municipal Code Chapter 5.77.080, have any of the owners, officers, or managers been convicted of any of the following:

A violent felony as defined by California Penal Code 667.5 or equivalent offense in other states.

☐ Yes    ☐ No

A serious felony as defined by California Penal Code 1192.7 or equivalent offense in other states.

☐ Yes    ☐ No

A felony for hiring, employing, or using a minor in transporting, carrying, selling, giving away, preparing for sale, or peddling, any controlled substance to a minor; or selling, offering to sell, furnishing, offering to furnish, administering, or giving any controlled substance to a minor.

☐ Yes    ☐ No

A felony for drug trafficking with enhancements pursuant to Section 11370.4 or 11379.8 of the Health and Safety Code.

☐ Yes    ☐ No

A felony involving fraud, deceit, or embezzlement.

☐ Yes    ☐ No

Pursuant to Riverside Municipal Code Chapter 5.77.080, applicant acknowledges and agrees to require employees to submit to a background check within one month of being hired.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

Pursuant to Riverside Municipal Code Chapter 5.77.080, applicant acknowledges and agrees that any evidence of a conviction of any the offenses outlined above shall be grounds for denial or revocation of a cannabis business permit, and/or employment with a cannabis business permittee in the City of Riverside.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 6. State Law Compliance

Applicant acknowledges and agrees to meet the requirements of the state cannabis laws, including, but not limited to, track-and-trace, inventory, returns, destruction of products, waste management, environmental sustainability, records retention, and operational requirements.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 7. Insurance Compliance

Pursuant to Riverside Municipal Code Chapter 5.77.330, applicants must obtain and provide liability insurance to Risk Management. Below is the requirement to obtain and maintain insurance in the amounts and types acceptable to the City and to name the City, its directors, officials, officers, employees, agents, and volunteers as additional insureds by endorsement.

	General Liability	Auto Liability
<b>Required Limits</b>	\$2,000,000 per Occurrence \$4,000,000 per Aggregate	\$1,000,000 Combined Single Limit (CSL)
<b>Required Endorsements</b>	Additional Insured	Additional Insured

Applicants also must obtain and maintain Workers' Compensation with limits as required by the Labor Code of the State of California.

Applicant acknowledges and agrees to provide and maintain the required certificates and endorsements to the City's insurance portal: <https://RiversideCA.gov/Coportal>

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 8. Labor Peace Agreement

Pursuant to Riverside Municipal Code Chapter 5.77.130, applicants with over 5 employees are required to attest that they have executed a labor peace agreement as defined in Business and Professions Code Section 26001(y) with a Bona Fide Labor Organization as defined by 29 U.S.C 402(i) and will abide by the terms of the agreement. If an applicant has not yet established such an agreement, they must furnish a notarized statement expressing their commitment to promptly enter into a labor peace agreement and adhere to its terms within 30 days of receiving a Storefront Retail CCB permit.

- ☐ Check this box if the applicant has not yet established a labor peace agreement and intends to submit a notarized statement.

Applicant attests to the ownership of an existing labor peace agreement and will abide by the terms of the agreement.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 9. Cannabis Experience and Background

List any of the owners', officers', or managers' commercial cannabis experience since 2017. Any experience as an owner, officer, manager, lender, employee, volunteer, or agent shall be listed, including the location of the experience. All individuals listed will be subject to Background and Live Scan checks in later stages of the CCB Permit selection process if identified as a finalist.

Include copies of permits, licenses, or other written forms of permission by a state, county, or municipal government entity identifying claimed experience. Copies of supporting documents do not count against your application page limits, only the business proposal has page limits.

List the license types and license numbers that the applicant currently holds from the State of California and/or all other out-of-state licensing authorities.

All applicants must provide all financial information required by the State of California, pursuant to the California Code of Regulations, Title, 4, Section 15004, or other relevant law. (Section 15004)

☐ Check this box if the applicant does not have any prior commercial cannabis experience.

### Percentage of Ownership

Percentage(%)

Full Legal Name:		
Full Legal Name:		
Full Legal Name:		
Full Legal Name:		
Full Legal Name:		

### Owner / Officer / Manager

Individual Type (Owner/Officer/Manager): \_\_\_\_\_

Full Legal Name: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

### Experience Details

Year(s) of Experience: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

License Type: \_\_\_\_\_

License Number: \_\_\_\_\_



### **Owner / Officer / Manager**

Individual Type (Owner/Officer/Manager): \_\_\_\_\_

Full Legal Name: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

### **Experience Details**

Year(s) of Experience: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

License Type: \_\_\_\_\_

License Number: \_\_\_\_\_

---

### **Owner / Officer / Manager**

Individual Type (Owner/Officer/Manager): \_\_\_\_\_

Full Legal Name: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_

Email: \_\_\_\_\_

Date of Birth: \_\_\_\_\_

### **Experience Details**

Year(s) of Experience: \_\_\_\_\_

Mailing Address Street: \_\_\_\_\_

City/State/Zip Code: \_\_\_\_\_

License Type: \_\_\_\_\_

License Number: \_\_\_\_\_

## 10. Defense & Indemnification Agreement

Pursuant to City of Riverside Municipal Code Chapter 5.77.330, and to the fullest extent permitted by law, the City of Riverside shall not assume any liability whatsoever with respect to having issued a commercial cannabis business permit or otherwise approving the operation of any commercial cannabis business.

Applicant hereby attests and agrees to defend (at Applicant's sole cost and expense, and with counsel of City's choosing), indemnify and hold the City of Riverside and its directors, officials, officers, employees, representatives, volunteers and agents free and harmless from any and all claims, losses, damages, injuries, liabilities or losses which arise out of, or which are in any way related to, the City's issuance of the commercial cannabis business permit, the City's decision to approve the operation of the cannabis business or activity, the process used by the City in making its decision, or the alleged violation of any federal, state or local laws by the commercial cannabis business or any of its officers, employees, or agents.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

Applicant hereby attests and agrees to reimburse the City for all costs and expenses, including but not limited to legal fees and court costs, which the City may be required to pay as a result of any legal challenge related to the City's approval of the Applicant's cannabis business permit or related to the City's approval of a cannabis activity. The City, at its sole discretion, may participate at its own expense in the defense of any such action, but such participation shall not relieve the Applicant of any of the obligations imposed hereunder.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 11. Proof of Application Fee Payment

All Storefront Retail CCB Permit applicants shall submit at the time of filing of the application the Application Review fee in the amount and manner established by Resolution 24053 and Riverside Municipal Code Chapter 5.77.130(F). Applicants that proceed past Phase 1 will be required to submit an additional Site Review fee to cover the additional staff time to proceed to Phase 2 of the application process.

Applicants shall submit a copy of the receipt provided by the City of Riverside Treasury as proof of payment for the Application Review.

Applicant acknowledges and agrees to pay additional fees that may be incurred if selected for the second phase of the Storefront Retail CCB Permit application. Furthermore, the applicant also acknowledges and agrees that non-payment or late payment is considered not responsive and subject to rejection of the permit at the discretion of the City Manager.

Applicant signature: \_\_\_\_\_ Date: \_\_\_\_\_

## 12. Business Proposal

All Storefront Retail CCB Permit applicants must prepare a narrative Business Proposal that will be used during the Merit-Based evaluation. The Business Proposal must be in 12-point font text that does not exceed a total of 50 single-sided pages that addresses all topics outlined in the [Evaluation Criteria](#) identified in the [Storefront Retail Commercial Cannabis Business Permit guidelines](#).

- I. Qualifications of Owners and Operators
- II. Business Plan/Financial Investment
- III. Operations Plan
- IV. Safety/Security Plan
- V. Labor, Employment, and Local Sourcing Plan

# **EXHIBIT 2**



# CITY OF RIVERSIDE STOREFRONT RETAIL COMMERCIAL CANNABIS BUSINESS PERMIT – WRITTEN RANKING

## D. Application Evaluation Process – Written Ranking

Pursuant to the [City of Riverside Storefront Retail Commercial Cannabis Business Permit Procedure Guidelines and Application Review Criteria](#), below is a Written Ranking of the top fourteen (14) applications that have been reviewed, evaluated, and ranked by the City Review Panel.

Based on the stated Merit-Based Evaluation criteria and point system, the top fourteen (14) ranked applications – highlighted in **GREEN** – have received Provisional Approval.

RANK	BUSINESS NAME	APPLICANT ID
1	STIIIZY Riverside LLC	24
2	SGL Riverside LLC	25
3	C4TP Retail A Inc.	5
3	Riverside Community Retail LLC	17
5	Community Oriented Riverside Retail LLC	6
5	Riverside Responsible and Compliant Retail LLC	19
7	Blaine St. RS LLC	4
8	OTC Riverside City LLC	16
9	Packs Riverside LLC	2
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# **EXHIBIT 3**



QuickFacts
Denver city, Colorado

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QuickFacts provides statistics for all states and counties. Also for cities and towns with a *population of 5,000 or more*.







































Table

All Topics	Denver city, Colorado
Population estimates, July 1, 2024, (V2024)	NA
PEOPLE	
Population	
Population estimates, July 1, 2024, (V2024)	NA
Population estimates, July 1, 2023, (V2023)	716,577
Population estimates base, April 1, 2020, (V2024)	NA
Population estimates base, April 1, 2020, (V2023)	715,524
Population, percent change - April 1, 2020 (estimates base) to July 1, 2024, (V2024)	NA
Population, percent change - April 1, 2020 (estimates base) to July 1, 2023, (V2023)	0.1%
Population, Census, April 1, 2020	715,522
Population, Census, April 1, 2010	600,158
Age and Sex	
Persons under 5 years, percent	5.5%
Persons under 18 years, percent	18.3%
Persons 65 years and over, percent	12.3%
Female persons, percent	49.6%
Race and Hispanic Origin	
White alone, percent	62.9%
Black alone, percent (a) (a)	8.8%
American Indian and Alaska Native alone, percent (a) (a)	0.9%
Asian alone, percent (a) (a)	3.6%
Native Hawaiian and Other Pacific Islander alone, percent (a) (a)	0.1%
Two or More Races, percent	15.5%
Hispanic or Latino, percent (b) (b)	27.9%
White alone, not Hispanic or Latino, percent	54.6%
Population Characteristics	
Veterans, 2019-2023	27,102
Foreign-born persons, percent, 2019-2023	13.8%
Housing	
Housing Units, July 1, 2023, (V2023)	X
Owner-occupied housing unit rate, 2019-2023	49.1%
Median value of owner-occupied housing units, 2019-2023	\$586,700
Median selected monthly owner costs - with a mortgage, 2019-2023	\$2,385
Median selected monthly owner costs -without a mortgage, 2019-2023	\$655
Median gross rent, 2019-2023	\$1,770
Building Permits, 2023	X
Families & Living Arrangements	
Households, 2019-2023	329,578
Persons per household, 2019-2023	2.12
Living in the same house 1 year ago, percent of persons age 1 year+ , 2019-2023	79.6%
Language other than English spoken at home, percent of persons age 5 years+, 2019-2023	23.6%
Computer and Internet Use	
Households with a computer, percent, 2019-2023	97.0%
Households with a broadband Internet subscription, percent, 2019-2023	92.2%
Education	
High school graduate or higher, percent of persons age 25 years+, 2019-2023	91.4%
Bachelor's degree or higher, percent of persons age 25 years+, 2019-2023	55.6%
Health	
With a disability, under age 65 years, percent, 2019-2023	7.2%
Persons without health insurance, under age 65 years, percent	9.8%

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Yes


No

Economy	
 In civilian labor force, total, percent of population age 16 years+, 2019-2023	74.1%
 In civilian labor force, female, percent of population age 16 years+, 2019-2023	70.3%
 Total accommodation and food services sales, 2022 (\$1,000)  (c)	5,669,146
 Total health care and social assistance receipts/revenue, 2022 (\$1,000)  (c)	9,648,534
 Total transportation and warehousing receipts/revenue, 2022 (\$1,000)  (c)	13,689,732
 Total retail sales, 2022 (\$1,000)  (c)	14,963,195
 Total retail sales per capita, 2022  (c)	\$20,973
Transportation	
 Mean travel time to work (minutes), workers age 16 years+, 2019-2023	25.4
Income & Poverty	
 Median households income (in 2023 dollars), 2019-2023	\$91,681
 Per capita income in past 12 months (in 2023 dollars), 2019-2023	\$61,202
 Persons in poverty, percent	 11.2%
 BUSINESSES	
Businesses	
 Total employer establishments, 2022	X
 Total employment, 2022	X
 Total annual payroll, 2022 (\$1,000)	X
 Total employment, percent change, 2021-2022	X
 Total nonemployer establishments, 2022	X
 All employer firms, Reference year 2022	22,135
 Men-owned employer firms, Reference year 2022	12,321
 Women-owned employer firms, Reference year 2022	5,664
 Minority-owned employer firms, Reference year 2022	3,852
 Nonminority-owned employer firms, Reference year 2022	15,473
 Veteran-owned employer firms, Reference year 2022	764
 Nonveteran-owned employer firms, Reference year 2022	18,742
 GEOGRAPHY	
Geography	
 Population per square mile, 2020	4,674.3
 Population per square mile, 2010	3,922.6
 Land area in square miles, 2020	153.08
 Land area in square miles, 2010	153.00
 FIPS Code	0820000

[About datasets used in this table](#)

Value Notes

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Santa Ana city, California

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Table

All Topics	Santa Ana city, California
Population estimates, July 1, 2024, (V2024)	NA
PEOPLE	
Population	
Population estimates, July 1, 2024, (V2024)	NA
Population estimates, July 1, 2023, (V2023)	310,539
Population estimates base, April 1, 2020, (V2024)	NA
Population estimates base, April 1, 2020, (V2023)	310,557
Population, percent change - April 1, 2020 (estimates base) to July 1, 2024, (V2024)	NA
Population, percent change - April 1, 2020 (estimates base) to July 1, 2023, (V2023)	0.0%
Population, Census, April 1, 2020	310,227
Population, Census, April 1, 2010	324,528
Age and Sex	
Persons under 5 years, percent	5.5%
Persons under 18 years, percent	23.4%
Persons 65 years and over, percent	11.1%
Female persons, percent	48.7%
Race and Hispanic Origin	
White alone, percent	19.5%
Black alone, percent (a) (a)	0.8%
American Indian and Alaska Native alone, percent (a) (a)	1.5%
Asian alone, percent (a) (a)	12.0%
Native Hawaiian and Other Pacific Islander alone, percent (a) (a)	0.1%
Two or More Races, percent	17.4%
Hispanic or Latino, percent (b) (b)	77.3%
White alone, not Hispanic or Latino, percent	8.7%
Population Characteristics	
Veterans, 2019-2023	4,519
Foreign-born persons, percent, 2019-2023	41.0%
Housing	
Housing Units, July 1, 2023, (V2023)	X
Owner-occupied housing unit rate, 2019-2023	44.6%
Median value of owner-occupied housing units, 2019-2023	\$657,800
Median selected monthly owner costs - with a mortgage, 2019-2023	\$2,529
Median selected monthly owner costs -without a mortgage, 2019-2023	\$617
Median gross rent, 2019-2023	\$1,975
Building Permits, 2023	X
Families & Living Arrangements	
Households, 2019-2023	79,691
Persons per household, 2019-2023	3.86
Living in the same house 1 year ago, percent of persons age 1 year+ , 2019-2023	92.0%
Language other than English spoken at home, percent of persons age 5 years+, 2019-2023	78.0%
Computer and Internet Use	
Households with a computer, percent, 2019-2023	96.2%
Households with a broadband Internet subscription, percent, 2019-2023	89.9%
Education	
High school graduate or higher, percent of persons age 25 years+, 2019-2023	66.1%
Bachelor's degree or higher, percent of persons age 25 years+, 2019-2023	18.0%
Health	
With a disability, under age 65 years, percent, 2019-2023	5.7%
Persons without health insurance, under age 65 years, percent	13.7%

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Yes


No

Economy	
 In civilian labor force, total, percent of population age 16 years+, 2019-2023	66.3%
 In civilian labor force, female, percent of population age 16 years+, 2019-2023	59.1%
 Total accommodation and food services sales, 2022 (\$1,000) <span>(c)</span>	852,885
 Total health care and social assistance receipts/revenue, 2022 (\$1,000) <span>(c)</span>	2,671,844
 Total transportation and warehousing receipts/revenue, 2022 (\$1,000) <span>(c)</span>	400,715
 Total retail sales, 2022 (\$1,000) <span>(c)</span>	4,828,177
 Total retail sales per capita, 2022 <span>(c)</span>	\$15,542
Transportation	
 Mean travel time to work (minutes), workers age 16 years+, 2019-2023	24.8
Income & Poverty	
 Median households income (in 2023 dollars), 2019-2023	\$88,354
 Per capita income in past 12 months (in 2023 dollars), 2019-2023	\$28,859
 Persons in poverty, percent	 11.1%
 BUSINESSES	
Businesses	
 Total employer establishments, 2022	X
 Total employment, 2022	X
 Total annual payroll, 2022 (\$1,000)	X
 Total employment, percent change, 2021-2022	X
 Total nonemployer establishments, 2022	X
 All employer firms, Reference year 2022	6,141
 Men-owned employer firms, Reference year 2022	3,782
 Women-owned employer firms, Reference year 2022	1,079
 Minority-owned employer firms, Reference year 2022	2,678
 Nonminority-owned employer firms, Reference year 2022	2,720
 Veteran-owned employer firms, Reference year 2022	262
 Nonveteran-owned employer firms, Reference year 2022	5,242
 GEOGRAPHY	
Geography	
 Population per square mile, 2020	11,347.4
 Population per square mile, 2010	11,900.8
 Land area in square miles, 2020	27.34
 Land area in square miles, 2010	27.27
 FIPS Code	0669000

[About datasets used in this table](#)

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Riverside city, California

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Table

All Topics	Riverside city, California
Population estimates, July 1, 2024, (V2024)	NA
PEOPLE	
Population	
Population estimates, July 1, 2024, (V2024)	NA
Population estimates, July 1, 2023, (V2023)	318,858
Population estimates base, April 1, 2020, (V2024)	NA
Population estimates base, April 1, 2020, (V2023)	315,015
Population, percent change - April 1, 2020 (estimates base) to July 1, 2024, (V2024)	NA
Population, percent change - April 1, 2020 (estimates base) to July 1, 2023, (V2023)	1.2%
Population, Census, April 1, 2020	314,998
Population, Census, April 1, 2010	303,871
Age and Sex	
Persons under 5 years, percent	5.6%
Persons under 18 years, percent	23.3%
Persons 65 years and over, percent	11.7%
Female persons, percent	50.3%
Race and Hispanic Origin	
White alone, percent	39.2%
Black alone, percent (a) (a)	6.0%
American Indian and Alaska Native alone, percent (a) (a)	1.1%
Asian alone, percent (a) (a)	8.3%
Native Hawaiian and Other Pacific Islander alone, percent (a) (a)	0.4%
Two or More Races, percent	15.1%
Hispanic or Latino, percent (b) (b)	54.6%
White alone, not Hispanic or Latino, percent	27.4%
Population Characteristics	
Veterans, 2019-2023	9,759
Foreign-born persons, percent, 2019-2023	22.4%
Housing	
Housing Units, July 1, 2023, (V2023)	X
Owner-occupied housing unit rate, 2019-2023	56.3%
Median value of owner-occupied housing units, 2019-2023	\$542,100
Median selected monthly owner costs - with a mortgage, 2019-2023	\$2,379
Median selected monthly owner costs -without a mortgage, 2019-2023	\$619
Median gross rent, 2019-2023	\$1,812
Building Permits, 2023	X
Families & Living Arrangements	
Households, 2019-2023	92,368
Persons per household, 2019-2023	3.27
Living in the same house 1 year ago, percent of persons age 1 year+ , 2019-2023	88.7%
Language other than English spoken at home, percent of persons age 5 years+, 2019-2023	46.4%
Computer and Internet Use	
Households with a computer, percent, 2019-2023	97.2%
Households with a broadband Internet subscription, percent, 2019-2023	93.7%
Education	
High school graduate or higher, percent of persons age 25 years+, 2019-2023	83.1%
Bachelor's degree or higher, percent of persons age 25 years+, 2019-2023	25.7%
Health	
With a disability, under age 65 years, percent, 2019-2023	7.2%
Persons without health insurance, under age 65 years, percent	10.3%

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Yes


No

Economy	
 In civilian labor force, total, percent of population age 16 years+, 2019-2023	64.5%
 In civilian labor force, female, percent of population age 16 years+, 2019-2023	58.4%
 Total accommodation and food services sales, 2022 (\$1,000)  (c)	1,223,158
 Total health care and social assistance receipts/revenue, 2022 (\$1,000)  (c)	4,184,159
 Total transportation and warehousing receipts/revenue, 2022 (\$1,000)  (c)	608,929
 Total retail sales, 2022 (\$1,000)  (c)	6,856,078
 Total retail sales per capita, 2022  (c)	\$21,493
Transportation	
 Mean travel time to work (minutes), workers age 16 years+, 2019-2023	31.6
Income & Poverty	
 Median households income (in 2023 dollars), 2019-2023	\$88,575
 Per capita income in past 12 months (in 2023 dollars), 2019-2023	\$33,716
 Persons in poverty, percent	 12.5%
BUSINESSES	
Businesses	
 Total employer establishments, 2022	X
 Total employment, 2022	X
 Total annual payroll, 2022 (\$1,000)	X
 Total employment, percent change, 2021-2022	X
 Total nonemployer establishments, 2022	X
 All employer firms, Reference year 2022	6,464
 Men-owned employer firms, Reference year 2022	3,839
 Women-owned employer firms, Reference year 2022	1,340
 Minority-owned employer firms, Reference year 2022	2,388
 Nonminority-owned employer firms, Reference year 2022	3,295
 Veteran-owned employer firms, Reference year 2022	S
 Nonveteran-owned employer firms, Reference year 2022	5,589
GEOGRAPHY	
Geography	
 Population per square mile, 2020	3,877.8
 Population per square mile, 2010	3,745.0
 Land area in square miles, 2020	81.23
 Land area in square miles, 2010	81.14
 FIPS Code	0662000

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# **EXHIBIT 4**

**“Pot Luck”  
Santa Ana’s Monopoly on Licensed  
Retail Adult-Use Cannabis  
in Orange County**



GRAND JURY 2020-2021

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## SUMMARY

Santa Ana was the first city in Orange County, California to approve the retail sale of Adult-Use Cannabis. This action has added significant revenue to the city with no reported increase in criminal activity. Through interviews and investigation, the Orange County Grand Jury has discovered that the revenue generated by the Retail Adult-Use Cannabis business has provided much needed funds to the City of Santa Ana. These funds have not only increased the city’s general fund account but have also been used for enhanced police services and code enforcement efforts as well as funding for additional youth programs through the Parks, Recreation, and Community Services Agency.

*The Orange County Grand Jury does not express an opinion on the use of Cannabis.*

## BACKGROUND

Cannabis use has long been a subject of controversy in the United States. Once commonly grown for hemp, made from fibers from the plant and used in a variety of products such as rope and paper, cannabis was later discovered to have medicinal purposes and subsequently became a criminalized product. Over the last six decades there has been much debate and many propositions introduced to decriminalize and/or regulate cannabis and allow it to be legally sold and used for medicinal as well as recreational purposes.

### Federal Cannabis Laws

Despite a cannabis legalization trend sweeping the country, the federal government still classifies cannabis as a Schedule 1 drug. The federal government considers drugs in this class to be some of the most dangerous.

A Schedule 1 classification puts cannabis in the same class as heroin, which means the federal government considers cannabis more dangerous than Schedule 2 drugs like cocaine and methamphetamine.

At the present time, the United States Department of Justice (“DOJ”) is not prosecuting most cannabis users and businesses that follow state and local cannabis laws, as long as those laws do not conflict with certain federal requirements. These requirements include preventing minors from using cannabis and preventing cannabis from being transported across state lines.

### Legislation in California

**Proposition 19 (1972)** also known as “The California Marijuana Initiative” was a ballot initiative on the November 7, 1972 California Statewide Ballot. California became the first state to vote on a ballot measure seeking to legalize cannabis. If it had passed, the measure would have removed penalties in the State of California for persons 18 years of age or older for using,



possessing, growing, processing, or transporting marijuana for personal use. The initiative was defeated by the voters with 66.5% No votes to 33.5% Yes votes.

**Proposition 215 (1996)** also known as “The Compassionate Use Act of 1996” made it legal under California law for individuals of any age to use cannabis for medicinal purposes. Individuals must have a recommendation from a doctor to use medical cannabis. The act passed by a vote of 55.58% Yes votes to 44.42% No votes.

**Proposition 19 (2010)** also known as “The Regulate, Control, and Tax Cannabis Act of 2010” was defeated by the voters with 53.5% No votes to 46.5% Yes votes. If it had passed, Proposition 19 would have legalized various cannabis-related activities in California and authorized local governments to control these activities. In addition, the Proposition would have granted local governments the right to impose and collect cannabis-related fees & taxes, and authorized various criminal and civil penalties.

**Proposition 64 (2016)** also known as “The Adult-Use of Marijuana Act” passed by a vote of 57.13% to 42.87%. The measure:

- Legalized adult use of cannabis for recreational, non-medical purposes
- Created a system for regulating Retail Adult-Use Cannabis businesses
- Imposed taxes on Retail Adult-Use Cannabis sales
- Changed penalties for cannabis-related crimes

Once Proposition 64 was passed, cities in California were granted the opportunity to approve Retail Adult-Use Cannabis and begin the process of granting licenses to shops within their city limits.

## REASON FOR STUDY

The selling of cannabis for “Adult-Use” or “recreational” purposes has been legal in the State of California since January 1, 2018 and yet, until July 2020, Santa Ana was the only city in Orange County that had approved licensing for this type of business. The Orange County Grand Jury (OCGJ) was interested in investigating how the decision to move forward with this licensing impacted Santa Ana and if there were any significant issues.

The Grand Jury felt it was important to investigate this matter in order to make the public aware of the potential gains or pitfalls other cities in the county might encounter should they move forward with Retail Adult-Use Cannabis licensing.

This report focuses only on the licensing and selling of Retail Adult-Use Cannabis in the City of Santa Ana and does not address medicinal sales, cultivation, distribution, or any issues related to the use of cannabis products.

## METHOD OF STUDY

The OCGJ conducted extensive internet research on the legal status of Retail Adult-Use Cannabis, both nationwide and in California, by reviewing and analyzing relevant legislation as well as the numerous California propositions that culminated in the passage of Proposition 64. In addition, the OCGJ reviewed City of Santa Ana documents including staff reports, commission reports, Requests for City Council Actions, and ordinances that authorized and established conditions for the sale of cannabis products for Adult-Use.

The OCGJ also interviewed current and former Santa Ana City Council members and City employees who work in agencies directly involved with or impacted by the licensing and sale of Retail Adult-Use Cannabis products in Santa Ana. In addition, OCGJ interviewed professional experts not employed by the City, including licensed Retail Adult-Use Cannabis dispensary proprietors and employees. The OCGJ visited several licensed Retail Adult-Use Cannabis dispensaries in Santa Ana to observe the facilities, amenities, staff, clientele, and operations.

## INVESTIGATION AND ANALYSIS

### Santa Ana City Council Says “Yes”

In response to the November 2016 passage of Proposition 64 in California, the Santa Ana City Council began to consider licensing and regulating the retail sale of cannabis for adults. After multiple meetings and discussions and after thorough staff analysis, on October 17, 2017, the City Council introduced ordinance number NS-2929 for a first reading. The ordinance was identified as “An Ordinance of the City Council of the City of Santa Ana creating Chapter 40 of the Santa Ana Municipal Code, ‘Regulation of Commercial Cannabis’, to Regulate Commercial Cannabis Activities, excepting Medicinal Retail.”

On November 9, 2017, the ordinance was introduced for a second reading and approved with amendments by a vote of 5-0 (two City Council members were absent). Santa Ana has remained the only city in Orange County issuing business licenses and regulating the retail sale of Adult-Use Cannabis for the years 2018, 2019, and 2020.

### Dispensary Application and Licensing Process

Santa Ana Ordinance number NS-2929 allows up to 30 Retail Adult-Use Cannabis stores within the City. As of April 15, 2021, there were 23 dispensaries open and operating in the City of Santa Ana (see Appendix 1). The ordinance sets forth operational standards, permit procedures, and an operating agreement to address collection of operating fees.

To ensure fairness and impartiality in the selection process, the City devised a system of “Retail Adult-Use Cannabis merit-based criteria and possible points” (see Appendix 2) to evaluate applicants who sought to operate a dispensary offering Adult-Use Cannabis products. This led to the Commercial Cannabis Application (Phase I and Phase II) and Permit Process (see Appendix 3), a comprehensive evaluation process that each Retail Adult-Use Cannabis dispensary applicant had to follow and pass before being allowed to open for business.

After completion of the application process, each applicant was required to obtain a Regulatory Safety Permit (RSP) which is a permit issued by the City of Santa Ana pursuant to Chapter 40 of its municipal code. The RSPs issued for Phase I and Phase II had fees associated with each phase of the process. The fees charged were based on city processing costs as follows: Phase I, initially \$1,690, was subsequently raised to \$1,752; Phase II, initially \$12,086, was later raised to \$12,530.

The City’s Planning and Building Agency drafted a two-page Phase I and Phase II applicants’ information form advising interested parties of the steps in the application process (see Appendix 4).

### **Cannabis Community Benefits Program**

All parties seeking a license to operate a cannabis dispensary in Santa Ana must submit a written operating agreement titled “Operating Agreement for Adult use (Non-Medicinal) Cannabis Retail Business.” One section of the agreement is entitled “Public Benefit.” In this section, the applicant for the proposed dispensary is encouraged to submit a “Community Benefit and Sustainable Business Practices Plan” (PLAN). The plan serves as a goodwill program sponsored by the dispensary for the benefit of the Santa Ana community.

A review of the PLANs submitted by the applicants revealed a wide variety of current community service projects such as sponsoring a local debate team, supporting a community garden, organizing and/or funding toy/clothing/food drives, diversion or prevention educational programs, and neighborhood clean-up efforts.

While these programs are a step towards goodwill in the community, there is no oversight or confirmation by the City that the dispensary operator is participating in the plan. It is up to each dispensary owner to decide how and to whom they will provide a “benefit.” There are no specific requirements in terms of money or volunteer hours that a dispensary must donate, and there is no obligation to provide proof of participation in the plan to the City.

The OCGJ has concluded that there should be some process in place to set standards for and document participation in the Community Benefits Program. In addition, the benefits provided by the Retail Adult-Use Cannabis dispensaries should be reported to the City Council and made available to the general public.

### **Community Safety**

The OCGJ learned through interviews with City officials and staff that there had been more than 120 unlicensed dispensaries operating illegally in Santa Ana before ordinance NS-2929 went into effect. That number has since been reduced to “less than a handful,” due to enforcement efforts by the City, especially the Planning and Building Agency, including Code Enforcement, and the Santa Ana Police Department.

One third of the taxes and fees that the City receives from Retail Adult-Use Cannabis dispensaries is dedicated to Police and Code Enforcement. This money provides funding for a vice unit, including a sergeant and four officers. Other City agencies, such as Planning and

Building and the City Attorney’s Office, also receive funding because of their role in ensuring Retail Adult-Use Cannabis compliance with regulations.

The reality is that shutting down the unlicensed, illegally operating dispensaries will increase business for the licensed facilities, thereby increasing the City’s tax revenues. Closing unlicensed facilities is a win-win for both the licensed dispensaries and the City of Santa Ana.

It should be noted that the licensed Retail Adult-Use Cannabis dispensaries must meet the quality standards for their merchandise that comply with requirements set forth by the State of California’s Bureau of Cannabis Control (BCC). Consumers have no such protections when products are purchased from unlicensed shops.

Ordinance number NS-2929, Section 1, subparagraph K, states: “The City of Santa Ana has a compelling interest in ensuring that cannabis is not sold in an illicit manner, in protecting the public health, safety, and welfare of its residents and businesses, in preserving the peace and quiet of the neighborhoods in which these businesses may operate, and in providing access of cannabis to residents.”

The OCGJ further learned through interviews with both Police Department and Code Enforcement staff that there has been no apparent increase in criminal activity in the areas surrounding the Retail Adult-Use Cannabis dispensaries. It should be noted that all licensed dispensaries are required to have security guards in place during hours of operations, and 24/7 video surveillance protecting their facilities, employees, and customers. Additionally, all dispensaries are required to secure all inventory in a locked safe, unless open for business.

## **Site Visits**

During its investigation, the OCGJ interviewed cannabis dispensary owners and visited Retail Adult-Use dispensary sites. The OCGJ would like to note that it received full cooperation from the dispensary owners and staff while touring their locations.

The dispensary sites the OCGJ visited appeared to be well managed, with clean public areas that were adequately illuminated and well-appointed. The shelves were fully stocked with products. All products were marked with California approval code stamps, indicating that the products conformed to quality control standards approved by the BCC.

Sites visited had the required security guards; the OCGJ noted that there were two security guards at each site visited. Each store had 24-hour video surveillance cameras covering the interior and exterior. One of the store owners mentioned that their external video surveillance is so extensive and of such high quality that they were able to assist law enforcement with investigations into criminal activities at nearby properties. Inside, stores were well furnished, had appropriate security doors, and all products were locked up at night in secured structures, vaults, or safes.

## Financial Impact

In November 2018, residents of the City of Santa Ana approved Measure Y by a vote of 71% Yes to 29% No. Measure Y is a tax on Retail Adult-Use Cannabis businesses operating in the City that provides for a tax of 25 cents to 35 dollars based on the gross square footage of the business and a sales tax of up to 10% for retail sales. The City estimates that Measure Y will generate \$11-14 million a year to fund city services.

On December 4, 2018, the Santa Ana City Council adopted Ordinance NS-2959 (see Appendix 5), establishing a “Cannabis Public Benefit Fund”. The fund derives almost all of its money from Measure Y and requires that the city allocate all money received from the sale of Retail Adult-Use Cannabis as follows: one third to the General Fund, one third to Enforcement Services, and the final third to Youth Services.

Some of the City of Santa Ana Council members and staff interviewed by OCGJ informed the OCGJ that there is no true, viable oversight regarding disbursement and use of cannabis money received. The OCGJ learned that there is no clearly identifiable accounting for residents to see how this money is spent. Furthermore, the COVID pandemic has caused a shifting of money from previously planned programs to others.

Money received by the Retail Adult-Use Cannabis businesses for the last two years from the Measure Y tax has been in excess of \$20 million. The General Fund money can be allocated to projects or programs in any City department, and expenditures from this fund cannot be specifically attributed to the Cannabis Public Benefit Fund. It has also been difficult to secure specific information about how the money for Enforcement Services has been used. Interviews with City staff indicated that various departments rely on Measure Y funds for their enforcement efforts. For example, the Police Department has funded the Vice Unit with Measure Y proceeds and the Planning and Building Agency, especially the Code Enforcement Division, also relies on Cannabis Public Benefit Fund money to staff some positions. However, the OCGJ has not received a clear breakdown of how the Enforcement Services money has been used by the various city agencies.

Expenditures related to Youth Services are much more transparent. The following programs and projects are anticipated to be funded from the Cannabis Public Benefit Fund and undertaken in the following year for the benefit of Santa Ana youth:

- Library Services
  - Book/Techmobile
  - Digital Collection for Teens
  - Laptop Dispenser Kiosks
  - Wireless Hotspots
- Library Improvements at the Newhope Branch Library
- Library Playground at the Main Branch

- Parks and Recreation
  - Anti-Drug Education Program
  - Fitness Courts
  - Goat Encounter at Santa Ana Zoo
  - Santa Anita Park Soccer Field Renovation
  - Splash pads for six City parks
  - Third Party youth programs
  - Traveling Zoo Exhibit
  - Year-Round Aquatics
  - Youth and Teen Excursion
  - Youth Programs and Services
  - Zoo and You Program
- Community Development Agency youth paid internships
- Contribution to the Deferred Action for Childhood Arrival Defense Fund

The OCGJ, through its investigation of the use of Cannabis Public Benefit funds, concluded that the youth of Santa Ana have benefited greatly and will continue to benefit as a result of the decision to license Retail Adult-Use Cannabis dispensaries in the City.

## Communication

During the investigation of the Retail Adult-Use sale of cannabis in Santa Ana, the OCGJ noted that there are several independent City departments involved in the licensing and regulation process. While the expertise of each department may be required to ensure compliance with all City ordinances and to process all necessary documents and fees, multiple points of contact can make it difficult to obtain information when needed.

## COMMENDATIONS

The City of Santa Ana received more than \$20 million in revenue during the first three years of licensed Retail Adult-Use Cannabis sales. Santa Ana was the first city in Orange County to begin licensing for these dispensaries and has remained the only city for several years, giving it a “monopoly” on Retail Adult-Use Cannabis business in Orange County.

The City of Santa Ana saw a significant drop in the number of illegal/unlicensed cannabis shops as the number of licensed dispensaries increased. This reduction in illegal/unlicensed shops has improved community safety for both consumers and residents.

## FINDINGS

In accordance with California Penal Code Sections 933 and 933.05, the 2020-21 Grand Jury requires responses from each agency affected by the findings presented in this section. The responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation described here, the 2020-21 Orange County Grand Jury has arrived at the following principal findings:

- F1. There is no clearly identifiable accounting of where all the Enforcement Services money received from Retail Adult-Use Cannabis licensing in accordance with Santa Ana Municipal Ordinance number NS-2959, section 13-203 was spent.
- F2. The legalization of Retail Adult-Use Cannabis by the City of Santa Ana and the resulting increase in city revenue have allowed the city to significantly expand its youth services programs.
- F3. There are multiple departments within the City of Santa Ana responsible for various aspects of Retail Adult-Use Cannabis oversight. The decentralized nature of the oversight within the City makes information difficult to obtain.
- F4. The number of unlicensed cannabis dispensaries in Santa Ana has significantly declined since the business licensing of Retail Adult-Use Cannabis dispensaries.
- F5. The Orange County Grand Jury did not receive evidence of an increase in crime as a result of the licensing of Retail Adult-Use Cannabis dispensaries.
- F6. The *Cannabis Community Benefits Program* motivates local dispensaries to contribute funds and/or staff volunteer hours for the benefit of the City of Santa Ana.

## RECOMMENDATIONS

In accordance with California Penal Code Sections 933 and 933.05, the 2020-21 Grand Jury requires responses from each agency affected by the recommendations presented in this section. The responses are to be submitted to the Presiding Judge of the Superior Court.

Based on its investigation described herein, the 2020-21 Orange County Grand Jury makes the following recommendations:

- R1. The Orange County Grand Jury recommends that the Santa Ana City Council require an annual report specifically detailing all Retail Adult-Use Cannabis money spent each fiscal year. This report should be presented to the Santa Ana City Council and made public. This should be completed by December 31, 2021, for fiscal year 2020-21, and by September 30 following each fiscal year thereafter. (F1)
- R2. The Orange County Grand Jury recommends that the City of Santa Ana designate an individual to oversee and provide centralized coordination of Retail Adult-Use Cannabis activity commencing January 1, 2022. (F3)
- R3. The Orange County Grand Jury recommends that the City of Santa Ana create a process to report to the Santa Ana City Council and the residents of Santa Ana detailed information about the participation of Retail Adult-Use Cannabis dispensaries in the Community Benefits Program by December 31, 2021 and yearly thereafter. (F6)



## RESPONSES

The following excerpts from the California Penal Code provide the requirements for public agencies to respond to the Findings and Recommendations of this Grand Jury report:

### §933

(c) No later than 90 days after the grand jury submits a final report on the operations of any public agency subject to its reviewing authority, the governing body of the public agency shall comment to the presiding judge of the superior court on the findings and recommendations pertaining to matters under the control of the governing body, and every elected county officer or agency head for which the grand jury has responsibility pursuant to Section 914.1 shall comment within 60 days to the presiding judge of the superior court, with an information copy sent to the board of supervisors, on the findings and recommendations pertaining to matters under the control of that county officer or agency head and any agency or agencies which that officer or agency head supervises or controls. In any city and county, the mayor shall also comment on the findings and recommendations. All these comments and reports shall forthwith be submitted to the presiding judge of the superior court who impaneled the grand jury. A copy of all responses to grand jury reports shall be placed on file with the clerk of the public agency and the office of the county clerk, or the mayor when applicable, and shall remain on file in those offices. One copy shall be placed on file with the applicable grand jury final report by, and in the control of the currently impaneled grand jury, where it shall be maintained for a minimum of five years.

### §933.05.

(a) For purposes of subdivision (b) of Section 933, as to each grand jury finding, the responding person or entity shall indicate one of the following:

(1) The respondent agrees with the finding.

(2) The respondent disagrees wholly or partially with the finding in which case, the response shall specify the portion of the finding that is disputed and shall include an explanation of the reasons therefor.

(b) For purposes of subdivision (b) of Section 933, as to each grand jury recommendation, the responding person or entity shall report one of the following actions:

(1) The recommendation has been implemented, with a summary regarding the implemented action.

(2) The recommendation has not yet been implemented, but will be implemented in the future, with a timeframe for implementation.

(3) The recommendation requires further analysis, with an explanation and the scope and parameters of an analysis or study, and a timeframe for the matter to be prepared for discussion by the officer or head of the agency or department being investigated or reviewed, including the governing body of the public agency when applicable. This timeframe shall not exceed six months from the date of publication of the grand jury report.



(4) The recommendation will not be implemented because it is not warranted or is not reasonable, with an explanation therefor.

(c) However, if a finding or recommendation of the grand jury addresses budgetary or personnel matters of a county agency or department headed by an elected officer, both the agency or department head and the board of supervisors shall respond if requested by the grand jury, but the response of the board of supervisors shall address only those budgetary or personnel matters over which it has some decision-making authority. The response of the elected agency or department head shall address all aspects of the findings or recommendations affecting his or her agency or department.

(d) A grand jury may request a subject person or entity to come before the grand jury for the purpose of reading and discussing the findings of the grand jury report that relates to that person or entity in order to verify the accuracy of the findings prior to their release.

(e) During an investigation, the grand jury shall meet with the subject of that investigation regarding the investigation, unless the court, either on its own determination or upon request of the foreperson of the grand jury, determines that such a meeting would be detrimental.

(f) A grand jury shall provide to the affected agency a copy of the portion of the grand jury report relating to that person or entity two working days prior to its public release and after the approval of the presiding judge. No officer, agency, department, or governing body of a public agency shall disclose any contents of the report prior to the public release of the final report.

## RESPONSES REQUIRED

Comments to the Presiding Judge of the Superior Court in compliance with Penal Code Section 933.05 are required from:

Responses are required from the following governing body within 90 days of the date of the publication of this report:

90 Day Required Responses	F1	F2	F3	F4	F5	F6
Santa Ana City Council	x	x	x	x	x	x

90 Day Required Responses	R1	R2	R3
Santa Ana City Council	x	x	x

## APPENDIX

### APPENDIX 1 – Approved and Operating Adult-Use Cannabis Dispensaries

4-15-2021 update

Count	Applicant Name	DBA Name	Business Activity	Business Address
1	Vertical, Inc.	420 Central	Retail (Adult-Use)	420 W. Central Ave.
2	The Garry Five, LLC	ASHE Society	Retail (Adult-Use)	3601 W. Garry Ave.
3	AAA Health Center	Kannadise	Retail (Adult-Use)	1525 E St Gertrude
4	Bud & Bloom	Farmacy Santa Ana	Retail (Adult-Use)	1327 E. St. Gertrude Pl.
5	Hand & Hand Patient Care	Catalyst - Santa Ana	Retail (Adult-Use)	2400 S. Pullman St.
6	STPC Enterprise, Inc	Evergreen	Retail (Adult-Use)	1320 E. Edinger Ave.
7	DBO Investments SA LLC	From The Earth	Retail (Adult-Use)	3023 S. Orange Ave.
8	Fairfax Enterprises, Inc.	Herban Kulture	Retail (Adult-Use)	3210 S. Standard Ave.
9	55 OC Collective, Inc	Jungle Boys	Retail (Adult-Use)	2911 Tech Center Dr.
10	Jason Lily, LLC	Kannabis Works	Retail (Adult-Use)	2106 S. Susan St.
11	The Source - Santa Ana	MedMen OC	Retail (Adult-Use)	2141 S. Wright St.
12	Monex Place Wellness, Inc	Mr. Nice Guy	Retail (Adult-Use)	730 E. Dyer Rd.
13	OCG SYSTEMS	New Generation	Retail (Adult-Use)	3700 W. Segerstrom Ave. #A
14	SOAR Collective	OC3	Retail (Adult-Use)	3122 S. Halladay St. #A
15	People's First Choice LLC	Peoples OC	Retail (Adult-Use)	2721 S. Grand Ave.
16	SCSA Group, Inc.		Retail (Adult-Use)	1900 E. Warner Ave., #A-1
17	Halladay Healing Group	Super Clinic	Retail (Adult-Use)	2525 S. Birch St.
18	Green Rose Green Leaf Care Inc.	Speedy Weedy	Retail (Adult-Use)	1325 E. St. Andrew Pl. #B
19	The 10 Spot, Inc	The Spot	Retail (Adult-Use)	3242 S. Halladay St. #101
20	The 10 Spot, Inc	The Spot Shannon	Retail (Adult-Use)	2700 S. Shannon St.
21	WCW Organization	Tropicana	Retail (Adult-Use)	1628 S. Grand Ave
22	Healthy Healing Holistic Options, Inc	Weden	Retail (Adult-Use)	1625 E. St. Gertrude Pl.
23	2015 Halladay Wellness Inc.	West Clinic	Retail (Adult-Use)	2110 S. Yale St., #A

## APPENDIX 2 – Commercial Cannabis Application Process

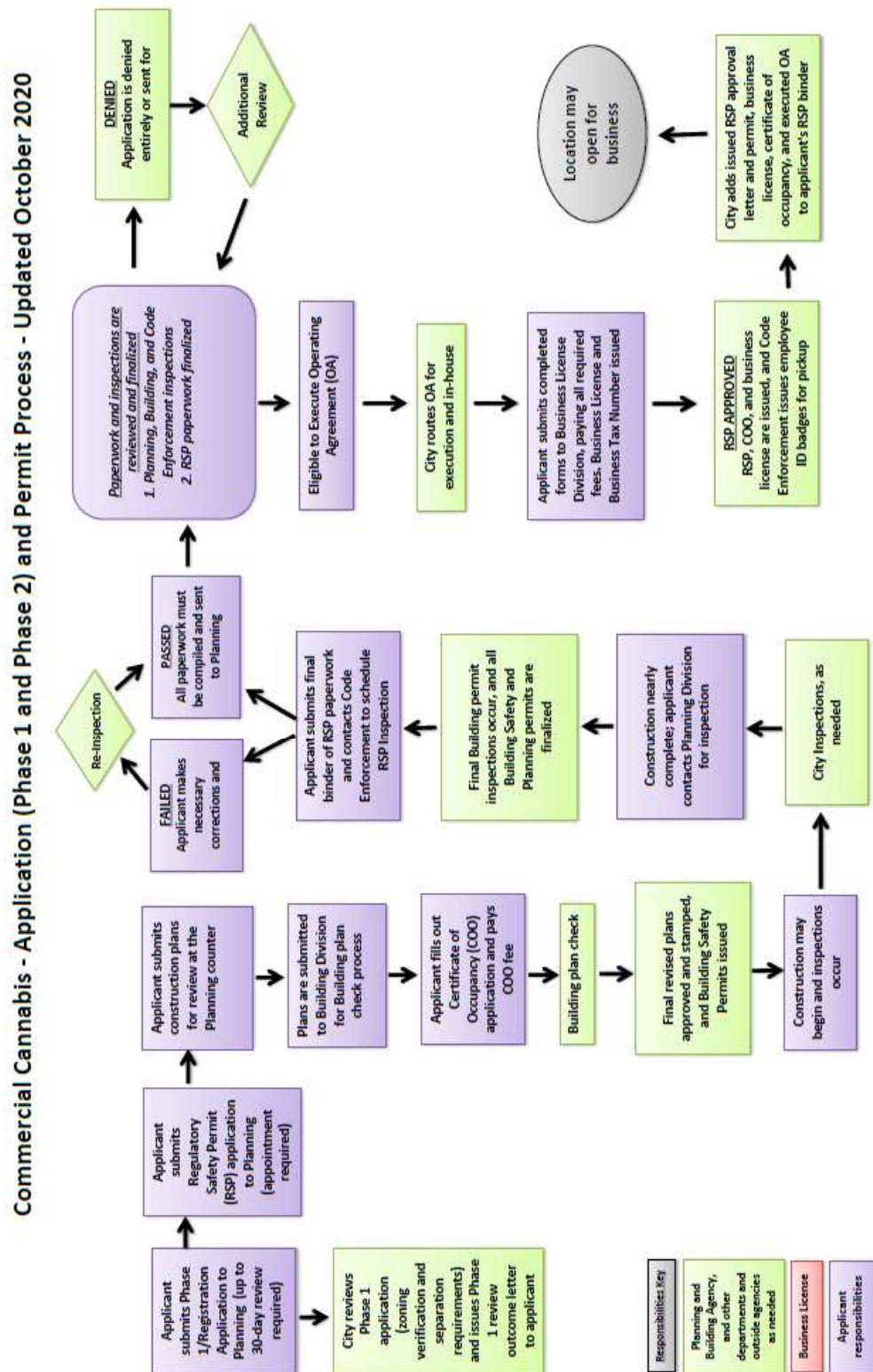
<b>Adult-Use Retail Cannabis Merit-Based Criteria and Possible Points</b>		
All applications for a Regulatory Safety Permit (RSP) will be evaluated using the merit criteria outlined below. Applicants must submit supplemental documentation or references with the RSP application that support the statements below for review by the City.		
No.	Merit Criteria	Points
1	Applicant demonstrates control of a site that is in full compliance with the requirements of Chapter 18 and/or Chapter 40 of the Santa Ana Municipal Code (base requirement <sup>1</sup> ).	Up to 20
2	Applicant demonstrates experience in operating a permitted or licensed commercial cannabis activity within the United States (base requirement <sup>1</sup> ).	Up to 20
3	Applicant demonstrates past experience in and commits to any of the following <sup>2</sup> : <i>This criteria evaluates the items listed below.</i> <ul style="list-style-type: none"> <li>Local hiring and sourcing practices<sup>3</sup></li> <li>Sustainable business or building practices</li> <li>Community benefit and/or youth programs in Santa Ana</li> </ul>	Up to 30
4	Applicant is currently on the Measure BB lottery waitlist.	Up to 10
5	Applicant's principal officer's, director's, or owner's primary residence is in the City of Santa Ana and the person has been residing at the primary residence for at least 12 consecutive months immediately preceding the date of the application; OR have been operating a business in the City of Santa Ana for at least 12 consecutive months immediately preceding the date of the application.	Up to 10
6	Applicant, entity, or premises: <i>This criteria evaluates the items listed below.</i> <ul style="list-style-type: none"> <li>Has no previous record of failing to make timely reporting or remitting of their Santa Ana medical marijuana and/or commercial cannabis business license taxes or any other payments required by their entitlements if operating in another jurisdiction</li> <li>Is not the subject of any outstanding code enforcement activity</li> </ul>	Up to 10
<b>Maximum Possible Points</b>		<b>100</b>

<sup>1</sup> Base requirement indicates that the applicant must satisfy a portion of each criteria (nos. 1 and 2) in order to qualify for consideration and scoring

<sup>2</sup> A community benefits plan will be reviewed and incorporated into the required operational agreement for any selected commercial cannabis business operating in Santa Ana.

<sup>3</sup> Note: Pursuant to Chapter 40, any facility employing two or more individuals is required to enter into a labor peace agreement.

## APPENDIX 3 – Phase 1 and Phase 2 Application and Permit Process





## APPENDIX 4 – Commercial Cannabis Application Information



Planning and Building Agency  
Planning Division  
20 Civic Center Plaza  
P.O. Box 1988 (M-20)  
Santa Ana, CA 92702  
(714) 647-5804  
www.santa-ana.org



### Commercial Cannabis **Non-Retail** Business Phase 1 & Phase 2 Application Information

Thank you for your interest in submitting an application to operate a non-retail commercial cannabis in Santa Ana.

#### **What applications do I need to submit?**

All commercial cannabis businesses are required to submit a Phase 1/Registration Application and a Phase 2/Regulatory Safety Permit (RSP) Application.

#### **How much are the application processing fees?**

The Phase 1 processing fee is \$1,752.02. The Phase 2/RSP processing fee is \$12,529.56. Please note that the Phase 2 permit and fee must be renewed annually.

#### **Are there any other fees?**

All commercial cannabis businesses are required to execute an operating agreement. The operating agreement preparation fee is \$2,500.00, payable within 30 days if the Phase 2/RSP is approved.

Commercial cannabis businesses in Santa Ana are also subject to following taxes following the passage of Measure Y, approved by Santa Ana voters in November 2018.

Commercial Cannabis Business Type	Tax
Adult-Use Retail	8% of gross receipts or \$25 per square foot (annually), whichever is higher.
Testing Laboratory	1% of gross receipts or \$1.50 per square foot (annually), whichever is higher.
Cultivation and Manufacturing	6% of gross receipts or \$10 per square foot (annually), whichever is higher.
Distribution	6% of gross receipts or \$4 per square foot (annually), whichever is higher.
Medicinal Retail (subject to separate tax approved in 2014)	6% of gross receipts

#### **Is there a cap or limit on the number of permits?**

There is limit of 30 adult-use retailer RSPs and 20 medicinal retailer RSPs. The application period for adult-use retailers ended March 1, 2018, and no new applications are being accepted. There is no limit on the number of RSPs for "non-retail" commercial cannabis businesses (testing laboratory, cultivation, manufacturing, and distribution).

#### **When and how can I submit an application?**

Applications for "non-retail" commercial cannabis businesses (testing laboratory, cultivation, manufacturing, and distribution) are accepted year-round. Applications are only accepted in digital format. Additional information is provided in each application.



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## Commercial Cannabis **Non-Retail** Business Phase 1 & Phase 2 Application Information

### **Can I submit Phase 1 and Phase 2 applications together?**

Yes. Applicants are encouraged to submit Phase 1 and Phase 2 applications concurrently, which can save up to 30 days of processing time.

### **Do I need a submittal appointment?**

Phase 1 submittals do not require an appointment. Phase 1 applications can be submitted during regular Planning Division counter hours. If submitting both Phase 1 and Phase 2 applications together, please contact [cannabis@santa-ana.org](mailto:cannabis@santa-ana.org) for a submittal appointment. Phase 2 submittals require an appointment.

### **How long is the review period?**

Phase 1 applications require up to 30 days to process, after which the applicant is informed of the outcome. Phase 2 includes the full background checks of all business owners, managers, employees, and volunteers, as well as plan-check, construction, buildout, and inspections. Because each site will have different plan-check and buildout requirements, the Phase 2 timeframe is more difficult to estimate. The City offers expedited plan-check and overtime inspections if requested by an applicant.

### **Is there a reason my applications would be denied?**

There is no limit for non-retail commercial cannabis businesses and there no selection process (evaluation, lottery, etc.). Non-retail applications must meet all zoning and buffer requirements, and all owners, managers, employees, and volunteers must meet the Santa Ana Municipal Code (SAMC) requirements for background checks listed in Chapters 18 and 40 [SAMC Sec. 18-613 (n) and 40-8 (3) (x)], as well as any other applicable sections of the SAMC.

### **Is there a flowchart explaining Santa Ana's permit process?**

Yes. A flowchart explaining the entire application review and permitting process is available online at: <http://santa-ana.org/commercialcannabis/default.asp>.

### **Is Santa Ana's RSP the same as a State license?**

No. The City of Santa Ana issues RSPs, which are local permits. The State issues licenses to conduct commercial cannabis business activity. For information on State licenses and the application process, please visit <http://bcc.ca.gov/>.

### **Where can I find additional details or information?**

Additional information on application requirements are contained in the Phase 1 and Phase 2 applications, as well as in the commercial cannabis ordinances available online at <https://www.santa-ana.org/cannabis>. For additional information, please contact [cannabis@santa-ana.org](mailto:cannabis@santa-ana.org).



## APPENDIX 5 – Santa Ana Ordinance No. NS-2959

SRC 11/20/18

### ORDINANCE NO. NS-2959

AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF SANTA ANA, CALIFORNIA, ADDING ARTICLE XX TO CHAPTER 13 OF THE SANTA ANA MUNICIPAL CODE TO ESTABLISH A CANNABIS PUBLIC BENEFIT FUND

#### THE CITY COUNCIL OF THE CITY OF SANTA ANA DOES HEREBY ORDAIN AS FOLLOWS:

**Section 1.** Section XX is hereby added to Chapter 13 of the Santa Ana Municipal Code and shall read as follows:

#### **ARTICLE XX.- CANNABIS PUBLIC BENEFIT FUND.**

##### **Sec. 13-200. - Establishment of the Fund.**

There is hereby established within the City of Santa Ana the "Cannabis Public Benefit Fund", which shall be two sub-funds, one for Enforcement Services and one for Youth Services, within the City's General Fund (the "Cannabis Fund").

##### **Sec. 13-201.- Purpose.**

The Cannabis Fund shall be used to fund new or additional Youth Services, as of the date of the fund creation, for City of Santa Ana residents. The Cannabis Fund shall not be used to supplement existing Youth Services. The Cannabis Fund shall also be used to fund community enforcement and code enforcement.

##### **Sec. 13-202.- Definitions.**

For the purposes of this Article, the following words and phrases shall be construed as having the following definitions:

*Adult Use-* shall have the same meaning as that set forth in Santa Ana Municipal Code ("SAMC") section 40-2(2) as may be periodically amended. At the time of adoption of this Article, meaning cannabis or cannabis products that are intended to be used for non-medicinal purposes by a person twenty-one (21) years of age or older.

*Commercial Cannabis Activity* – shall have the same meaning as that set forth in SAMC section 40-2(9) as may be periodically amended. At the time of adoption of this Article, meaning the cultivation, possession, manufacture, distribution, processing, storing, laboratory, packaging, labeling, transportation, delivery or sale of cannabis or cannabis products as provided for in this Chapter

Ordinance No. NS-2959  
Page 1 of 4

[Chapter 40]. Permitted commercial cannabis activities are listed in Land Use Table 40-5 of this Chapter [Chapter 40].

*Enforcement Services* – any and all services provided by City staff for the prevention, detection, investigation and violations of the City's codes and ordinances intended to prevent public nuisances or activities that are detrimental to the health, safety and welfare of the community.

*Medicinal/Medical Cannabis*- shall have the same meaning as that set forth in SAMC section 40-2(27) as may be periodically amended. At the time of adoption of this Article, meaning cannabis or a product containing cannabis, including, but not limited to, concentrates, and extractions, intended to be sold for use by medicinal cannabis patients in California pursuant to the Compassionate Use Act of 1996, found at Section 11362.5 of the California Health and Safety Code. Medical cannabis retail is regulated by Chapter 18 and Chapter 21 of the Santa Ana Municipal Code.

*Operating Agreement*- shall have the same meaning as that set forth in SAMC section 40-1C as may be periodically amended. At the time of adoption of this Article, meaning a legally binding written agreement between each commercial cannabis business operator and the City, executed by the City Manager, or his or her designee, and in a form or substance satisfactory to the Executive Director of Planning and Building and the City Attorney, and containing those provisions necessary to ensure that the requirements of this article are satisfied. A distinct Commercial Cannabis Operating Agreement shall be required for each location and type of commercial cannabis business activity taking place at an approved Commercial Cannabis Business.

*Youth Services*- any and all services provided to residents of the City under the age of 24 for athletic, recreational, health, educational, or human services, directly by City staff or through partnerships with third parties. This may include City facility improvements, maintenance and equipment needs related to youth services.

### **Sec. 13-203. - Cannabis Revenue Funding.**

A. Automatic Deposit of Cannabis Tax Revenues into the Cannabis Fund. The Cannabis Fund shall be funded by an automatic deposit of one-third (1/3) of all cannabis tax revenues generated each year for Enforcement Services and one-third (1/3) of all cannabis tax revenues generated each year for Youth Services, commencing with the Fiscal Year Budget for 2018-20 and continuing thereafter in the budget for each Fiscal Year, from all of the following: 1) Operating Agreements for Commercial Cannabis businesses and 2) Any newly adopted Cannabis Business License Tax. For purposes of this subsection, in addition to the descriptions provided directly above in this paragraph, the phrase "cannabis tax revenues" means all revenues generated from any new or increased cannabis tax which has been approved by the voters of the City on or after the effective date of this Chapter and any increase of the cannabis tax



authorized by the Santa Ana Municipal Code and approved by the City Council. Tax revenue from Medicinal/Medical Cannabis shall not go into the Cannabis Fund. Funds in these sub-funds shall be carried over from year-to-year.

B. Discretionary Deposits into Cannabis Fund Not Prohibited. Nothing in this Chapter shall prohibit the City Council, as part of the budgeting process, from contributing additional revenues to the Cannabis Fund, as determined in the City Council's sound legislative discretion.

C. Expenditures from the Cannabis Fund. Funds in the Cannabis Fund shall be restricted to 1) Youth Services: expenditures for new, additional or enhanced, as of the date the Cannabis Fund is created, Youth Services for City of Santa Ana residents and 2) Enforcement Services: expenditures for Enforcement Services.

**Sec. 13-204.- Presentation to City Council.**


At least two times per year the City Manager shall make a presentation to the City Council and report on the revenue that has been deposited in the Cannabis Fund and expenditures from the Cannabis Fund.

**Sec. 13-205. - Procedure for Amending, Suspending or Rescinding Ordinance.**

This ordinance may only be amended, suspended or rescinded by an affirmative vote of at least two-thirds of the City Council after making findings that a structural deficit exists in the same manner as required to access the Economic Uncertainty Account as set forth in the City's Budget and Financial Policy.

**Section 2.** If any section, subsection, sentence, clause, phrase or portion of this ordinance is for any reason held to be invalid or unconstitutional by the decision of any court of competent jurisdiction, such decision shall not affect the validity of the remaining portions of this ordinance. The City Council of the City of Santa Ana hereby declares that it would have adopted this ordinance and each section, subsection, sentence, clause, phrase or portion thereof irrespective of the fact that any one or more sections, subsections, sentences, clauses, phrases, or portions be declared invalid or unconstitutional.

ADOPTED this 4<sup>th</sup> day of December, 2018.

  
Miguel A. Pulido  
Mayor

Ordinance No. NS-2959  
Page 3 of 4

APPROVED AS TO FORM:

By: *Sonia R. Carvalho*  
Sonia R. Carvalho  
City Attorney

AYES: Councilmembers: Benavides, Pulido, Martinez, Solorio, Tinajero, Villegas (6)

NOES: Councilmembers: None (0)

ABSTAIN: Councilmembers: None (0)

NOT PRESENT: Councilmembers: Sarmiento (1)

CERTIFICATE OF ATTESTATION AND ORIGINALITY

I, MARIA D. HUIZAR, Clerk of the Council, do hereby attest to and certify that the attached Ordinance No. NS-2959 to be the original ordinance adopted by the City Council of the City of Santa Ana on December 4, 2018, and that said ordinance was published in accordance with the Charter of the City of Santa Ana.

Date: 12/11/2018

*Maria D. Huizar*  
Maria D. Huizar  
Clerk of the Council  
City of Santa Ana

## GLOSSARY

<b>Adult-Use</b>	Terminology used for “recreational” use to distinguish from “medicinal” use.
<b>BCC</b>	California Bureau of Cannabis Control
<b>Cannabis</b>	Cannabis refers to a group of three plants with psychoactive properties, known as <i>cannabis sativa</i> , <i>cannabis indica</i> , and <i>cannabis ruderalis</i> . When the flowers of these plants are harvested and dried, it becomes one of the most common drugs in the world. It is also referred to as weed, pot, or marijuana.
<b>Cannabis Public Benefit Fund</b>	The fund created by ordinance NS-2959 for revenue received in accordance with Measure Y.
<b>Community Benefits Program</b>	A voluntary, good-will program for dispensary owners and employees to provide donations or volunteer hours to the City of Santa Ana.
<b>DOJ</b>	United States Department of Justice
<b>Dispensary</b>	A retail store or business that sells Cannabis products.
<b>Medicinal</b>	Use specifically for medical purposes such as treating PTSD or for relieving nausea caused by chemotherapy.
<b>OCGJ</b>	Orange County Grand Jury
<b>PLAN</b>	Community Benefit and Sustainable Business Practices Plan
<b>Regulatory Safety Permit (RSP)</b>	A permit used by the City of Santa Ana pursuant to Chapter 40 of its Municipal Code.
<b>Unlicensed</b>	Also known as “illegal” or “black market.” Dispensaries not licensed or legally authorized to sell Cannabis products to the public.

## BIBLIOGRAPHY

- California Marijuana Legalization, Proposition 19 (1972)*. (1972, Nov 7). Retrieved 2021, from BALLOTPEdia:  
[https://ballotpedia.org/California\\_Marijuana\\_Legalization,\\_Proposition\\_19\\_\(1972\)](https://ballotpedia.org/California_Marijuana_Legalization,_Proposition_19_(1972))
- California Proposition 215, the Medical Marijuana Initiative (1996)*. (1996, Nov 5). Retrieved 2021, from BALLOTPEdia:  
[https://ballotpedia.org/California\\_Proposition\\_215,\\_the\\_Medical\\_Marijuana\\_Initiative\\_\(1996\)](https://ballotpedia.org/California_Proposition_215,_the_Medical_Marijuana_Initiative_(1996))
- ORDINANCE NO. NS -2929*. (2017, Oct 17). Retrieved 2021, from SantaAna Granicus:  
[http://santaana.granicus.com/MetaViewer.php?view\\_id=2&clip\\_id=1414&meta\\_id=54509](http://santaana.granicus.com/MetaViewer.php?view_id=2&clip_id=1414&meta_id=54509)
- Ordinance NS- 2959, Establishing a Cannabis Public Benefit Fund*. (2018, Dec). Retrieved 2021, from SantaAna Granicus:  
[https://santaana.granicus.com/MetaViewer.php?view\\_id=2&event\\_id=8261&meta\\_id=122354](https://santaana.granicus.com/MetaViewer.php?view_id=2&event_id=8261&meta_id=122354)
- Proposition 64: The Adult Use of Marijuana Act*. (2016, Nov). Retrieved 2012, from California Courts The Judicial Branch of California: <https://www.courts.ca.gov/prop64.htm>
- Santa Ana, California, Measure Y, Recreational Marijuana Business Tax (November 2018)*. (2018, Nov 6). Retrieved 2021, from BALLOTPEdia:  
[https://ballotpedia.org/Santa\\_Ana,\\_California,\\_Measure\\_Y,\\_Recreational\\_Marijuana\\_Business\\_Tax\\_\(November\\_2018\)](https://ballotpedia.org/Santa_Ana,_California,_Measure_Y,_Recreational_Marijuana_Business_Tax_(November_2018))
- Text of Proposition 19, the "Regulate, Control and Tax Cannabis Act of 2010" (California)*. (2010). Retrieved 2021, from BALLOTPEdia:  
[https://ballotpedia.org/Text\\_of\\_Proposition\\_19,\\_the\\_%22Regulate,\\_Control\\_and\\_Tax\\_Cannabis\\_Act\\_of\\_2010%22\\_\(California\)](https://ballotpedia.org/Text_of_Proposition_19,_the_%22Regulate,_Control_and_Tax_Cannabis_Act_of_2010%22_(California))

# **EXHIBIT 5**



# CALIFORNIA'S COMMERCIAL POT SALES CONTINUE TO DAMAGE PUBLIC HEALTH AND SAFETY

🕒 December 30, 2024



(SACRAMENTO, CA) – Dr. Kevin Sabet, President of **Smart Approaches to Marijuana (SAM)** and a three-time White House drug policy advisor, released the following statement in advance of the anniversary of commercial marijuana sales in California:

“Trends across the nation have universally shown that sales of today’s high-potency marijuana and THC-infused drugs are resulting in more THC-related traffic crashes, more youth-use, more workplace accidents, a larger illicit market, and lower than expected tax revenue. For yet another year California has been no different. Lawmakers at the state and federal level – many of whom count pot profiteers among their donors – refuse to acknowledge the damage being done and have been resistant to advance policies that can save Californians from physical, psychological and economic clutches of this predatory industry.

Since THC drug sales started in 2018, California has seen:

found in state-legal dispensaries, with [one study](#) finding that almost 72% of the samples contained residual solvents, including isopentane, butane, and propane and One third of those samples also contained pesticide residues. This year, the [LA Times](#) reported that nearly 60% of legal marijuana products in California had pesticide levels above either state limits or federal tobacco standards. Lab results suggested that the state has 250,000 contaminated vapes and joints sold in dispensaries;

- [Notable increases](#) in hospitalizations and emergency department visits by children who had some sort of marijuana exposure. Researchers found that 43% of patients presented with complaints of suicidal ideation; and
- Little benefit to state coffers. Despite some of the highest taxes in the country, the FY21-22 marijuana [tax revenue](#) was only 0.49% of the state's entire budget.

"The last year has demonstrated again that states cannot effectively regulate this industry. Big Marijuana will stop at nothing to hook a new generation of users on increasingly potent pot products. Significant reforms are needed, including requiring clear warning labels that spell out the harms associated with these dangerous psychoactive drugs. Those labels should make clear to the public that THC drugs are increasingly medically



on the part of parents, especially for young people.

Lawmakers should also advance strict potency caps, enact bans on advertising that can be seen by those under 21, and invest greater resources in prevention and treatment programs to help those who are bearing the consequences of the state's failed experiment with marijuana legalization."

## Join the **conversation**



[info@learnaboutsam.org](mailto:info@learnaboutsam.org)

- ☐ Smart Approaches to Marijuana (SAM) Updates
- ☐ Parent Action Network (PAN) Updates
- ☐ Foundation for Drug Policy Solutions (FDPS) Updates
- ☐ The Drug Report Newsletter

SUBSCRIBE

© 2025 - SMART APPROACHES TO MARIJUANA / PRIVACY

# **EXHIBIT 6**

**From:** Cruz Rene Garcia <cruzrene.garcia@stiiizy.com>  
**Sent:** 7/11/2023 5:08:23 PM  
**To:** Taylor, Matthew  
**Cc:**  
**Subject:** [EXTERNAL] RE: Question about Cannabis Ordinance

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Hi Matthew,

Thank you so much for your answer and insight. Itâ€™s much appreciated.

Have a great rest of your day.

Best,

Cruz R. Garcia

**From:** Taylor, Matthew <MTaylor@riversideca.gov>  
**Sent:** Tuesday, July 11, 2023 4:48 PM  
**To:** Cruz Rene Garcia <cruzrene.garcia@stiiizy.com>  
**Cc:** Barrera, Jorge <JBarrera@riversideca.gov>  
**Subject:** RE: Question about Cannabis Ordinance

Hi Cruz,

The ordinance that was adopted does not restrict a specific number of licenses to a particular Council ward or any other geographic area. However, as the application process and scoring criteria development moves forward, I canâ€™t say for certain whether geographic concentration will or will not be a factor in evaluating applications â€ we are just not there yet.

Weâ€™ll add you to our interest list for notifications of when there are announcements or opportunities to provide input.

Thanks,

**Matthew Taylor | Principal Planner**  
951.826.5944 | [mtaylor@riversideca.gov](mailto:mtaylor@riversideca.gov)

**City of Riverside**  
Community & Economic Development Department  
Planning Division  
3900 Main Street | 3<sup>rd</sup> Floor | Riverside 92522

**From:** Cruz Rene Garcia <[cruzrene.garcia@stiiizy.com](mailto:cruzrene.garcia@stiiizy.com)>  
**Sent:** Friday, July 7, 2023 2:50 PM  
**To:** Taylor, Matthew <[MTaylor@riversideca.gov](mailto:MTaylor@riversideca.gov)>  
**Subject:** [EXTERNAL] Question about Cannabis Ordinance

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Hello,

I had a question regarding the cannabis ordinance. I understand that 14 license will be distributed to applicants, but I was wondering if those licenses had district designationsâ€ is there a certain amount of operators allowed per district? For example, 2 license per 7 districts totaling 14 license.

Hope to hear from you soon. Thanks for reading.

Best,

Cruz R. Garcia

Stay in-the-know with all things Riverside! Connect with us at [RiversideCA.gov/Connect](https://www.RiversideCA.gov/Connect).

**From:** Biggerstaff, Connor <Connor>  
**Sent:** 6/20/2023 5:02:30 PM  
**To:** matthew@stilizy.com  
**Cc:**  
**Subject:** Re: Zoning Inquiry  
**Attachments:** [Outlook-cv4nwtvr.png](#)

Good Afternoon Matthew,

I wanted to respond to you in a timely manner. You have the proper people in this original email, Matthew Taylor and Judy Eguez are the likely Planners you will be speaking with when the time comes for the cannabis licensing program.

We have just received notification today, June 20th, that the City of Riverside has been granted funds from the state to pursue a licensing program, but has no formal plans as of yet when the rollout will occur or which Planner will be in charge of the program. I will recommend that you keep reaching out every few weeks to see where we are in the process. Our Economic Development Manager, Jorge Barrera, will also be involved with the program. You can add his name to this outreach list: [jbarrera@riversideca.gov](mailto:jbarrera@riversideca.gov)

Please let me know if you have any further questions, and I can answer them to the best of my ability at this current time.

Thank you,

**Connor Biggerstaff**  
City of Riverside  
Community & Economic Development Department  
(951) 367-7399 Cell Phone  
(951) 826-2438 Main Line  
[RiversideCA.gov](http://RiversideCA.gov)

**From:** Office of Economic Development <[econdev@riversideca.gov](mailto:econdev@riversideca.gov)>  
**Sent:** Tuesday, June 20, 2023 4:54 PM  
**To:** Biggerstaff, Connor <[CBiggerstaff@riversideca.gov](mailto:CBiggerstaff@riversideca.gov)>  
**Subject:** Fw: Zoning Inquiry

**From:** Matthew Nathaniel <[matthew@stilizy.com](mailto:matthew@stilizy.com)>  
**Sent:** Tuesday, June 20, 2023 11:16 AM  
**To:** Matthew Nathaniel <[matthew@shrynegroup.com](mailto:matthew@shrynegroup.com)>; Office of Economic Development <[econdev@riversideca.gov](mailto:econdev@riversideca.gov)>; Taylor, Matthew <[MTaylor@riversideca.gov](mailto:MTaylor@riversideca.gov)>  
**Cc:** Eguez, Judy <[Eguez@riversideca.gov](mailto:Eguez@riversideca.gov)>  
**Subject:** [EXTERNAL] Re: Zoning Inquiry

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Good evening,

I wanted to follow up on my previous email to find out the current status of the cannabis licensing program. Can you confirm which department is leading on this now, and when there may be additional clarity around some of the zoning considerations?  
Thanks for your assistance.

Sincerely,

**STILIZY**  
Matthew Nathaniel  
Director  
323.420.1091  
[Matthew@STILIZY.com](mailto:Matthew@STILIZY.com)  
[STILIZY.com](http://STILIZY.com)

**From:** Matthew Nathaniel <matthew@shrynegroup.com>

**Sent:** Monday, May 29, 2023 14:12

**To:** EconDev@RiversideCA.gov <EconDev@RiversideCA.gov>; Taylor, Matthew <MTaylor@riversideca.gov>

**Subject:** Zoning Inquiry

Good afternoon,

I hope this email finds you well. I wanted to inquire about the progress of the cannabis retail permitting process as it transitions to the Economic Development department. I also wanted to extend my best wishes in the hope that the city has been successful in securing the state grant to facilitate this process.

My purpose in reaching out is to seek further clarity on a question that arose previously. While I understand that cannabis retail is permissible in commercial areas, including downtown, with consideration for sensitive uses and buffers, I am still uncertain about the categorization of certain businesses. Specifically, I would like to understand if there is a distinction between preschools and daycares in terms of their classification. Additionally, I am curious to know if a drive-in theater would be considered a sensitive use under the regulations.

Your time and assistance in providing clarification on these matters would be greatly appreciated. Thank you once again for your ongoing support and guidance throughout this process.

Sincerely,



**Matthew Nathaniel**

Director

323.420.1091

Matthew@ShryneGroup.com

[www.ShryneGroup.com](http://www.ShryneGroup.com)

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**From:** Biggerstaff, Connor <CBiggerstaff@riversideca.gov>  
**Sent:** 3/21/2024 11:43:38 AM  
**To:** Christopoulos, Chris  
**Cc:**  
**Subject:**

---

Let me know if you need my participation in any other cannabis meeting, happy to help. In my opinion, Frank's concern is warranted, but if, say, Stiliizy had submitted three applications for three locations in the City, and all were well-received and are high-end, I don't see an ethical issue; they went through the same scoring system, they shouldn't be penalized for high-performing proposals. With that said, we should keep an eye out for shenanigans.



**From:** Stephanie L. Uy <stephanie.uy@shrynegroup.com>  
**Sent:** 3/15/2024 12:18:02 PM  
**To:** Lilley, Jennifer, Jesse Ramirez  
**Cc:**  
**Subject:** [EXTERNAL] Re: Cannabis inquiry  
**Attachments:** [image001.jpg](#)

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Hi Jennifer,

I hope this email finds you well. Now that the rankings have been released, I wanted to reach back out to you.

We are so excited to be ranked #1 and #2 and we look forward to moving forward in the process.

We had a few questions I was hoping you could help answer.

1. In initial conversations, the city mentioned limiting each council district to 2 cannabis retail licenses. Does this requirement of 2 licenses per council district still apply?
2. When will the preferred location form be released?
3. Please confirm Site Review Fee of \$17,864.00 per property. If that is the correct fee amount, can you point me to the resolution that establishes this fee?

Thank you so much & have a nice weekend,

**From:** Lilley, Jennifer <Lilley@riversideca.gov>  
**Sent:** Thursday, November 9, 2023 3:50 PM  
**To:** Stephanie L. Uy <stephanie.uy@shrynegroup.com>; Jesse Ramirez <jesse@socialprojectstrategies.com>  
**Subject:** RE: Cannabis inquiry

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AMAZING! Thank you so much. I hope you have a great holiday weekend as well.



**Jennifer A. Lilley, AICP**  
Community and Economic Development Director  
3900 Main Street, Riverside, CA 92522  
Office: (951) 826-5800 | (951) 826-5110  
[www.riversideca.gov](http://www.riversideca.gov) | [lilley@riversideca.gov](mailto:lilley@riversideca.gov)  
Connect with Us! [Facebook](#) | [Twitter](#) | [YouTube](#) | [Instagram](#) |

**From:** Stephanie L. Uy <stephanie.uy@shrynegroup.com>  
**Sent:** Thursday, November 9, 2023 3:46 PM  
**To:** Lilley, Jennifer <Lilley@riversideca.gov>; Jesse Ramirez <jesse@socialprojectstrategies.com>  
**Subject:** [EXTERNAL] Re: Cannabis inquiry

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Hi Jennifer,

Thank you for getting back to me. I really appreciate it. I will email [cannabis@riversideca.gov](mailto:cannabis@riversideca.gov) directly with my questions. Have a nice holiday weekend.

Thank you,

**From:** Lilley, Jennifer <[jlilley@riversideca.gov](mailto:jlilley@riversideca.gov)>  
**Sent:** Tuesday, November 7, 2023 9:11 AM  
**To:** Stephanie L. Uy <[stephanie.uy@shnynegroup.com](mailto:stephanie.uy@shnynegroup.com)>; Jesse Ramirez <[jesse@socialprojectstrategies.com](mailto:jesse@socialprojectstrategies.com)>  
**Subject:** RE: Cannabis inquiry

**Caution:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Hello Stephanie and Jesse  
I appreciate your inquiry and reaching out. The City is working diligently to ensure equitable information to all potential applicants. As we have outlined in the guidelines under the direction of Council all inquiries are to be submitted in writing at our [cannabis@riversideca.gov](mailto:cannabis@riversideca.gov) account so that we can respond on the FAQ and ensure everyone gets the same information at the same time.

I wanted to reach back out to ensure you knew that I received your emails. Thank you in advance for your interest in Riverside and direct you to the right place to get your question answered. All the best to you in this process. Jennifer



**Jennifer A. Lilley, AICP**  
Community and Economic Development Director  
3900 Main Street, Riverside, CA 92522  
Office: (951) 826-5800 | (951) 826-5110  
[www.riversideca.gov](http://www.riversideca.gov) | [jlilley@riversideca.gov](mailto:jlilley@riversideca.gov)  
Connect with Us! [Facebook](#) | [Twitter](#) | [YouTube](#) | [Instagram](#) |

**From:** Stephanie L. Uy <[stephanie.uy@shnynegroup.com](mailto:stephanie.uy@shnynegroup.com)>  
**Sent:** Monday, November 6, 2023 12:32 PM  
**To:** Jesse Ramirez <[jesse@socialprojectstrategies.com](mailto:jesse@socialprojectstrategies.com)>; Lilley, Jennifer <[jlilley@riversideca.gov](mailto:jlilley@riversideca.gov)>  
**Subject:** [EXTERNAL] Re: Cannabis inquiry

**CAUTION: This email originated from outside the City of Riverside. It was not sent by any City official or staff. Use caution when opening attachments or links.**

Hi Jennifer,

It's great to be connected with you. As Jesse mentioned, my company is interested in submitting two cannabis retail applications. The applications would be submitted under two different entities, but they would be owned by the same company. Is this allowed?

Thank you in advance for your insight.

Thank you,

**From:** Jesse Ramirez <[jesse@socialprojectstrategies.com](mailto:jesse@socialprojectstrategies.com)>  
**Sent:** Monday, November 6, 2023 12:18 PM  
**To:** Jennifer Lilley <[jlilley@riversideca.gov](mailto:jlilley@riversideca.gov)>  
**Cc:** Stephanie L. Uy <[stephanie.uy@shnynegroup.com](mailto:stephanie.uy@shnynegroup.com)>  
**Subject:** Cannabis inquiry

**Caution:** This email originated from outside of the organization. Do not click links or open attachments unless you recognize the sender and know the content is safe.

Good Afternoon, Jennifer.

I wanted to come to you with Stephanie Uy. She is the VP of government relations for Stiizy (cannabis retail operator).

I believe she had some questions regarding how many applications can be submitted. There was interest in submitting two applications under different entities. Any guidance would be appreciated. Also, will there be a point of contact for similar questions moving forward?

Thank you in advance for your help.

Best,  
Jesse Ramirez  
[Socialprojectstrategies.com](mailto:Socialprojectstrategies.com)

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# **EXHIBIT 7**



# California Cannabis Tax Revenues: A Windfall for Law Enforcement or an Opportunity for Healing Communities?

Proposition 64 promised to take cannabis revenues and invest them in youth programs, substance abuse treatment, and more. But, says a report from Youth Forward and PHI's Getting It Right from the Start, cities across California are also taking the money and spending it on city and county law enforcement.



[Cookie Policy](#)

---

**Lynn Silver, MD, MPH, FAAP**

**Jim Keddy, Alisa Padon**

## **FOCUS AREAS**

Alcohol, Tobacco, Drugs & Mental Health, Healthy Communities

## **ISSUES**

Cannabis

## **EXPERTISE**

Public Policy Development

## **PROGRAMS**

Getting it Right from the Start: Advancing Public Health & Equity in Cannabis Regulation, Prevention Policy Group



In 2016, California passed Proposition 64 and legalized recreational cannabis. Voters believed that legalizing marijuana would right some of the wrongs of the War on Drugs—especially the mass criminalization and incarceration of young, mostly black and brown men. Prop 64 also promised to generate new revenues that would be invested in youth programs, substance abuse prevention and treatment, environmental restoration and public health initiatives.

**But, says a new report, cities across the state are funneling new cannabis revenues into law enforcement.**



**DOWNLOAD THE REPORT:  
"CALIFORNIA CANNABIS TAX  
REVENUES: A WINDFALL FOR LAW  
ENFORCEMENT OR AN  
OPPORTUNITY FOR HEALING  
COMMUNITIES? "**

To better understand the impact of the taxes imposed by localities, authors researched 28 California cities that were the first to pass recreational cannabis ordinances related to Proposition 64 and that had actually begun to collect cannabis-related revenue by 2018. Those cities were estimated to bring in over \$85 million from local cannabis taxes in just the 2019-20 year.

The revenue collected from cannabis in nearly all these cities goes into their “general fund” where it is used to pay for various city services—including the youth and prevention services called out in Prop 64.

However, for most cities, the largest chunk of their general fund spending goes toward the police. On average, for the 28 cities in the study, police spending represented 39% of general fund spending. **Without any affirmative efforts to direct additional resources elsewhere, new revenues such as those**

**elsewhere, new revenues such as those from cannabis that go into the general fund end up heavily benefiting the police.**

Additionally, instead of actively seeking to direct new revenues elsewhere, many jurisdictions are instead explicitly seeking to use cannabis revenues to expand police budgets. For example, San Diego has decided that “enforcement of marijuana laws” and “proactively cracking down on illegal operators” should be prioritized in deploying cannabis revenues. Los Angeles is directing millions of dollars per year in cannabis revenues to the police “overtime fund” where it is used for “investigating and enforcing laws relative to illegal cannabis businesses” among other law enforcement functions. And the small city of Woodlake, which only has a city police budget of \$1.6 million and nine police officers overall, uses its cannabis revenue to “fund an additional officer, an additional K9, and a



additional officer, an additional K9, and a patrol vehicle.”

Figure Five. Changes in Police Spending After Passage of Proposition 64

City	County	2016-2017 Police Spending	2019-2020 Police Spending	% Change
Greenfield	Monterey	\$2,319,100	\$3,575,262	54%
Dixon	Solano	\$4,141,381	\$5,945,693	44%
Palm Springs	Riverside	\$25,675,356	\$34,323,000	34%
San Leandro	Alameda	\$31,749,103	\$40,914,566	29%
Woodlake	Tulare	\$1,232,922	\$1,581,801	28%
Cloverdale	Sonoma	\$3,334,752	\$4,198,699	26%
Cathedral City	Riverside	\$14,792,447	\$18,590,381	26%
Cotati	Sonoma	\$2,950,972	\$3,698,397	25%
Shasta Lake	Shasta	\$2,660,555	\$3,309,417	24%
Seaside	Monterey	\$11,064,352	\$13,727,237	24%
Santa Rosa	Sonoma	\$48,458,821	\$59,658,991	23%
San Diego	San Diego	\$439,642,132	\$539,262,929	23%
King City	Monterey	\$3,137,112	\$3,764,593	20%
Coachella	Riverside	\$8,171,602	\$9,656,954	18%
Long Beach	Los Angeles	\$207,137,483	\$243,903,742	18%
Modesto	Stanislaus	\$59,102,867	\$69,535,702	18%
Los Angeles	Los Angeles	\$1,433,792,173	\$1,676,632,617	17%
Adelanto	San Bernardino	\$5,522,618	\$6,404,817	16%
Davis	Yolo	\$17,563,698	\$19,945,541	14%
Grover Beach	San Luis Obispo	\$3,833,268	\$4,297,905	12%
Bellflower	Los Angeles	\$11,536,155	\$12,870,580	12%
Santa Barbara	Santa Barbara	\$40,942,916	\$45,555,190	11%
Hayward	Alameda	\$71,139,162	\$78,725,448	11%
Salinas	Monterey	\$36,059,797	\$39,484,747	9%
Pacifica	San Mateo	\$9,333,300	\$10,203,510	9%
Watsonville	Santa Cruz	\$17,229,057	\$18,650,882	8%
Point Arena	Mendocino	\$113,015	\$109,868	-3%
Coalinga	Fresno	\$3,419,918	\$3,246,688	-5%
			Average	+19%

Source: City Budgets

## Report findings

The report found that, between 2016-17 and 2019-20:

- **23 of the 28 cities** that had passed

recreational cannabis ordinances related to Proposition 64 and begun to collect cannabis-related revenue by 2018 **experienced double-digit increases in the amount of general fund dollars going into their police budgets.**

- Eight of the 28 increased their **police budgets by at least 25%.**
- The average shift in police budgets for these 28 cities was an **increase of 19%.**
- Ultimately, in just those cities, **over \$455 million more in general fund dollars was spent on police** in 2019-20 than was spent just three years earlier.

Plus, while the enforcement of cannabis laws has always been concentrated within communities of color, it has become even more so in recent years.

**People of color represented 68% of cannabis arrests in 2013, but by 2018**

**that had risen to 75%** (though with far fewer cannabis arrests in total).

**As a result of this continued infusion of resources into law enforcement strategies, California's War on Drugs has raged on. California's criminal justice system is still being flooded with drug arrests (though most are now misdemeanors). In fact, there were more people arrested for drug offenses in California in 2018 than there were before these initiatives were introduced.**

The report includes positive examples from cities and counties that have used

communities and counties that have used their new cannabis revenues to invest in youth, early childhood education and intervention programs, addressing homelessness and more:

- Santa Ana is dedicating \$3.1 million in cannabis revenues this year to youth services, including tutoring services, internships, and youth enrichment programs.
- Santa Cruz County is investing \$350,000 in cannabis revenue per year in the Thrive by Three program, which is dedicated to creating a robust system of care for children from low-income families and their families. It includes initiatives such as the Nurse-Family Partnership, a research-based community health program in which specially-trained nurses regularly visit first-time mothers from early in their pregnancies until their child's second birthday.

- Monterey County is allocating nearly a million dollars in cannabis revenues in 2019- 20 to initiatives including early childhood education and intervention programs, a homeless shelter, and the Whole Person Care program, which provides comprehensive case management services to those who are homeless, have mental illness or substance use disorders, or have multiple chronic diseases.

## Report recommendations

The report includes recommendations for local officials, state government, and activists, including:

### Recommendations for Youth Organizers, Racial Justice Advocates And Public Health Activists

1. Research if your local city or county has a cannabis tax yet, and if so, how it is spending its cannabis tax revenue.
2. Share the information collected under #1 broadly with fellow advocates and in the news media.
3. Educate local officials on the
4. Bring forward proposals to your local officials for how to tax cannabis businesses and invest these revenues in your communities based on your local needs.
5. In the absence of action on the part of local officials, consider using local ballot measures to present voters

3. Educate local officials on the racialized history of the War on Drugs and share with them examples of how state agencies and communities are prioritizing cannabis revenues for the most impacted neighborhoods.

with an alternative for how to capture and spend these funds.<sup>64</sup>



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*California Cannabis Tax Revenues: A Windfall for Law Enforcement or an Opportunity for Healing Communities?* is co-authored by Youth Forward and PHI's Getting It Right from the Start, and co-sponsored by the Alliance for Boys and Men of Color, California Pan-Ethnic Health Network, California Urban Partnership, Children's Defense Fund CA, Prevention Institute and Public Health Advocates.

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# **EXHIBIT 8**



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# Journal of Economic Behavior & Organization

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## Crime and the legalization of recreational marijuana ☆

Davide Dragone, Giovanni Prarolo, Paolo Vanin,  
Giulio Zanella  

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## Abstract

First-pass evidence is provided that the legalization of the cannabis market across US states is inducing a crime drop. We exploit the staggered legalization of recreational marijuana enacted by the adjacent states of Washington (end of 2012) and Oregon (end of 2014). Combining county-level difference-in-differences and spatial regression discontinuity designs, we find that the policy caused a significant reduction in rapes and property crimes on the Washington side of the border in 2013–2014 relative to the Oregon side and relative to the pre-legalization years 2010–2012. The legalization also increased consumption of marijuana and reduced consumption of other drugs and both ordinary and binge alcohol. Four possible mechanisms are discussed: the direct psychotropic effects of cannabis; substitution away from violence-inducing substances; reallocation of police effort; reduced role of criminals in the marijuana business.

---

# Introduction

The full legalization of the American cannabis market (production, sale, and consumption) began in 2012 in the states of Colorado and Washington, where the first recreational marijuana laws were passed. By the end of 2017, recreational cannabis is legal in 9 US states (and DC), comprising 22% of the US population, and more states are likely to follow soon.<sup>1</sup>

This legalization wave is raising concerns about the crime impact of a permissive drug policy. For instance, in October 2016, shortly before voters in California cast their ballot on Proposition 64 (a voter initiative to legalize recreational cannabis), the Denver District Attorney wrote a letter warning Californian voters that since the legalization of recreational marijuana crime surged in Denver and Colorado at large. Not everyone shares this concern. Among economists, Gary Becker was a strong advocate of the legalization of drugs in general (Becker and Murphy, 2013), and in particular of marijuana in the wake of the first wave of legalization of recreational cannabis in the US (Becker, 2014). Becker and Murphy (2013) claimed that the largest costs of a prohibitionist

approach to buying and selling drugs in the US are “the costs of the crime associated with drug trafficking”, predicting that legalizing this market would “reduce the role of criminals in producing and selling drugs [and] improve many inner-city neighborhoods”: “Just as gangsters were largely driven out of the alcohol market after the end of prohibition, violent drug gangs would be driven out of a decriminalized drug market”. That is, letting the drug market emerge from illegality would make illegal activities in this market not pay, thus greatly reducing fertile ground for crime, a central theme in Becker’s economic approach to crime (Becker, 1968).

To date, there is limited causal evidence supporting either side of the debate. The present paper contributes to the academic and policy discussion on this issue by providing an empirical investigation of the crime effects of legalizing recreational cannabis. In order to provide credible evidence, we exploit a quasi-experiment generated by the timing of the legalization process in the states of Washington (WA, henceforth) and Oregon (OR, henceforth). These are neighboring (hence similar, in many respects) states where voters attempted the

legalization of cannabis for recreational use at the same time, in November 2012. The proposal passed in WA but was rejected in OR by a relatively small margin. Two years later, in November 2014, a new but essentially identical ballot initiative was passed in OR, aligning the regulation of recreational marijuana to the one in force in WA. This “accidental” 2-year lag allows us to combine difference-in-differences (DID, henceforth) and spatial regression discontinuity (SRD, henceforth) research designs at the county level to identify the causal impact of the policy at the WA-OR border. We find across different specifications that the legalization of recreational marijuana has not increased crime. On the contrary, it reduced rapes by between 15% and 30% (between 2 and 4 occurrences per 100,000 inhabitants), and thefts by between 10% and 20% (between 60 and 100 per 100,000 inhabitants). These empirical results support Becker and Murphy’s conjectures and stand in sharp contrast with the presumption that drugs cause crime, a major argument in support of a prohibitionist approach to substance use.

At the level of analysis pursued in this paper, we



cannot pin down the mechanisms operating behind these effects. One possibility is the direct psychotropic effect of consuming marijuana, effectively a sedative drug. The possible substitution away from alcohol and other drugs which make consumers more aggressive than if consuming cannabis is another candidate mechanism. Some evidence supporting these two channels is provided by a complementary analysis of the effect of the policy on substance consumption. By using data from the National Survey on Drug Use and Health, we find that the legalization of recreational marijuana in WA induced an increase in the consumption of cannabis of about 2.5 percentage points (off a base level of about 10%), a decrease in the consumption of other drugs of about 0.5 points (off a base level of about 4%), and a decrease in the consumption of both ordinary alcohol and binge alcohol of about 2 points (off base levels of about 50% and 20%, respectively). A third possibility is that the police reallocates effort away from retail marijuana dealing and towards other types of offenses. Finally, moving retail cannabis deals from degraded streets to safe, legal shops most likely played a role.<sup>2</sup>

Our findings enrich the empirical literature on

Our findings enrich the empirical literature on the crime effects of legal cannabis, which is mostly based on the evaluation of medical marijuana laws (MML) in the US. According to a 2009 statement by the California Police Chiefs Association, “public officials and criminal justice organizations who oppose MML often cite the prospect of increased crime”, but research yields mixed results. Some researchers find no significant relationship between MML and crime (Braakman, Jones, 2014, Freisthler, Ponicki, Gaidus, Gruenewald, 2016, Keppler, Freisthler, 2012, Morris, TenEyck, Barnes, Kovandzic, 2014, Shepard, Blackley, 2016). Others show that MML are associated with fewer homicides (Ingino, 2016), less violent crime in general because of reduced activity by drug-trafficking organizations (Gavrilova et al., 2017), and less property crime (Huber et al., 2016). Chu and Townsend (2017) show that although there are no significant effects at the national level, MML seem to reduce both violent and property crime within some states. In a different context, Adda et al. (2014) study an experiment that depenalized cannabis possession in a London borough, finding a reduction in crime induced by the reallocation of police effort towards nondrug offences. Experimental designs like the latter are

offenses. Experimental designs like the latter are quite unique, which is why the estimation of a causal effect going from legalizing cannabis to crime rates remains an elusive question (Miron, 2004).

The present paper makes progress in this respect by engineering a quasi-experiment that is able to provide first-pass causal evidence on the relationship between large-scale legalization of recreational cannabis and crime rates. A few recent papers analyze the effects of both medical and recreational marijuana laws. Brinkman and Mok-Lamme (2017), using highly disaggregated data for the city of Denver and an identification based on demand-side shocks to the location of dispensaries within the city find that crime drops in neighborhoods with more dispensaries, the disruption of the illegal market being the most plausible explanation. Dills et al. (2017) use nationwide survey data collected among high school students between 1977 and 2015, thus covering all changes in US marijuana laws over the past 40 years, and they find no impact of liberalizing cannabis on youth drug use, alcohol consumption, or youth criminal behavior. Finally, two similarly recent papers analyze recreational marijuana laws with a focus on the cross-border

marijuana laws with a focus on the cross-border spillovers from legal to illegal markets.

Hansen et al. (2017) exploit, like we do, the WA-OR quasi-experiment, as well as data on legal marijuana transactions in WA, to estimate how demand changed on the WA side of the border when the cannabis market was legalized in OR. They find a sizable reduction in volume of 41%, and evidence that this reflects a drop in cross-border diversion (OR residents traveling to purchase marijuana in WA and bringing it back in OR) rather than in cross-border consumption (OR residents traveling to consume marijuana in WA). Hao and Cowan (2017) study in a difference-in-differences setting the effect of the legalization of recreational cannabis in Colorado and WA on drug law enforcement in neighboring states where marijuana is illegal, finding a sharp increase in marijuana possession arrests in counties located right across the border in these states. These cross-border spillovers are important to interpret our estimates, which are produced by an identification right at the WA-OR border and which are gross of any form of noncompliance on the OR side. We will return to this point later on.

The remainder of the paper is organized as

follows. Section 2 describes the quasi-experiment we analyze. The data are presented in Section 3 and the identification strategy in Section 4. Section 5 reports the results. Section 6 discusses mechanisms and concludes. The Appendix A contains some robustness checks.

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## Section snippets

### The quasi-experiment

Possessing, using, selling, and cultivating marijuana is illegal under US federal law, except for restricted uses, since the *Marihuana Tax Act* of 1937. The *Controlled Substance Act* of 1970 classified marijuana and tetrahydrocannabinols among the drugs listed in Schedule I, which have high potential for abuse and no accepted medical value. State legislations have recently become more permissive. In 1996 California was the first

state to legalize marijuana for medical purposes, followed by 28 ...

## Data

The main data employed in our analysis are crime statistics at the county level from the US Uniform Crime Reporting (UCR) for years 2010 to 2014. The data base contains the number of offenses reported by the sheriff's office or county police department. For the reasons detailed below, these are not necessarily the county totals, but they are the only publicly available information from the UCR at the county level of disaggregation. For each reporting county and year, we have the total number of ...

## Econometrics

Our research design combines a DID design with a SRD design at the WA-OR border. Such a combined design allows identifying the effect of the legalization policy at the WA-OR border, where treated and control counties offer a better comparison. Formally, let  $c_{it}$  be the crime rate in county  $i$  and year  $t$ , and define the following binary variables: first  $m_i = 1$  if county  $i$  is

Binary variables: first,  $w_i = 1$  if county  $i$  is located in WA (treatment), and  $w_i = 0$  if county  $i$  is located in OR (control); second,  $p_t = 1$  if year  $t > 2012$  (post), and  $p_t = 0$  if ...

## Results

Preliminary graphical evidence about the causal effect of legalizing recreational marijuana is given by Fig. 4. The figure plots nonparametric estimates (from local linear regressions) of the difference between county-level crime rates before (2010–2012) and after (2013–2014) the WA legalization, as a function of the minimum distance (measured in hundreds of kilometers) of the county centroid from the WA-OR border. In each panel of Fig. 4, the difference between the variations in crime rates at ...

## Concluding remarks

The concern that legalizing cannabis for recreational purposes may increase crime occupies a prominent position in the public debate about drugs. Our analysis suggests that such a concern is not justified. We reach conclusions in line with what Becker and Murphy (2012) expected when advocating the

Murphy (2013) expected when advocating the full decriminalization of the drugs market, namely a crime drop: rapes dropped in WA by, approximately, between 15% and 30%, and property crimes fell by between 10% and 20%, an effect entirely driven ...

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## References (37)

S. Dickert-Conlin *et al.*

[Suburban legend: school cutoff dates and the timing of births](#)

Econ. Educ. Rev. (2010)

S. Gagliarducci *et al.*

[Do better paid politicians perform better? disentangling incentives from selection](#)

J. Eur. Econ. Assoc. (2013)

B. Green *et al.*

[Being stoned: a review of self-reported cannabis effects](#)

Drug Alcohol Rev. (2003)

H. Wen *et al.*

[The effect of medical marijuana laws on](#)



# adolescent and adult use of marijuana, alcohol, and other substances

J. Health Econ. (2015)

J. Adda *et al.*

Crime and the depenalization of cannabis  
possession: evidence from a policing  
experiment

J. Political Econ. (2014)

D.M. Anderson *et al.*

The legalization of recreational marijuana:  
how likely is the worst-case scenario?

J. Policy Anal. Manag. (2014)

G. Becker

Crime and punishment: an economic  
approach

J. Political Econ. (1968)

G. Becker

Why marijuana should be decriminalized

Becker-Posner Blog (2014)

G. Becker *et al.*

A theory of rational addiction

J. Political Econ. (1988)

G. Becker *et al.*

How much should we consume?

Have we lost the war on drugs?

Wall Street J (2013)



View more references

---

Cited by (101)

[Cannabis sativa: A comprehensive ethnopharmacological review of a medicinal plant with a long history](#)

2018, Journal of Ethnopharmacology

[Show abstract](#) ✓

[The Public Health Effects of Legalizing Marijuana](#) ↗

2023, Journal of Economic Literature

[The Spillover Effect of Recreational Marijuana Legalization on Crime: Evidence From Neighboring States of Colorado and Washington State](#) ↗

2020, Journal of Drug Issues

## Violence and Cannabis Use: A Focused Review of a Forgotten Aspect in the Era of Liberalizing Cannabis ↗

2020, Frontiers in Psychiatry

## Evaluation of the effects of CBD hemp extract on opioid use and quality of life indicators in chronic pain patients: a prospective cohort study ↗

2020, Postgraduate Medicine

## International perspectives on the implications of cannabis legalization: A systematic review & thematic analysis ↗

2019, International Journal of Environmental Research and Public Health



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# **EXHIBIT 9**



# The Effect of Marijuana Legalization on Crime Rates

Continued Evidence-Based Education

22

Sep 2022

Kylie E. McCarthy



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The legalization of marijuana for recreational and medicinal use has been a topic of debate within the political and criminal justice systems for many years. Marijuana existed long before there were any laws criminalizing it, estimated to be first used at least 5,000 years ago (Hudak, 2020). Formal use in medicine began in the mid-1800s (Bridgeman, & Abazia, 2017), but each passing year led to new drug restrictions and legislations criminalizing and taxing it. Campaigning for presidency in the late 1960s, a component of Richard Nixon's political strategy was to target minorities in society, specifically black individuals (Hodge, 2021). Prior to his taking office in 1969, the Civil Rights movement (1954-1968) was in full force. During the movement, Nixon capitalized on the uneasiness of white American's apprehension towards change, and he created a storyline that correlated the



civil unrest and crime rate with “drug using” people of color (LoBianco, 2016). He further sought to instill fear around marijuana use, specifically as a gateway drug to more dangerous drugs, although current research yields mixed results on the gateway drug theory (Nöel & Wang, 2018).



Shortly after his presidency began, Nixon addressed the nation by discussing Congress’s Drug Abuse Prevention and Control program, later coined as the War on Drugs. In October of 1970, the Controlled Substances Act was announced, becoming effective in May of 1971 (Gabay, 2013). This act classified the schedules of drugs from one to five, with definitions of their abuse and addictiveness, and examples of where each drug fit. Marijuana was classified as a Schedule 1 drug, defined as being highly addictive and without accepted medical use.

As more recent research indicates, marijuana cannot be chemically addictive, although it can be habit forming (Drug Abuse Centers, 2019). Cannabis is widely used in the medical system as a treatment for chronic pain, chemotherapy related nausea, and some neurological disorders (Bridgeman & Abazia, 2017). Because of this, many argue that the Schedule 1 classification is incorrect, as we know that the addictive properties are minimal compared to other drugs, and marijuana has been used in medicine for hundreds of years.

With current knowledge regarding the use and abuse of marijuana, 17 states and Washington, D.C., have legalized cannabis for recreational and medicinal use, with 19 additional states allowing medical use only (American Nonsmokers' Rights Foundation, 2021). However, while 37 states and D.C. allow the use of marijuana in some capacity, there are many arguments against its value. Such arguments against its legalization include concern for potential increased risk of teen

concern for potential increased risk of teen use, rising marijuana related medical issues, and the belief that legal access and greater use of marijuana will increase the level of crime. Regardless of the changes that have occurred pertaining to legalization status, there is still little understanding of marijuana use and how it influences many areas of life, including the law.

At this point in time, decisions on legalization are decided at the state level, but remain illegal under federal law (National Conference of State Legislatures, 2021). This paper focuses on this relationship between cannabis and criminality, by assessing existing research and three recent articles examining the relationship between marijuana legalization and crime, as well as the influence that opening medicinal dispensaries have on crime. Contemporary researchers hope to provide a more comprehensive understanding of marijuana use and how it impacts crime. With the steady increase in users across the nation

(NIH, 2021), it is imperative that legalization status is guided by empirical evidence. At this time, limited and mixed results, combined with varied public opinion, create ambiguity. Further research should be conducted to assess marijuana use and legalization status, as marijuana use does not seem to be decreasing through legalization decisions.

## Previous Research Findings

Being a relatively new area of study, there is not extensive research on marijuana legalization and its relation to crime rates. However, there is a vast amount of research on marijuana as a whole. While there are some inconsistencies in findings, the majority of research on marijuana's effects on the brain indicate both short and long-term effects. One study suggested chronic users experience reduced hippocampal volume, resulting in weakened learning ability and memory, as well as reduced gray

ability and memory, as well as reduced grey matter, which is responsible for controlled movement, memory, and emotions (Burggren et. al., 2019). Short-term effects of marijuana use can include reduced balance and motor control (Iversen, 2003). While there are detriments to using most drugs, marijuana also offers some benefits. In 2017, the National Academies of Science, Engineering, and Medicine published a thorough review of marijuana use in the medical field, revealing substantial support for cannabis as an effective treatment for individuals experiencing chronic pain, nausea caused by chemotherapy, and symptoms of multiple sclerosis (Therapeutic Benefits of Marijuana, 2017). In addition, marijuana has been used as a treatment for some mental disorders, including anxiety and post-traumatic stress disorder (Orsolini et. al., 2019).

In relation to marijuana and crime rates, there are many studies yielding mixed results, leading to vague understandings on

the drug effects and crime. Some research has suggested a weak relationship between marijuana use and crime in chronic users. In a longitudinal study of 13 to 27-year-olds, Pedersen and Skardhamar (2010) examined consumption of cannabis and other substances from adolescence to early adulthood. They found a strong correlation between early use of cannabis and later involvement in crime, but noted a limitation to their research, in that substantial developmental and environmental changes occur during this time that also could account for involvement in crime.

Hughes and colleagues (2020) examined the relationship between medicinal and recreational dispensaries in Denver and neighborhood crime rates, comparing neighborhoods with dispensaries to those without. They found statistically significant support for an increase in violent offenses, including aggravated assault and robbery, but excluding murder. At the same time,

there was significant support for the reduction of substance abuse offenses decreasing over time. This was suggested to be potentially related to increased use of marijuana, resulting in decreased use in other substances, such as alcohol, which has been shown to relate to increased violence in individuals with previous violent-prone behavior (Boles & Miotto, 2003).

On the other hand, there also has been support for the decrease in crime rates following recreational marijuana use and sales in Washington. Examination of reports from the FBI's uniform crime report (UCR) revealed there was a drop in rape, property crimes, and theft across the state from 2010 to 2014, two years prior to and following legalization (Dragone et. al., 2018). The authors suggested various potential reasons for these drops, including the relaxed state one often feels while using marijuana, and the possible reduced role of criminal dealers that may resort to crime now that it could be purchased legally from a dispensary.

purchased legally from a dispensary.

The highly mixed evidence surrounding marijuana use and crime contributes to inconsistencies in legalization across the nation. Some studies highlight its benefits and note reductions in crime, while others bring up concern for drug use and increasing crime rates. The mixed results leave policymakers with difficult decisions, trying to determine if they should follow the federal decision to keep marijuana illegal, or focus efforts on decriminalization and legalization. There are large amounts of support and opposition, with both sides advocating for what they believe will keep everyone the safest. To further assess this situation, three research teams were interested in examining how marijuana legalization influenced crime. The first sought to understand the spillover effect of legalization on crime in the bordering counties of Colorado and Washington. The second was interested in crime rates across those two states. And the third evaluated the opening of medicinal



marijuana dispensaries in Washington, D. C.

## Effects of Legalization in Colorado and Washington on Neighboring States

With the legalization of marijuana in Colorado and Washington in 2012, Wu and colleagues (2020) were interested in examining crime rates in the surrounding states, to analyze whether any changes occurred following legalization. Data from the FBI's Uniform Crime Reports (UCR) was collected from 360 counties across Kansas, Nebraska, New Mexico, Oklahoma, Utah, and Wyoming, the states bordering Colorado. Data were also collected from 80 counties across Idaho and Oregon, which border Washington. Data ranged from 2003-2012 (pre legalization) to 2012-2016 (post legalization). This data provided information on serious violent and property crimes, categorized as Part I crimes, and less serious

crimes that are categorized as Part II crimes. Using a quasi-experimental design, difference-in-differences analysis was employed to evaluate the spillover effect of crime in bordering and non-bordering counties.

In the Colorado region, from 2003-2012 (pre legalization), the average number of property crimes per 100,000 residents was 2,364. Following legalization, from 2012 to 2016, property crimes decreased to an average of 2,034 per 100,000 residents. In the counties directly bordering the state of Colorado (i.e., counties located in Kansas, Nebraska, New Mexico, Oklahoma, Utah, and Wyoming), a larger decrease in property crimes occurred. Specifically, property crime cases located in bordering counties numbered 2,371 per 100,000 during pre-legalization and 1,723 per 100,000 during post legalization, an average decrease of 648 cases. In non-bordering counties, the decrease was smaller, declining from 2,363 cases per 100,000 during pre-

legalization to 2,059 per 100,000 during post-legalization experiencing an average drop of 304 cases.

Although property crimes experienced the biggest drop in cases per 100,000 residents in Colorado, other crimes dropped pre and post legalization as well. In counties located in neighboring states that directly bordered Colorado, larceny reports dropped by an average of 519 cases per 100,000. In non-bordering counties, larceny reports dropped by 258 cases per 100,000. Additionally simple assault also experienced a decrease in both bordering and non-bordering counties. Prior to legalization, simple assault in bordering counties was reported 1,009 times per 100,000 and dropped to 827 cases, experiencing a drop of 182 cases per 100,000 residents. In non-bordering counties, a decrease in simple assault reports occurred by 86 cases per 100,000 residents. Finally, motor vehicle theft decreased by an average of 25 cases in bordering counties and 6 cases in non-bordering counties per 100,000.

in non-bordering counties, per 100,000 residents.

In the state of Washington, patterns of official crime reporting were similar, with a drop in most crimes following legalization. Violent crime in bordering counties dropped from 260 cases per 100,000 residents pre-legalization to 212 cases post-legalization, decreasing by an average of 48 cases. However, this drop was only significant in bordering counties, as non-bordering cases only dropped by three. Reports of aggravated assault in bordering counties dropped from 197 to 155, each per 100,000. However, non-bordering counties showed no increase or decrease, with an average of 144 cases both prior to and following the legalization of marijuana in Washington.

Overall, researchers reported there is some evidence to suggest that the legalization of marijuana did lead to a reduction in crime in neighboring states of Colorado and

neighboring states of Colorado and Washington. They specifically noted that property crimes, larceny and simple assault significantly decreased in counties located on the direct borders of the state. This was also seen in some Part II crimes as categorized by the FBI's UCR. Results suggest the potential for little consequences relating to crime following the legalization of marijuana.

Wu and colleagues (2020) were not the only researchers who were interested in the potential changes in crime following the legalization of marijuana in Colorado and Washington. Lu and associates (2021) utilized a quasi-experiment and multi-group interrupted time-series analysis to evaluate whether UCR data had changed following legalization in Colorado and Washington in 2012. To conduct this study, they conducted a monthly time series analysis of crime rates in Colorado and Washington and compared them to states that had not yet legalized marijuana. States considered in this study

were Alabama, Georgia, Idaho, Indiana, Iowa, Kansas, Kentucky, Mississippi, Missouri, Nebraska, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, Texas, Utah, Virginia, West Virginia, Wisconsin and Wyoming.

Because examining the two states in a single group interrupted time series would have limited capability of verifying causality (i.e., marijuana legalization causing crime rate changes), these 21 states that had yet to legalize marijuana on a recreational or medical purpose on a large scale were employed as a control group and compared to Colorado and Washington to evaluate crime trend changes. Monthly data from 1999 to 2016 were obtained from the FBI's UCR, measuring violent crimes (murder, manslaughter, aggravated assault, and rape) as well as theft, burglary, larceny, and robberies. The monthly crime rates per capita were calculated by the state's population and multiplying by 100,000.

Instead of evaluating changes in crime in Colorado and Washington to each control state, researchers used a multi-group approach to compare Colorado and Washington to the 21 control states altogether.

The results of this study suggested that overall, there were no long-term changes in crime rates in Colorado or Washington, when compared to the states that had yet to legalize marijuana. In terms of violent crime, there were no significant changes immediately following legalization. However, in Colorado, there was a statistically significant increase in property crime immediately following legalization, suggested to be due to an increase in larceny. In Washington, there was a statistically significant increase in property crime, burglary, and aggravated assault. All increases were suggested to be short-term. There were no long-term significant changes in crime following legalization in Colorado or Washington. However, there was a

washington. However, there was a statistically significant reduction of burglary reports in Washington.

Lu et al. (2021) concluded that while there were some immediate or short-term crime rate increases at the point of legalization, there were no long-term shifts. The authors also noted that further research must be conducted to determine if the immediate effects of marijuana legalization could be influenced by the small-time frame between legalization and data analysis. In sum, the results indicated no long-term effects on crime rates following the legalization of marijuana in Colorado and Washington.

## Effects of Medical Marijuana on Crime in Washington, DC

While marijuana was legalized for



recreational use in some states, Washington, D.C., legalized marijuana for medical use (Altieri, 2013). Although declared legal for medicinal use in 1998, the first dispensaries in which an individual could purchase marijuana with proof of medical need were not opened until 2013, after the Barr amendment was overturned in 2011 (Zakrzewski et. al., 2020). Researchers were interested in examining the relationship between the opening of medical marijuana dispensaries and crime in D.C. at the micro-spatial unit. To examine this, researchers used intersections of five D.C. dispensaries to evaluate crime rates before and after they opened. Crime records from January 2008 to December of 2017 were obtained from available public data sets, including reports of homicides, assault with a deadly weapon, robbery, sexual abuse, burglary, motor vehicle theft, larceny, and arson (Zakrzewski et. al., 2020). Three of the dispensaries opened around the beginning of August 2013, with the other two opening in 2015. Statistical graphs were employed to examine changes in crime rates following dispensary

openings.

Crime rates per year, prior to and following dispensaries being opened, were calculated. Results indicated the areas around the dispensary *Capital Care* had an average of 42 nonviolent crimes per year prior to the dispensary opening. Following this dispensary opening, there was an average of 39 nonviolent crimes per year. Three of the other dispensaries, *National Holistic Healing Center*, *Herbal Alternatives*, and *Tacoma Wellness Center*, showed no evidence of either violent or nonviolent crime increases following the opening of the dispensaries. However, the fifth dispensary, *Metropolitan Wellness Center*, experienced an increase in crime that was limited to robberies and larceny. However, Zakrzewski and colleagues (2020) noted both these crimes were increasing prior to the dispensary being opened, potentially influenced by an increase in nearby commercial properties opening.

It should be noted that because there was not a statistical test employed, the results of this study were not based on statistical significance. The authors cautioned that there was no causal evidence suggesting increasing crime rates following the openings of the five dispensaries. They suggested that the results of their study should be considered along with the research limitations, specifically that there were uncontrolled variables. Such variables include the opening of commercial stores that occurred around the same time as the opening of the *Metropolitan Wellness Center*, which could account for the subsequent increase in larceny and robbery. Therefore, there is not enough evidence to suggest that the opening of any of the five dispensaries was related causally to changes in crime rates, suggesting the need for future research to be conducted.

# Discussion and Implications

This paper does not seek to support or reject the legalization of marijuana at the state or federal level, as changes in crime rates are only one relevant issue for legalization.

Instead, it seeks to evaluate the claim often made by opponents of legalization, that this approach will increase crime in states and jurisdictions where legalization has occurred, and in states surrounding those areas.

Overall, current studies reveal little evidence that marijuana legalization influences crime rates. Although marijuana may not become federally legalized in the foreseeable future, there were an estimated 48.2 million users nationwide in 2019 (CDC, 2021). Knowing this, adequate resources should be allocated toward research on the drug and its effects on society. Being the third most often used drug, behind alcohol and tobacco (CDC, 2021), users likely will continue, regardless of the drug's legal status. Further funding towards research to gain a more comprehensive understanding of the drug is

necessary to make evidence-based changes in legalization status.

The majority of studies at the present time evaluated the first states to legalize marijuana, since there is a greater amount of data on crime rates and marijuana use in these states. Future research should continue to evaluate states that recently have legalized marijuana, to determine if there is a difference in crime rates potentially linked to marijuana use in places other than Colorado, Washington, and Washington, D.C. All current studies were limited in various ways. Zakrzewski and colleagues (2020) noted that their research was focused on medicinal dispensaries, but recreational dispensaries could potentially yield different conclusions about crime. Wu and associates (2020) cautioned that their results could be influenced by societal or cultural aspects of neighboring states, which were not controlled for during their study. Finally, Lu and colleagues (2021) recognized their study

should be replicated, in an effort to increase external validity and generalizability.

## Conclusion

With the current research, it is suggested that legalization of marijuana and subsequent opening of dispensaries have little to no adverse effects on crime rates, specifically in the long-term. Wu and colleagues (2020) found that property crimes decreased following Colorado legalization in 2012. In Washington, property crime, larceny, and violent crime rates dropped, while aggravated assault saw no change. Lu and associates (2021) saw no long-term changes to crime rates within Colorado or Washington following legalization of marijuana. Although there was a statistically significant increase in property crimes in Colorado immediately following legalization, they were suggested to be driven by an increase in larceny that occurred prior to legalization. In Washington, there was a

regulation in Washington, there was a statistically significant increase in property crimes, burglary and aggravated assault, but only in the short-term. No long-term increases were reported. Finally, after examination of five medicinal dispensaries in Washington, D.C., Zakrzewski and colleagues (2020) reported no evidence of an increase in crime following the opening of four of them. One location experienced an increase in robberies and larceny, but the authors noted this change was initiated prior to its opening and may have been influenced by expansion of nearby commercial properties.

Overall, there is little evidence at this time to support the claim that the legalization of marijuana will result in an increase in crime rates, particularly in the long-term. However, this is a relatively new area of research, and the focus of legalization should surround empirical evidence with sound research designs to ensure that limitations in studies do not provide insufficient data for this claim. Only a few states have been examined

empirically, and with legalization on the rise, it is pertinent to continue evaluating its effects on crime, as well as other concerns regarding marijuana use and legalization.

## References

Alteri, E. (2013). First medicinal marijuana sale reported in Washington, D.C. *National Organization for the Reform of Marijuana Laws*. <https://norml.org/blog/2013/07/30/first-medical-marijuana-sale-reported-in-washington-dc/>

Boles, S. M., & Miotto, K. (2003). Substance abuse and violence: A review of the literature. *Aggression and Violent Behavior, 8*(2), 155-174

Bridgeman, M. B., & Abazia, D. T. (2017). Medicinal cannabis: History, pharmacology, and implications for the acute care setting. *Pharmacy & Therapeutics, 42*(3), 180-188.

Burggren, A. C., Shirazi, A., Ginder, N., and London, E. D. (2019). Cannabis effects on brain structure, function, and cognition:



Considerations for medical uses of cannabis and its derivatives. *The American Journal of Drug and Alcohol Abuse*, 45(6), 562-579.

Center for Disease Control and Prevention.  
(2021). *Data and statistics*.  
<https://www.cdc.gov/marijuana/data-statistics.html>

Dragone, D., Prarolo, G., Paolo, V., & Zanella, G.  
(2019). Crime and the legalization of recreational marijuana. *Journal of Economic Behavior & Organization*, 159(1), 488-501.  
<https://doi.org/10.1016/j.jebo.2018.02.05>

Drug Abuse Centers (2019). *Is marijuana addictive? Physically and or psychologically?*  
American Addiction Centers.  
<https://drugabuse.com/log/marijuana-addiction/>

Gabay, M. (2013). The federal controlled substances act: Schedules and pharmacy registration. *Hospital Pharmacy*, 48(1), 473-474.

Hodge, J. (2021). Fifty years ago today,

President Nixon declared the war on drugs.

*Vera Institute of Justice.*

<https://www.vera.org/blog/fifty-years-ago-today-president-nixon-declared-the-war-on-drugs>

Hudak, J. (2020). *Marijuana: A short history*. Bookings Institution Press.

Hughes, L. A., Schaible, L. M., and Jimmerson, K. (2020). Marijuana dispensaries and neighborhood crime and disorder in Denver, Colorado. *Justice Quarterly*, 37(3), 461-485.

Iversen, L. (2003). Cannabis and the brain. *Brain: A Journal of Neurology*, 126(1), 1252-1270

LoBianco, T. (2016). Report: Aide says Nixon's war on drugs targeted blacks, hippies. *CNN*.  
<https://www.cnn.com/2016/03/23/politics/john-ehrllichman-richard-nixon-drug-war-blacks-hippie/index.html>

Lu, R., Willits, D., Stohr, M. K., Makin, D., Snyder, J., Lovrich, N., Meize, M., Stanton, D., Wu, G., & Hemmens, C. (2021) The Cannabis Effect on Crime: Time-Series Analysis of Crime in Colorado and Washington State

Crime in Colorado and Washington State.

*Justice Quarterly*, 38(4), 565-595.

American Nonsmokers' Rights Foundation  
(2021). *Marijuana States Legal Map*.

<https://no-smoke.org/wp-content/uploads/pdf/marijuana-states-legal-map.pdf>.

National Conference of State Legislatures.  
(2021). *State Medical Cannabis Laws*.

<https://www.ncsl.org/research/health/state-medical-marijuana-laws.aspx#2>

National Institute of Health. (2021). *Marijuana use at a historic high among college-aged adults in 2020*. <https://www.nih.gov/news-events/news-releases/marijuana-use-historic-high-among-college-aged-adults-2020>

Noel, W., & Wang, J. (2018). Is cannabis a gateway drug? Key findings and literature review. *National Institute of Justice*.

<https://www.ojp.gov/pdffiles1/nij/252950.pdf>

Orsolini, L., Chiappini, S., Volpe, U., De Beradis, D., Latini, R., Papanti, G. D., Corkery, J. M.

(2019). Use of medicinal cannabis and

(2015). Use of medicinal cannabis and synthetic cannabinoids in post-traumatic stress disorder (PTSD): A systematic review. *Medicina*, 55(9), 1-14.

Pedersen, W. & Skardhamar, T. (2010). Cannabis and crime: Findings from a longitudinal study. *Addiction*, 105(1), 109-118.

The therapeutic benefits of marijuana. (2017). *Lamp*, 74(4), 18-19.

Wu, G., Boateng, F. D., & Xiaodong, L. (2020). The spillover effect of recreational marijuana legalization on crime: Evidence from neighboring states of Colorado and Washington state. *Journal of Drug Issues*, 50(4), 392-409.

Zakrzewski, W. J., Wheeler, A. P., & Thompson, A. J. (2020). Cannabis in the capital: Exploring the spatial association between medical marijuana dispensaries and crime. *Journal of Crime & Justice*, 43(1), 1-15.

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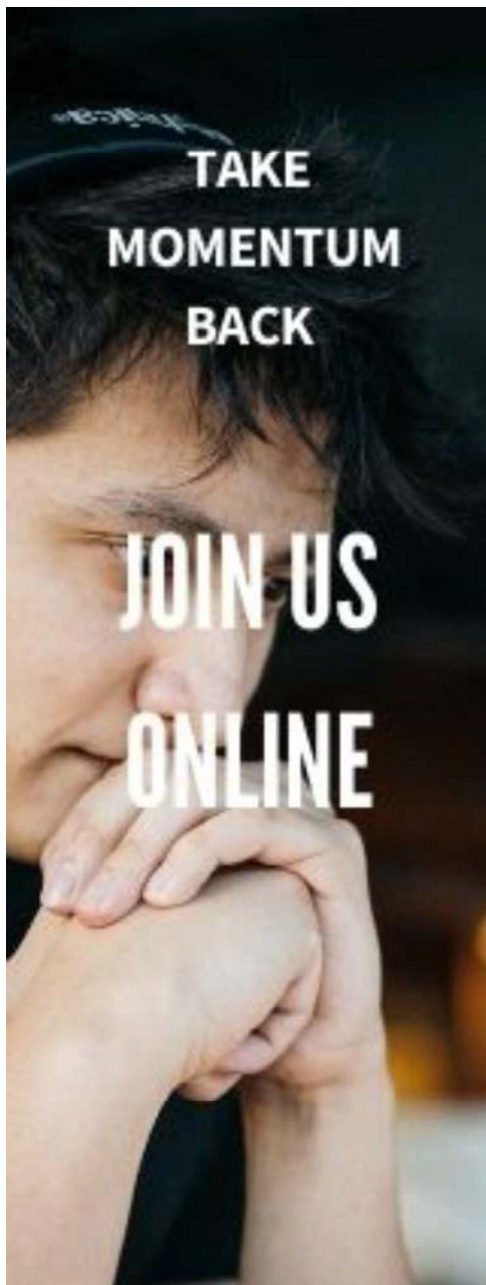
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# **EXHIBIT 10**



DECEMBER 2022



# Effects of Drug Policy Liberalization on Public Safety: A Review of the Literature



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**DRUG ENFORCEMENT  
AND POLICY CENTER**

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## DRUG ENFORCEMENT AND POLICY CENTER

# Effects of Drug Policy Liberalization on Public Safety: A Review of the Literature

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## EXECUTIVE SUMMARY

After decades of criminalization, cannabis policy has liberalized rapidly throughout the U.S. in the 21<sup>st</sup> century. Thus, there has been considerable speculation regarding the effects these reforms would have on crime and public safety. This review summarizes extant literature on the effect of drug policy liberalization on crime, traffic safety, law enforcement, and racial disparities. Overall, the literature suggests that cannabis legalization has resulted in some benefits to public health and public safety, even while some studies have produced mixed findings with regard to particular outcomes.

## KEY FINDINGS

- Overall, the literature suggests that the liberalization of drug laws confers some benefits related to public safety and public health.
- Much of the literature regarding the impact of marijuana legalization on crime shows promising effects, including decreases in violent and property crime, reductions in drug-related arrests, and an improvement in crime clearance rates. Yet, a caution might be warranted given some of the criminal justice data limitations.
- Research on the relationship between cannabis policy liberalization and changes in traffic safety has produced mixed results. Some differences in traffic outcomes depend on the specific type of policy change, with certain jurisdictions observing increases in fatal collisions and others observing decreases. While some research has found increases in positive cannabis tests among drivers, this was not determined to be a major threat to road safety; alcohol remains a greater hazard.
- Research on the effects of marijuana policy changes on law enforcement suggests that police workload required greater resources following legalization. Qualitative research on officer perceptions indicated several concerns upon implementation. Findings suggest that more education, training, and resources would be beneficial.
- While drug policy liberalization has the potential to reduce racial disparities, further changes are needed for those benefits to be achieved. Research shows that while drug arrest rates among adults decreased following policy liberalization, racial disparities persisted.
- All-drug decriminalization is associated with reductions in problematic drug use and criminal justice overcrowding, declines in youth drug use, and other health and social benefits, as evidenced by evaluations of Portugal's policy. In the U.S., preliminary evidence suggests that in Oregon, where all drugs were decriminalized in 2020, arrests for drug offenses have declined while the number of people receiving services has increased.

## INTRODUCTION

After decades of criminalization, cannabis policy has liberalized rapidly throughout the U.S. in the 21<sup>st</sup> century. Following cannabis legalization in Colorado and Washington, legalization has gained momentum in many other U.S. states. While some states have fully legalized recreational cannabis for adult use, others have only decriminalized or legalized medical use. These reforms may have significant effects on public safety and public health, and therefore have become a topic of considerable academic interest. This review summarizes extant literature on the effect of cannabis policy liberalization on crime, traffic safety, law enforcement, and racial disparities, while also exploring future directions such as the decriminalization of all drugs.

There are many potential benefits that have been advanced as reasons to liberalize drug policy. Proponents of the liberalization of cannabis laws have argued that public safety would improve after legalization, in part because it enables police to focus on more serious crimes (Makin et al. 2019; Wu, Li, and Lang 2022). Advocates have also speculated that legalization would decrease the jail population and lessen the disproportionate incarceration of minorities (Stanton et al. 2020). Supporters of legalization also point out that it would reduce the underground market and attendant criminal activity, decreasing the number of people who come into contact with underground markets (Maier, Mannes, and Kippenhofer 2017). Furthermore, legalization is said to increase tax revenue and save money previously wasted on the enforcement of marijuana laws. On the other hand, opponents of legalization have asserted that if cannabis were legalized, crime would increase and youth use would rise, thus harming public safety. To address these questions, many studies have researched the effects of marijuana legalization on crime and public safety using a variety of measures. While early studies were less conclusive as it was too early to properly assess the effects of the reforms, more recent work increasingly demonstrates that marijuana legalization has a variety of benefits with regard to public safety.

## EFFECTS OF CANNABIS POLICY LIBERALIZATION

### Crime Rates

Due to the nature of drug prohibition, the drug trade has been linked with violence and crime. Prohibition creates an environment in which formal dispute resolution is not possible, sometimes leading drug-involved parties to resort to violence (Jacques et al. 2016). However, drug legalization has the potential to reverse this relationship between drugs and crime by curtailing the black market and reducing the burden on the criminal justice system. Researchers have assessed the relationship between cannabis policy liberalization and crime using various measures such as arrest rates and crime clearance rates.

One study found that the decriminalization of cannabis in five U.S. states was associated with a substantial reduction in drug-related arrests among both youth and adults (Grucza et al. 2018), indicating that the policy achieved its intended effects without adverse consequences. The researchers also found no association between decriminalization and an increase in youth cannabis use during the studied period. A more recent study focused on Washington State found that following legalization, marijuana arrest rates dropped dramatically among adults 21 and older (Firth et al. 2019).

Research also suggests that drug legalization may decrease violent crime. For example, one study found that the implementation of medical marijuana laws led to a decrease in violent crime in states that bordered Mexico (Gavrilova, Kamada, and Zoutman 2019). The study used Uniform Crime Reporting (UCR) data to examine homicides, assaults, and robberies, and found that with the introduction of medical marijuana laws, violent crimes in border states were reduced by between 5 and 12.5 percent. Additionally, the authors found that drug-law-related homicides decreased, which supports the theory that lessened drug market activity is associated with reductions in crime. Furthermore, the authors predicted that full legalization in states like Colorado and Washington would have an even larger impact. A later study focusing on Colorado found that the opening of medical and recreational dispensaries decreased violent crime in nearby neighborhoods with incomes above the median (Burkhardt and Goemans 2019). The authors also found a decrease in non-cannabis drug- and alcohol-related crimes near dispensaries. While they found that vehicle break-ins were elevated within a mile of dispensaries, they concluded that marijuana legalization had a net benefit with regard to crime rates. An additional study focusing on recreational

legalization in Washington and Oregon found that legalization likely caused a drop in crime (Dragone et al. 2019). Specifically, the authors found that legalization resulted in a significant reduction in rape and property crime on the Washington side of the border compared to both the Oregon side and the pre-legalization years. Furthermore, while marijuana consumption increased, use of other drugs and alcohol decreased.

Researchers have also evaluated potential spillover effects of legalization in one state to the neighboring non-legalized states. For example, one study used UCR data between 2003 and 2017 to examine the potential spillover effect from legalization in Colorado and Washington, focusing on the changes in crime rates in border counties in neighboring states, and found some evidence of a crime reduction effect (Wu, Boateng, and Lang 2020). Specifically, the authors found significant decreases in property crime, larceny, and simple assault in the region that includes six states near Colorado. They also noted that the effects of cannabis legalization on crime rates in nearby states may vary based on the state and type of crime.

While much of the literature observed decreases in crime, some studies found increases in crime rates after cannabis legalization. For example, using UCR data from 2007 to 2017 to examine the effect of marijuana legalization on crime rates in Oregon, one study found increases in crime rates for several types of offenses, including property and violent crime (Wu, Wen, and Wilson 2021). In another study pertaining to crime in Oregon, Wu and Willits (2022) found that the rate of simple assault had increased following legalization. However, they noted that their post-legalization time frame was fairly short and should be reassessed by future research.

Other research found no significant changes in crime following marijuana legalization. For example, using UCR data, Lu et al. (2021) conducted a quasi-experimental study to examine crime rates in Colorado and Washington. They found no statistically significant effects of marijuana legalization on violent or property crime. Similarly, data from several legalized states indicated that violent crime neither increased nor dropped dramatically following cannabis legalization (Dills et al. 2021). Overall, the literature exploring the relationship between liberalization of marijuana policies and crime suggests that legalizing marijuana is not a threat to public safety (French et al. 2022).

Finally, as proponents of marijuana legalization have asserted that it would enable police to focus on more serious crimes, some studies have used crime clearance rates to assess the impact of this policy change. Examining cannabis legalization in Washington and Colorado, researchers conducted time-series analysis of UCR data between 2010 and 2015 and found that some crime clearance rates had improved following legalization (Makin et al. 2019). In another study focusing on Oregon, which was also among the first states to legalize, researchers used UCR data from 2007 to 2017 to test the effects of legalization on clearance rates for violent crimes (Wu, Li, and Lang 2022). They found that clearance rates increased for violent crimes and aggravated assault in Oregon counties compared to those in non-legalized states. This supports the idea that legalization of cannabis would help crime clearance rates by allowing officers to reallocate their attention and resources to more serious crimes.

## **Traffic Safety**

Although some media reports and opponents of legalization have suggested an increase in traffic accidents following cannabis policy changes, researchers have found mixed results depending on the type of policy and measures analyzed. Typically, studies have used metrics such as fatal collisions and positive drug tests to evaluate changes in road safety. To assess the effect of legalization on traffic fatalities in Colorado and Washington, Hansen, Miller, and Weber (2020) used a synthetic control approach with data on fatal traffic accidents between 2000 and 2016. Despite media reports which exaggerated this threat, the authors found little evidence to support the idea that recreational legalization dramatically increased traffic fatalities. Specifically, synthetic control groups had similar changes in marijuana- and alcohol-related traffic fatality rates, as well as a similar change in overall traffic fatalities, despite not having legal marijuana.

On the other hand, some studies have found varying results depending on the type of policy change. For example, a 2015 report from the Governors Highway Safety Association cited studies with conflicting results; cannabis-positive fatalities rose slightly in Colorado after legalization, while there was no change in traffic fatalities in California after decriminalization (Dills et al. 2021). However, research has suggested a substitution effect whereby any increase in cannabis-related fatalities may be offset by a reduction in fatalities driven by alcohol consumption. Thus, an important consideration in evaluating public safety is the net effect when accounting for both of these measures (Dills et al. 2021). Similarly, Windle et al. (2022) also found a difference between medical and recreational legalization with



regard to fatal traffic collisions. Specifically, medical legalization was associated with a decrease in fatal collisions, whereas recreational legalization was associated with an increase. The authors speculate that this difference may be attributable to the population subgroups that participate in each market. Additionally, while they had limited evidence related to the impact of marijuana policy changes on alcohol-related road safety measures, they suggest that medical marijuana legalization may be associated with a decrease in positive alcohol tests among drivers. Another study found that no significant changes in marijuana-related traffic accidents occurred following medical legalization (Lee, Abdel-Aty, and Park 2018). However, the authors found increases following other types of marijuana policy changes such as decriminalization and full legalization.

A number of studies have also examined positive cannabis tests as an outcome. After a systematic review of the effect of cannabis legalization and decriminalization on road safety, Windle et al. (2022) found that recreational and medical legalization, as well as decriminalization, were all associated with an increase in positive cannabis tests among drivers. However, they determined that many of these studies were at risk of bias due to potential confounders and measurement error. Moreover, the authors emphasized that although more drivers may have tested positive for cannabis, this does not necessarily indicate impaired driving due to the way the body processes tetrahydrocannabinol (THC) and the length of time that it can be detected. Similarly, French et al. (2022) also reviewed several studies that examined marijuana policy liberalization and its effect on road safety. Some studies found that cannabis-involved driving increased in some jurisdictions following medical marijuana laws; however, one of these studies also concluded that cannabis-involved driving was not significantly related to fatal crashes across the country. Finally, Jones et al. (2019) evaluated the effect of legalized medical marijuana using data on drug and alcohol screens from the Arizona State Trauma Registry. Compared with prelaw projections, results showed small annual increases in the proportions of drivers who tested positive for alcohol or marijuana after the law was passed. However, despite small increases in positive marijuana tests among drivers after the law compared to prelaw projections, alcohol remained a more prevalent threat to road safety.

## **Law Enforcement**

Marijuana policy changes also affect law enforcement practices and resourcing needs. Police officer workload in the wake of recreational legalization in Washington State has been explored to assess the extent to which this reform affected calls for service, an understudied measure compared to crime or arrest rates (Makin et al. 2021). Makin et al. (2021) provide this more nuanced analysis of officer workload by conducting an interrupted time-series analysis of two cities near the Washington border. They found that recreational marijuana was associated with changes in police resourcing (i.e., increased calls for service) in the legalized state's city compared to the neighboring city in a nonlegal state. This suggested greater police resourcing needs post legalization.

Another avenue of research has explored law enforcement perceptions of cannabis legalization. Survey research on police departments in states neighboring Colorado after legalization found that officers in nearby states largely disapproved of legalization (Ward, Lucas, and Murphy 2019). Qualitative results indicated that officers were concerned about increases in plant and edible cannabis, trafficking, a strain on resources, and perceived increases in youth use. Furthermore, officers with less favorable perceptions of cannabis perceived greater enforcement challenges. Similarly, Stanton et al. (2022) conducted semi-structured interviews and found that police professionals felt largely unprepared for marijuana legalization, were concerned about youth use, and believed that traffic safety was an issue as a result of legalization. They felt that civic education with regard to marijuana was underdeveloped, and that law enforcement lacked proper training and resources.

## **Racial Disparities**

As past researchers have noted, the War on Drugs in the U.S. has been a central part of the rise in mass incarceration and has had a disproportionate impact on communities of color (Alexander 2010). Thus, one potential benefit of the liberalization of drug laws is that it may reduce racial/ethnic disparities in criminal justice system contact. To test this assertion, Firth et al. (2019) used National Incident Based Reporting System (NIBRS) data on marijuana-related arrests. They found that marijuana arrest rates among people over 21 fell dramatically after legalization of marijuana possession in Washington State, and that rates stayed at similar levels following the opening of the retail market. However, while marijuana-related arrest rates for both White and Black adults decreased, relative

disparities increased. African Americans previously had an arrest rate 2.5 times higher than the White arrest rate, but this increased to 5 times higher after the opening of the retail market. Similarly, recent research on Colorado and Washington has also found that while cannabis-related arrest rates generally declined after legalization, racial disparities persisted (Willits et al. 2022). Thus, while legalization lessens the absolute number of people who come into contact with the justice system overall, more needs to be done to specifically address racial disparities. Another study used jail booking data to assess whether legalization had an impact on jail populations (Stanton et al. 2020). The authors found that jail population trends varied by county over time and also differed with regard to the impact on minorities and women. In terms of racial disparities, they concluded that there was little positive change. Since legalization did not seem to have a substantial impact on jail populations, the authors suggest that future research may benefit from using different measures to more thoroughly parse the effects of legalization.

Additional work has explored the impact of adult cannabis legalization on disparities among youth and changes in juvenile justice outcomes. Using data from Oregon between 2012 and 2018, Firth et al. (2020) found that juvenile allegation rates increased overall, with rates being highest for American Indian/Alaska Native and Black youth. Prior to legalization, Black youth rates were twice that of White youth rates, and this disparity decreased after legalization. However, allegation rates for Black youth still remained greater than rates for White youth. The disparity between White and American Indian/Alaska Native remained the same before and after legalization. These changes are not explained by changes in juvenile cannabis use; thus, the authors conclude that changing adult regulations may have unintended consequences for youth.

Finally, other research has tested the effects of drug policy changes beyond those specific to cannabis. For example, to examine the effects of California's Proposition 47, which reclassified felony drug offenses to misdemeanors in 2014, Mooney et al. (2018) used data on all drug arrests in California between 2011 and 2016. Overall, drug arrest rates declined across all racial/ethnic groups, indicating a deprioritization of drug law enforcement. Absolute disparities also decreased between Black and White felony drug arrest rates. However, results showed that relative disparities increased in part due to the preexisting composition of felony offenses by race/ethnicity and the specific offense types that were reclassified (e.g., drug possession instead of sale). Ultimately, they concluded that reducing penalties for drug possession could lessen disproportionate felony convictions among Black people, which may help alleviate racial/ethnic disparities in criminal justice exposure and improve inequalities related to social determinants of health.

## EFFECTS OF BROADER DRUG DECRIMINALIZATION EFFORTS

While most U.S. drug policy liberalization thus far has involved marijuana laws, some jurisdictions outside the U.S. have decriminalized all drugs. One notable example is Portugal, which decriminalized all drugs for personal use in 2001. Rather than being sanctioned with criminal charges, drug possession is considered a public order or administrative offense, and people are referred to a panel that consists of medical professionals, lawyers, and social workers. Hughes and Stevens (2010) examined the effects of this policy by consulting Portuguese evaluative documents as well as conducting interviews with a purposive sample of people in politics, health, and criminal justice. They found that decriminalization was associated with reductions in problematic drug use and criminal justice overcrowding. Notably, problematic drug use declined following implementation, and drug use among youth also declined in the long run despite a brief uptick immediately following the reform. While drug use may have also risen slightly among adults since the reform, it is debatable to what extent this is attributable to the reform since there are confounding factors. Proponents of the reform argue that this relationship may be spurious and at least partially a reflection of greater reporting of drug use due to the lessened stigma associated with drugs. While more research needs to be conducted to fully evaluate the effects of decriminalization, current evidence suggests that decriminalization is not associated with substantial increases in drug use and reduces the burden on the criminal justice system while facilitating a number of other health and social benefits (Hughes and Stevens 2010).

In the U.S., Oregon spearheaded a similar effort with Measure 110, which passed in November 2020, making Oregon the first state in the U.S. to decriminalize drug possession. While opponents feared it would be harmful, supporters maintained that shifting away from prohibition and toward decriminalization would have numerous benefits such as restoring individual liberty, removing one of the structures that enables police abuse, reducing government waste, and moving toward treating problematic drug use as a health issue rather than a criminal issue (Sutton 2020). While it is still too early following the reform to draw definitive conclusions about its efficacy, preliminary evidence suggests

that the reform is successful (Sutton 2022). As of one year after the policy change, more than 16,000 people had received services; arrests for drug offenses had fallen by about 60%; and housing, peer support, and other harm reduction services had become more accessible (Sutton 2022). Future research will reevaluate the effects of these reforms, and should also carefully consider which metrics are used to evaluate such reforms (Netherland et al. 2022).

## CONCLUSION AND FUTURE DIRECTIONS

There has been substantial public discourse around the liberalization of cannabis laws in the U.S., particularly as medical and recreational legalization have garnered greater support among the public. As these reforms have become more common, researchers have been able to collect and analyze more data to test many of the arguments that preceded implementation. Analyses of various aspects of these reforms are ongoing as sufficient time is needed following policy changes before researchers can effectively assess their impact. However, the literature suggests that cannabis legalization has resulted in many benefits to public health and public safety (Todd 2018), even while some studies have produced mixed findings with regard to particular outcomes. While future research should continue to assess cannabis-related reforms, attention should also be paid to the effects of policies such as those implemented in Portugal and, more recently, Oregon, as it became the first state in the U.S. to decriminalize all drugs. This type of drug policy liberalization stands to produce even greater public health and public safety benefits, but more data are needed to thoroughly understand these reforms as we move toward novel and more humane drug policy frameworks.

## REFERENCES

- Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York, NY: The New Press.
- Burkhardt, Jesse and Chris Goemans. 2019. "The Short-Run Effects of Marijuana Dispensary Openings on Local Crime." *The Annals of Regional Science* 63:163-189.
- Dills, Angela, Sietse Goffard, Jeffrey Miron, and Erin Partin. 2021. "The Effect of State Marijuana Legalizations: 2021 Update." *Cato Institute* 908.
- Dragone, Davide, Giovanni Prarolo, Paolo Vanin, and Giulio Zanella. 2019. "Crime and the Legalization of Recreational Marijuana." *Journal of Economic Behavior and Organization* 159:488-501.
- Firth, Caislin L., Anjum Hajat, Julia A. Dilley, Margaret Braun, and Julie E. Maher. 2020. "Implications of Cannabis Legalization on Juvenile Justice Outcomes and Racial Disparities." *American Journal of Preventive Medicine* 58(4):562-569.
- Firth, Caislin L., Julie E. Maher, Julia A. Dilley, Adam Darnell, and Nicholas P. Lovrich. 2019. "Did Marijuana Legalization in Washington State Reduce Racial Disparities in Adult Marijuana Arrests?" *Substance Use & Misuse* 54(9):1582-1587.
- French, Michael T., Julia Zukerberg, Tara E. Lewandowski, Katrina B. Piccolo, and Karoline Mortensen. 2022. "Societal Costs and Outcomes of Medical and Recreational Marijuana Policies in the United States: A Systematic Review." *Medical Care Research and Review* 00(0):1-29.
- Gavrilova, Evelina, Takuma Kamada, and Floris Zoutman. 2019. "Is Legal Pot Crippling Mexican Drug Trafficking Organisations? The Effect of Medical Marijuana Laws on US Crime." *The Economic Journal* 129(617):375-407.
- Gruca, Richard A., Mike Vuolo, Melissa J. Krauss, Andrew D. Plunk, Arpana Agrawal, Frank J. Chaloupka, and Laura J. Bierut. 2018. "Cannabis Decriminalization: A Study of Recent Policy Change in Five U.S. States." *International Journal of Drug Policy* 59:67-75.
- Hansen, Benjamin, Keaton Miller, and Caroline Weber. 2020. "Early Evidence on Recreational Marijuana Legalization and Traffic Fatalities." *Economic Inquiry* 58(2):547-568.
- Hughes, Caitlin E. and Alex Stevens. 2010. "What Can We Learn From the Portuguese Decriminalization of Illicit Drugs?" *British Journal of Criminology* 50:999-1022.
- Jacques, Scott, Rosenfeld, Richard, Wright, Richard, and Van Gemert, Frank. 2016. "Effects of Prohibition and Decriminalization on Drug Market Conflict: Comparing Street Dealers, Coffeeshops, and Cafés in Amsterdam." *Criminology & Public Policy* 15(3):843-875.
- Jones, Jefferson M., Ruth A. Shults, Byron Robinson, Kenneth K. Komatsu, and Erin K. Sauber-Schatz. 2019. "Marijuana and Alcohol Use Among Injured Drivers Evaluated at Level I Trauma Centers in Arizona, 2008–2014." *Drug and Alcohol Dependence* 204(107539):1-6.
- Lee, Jaeyoung, Ahmad Abdel-Aty, and Juneyoung Park. 2018. "Investigation of Associations Between Marijuana Law Changes and Marijuana-Involved Fatal Traffic Crashes: A State-Level Analysis." *Journal of Transport & Health* 10:194-202.
- Lu, Ruibin, Dale Willits, Mary K. Stohr, David Makin, John Snyder, Nicholas Lovrich, Mikala Meize, Duane Stanton, Guangzhen Wu, and Craig Hemmens. 2021. "The Cannabis Effect on Crime: Time-Series Analysis of Crime in Colorado and Washington State." *Justice Quarterly* 38(4):565-595.
- Maier, Shana L., Suzanne Mannes, and Emily L. Koppenhofer. 2017. "The Implications of Marijuana Decriminalization and Legalization on Crime in the United States." *Contemporary Drug Problems* 44(2):125-146.
- Makin, David A., Mikala R. Meize, Dale W. Willits, Mary K. Stohr, Craig Hemmens, Nicholas P. Lovrich, Alexis Nordman, and Duane Stanton. 2021. "The Impact of Recreational Marijuana Sales on Calls for Service: An Analysis of Neighbouring Cities." *Policing and Society* 31(7):848-862.



- Makin, David A., Dale W. Willits, Guangzhen Wu, Kathryn O. DuBois, Ruibin Lu, Mary K. Stohr, Wendy Koslicki, Duane Stanton, Craig Hemmens, John Snyder, and Nicholas P. Lovrich. 2019. "Marijuana Legalization and Crime Clearance Rates: Testing Proponent Assertions in Colorado and Washington State." *Police Quarterly* 22(1):31-55.
- Mooney, Alyssa C., Eric Giannella, M. Maria Glymour, Torsten B. Neilands, Meghan D. Morris, Jacqueline Tulskey, and May Sudhinaraset. 2018. "Racial/Ethnic Disparities in Arrests for Drug Possession After California Proposition 47, 2011-2016." *American Journal of Public Health* 108(8):987-993.
- Netherland, Jules, Alex H. Kral, Danielle C. Ompad, Corey S. Davis, Ricky N. Bluthenthal, Nabarun Dasgupta, Michael Gilbert, Riona Morgan, and Haven Wheelock. 2022. "Principles and Metrics for Evaluating Oregon's Innovative Drug Decriminalization Measure." *Journal of Urban Health* 99:328-331.
- Stanton, Sr., Duane L., David Makin, Mary Stohr, Nicholas P. Lovrich, Dale Willits, Craig Hemmens, Mikala Meize, Oliver Bowers, and John Snyder. 2022. "Law Enforcement Perceptions of Cannabis Legalization Effects on Policing: Challenges of Major Policy Change Implementation at the Street Level." *Contemporary Drug Problems* 49(1):20-45.
- Stanton, Duane, Xiaohan Mei, Sohee Kim, Dale Willits, Mary Stohr, Craig Hemmens, Guangzhen Wu, Ruibin Lu, David Makin, and Nicholas Lovrich. 2020. "The Effect of Marijuana Legalization on Jail Populations in Washington State." *The Prison Journal* 100(4):510-530.
- Sutton, Matt. November 3, 2020. "Drug Policy Action's Measure 110 Prevails, Making Oregon the First U.S. State to Decriminalize All Drugs & Expand Access to Addiction and Health Services." *Drug Policy Alliance*. Retrieved from <https://drugpolicy.org/press-release/2020/11/drug-policy-actions-measure-110-prevails-making-oregon-first-us-state>.
- Sutton, Matt. February 1, 2022. "One Year of Drug Decriminalization in Oregon: Early Results Show 16,000 People Have Accessed Services through Measure 110 Funding & Thousands Have Avoided Arrest." *Drug Policy Alliance*. Retrieved from <https://drugpolicy.org/press-release/2022/02/one-year-drug-decriminalization-oregon-early-results-show-16000-people-have>.
- Todd, Tamar. 2018. "The Benefits of Marijuana Legalization and Regulation." *Berkeley Journal of Criminal Law* 23(1):99-119.
- Ward, Kyle C., Paul A. Lucas, and Alexandra Murphy. 2019. "The Impact of Marijuana Legalization on Law Enforcement in States Surrounding Colorado." *Police Quarterly* 22(2):217-242.
- Willits, Dale W., Brittany Solensten, Mikala Meize, Mary K. Stohr, David A. Makin, Craig Hemmens, Duane L. Stanton, and Nicholas P. Lovrich. 2022. "Racial Disparities in the Wake of Cannabis Legalization: Documenting Persistence and Change." *Race and Justice* 0(0):1-18.
- Windle, Sarah B., Peter Socha, José Ignacio Nazif-Munoz, Sam Harper, and Arijit Nandi. 2022. "The Impact of Cannabis Decriminalization and Legalization on Road Safety Outcomes: A Systematic Review." *American Journal of Preventive Medicine* 000(000):1-16.
- Wu, Guangzhen, Francis D. Boateng, and Xiaodong Lang. 2020. "The Spillover Effect of Recreational Marijuana Legalization on Crime: Evidence from Neighboring States of Colorado and Washington State." *Journal of Drug Issues* 50(4):392-409.
- Wu, Guangzhen, Yongtao Li, and Xiaodong (Eric) Lang. 2022. "Effects of Recreational Marijuana Legalization on Clearance Rates for Violent Crimes: Evidence from Oregon." *International Journal of Drug Policy* 100(103528):1-6.
- Wu, Guangzhen, Ming Wen, and Fernando A. Wilson. 2021. "Impact of Recreational Marijuana Legalization on Crime: Evidence from Oregon." *Journal of Criminal Justice* 72(101742):1-11.
- Wu, Guangzhen and Dale W. Willits. 2022. "The Impact of Recreational Marijuana Legalization on Simple Assault in Oregon." *Journal of Interpersonal Violence* 0(0):1-22.

## APPENDIX

Alexander, Michelle. 2010. *The New Jim Crow: Mass Incarceration in the Age of Colorblindness*. New York, NY: The New Press.

Alexander's book argues that the criminal justice system in the U.S. functions as a redesigned racial caste system. The underpinning of the War on Drugs was used as a justification for the criminal justice system to target Black men and destroy communities of color. While no longer acceptable to discriminate on the basis of race, it remained possible to discriminate against people who have criminal records. Thus, a new system of racial control was created wherein people who have contact with the justice system can face discrimination in areas including but not limited to employment, housing, education, and public benefits.

Burkhardt, Jesse and Chris Goemans. 2019. "The Short-Run Effects of Marijuana Dispensary Openings on Local Crime." *The Annals of Regional Science* 63:163-189.

The authors examine legalization of marijuana use and distribution of criminal activity. They use a difference-in-differences design to test the effect of marijuana dispensary openings on local crime rates in Denver, Colorado. They find that the opening of dispensaries decreases violent crime rates in above-median-income neighborhoods. They also find that non-marijuana drug-related crimes decrease within a half-mile of new dispensaries, but do not increase within a half-mile to one mile of new dispensaries. Finally, they find that vehicle break-ins increase up to a mile away from new dispensaries.

Dills, Angela, Sietse Goffard, Jeffrey Miron, and Erin Partin. 2021. "The Effect of State Marijuana Legalizations: 2021 Update." *Cato Institute* 908.

The authors review arguments around both support and opposition to legalization. They discuss how violent crime has neither increased nor dropped dramatically following cannabis legalization. Additionally, they review the effects of legalization on marijuana use, other drug use, road safety, and economic outcomes. They conclude that there is minimal support for strong claims made by both opponents and supporters, with the exception of significant increases in tax revenue. They emphasize existing data limitations and the importance of future research for understanding the full impact of legalization.

Dragone, Davide, Giovanni Prarolo, Paolo Vanin, and Giulio Zanella. 2019. "Crime and the Legalization of Recreational Marijuana." *Journal of Economic Behavior and Organization* 159:488-501.

This study focuses on recreational legalization in Washington and Oregon to assess the impact on crime. Overall, they find that legalization likely causes a drop in crime. Specifically, the authors find that legalization resulted in a significant reduction in rape and property crime on the Washington side of the border compared to both the Oregon side and the pre-legalization years. While marijuana consumption increased, use of other drugs and alcohol decreased.

Firth, Caislin L., Anjum Hajat, Julia A. Dilley, Margaret Braun, and Julie E. Maher. 2020. "Implications of Cannabis Legalization on Juvenile Justice Outcomes and Racial Disparities." *American Journal of Preventive Medicine* 58(4):562-569.

The authors assess changes in juvenile marijuana criminal allegation rates and racial disparities in Oregon following legalization for adults. The study finds that juvenile allegation rates increased overall, with allegation rates being highest for American Indian/Alaska Native and Black youth. Prior to legalization, Black youth rates were twice that of White youth rates, and this disparity decreased after legalization. However, for Black youth, allegation rates still remained greater than rates for White youth. The disparity between White and American Indian/Alaska Native remained the same before and after legalization. These changes are not explained by changes in juvenile cannabis use; thus, the authors conclude that changing adult regulations may have unintended consequences for youth.

Firth, Caislin L., Julie E. Maher, Julia A. Dilley, Adam Darnell, and Nicholas P. Lovrich. 2019. "Did Marijuana Legalization in Washington State Reduce Racial Disparities in Adult Marijuana Arrests?" *Substance Use & Misuse* 54(9):1582-1587.

This study used data on adult marijuana-related arrests in Washington State following legalization to assess changes in adult arrest rates as well as changes in racial disparities. They found that marijuana arrest rates among people over 21 fell dramatically following legalization of possession, and this stayed roughly the

same after the opening of the retail market. However, they found that while arrest rates for all adults decreased, relative disparities in arrest rates increased.

French, Michael T., Julia Zukerberg, Tara E. Lewandowski, Katrina B. Piccolo, and Karoline Mortensen. 2022. "Societal Costs and Outcomes of Medical and Recreational Marijuana Policies in the United States: A Systematic Review." *Medical Care Research and Review* 00(0):1-29.

This article reviews the literature pertaining to effects of marijuana legalization on crime, road safety, employment, other drug use, tobacco use, alcohol use, and many other domains. With regard to criminal activity, the review finds that, overall, marijuana legalization is not a threat to public safety. The authors also detail numerous mixed findings regarding traffic safety following policy changes, concluding that in general marijuana legalization does not reduce road safety.

Gavrilova, Evelina, Takuma Kamada, and Floris Zoutman. 2019. "Is Legal Pot Crippling Mexican Drug Trafficking Organisations? The Effect of Medical Marijuana Laws on US Crime." *The Economic Journal* 129(617):375-407.

This study shows that medical marijuana laws lead to decreases in violent crime in U.S. states bordering Mexico. This reduction effect is strongest for crimes related to drug trafficking and for counties close to the border. They also find that medical marijuana laws in inland states are associated with crime reduction in the closest border state. This is consistent with the theory that decriminalization of cannabis would lead to less violent crime in markets traditionally controlled by Mexican drug trafficking organizations.

Grucza, Richard A., Mike Vuolo, Melissa J. Krauss, Andrew D. Plunk, Arpana Agrawal, Frank J. Chaloupka, and Laura J. Bierut. 2018. "Cannabis Decriminalization: A Study of Recent Policy Change in Five U.S. States." *International Journal of Drug Policy* 59:67-75.

The authors examine the associations between cannabis decriminalization and arrests and youth cannabis use in five U.S. states that decriminalized between 2008 and 2014. Using federal crime statistics on cannabis possession arrests, as well as use data from Youth Risk Behavior Surveys between 2007 and 2015, the authors use a difference-in-differences framework. They find that decriminalization in five states resulted in substantial decreases in cannabis possession arrests for both adults and youth. Results also indicated no increase in youth cannabis use during the studied period.

Hansen, Benjamin, Keaton Miller, and Caroline Weber. 2020. "Early Evidence on Recreational Marijuana Legalization and Traffic Fatalities." *Economic Inquiry* 58(2):547-568.

The authors examine effects of marijuana legalization on traffic fatalities in Colorado and Washington. They use a synthetic control method to compare outcomes in these states to other states that had similar economic and traffic trends before legalization. They use records on fatal traffic accidents between 2000 and 2016. They find that the synthetic control groups had similar changes in marijuana- and alcohol-related traffic fatality rates, as well as overall traffic fatality rates, despite not legalizing marijuana for recreational purposes. They explain that their estimates show little evidence to support the idea that recreational marijuana legalization caused traffic fatalities to increase dramatically as some media reports (e.g., Colorado news articles) conjectured.

Hughes, Caitlin E. and Alex Stevens. 2010. "What Can We Learn From the Portuguese Decriminalization of Illicit Drugs?" *British Journal of Criminology* 50:999-1022.

This paper examines drug decriminalization in Portugal which was implemented in 2001. The authors use Portuguese evaluative documents and interviews with key informants in the field. They also compare criminal justice and health effects with Spain and Italy. Contrary to opponents' arguments, Portuguese decriminalization resulted in less problematic use and criminal justice overcrowding, as well as a reduction in drug-related harms.

Jacques, Scott, Rosenfeld, Richard, Wright, Richard, and Van Gemert, Frank. 2016. "Effects of Prohibition and Decriminalization on Drug Market Conflict: Comparing Street Dealers, Coffeeshops, and Cafés in Amsterdam." *Criminology & Public Policy* 15(3):843-875.

This study examines rates of victimization, retaliation, and legal mobilization in three retail drug markets in Amsterdam, the Netherlands. The three markets include the legal alcohol trade of cafés, the decriminalized

market of coffee shops which sell cannabis, and the illegal street market. Data include interviews with 50 sellers in each market. Results indicate, unsurprisingly, that illicit dealers have the highest rates of victimization and retaliation, and the lowest rates of legal mobilization. Prohibition creates an environment in which formal dispute resolution is unavailable, and therefore victimization and retaliation are more common.

- Jones, Jefferson M., Ruth A. Shults, Byron Robinson, Kenneth K. Komatsu, and Erin K. Sauber-Schatz. 2019. "Marijuana and Alcohol Use Among Injured Drivers Evaluated at Level I Trauma Centers in Arizona, 2008–2014." *Drug and Alcohol Dependence* 204(107539):1-6.

This study evaluated the effect of legalized medical marijuana using data on drug and alcohol screens from the Arizona State Trauma Registry. Compared with prelaw projections, results showed small annual increases in the proportions of drivers who tested positive for alcohol or marijuana after the law was passed. However, despite small increases in positive marijuana tests among drivers after the law compared to prelaw projections, alcohol remained a more prevalent threat to road safety.

- Lee, Jaeyoung, Ahmad Abdel-Aty, and Juneyoung Park. 2018. "Investigation of Associations Between Marijuana Law Changes and Marijuana-Involved Fatal Traffic Crashes: A State-Level Analysis." *Journal of Transport & Health* 10:194-202.

The authors examine five types of marijuana policy changes and their effect on fatal traffic crashes. They analyze policies in five states which had different policy shifts: prohibition to medical legalization; prohibition to decriminalization; decriminalization which adds medical legalization; medical legalization to full recreational legalization; and both decriminalization and medical to full legalization. They find that while there were no significant changes in a move to medical marijuana legalization from prohibition, there were increases in marijuana-related crashes associated with all of the other policy shifts.

- Lu, Ruibin, Dale Willits, Mary K. Stohr, David Makin, John Snyder, Nicholas Lovrich, Mikala Meize, Duane Stanton, Guangzhen Wu, and Craig Hemmens. 2021. "The Cannabis Effect on Crime: Time-Series Analysis of Crime in Colorado and Washington State." *Justice Quarterly* 38(4):565-595.

The authors use a quasi-experimental multi-group interrupted time-series analysis to assess whether UCR crime rates in Colorado and Washington State were influenced. Results show that marijuana legalization and sales have had minimal to no effect on major crimes in Colorado or Washington. There were no statistically significant long-term effects of recreational cannabis laws or retail sales on violent or property crime rates in these states.

- Maier, Shana L., Suzanne Mannes, and Emily L. Koppenhofer. 2017. "The Implications of Marijuana Decriminalization and Legalization on Crime in the United States." *Contemporary Drug Problems* 44(2):125-146.

The authors use 2014 UCR data to explore the relationship between decriminalization and marijuana legalization (recreational and medical) and crime rates and arrests for "drug abuse violations." They found that the legal status of cannabis in states did not significantly predict property or violent crime rates.

- Makin, David A., Mikala R. Meize, Dale W. Willits, Mary K. Stohr, Craig Hemmens, Nicholas P. Lovrich, Alexis Nordman, and Duane Stanton. 2021. "The Impact of Recreational Marijuana Sales on Calls for Service: An Analysis of Neighbouring Cities." *Policing and Society* 31(7):848-862.

Previous research neglected a nuanced analysis of officer workload, specifically calls for service received and initiated by police. This study uses an interrupted time series to analyze data from two border-straddling cities: Pullman, WA, and Moscow, ID. Recreational marijuana is associated with changes in police resourcing in the legalized state setting and the magnitude of those changes vary based on call type.

- Makin, David A., Dale W. Willits, Guangzhen Wu, Kathryn O. DuBois, Ruibin Lu, Mary K. Stohr, Wendy Koslicki, Duane Stanton, Craig Hemmens, John Snyder, and Nicholas P. Lovrich. 2019. "Marijuana Legalization and Crime Clearance Rates: Testing Proponent Assertions in Colorado and Washington State." *Police Quarterly* 22(1):31-55.

This study uses 2010-2015 UCR data to conduct time-series analysis on the offenses cleared by arrest to create monthly counts of violent and property crime. The authors found no negative effects of legalization on

crime clearance rates. They also found that some crime clearance rates had improved. In sum, the study suggests that legalization resulted in improvements to some clearance rates.

Mooney, Alyssa C., Eric Giannella, M. Maria Glymour, Torsten B. Neilands, Meghan D. Morris, Jacqueline Tulskey, and May Sudhinaraset. 2018. "Racial/Ethnic Disparities in Arrests for Drug Possession After California Proposition 47, 2011-2016." *American Journal of Public Health* 108(8):987-993.

This study examines the effects of California's Proposition 47 on racial/ethnic disparities in drug arrests. Proposition 47 reclassified felony drug offenses to misdemeanors in 2014. The authors use data on all drug arrests in California between 2011 and 2016. Drug law enforcement was likely deprioritized, as evidenced by a decline in total drug arrest rates. The authors conclude that reducing criminal penalties for drug possession could reduce racial/ethnic disparities in criminal justice exposure. They also posit that reducing criminal penalties would have implications for improving health inequalities related to social determinants of health.

Netherland, Jules, Alex H. Kral, Danielle C. Ompad, Corey S. Davis, Ricky N. Bluthenthal, Nabarun Dasgupta, Michael Gilbert, Riona Morgan, and Haven Wheelock. 2022. "Principles and Metrics for Evaluating Oregon's Innovative Drug Decriminalization Measure." *Journal of Urban Health* 99:328-331.

February 2022 marked one year since the enactment of Oregon's measure which decriminalized possession of small amounts of all drugs, and the authors outline principles and metrics for evaluating the policy's success. They interviewed people who use drugs in Oregon to understand how best to assess Measure 110. They caution against rushing to judgment too early as some news outlets began to prematurely report on the number of citations issued. The authors also advise researchers to take into account the complexities of policy implementation and to involve those who are most directly affected by such policies.

Stanton, Sr., Duane L., David Makin, Mary Stohr, Nicholas P. Lovrich, Dale Willits, Craig Hemmens, Mikala Meize, Oliver Bowers, and John Snyder. 2022. "Law Enforcement Perceptions of Cannabis Legalization Effects on Policing: Challenges of Major Policy Change Implementation at the Street Level." *Contemporary Drug Problems* 49(1):20-45.

This study produces qualitative findings regarding the experience of law enforcement in a context of novel cannabis legalization. The authors find, through semi-structured interviews, that police professionals felt unprepared for marijuana legalization, were concerned about youth use, and believed that traffic safety was an issue as a result of legalization.

Stanton, Duane, Xiaohan Mei, Sohee Kim, Dale Willits, Mary Stohr, Craig Hemmens, Guangzhen Wu, Ruibin Lu, David Makin, and Nicholas Lovrich. 2020. "The Effect of Marijuana Legalization on Jail Populations in Washington State." *The Prison Journal* 100(4):510-530.

Advocates have argued that legalization would lead police to focus their resources on other matters, thus decreasing the jail population and lessening the disproportionate incarceration of minorities. To test this assertion, the authors used jail booking data to conduct interrupted time-series regression models. They found that jail population trends differ among counties across time and regarding minorities and women. Regarding racial/ethnic disproportionate impact, they found that there was little positive change.

Sutton, Matt. November 3, 2020. "Drug Policy Action's Measure 110 Prevails, Making Oregon the First U.S. State to Decriminalize All Drugs & Expand Access to Addiction and Health Services." *Drug Policy Alliance*. Retrieved from <https://drugpolicy.org/press-release/2020/11/drug-policy-actions-measure-110-prevails-making-oregon-first-us-state>.

In this Drug Policy Alliance press release, Sutton summarizes Oregon Measure 110, the first all-drug decriminalization measure in the nation. Measure 110 refocuses efforts on public health rather than criminal sanctions, prioritizing health over punitive responses. Benefits of this measure include expanding access to evidence-based treatment and harm reduction services. The Oregon Criminal Justice Commission also speculated that this measure would decrease racial disparities in drug arrests.

Sutton, Matt. February 1, 2022. "One Year of Drug Decriminalization in Oregon: Early Results Show 16,000 People Have Accessed Services through Measure 110 Funding & Thousands Have Avoided Arrest." *Drug Policy Alliance*. Retrieved from <https://drugpolicy.org/press-release/2022/02/one-year-drug-decriminalization-oregon-early-results-show-16000-people-have>.



This Drug Policy Alliance press release summarizes preliminary results of drug decriminalization in Oregon. The press release marked the one-year anniversary of Oregon's groundbreaking reform. While it is still too early following implementation to draw definitive conclusions about its efficacy, preliminary evidence suggests that the reform is successful. As of one year after the policy change, more than 16,000 people had received services; arrests for drug offenses had fallen by about 60%; and housing, peer support, and other harm reduction services had become more accessible.

Todd, Tamar. 2018. "The Benefits of Marijuana Legalization and Regulation." *Berkeley Journal of Criminal Law* 23(1):99-119.

This article summarizes work that describes how marijuana-related offenses (e.g., possession, cultivation, distribution) dropped in states that legalized marijuana. Low-level court filings in Washington fell by 98% between 2011 and 2015. In Colorado, there was an 81% drop around the same time. Oregon and Alaska saw similar effects. The author points out that these states created jobs instead of arresting people. Legalization also did not lead to increased youth use rates. Five years after legalization, arrests for alcohol DUIs and other drugs have declined in Washington and Colorado. Emerging research indicates that cannabis legalization is also associated with reductions in opioid overdose deaths and untreated opioid use disorder. Finally, states are acquiring hundreds of millions in taxes that are funding important public policy priorities such as education, school construction, behavioral health, and alcohol and drug prevention and treatment.

Ward, Kyle C., Paul A. Lucas, and Alexandra Murphy. 2019. "The Impact of Marijuana Legalization on Law Enforcement in States Surrounding Colorado." *Police Quarterly* 22(2):217-242.

The goal of this study was to explore how recreational marijuana legalization affected law enforcement duties in police departments in neighboring states. The authors use a survey method. They find that law enforcement in states bordering Colorado disapproved of legal marijuana. The perceived impact on law enforcement fell into four categories: increases in plant and edible marijuana, concerns with marijuana trafficking, a strain on resources, and a perceived increase in juvenile use. Officers with less favorable perceptions of cannabis perceived higher enforcement challenges.

Willits, Dale W., Brittany Solensten, Mikala Meize, Mary K. Stohr, David A. Makin, Craig Hemmens, Duane L. Stanton, and Nicholas P. Lovrich. 2022. "Racial Disparities in the Wake of Cannabis Legalization: Documenting Persistence and Change." *Race and Justice* 0(0):1-18.

The authors use UCR data from Colorado and Washington to explore racial disparities following cannabis legalization. Their findings show that there was a general decline in arrests for marijuana for most racial groups; however, racial disparities persisted after legalization. This finding was especially pronounced in Colorado. Thus, while legalization generally had a positive effect by decreasing contact with the criminal justice system, more work needs to be done to address racial disparities.

Windle, Sarah B., Peter Socha, José Ignacio Nazif-Munoz, Sam Harper, and Arijit Nandi. 2022. "The Impact of Cannabis Decriminalization and Legalization on Road Safety Outcomes: A Systematic Review." *American Journal of Preventive Medicine* 000(000):1-16.

This article reviews the impact of cannabis decriminalization and legalization on road safety. The authors found that decriminalization, medical legalization, and recreational legalization were all associated with increases in positive marijuana tests among drivers. However, while this may reflect increases in marijuana use, it does not necessarily correspond to impaired driving. With regard to fatal traffic collisions, they found that medical legalization was associated with a decrease, while recreational legalization was associated with an increase.

Wu, Guangzhen, Francis D. Boateng, and Xiaodong Lang. 2020. "The Spillover Effect of Recreational Marijuana Legalization on Crime: Evidence From Neighboring States of Colorado and Washington State." *Journal of Drug Issues* 50(4):392-409.

This study uses UCR data from 2003 to 2017 and a difference-in-differences analysis to examine the potential spillover effect of recreational marijuana legalization in Colorado and Washington, especially focusing on changes in the rates of various crimes in border counties of neighboring states (compared to nonborder counties of those states). Results reflect some evidence of a spillover crime reduction effect of

legalization, as indicated by the significant decreases in property crime, larceny, and simple assault rates in the Colorado region that includes six neighboring states. Results also suggest that the effects of marijuana legalization on crime in neighboring states vary based on the crime type and state.

Wu, Guangzhen, Yongtao Li, and Xiaodong (Eric) Lang. 2022. "Effects of Recreational Marijuana Legalization on Clearance Rates for Violent Crimes: Evidence from Oregon." *International Journal of Drug Policy* 100(103528):1-6.

The authors use a difference-in-differences analysis and synthetic control method to examine the effect of recreational cannabis legalization on clearance rates for various violent crimes in Oregon. Using UCR data from 2007 to 2017, they find some evidence suggesting a favorable impact of legalization on violent crime clearances. Specifically, there were significant increases in clearance rates for overall violent crimes and aggravated assault in Oregon counties (compared to those in non-legalized states). Results also indicated that the positive effect of legalization on violent crime clearance rates may lessen over time.

Wu, Guangzhen, Ming Wen, and Fernando A. Wilson. 2021. "Impact of Recreational Marijuana Legalization on Crime: Evidence from Oregon." *Journal of Criminal Justice* 72(101742):1-11.

The authors use UCR data from 2007 to 2017 and difference-in-differences analysis to examine the impact of recreational marijuana legalization on the rates of various serious crimes in Oregon. Results show some evidence of a crime-exacerbating effect of recreational cannabis legalization, as indicated by increases in the rates of multiple types of serious crimes (relative to non-legalized states), including property and violent crime overall, and other crimes such as burglary, larceny, motor vehicle theft, and aggravated assault.

Wu, Guangzhen and Dale W. Willits. 2022. "The Impact of Recreational Marijuana Legalization on Simple Assault in Oregon." *Journal of Interpersonal Violence* 0(0):1-22.

This study examines the impact of cannabis legalization on simple assault, which is considered a less serious form of violent crime. The authors use UCR data from 2007 to 2017 and a quasi-experimental research design. Results indicated that counties in Oregon had increases in the simple assault rate following legalization relative to rates in the 19 non-legalized states.

# **EXHIBIT 11**





## Marijuana Legalization Is Not Linked With Increased Crime Rates

“All those [marijuana] arrests do is make people hate us.”  
— Cathy Lanier, former police chief for Washington, D.C.

“Our state’s efforts to regulate the sale of marijuana are succeeding. A few years ago, the illegal trafficking of marijuana lined the pockets of criminals everywhere. Now, in our state, illegal trafficking activity is being displaced by a closely regulated marijuana industry that pays hundreds of millions of dollars in taxes. This frees up significant law enforcement resources to protect our communities in other, more pressing ways.”

— Washington State Gov. Jay Inslee and Attorney General Bob Ferguson

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Government-published data, academic research, and the experiences of many law enforcement officials indicate that marijuana policy reform does not increase crime rates. Relying on statistics from the FBI’s Uniform Crime Reports, peer-reviewed studies have analyzed changes after passage of both adult-use legalization and medical marijuana laws. Contrary to assertions made by some opponents of legalization, there is no compelling basis for claims that legalizing marijuana and establishing regulated markets undermines public safety.

For medical marijuana, multiple analyses have concluded that these laws are not linked with increases in violent crime or property crime.<sup>[1]</sup> In fact, researchers from RAND discovered a “negative and significant relationship between dispensary allowances and property crime rates.”<sup>[2]</sup>

Similarly, available evidence suggests that legalizing marijuana for adults does not lead to increased crime of any variety either. In a 2018 study, scientists found “no statistically significant long-term effects of recreational cannabis laws or the initiation of retail sales on violent or property crime rates.”<sup>[3]</sup> In a more recent paper using regression analysis, a University of Washington researcher wrote, “Results indicate that the legalization of marijuana, both recreational and medical, does not increase violent crime rates. In contrast, marijuana legalization could lead to a decline in violent crime such as homicide, robbery and aggravated assault.”<sup>[4]</sup>

Other studies also point to marijuana policy reform as a public safety benefit. In a 2018 analysis, experts at Washington State University found that police solved significantly more violent and property crimes after passage of legalization laws in Colorado and Washington.<sup>[5]</sup> Another peer-reviewed paper in *The Economic Journal* supports the argument that legalizing marijuana reduces crime by displacing illicit markets traditionally controlled by drug cartels and illicit distributors.<sup>[6]</sup>

---

<sup>[1]</sup> Shepard, E. M., et al. (2016). Medical Marijuana and Crime: Further Evidence From the Western States. *Journal of Drug Issues*. Accessed from <https://doi.org/10.1177/0022042615623983>

Chu, Y. L., et al. (2019). Joint culpability: The effects of medical marijuana laws on crime. *Journal of Economic Behavior & Organization*. Accessed from <https://doi.org/10.1016/j.jebo.2018.07.003>

[2] Hunt, P., et al. (2018). High on Crime? Exploring the Effects of Marijuana Dispensary Laws on Crime in California Counties. Institute of Labor Economics. Accessed from <http://ftp.iza.org/dp11567.pdf>

[3] Lu, R., et al. (2018). The Cannabis Effect on Crime: Time-Series Analysis of Crime in Colorado and Washington State. *Justice Quarterly*. Accessed from <https://doi.org/10.1080/07418825.2019.1666903>

[4] Rice, A. (2019). A blunt look at the impacts marijuana has on violent crime (manuscript). University of Washington. Accessed from <https://digital.lib.washington.edu/researchworks/handle/1773/44495>

[5] Makin, D.A., et al. (2018). Marijuana Legalization and Crime Clearance Rates: Testing Proponent Assertions in Colorado and Washington State. *Police Quarterly*. Accessed from <https://doi.org/10.1177/1098611118786255>

[6] Gavrilova, E., et al. (2017). Is Legal Pot Crippling Mexican Drug Trafficking Organisations? The Effect of Medical Marijuana Laws on US Crime. *The Economic Journal*. Accessed from <https://doi.org/10.1111/ecoj.12521>

# **EXHIBIT 12**



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Marijuana's Impact on Crime: Studies Support  
Cannabis

# MARIJUANA'S IMPACT ON CRIME: STUDIES SUPPORT CANNABIS



Article Written By: [Pierce Hoover](#)

📅 Updated on May 24, 2024





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3. Marijuana And Crime Rates
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5. Additional Positive Effects of Legalization
6. [Marijuana Benefits May Have Been Underestimated](#)

Over the past 50 years, marijuana use has been blamed for millions of criminal acts. But while this statement may seem alarming at first, it loses impact when placed in context. The [overwhelming majority](#) of marijuana-related arrests and convictions stem from the mere possession of what federal authorities continue to consider a Schedule I drug under the

## Controlled Substances Act.

Legalization of marijuana at the national level would result in an immediate de facto reduction in crime statistics, as many millions of otherwise legal marijuana users would no longer be considered criminals. But manipulation of the numbers isn't the real story. There is substantial evidence that the legalization of marijuana may result in a reduction in both violent and property crime rates. The most recent reporting on the subject indicates that these societal benefits may have been underestimated in previous studies.

## **Problems With Marijuana Prohibition**

The U.S. federal government's longstanding policy known as the "War on Drugs" is predicated on the assumption of a causal link between crime and drug usage, and on the belief that harsh penalties for drug possession will lead to a reduction in crime rates. In the decades that followed the implementation of this program by the Nixon administration, marijuana-related arrests more than tripled, and the number of individuals incarcerated for these offenses increased ten-fold.

During these same years, crime rates failed to

During these same years, crime rates failed to plummet. Instead, the very illegality of marijuana led to new forms of crime associated with [trafficking activities](#) such as turf war violence, drug-related robbery, and money laundering. Prioritizing drug enforcement often draws police away and can result in a diminished ability to address other types of crime. A case study on the subject from [Florida State University](#) concluded:

The reallocation of police resources [to drug enforcement] results in reduced deterrence for property crime, and as a result an increase in these crimes. Evidence suggests that rising property crimes in Florida are at least partially the result of drug enforcement policy.

In addition to being proved largely ineffective at stemming illegal traffic use or reducing crime, the “War on Drugs” policy has proven to be quite expensive, with [annual expenditures](#) at the state and federal level reaching \$50 billion a year. Critics of U.S. drug enforcement policy have also noted the significant costs associated with drug-related incarcerations and the increasing trend towards militarization of police forces through the Pentagon’s [1033 Program](#).

A 2020 scholarly opinion piece published in the [Boise State University Blue Review](#) states:

The War on Drugs is primarily a war on marijuana, since the vast majority of arrests made and resources spent have been focused on marijuana offenses. In recent years,



drug arrests in general, and marijuana possession arrests in particular, have been increasing while at the same time the rates of serious crimes have been decreasing.

The [article](#) makes the following points on the ways marijuana legalization would benefit the criminal justice system:

- In 2018, there were more than 663,000 marijuana-related arrests made in the United States.
- More than 608,000 of those arrests were for marijuana possession only.
- Law enforcement is primarily arresting recreational cannabis users, not dealers.
- Many of those arrested will end up incarcerated, exacerbating the fact that tax monies supporting the incarceration of non-violent drug offenders are significant.
- Costs range between \$30,000-\$35,000

- Costs range between \$30,000-\$55,000 per year to house an inmate.

## **Cannabis Legalization Provides Insights And Answers**

By the 1990s, the recognized failures of harsh federal cannabis laws combined with an increasing societal acceptance of marijuana use led to the first steps toward legalization, with California taking the first leap with the 1996 passage of [Proposition 64](#) — the Adult Use Of Marijuana Act. As other states followed California's example in subsequent years, researchers were presented with a unique opportunity to answer a range of questions and concerns long voiced by opponents of marijuana legalization. Conclusions drawn from a variety of metrics gathered over periods of a decade or more were presented and reviewed. In almost all cases, the answers and insights gleaned from these research efforts painted marijuana legalization in a positive light with regards to its relationship to crime.

## **Marijuana And Crime Rates**

The first and most general assertion gleaned from recent studies is that legalization of

marijuana does not cause an increase in overall crime rates. Based on a 25-year assessment of data from state and national crime databases, a study released by the [Victoria University of Wellington](#), concluded:

We do not find evidence that medical marijuana laws consistently affect violent and property crime. [...] Our results suggest that liberalization of marijuana laws is unlikely to result in the substantial social cost that some politicians clearly fear.

A [multi-year study](#) of crime rates in California and Colorado, the first two states to legalize marijuana use, came to a similar conclusion,

noting that there was “no statistically significant long-term effects of recreational cannabis laws or the initiation of retail sales on violent or property crime rates in these states” and that “[marijuana] legalization has not had major detrimental effects on public safety.”

A common argument offered by anti-legalization advocates has been the concern that dispensaries would themselves become a target for robbery and property crimes. This concern was addressed in a [2018 report](#) by the RAND Corporation, which concluded:

We find no evidence that ordinances allowing for marijuana dispensaries lead to an increase in crime. We find no effects on burglary, robberies, or assaults, which are the types of crimes one would expect if dispensaries were

prime targets as a result of their holding large amounts of cash. [...] In fact, we see some evidence of a reduction in property crime.

This finding was reinforced by a [2014 review](#) of FBI crime data that found:

Medical marijuana legalization is not predictive of higher crime rates and may be related to reductions in rates of homicide and assault... [R]obbery and burglary rates were unaffected by medicinal marijuana

legislation, which runs counter to the claim that dispensaries and grow houses lead to an increase in victimization due to the opportunity structures linked to the amount of drugs and cash that are present. .... [T]his is in line with prior research suggesting that medical marijuana dispensaries may actually reduce crime in the immediate vicinity.

## **Cannabis May Lead to Crime Reduction**

A number of studies have reinforced the association between the legalization of

marijuana and a reduction in both violent and property crime. In 2019, the [\*Journal of Economic Behavior & Organization\*](#) stated:

First-pass evidence is provided that the legalization of the cannabis market across U.S. states is inducing a crime drop.

This statement was based on a multi-year study of crime rates in Washington and Oregon. During the years studied, researchers had a unique opportunity to compare pre- and post-legalization crime rates, as Washington and Oregon legalized marijuana use at different times. As the authors explain:

We exploit the staggered legalization of recreational marijuana enacted by the

marijuana enacted by the adjacent states of Washington (end of 2012) and Oregon (end of 2014). [Our model shows] a significant reduction in rapes and property crimes on the Washington side of the border in 2013–2014 relative to the Oregon side and relative to the pre-legalization years 2010–2012. The legalization also increased consumption of marijuana and reduced consumption of other drugs and both ordinary and binge alcohol.



A study by the [IZA Institute of Economics](#) draws similar conclusions from this data, and adds the notation that the observed decrease in violent crimes that accompanies the legalization of marijuana might be attributed to:

[Users'] substitution away from drugs which have remained illegal and from alcohol, which makes consumers more aggressive than if consuming cannabis.

## **Additional Positive Effects of Legalization**

Several positive effects of marijuana legalization in relationship to crime rates have also been well documented. Among these are:

\* **Crime Reduction in Border States:** Results from a study published in [\*The Economic Journal\*](#)

were “consistent with the theory that decriminalization of the production and distribution of marijuana leads to a reduction in violent crime in markets that are traditionally controlled by Mexican drug trafficking organizations.” The report noted that this effect was strongest in counties located within 200 miles of the U.S./Mexico border.

**\* Improved Crime Clearance Rates:** According to a 2018 report in the [\*Police Quarterly\*](#), the court clearance rates for violent and property crimes improved in California and Washington state following the legalization of marijuana. This was attributed to law enforcement resources no longer being diverted to the enforcement of marijuana laws.

**\* Decrease in Smuggling Activity:** A 2018 report from the [\*Cato Institute\*](#) noted that, “After decades of no progress in reducing marijuana smuggling, the average Border Patrol agent between ports of entry confiscated 78 percent less marijuana in fiscal year 2018 than in 2013.” The explanation for this trend was that “state marijuana legalization starting in 2014 did more to reduce marijuana smuggling than the doubling of Border Patrol agents or the construction of hundreds of miles of border

the construction of hundreds of miles of border fencing did from 2003 to 2009. As more states [legalize marijuana] these trends will only accelerate.”

## **Marijuana Benefits May Have Been Underestimated**

The most recent insights on the relationship between marijuana legalization and crime rates come from a [working paper](#) from Appalachia State University’s Department of Economics, published in October 2021. For the most part, the conclusions put forward in this paper largely reinforce previous studies, and provide similar insights. What is most noteworthy about this document is the author’s assertion that previous studies may have underestimated the degree to which marijuana legalization plays a role in reducing crime rates. The reason for these discrepancies is explained as a lack of complete reporting from law enforcement agencies, which leads to the under-reporting of certain key data sets.

The methodology employed by the Appalachia State is explained in great detail in the paper, but is beyond the scope of this article. The most significant takeaways generated by the author’s

advanced modeling is provided in a summary of the concluding remarks:

We estimate significant reductions in violent crime rates in states that legalize medicinal marijuana.

We find evidence that ending marijuana prohibition results in larger reductions in violent crime rates in states that border Mexico and in urban counties.

Medical marijuana legalization reduces property crimes, with larger reductions in states that border Mexico

that border Mexico.

Previous estimates of the effect of medical marijuana laws on crime have underestimated the reduction in crime from ending marijuana prohibitions.



## **PIERCE HOOVER**

Pierce Hoover is a career journalist with more than three decades of experience in print, broadcast and online writing, editing and reporting, with more than 5,000 articles published in national and

international print media and online. His focus on medical marijuana therapies mirrors his broader interest in science-based alternative medical practices.

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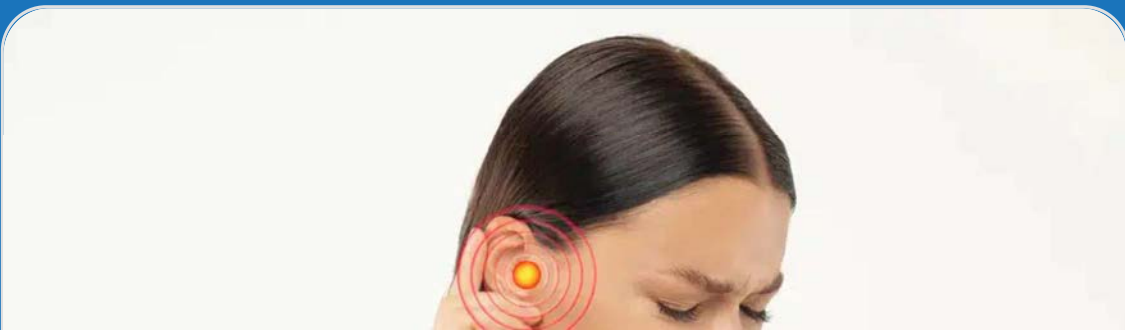


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# **EXHIBIT 13**



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## Regional Science and Urban Economics

Volume 78, September 2019, 103460

# Not in my backyard? Not so fast. The effect of marijuana legalization on neighborhood crime ☆

Jeffrey Brinkman <sup>a</sup>  , David Mok-Lamme <sup>a b</sup>

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## Abstract

This paper studies the effects of marijuana legalization on neighborhood crime and documents the patterns in retail dispensary locations over time using detailed micro-level data from Denver, Colorado. To account for endogenous retail dispensary locations, we use a novel identification strategy that exploits exogenous changes in demand across different locations arising from the increased importance of external markets after the legalization of recreational marijuana sales. The results imply that an additional dispensary in a neighborhood leads to a reduction of 17 crimes per month per 10,000 residents, which corresponds to roughly a 19 percent decline relative to the average crime rate over the sample period. Reductions in crime are highly localized, with no evidence of spillover benefits to adjacent neighborhoods. Analysis of detailed crime categories provides insights into the mechanisms underlying the reductions.

---



# Introduction

After Colorado and Washington became the first U.S. states to legalize recreational marijuana in 2012, the number of states legalizing or decriminalizing the sale and use of marijuana quickly expanded. After a wave of ballot initiatives in 2016, the sale and use of marijuana for recreational purposes was legal in 7 states, and another 22 states had legalized medical use. As states legalize the manufacturing, distribution, and sale of marijuana, the local health, economic, crime, and safety effects of marijuana dispensaries have become an important public policy issue. In addition to the aggregate effects of legalization, understanding the local effects of marijuana dispensaries on neighborhoods is important for designing policies to address concerns of residents who are broadly open to legalization but have a “not in my backyard” attitude toward dispensaries near their homes.<sup>1</sup>

The economic welfare and public policy implications of marijuana legalization are broad in scope and stem from several primary sources. First, given that legalization improves access to

marijuana and presumably reduces prices, in the long run, legalization could affect local health, economic, crime, and safety outcomes due to increased marijuana use.<sup>2</sup> Second, legalization may displace illicit markets affecting neighborhood outcomes, including crime or access to other illegal drugs.<sup>3</sup> Third, marijuana dispensaries may have social or economic spillover effects that may affect welfare. Finally, there are direct implications for public finance through increased tax revenue and decreased enforcement costs.<sup>4</sup>

Our paper focuses on the short-run causal effects of marijuana legalization on neighborhood crime.<sup>5</sup> To date, we are unaware of any research that studies the effects of full marijuana legalization on local crime, although several papers have analyzed local effects of decriminalization policies or legalization of medical marijuana.<sup>6</sup> Two papers study aggregate effects of crime from decriminalization and legalization policies. Adda et al. (2014) study the effects of a depenalization policy in a borough of London, exploiting time variation from a policy change. The authors found that the decriminalization policy led to an aggregate decrease in crime arising from reallocation of

decrease in crime arising from reallocation of police resources but also a decrease in home values, suggesting a welfare loss. Huber et al. (2016) use cross-sectional variation in state policies and panel data between 1970 and 2012 and find evidence that the legalization of medical marijuana reduces robberies, larcenies, and burglaries, although they find that decriminalization has no effect on crime. We expand on these aggregate studies by considering local variation in crime outcomes within a jurisdiction that has legalized marijuana.

Our approach is related to that of Freishtler et al. (2016) who study the effect of medical marijuana on neighborhood crime in Long Beach, California, and exploit a change in policy that led to the closing of dispensaries. They show that there was no change in crime locally, but found positive correlations between increased crime and the dispensary density in adjacent neighborhoods.

Chang and Jacobson (2017) also exploit the unexpected closing of dispensaries in California to identify the effect on crime. They find the somewhat different result; specifically that there

is a temporary increase in crime very near the dispensaries after they have closed that dissipates over time.<sup>7</sup> Our research expands on this work in an important way by accounting for the endogenous location of dispensaries in neighborhoods. In addition, we study both recreational and medical marijuana dispensaries and utilize panel data that capture both dispensary openings and closings.

In this paper, we investigate the local effects of marijuana legalization on neighborhood crime in Denver, Colorado, which was the first state to fully legalize marijuana use, sales, and production for medical and recreational purposes. The baseline analysis compares year-over-year changes in dispensaries to year-over-year changes in crime rates using monthly tract-level data from Denver. To account for the endogenous location of dispensaries, we exploit the change in policy that allowed for recreational sales starting in January 2014. This policy changed the spatial demand for marijuana by allowing for sales to out-of-state residents and increased demand from residents from neighboring municipalities that only allowed medical sales. Proxies for market access are used

to instrument for changes in dispensary density around the time of the policy change.

One contribution of our research is the construction of a unique and rich geospatial data set.<sup>8</sup> To measure dispensary locations, we use panel data from the State of Colorado that provide exact locations of dispensary licenses at monthly frequencies. Our primary measure of crime comes from the city of Denver and includes the location, date, and type of crime committed. We construct a detailed location-specific measure of available land using data on zoning, geographic features, and legal restrictions on dispensary locations, which we augment with demographic and employment data provided by the U.S. Census.

Initial analysis of the data shows that the locations of dispensaries are not randomly allocated across space or neighborhood characteristics. Dispensaries are more concentrated in areas with higher poverty, higher minority populations, and higher initial employment density. Correlations between the growth of new dispensaries and neighborhood characteristics strengthened over time.

It is also likely that dispensary locations and crime are correlated with unobservable neighborhood characteristics, which creates a challenge for causal analysis. For example, after the legalization of recreational marijuana sales in 2014, new dispensaries were subject to public hearings. Neighborhoods with more social cohesion, could potentially prevent the opening of new dispensaries. Previous studies on local crime effects have not directly addressed the endogeneity of dispensary locations.

An important contribution of our paper is that we employ a novel identification strategy that exploits shifts in demand across locations over time to analyze causal effects of marijuana legalization on crime. While the legalization of recreational marijuana in 2014 applied to the entire state, many municipalities within Colorado prohibit sales within their own jurisdictions. Residents living in municipalities near Denver that prohibit recreational sales often travel to Denver to purchase marijuana. Therefore, locations within Denver that have more access to demand from neighboring municipalities show more growth in their dispensary density, *ceteris paribus*. In addition, out of state tourists could purchase marijuana

out-of-state tourists could purchase marijuana starting in 2014, further increasing the demand for dispensaries in locations with access to broader outside markets. In the empirical analysis, we use two geospatial variables to proxy for access to outside demand: a neighborhood's proximity to municipal borders and proximity to major roads or highways. These variables are then used to instrument for changes in locations of dispensaries over time.<sup>9</sup> We combine our instrumental variables (IV) with our panel data to compare year-over-year changes in crime with year-over-year changes in dispensary density and use time fixed effects to control for aggregate crime trends.

Note that a particular advantage of our identification strategy relative to others is that it relies on variation within a single jurisdiction. Studies that use differences in policies across jurisdictions suffer from endogeneity if the policy decision is correlated with unobserved characteristics of a municipality. *In our setting, the policy change is the same for all locations in the study, and the variation in treatment is due to an exogenous shift in external demand.*

Our main IV results imply that receiving a

dispensary in a neighborhood causes a reduction in crime; specifically, an additional dispensary per 10,000 residents is associated with a reduction of 17 crimes per 10,000 residents per month. The average number of crimes per 10,000 residents in Denver is 90 per month, so an additional dispensary is associated with roughly a 19 percent decline in crime. These IV results are robust across a number of specifications. The results from the ordinary least squares (OLS) specification, on the other hand, are positive, reflecting that dispensaries are on average selected into neighborhoods with increasing crime.<sup>10</sup>

In addition to finding an overall reduction in crime when a dispensary is added to a neighborhood, we also find that there is some variation across crime categories. The effect is generally strongest for nonviolent crimes; specific crimes most affected include criminal trespassing, public-order crimes, criminal mischief, and simple assault. There are also reductions in violent crimes driven by a decrease in aggravated assault, although results are not statistically significant. Reductions in these crimes are consistent with disruption of illicit



markets and with a substitution away from alcohol use. However, we do not find strong evidence that legalization disrupts the sale of other illicit drugs. While our point estimates suggest that sales of other drugs decline, the estimates are not statistically significant. In addition, we do not find significant increases in marijuana-related crimes that are tracked separately by the City of Denver, which implies that there are not large crime effects from increased marijuana use itself.

Lastly, we find that the reduction in crime is very localized and contained within the census tract of the dispensary's location. We test for spillover effects by regressing changes in crime on the predicted change in dispensary density both within that tract and from neighboring tracts (from our first-stage regression). We find no significant effects of neighboring dispensary density on crime.

Overall, our results suggest that dispensaries cause an overall reduction in crime in neighborhoods, with no evidence of spillovers to surrounding neighborhoods. The local nature of these effects is consistent with increased policing or private security response near the

dispensaries. These findings may point to an aggregate reduction in crime due to legalization, but further investigation would be needed to rule out a reshuffling of crime to other neighborhoods. Effects on specific crimes vary and are weakly consistent with the theory that legalization could disrupt illicit markets and also support evidence that marijuana could be a substitute for alcohol consumption. Lastly, there is no evidence that increased marijuana use itself results in additional crime. More generally, there is potential for further research to understand the underlying mechanisms that lead to the change in crime after legalization.

The rest of the paper is organized as follows. Section 2 discusses the policy implications of legalization and related literature. Section 3 provides background and descriptive data analysis of legalization in Colorado. Section 4 outlines the empirical methodology and identification strategy. Section 5 gives a detailed description of data collection and construction. Section 6 presents the main results. Section 7 provides some additional analysis and discussion. Finally, Section 8 concludes.

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## Section snippets

### Policy implications and related literature

This section outlines the important policy implications of legalization and summarizes existing literature. Caulkins et al. (2016), Anderson and Rees (2014), and Miron and Zweibel (1995) provide more comprehensive summaries of the broad issues surrounding legalization than are provided here. Recent research highlights some of the potential negative effects of legalization. Given that legalization will likely lead to increased consumption, the effects of marijuana use itself could become more ...

### Legalization in the U.S.

Legalization of marijuana is becoming increasingly common, with many countries adopting varying decriminalization or legalization policies. In the United States, while marijuana is still technically illegal under federal law, the federal government largely defers to states with regard to local enforcement, particularly since 2009.<sup>19</sup> Legalization ...

## Methodology

In this section, we outline our estimation strategy to recover the causal effect of retail marijuana dispensaries on neighborhood crime. The data used in the analysis are monthly tract-level data from the city of Denver from January 2013 to December 2016.<sup>28</sup> ...

## Data

For the empirical analysis, we require local time-varying data on the location of dispensaries and detailed information on crime. This data is used to construct year-over-year changes in dispensary density and crime rates at the census tract level for the city of Denver starting with changes between January 2013 to January 2014

and ending with changes between December 2015 and December 2016. In addition, the instrumental variable identification strategy, outlined above, requires data on major ...

## Results

In this section, we outline our main results. We start by presenting the results of the first-stage regressions, which are summarized in Table 3.<sup>52,53</sup> Columns (1) and (2) show the first-stage results using ...

## Discussion


We find that the overall effect of adding a dispensary to a neighborhood of 10,000 residents is a reduction of crime of around 17 crimes per month. In this section, we further analyze and decompose the data in order to provide a better sense of the underlying mechanisms that lead to crime reduction and to compare these findings with existing theories about the effect of legalization on crime. To do so, we first use the detailed nature of the crime data to look at how dispensaries affect ...

# Conclusion

We use a novel identification strategy to show significant crime reductions in neighborhoods that receive marijuana dispensaries. To our knowledge, our research is the first research to use exogenous variation in dispensary locations to identify local crime effects of marijuana dispensaries. We find that adding a dispensary to a neighborhood (of 10,000 residents) decreases changes in crime by 19 percent relative to the average monthly crime rate in a census tract. These results are robust to ...

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## Research data for this article

 *Data not available / Data will be made available on request*

 [Further information on research data](#) ↗

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## References (63)

T. Chang *et al.*

## Going to pot? The impact of dispensary closures on crime

J. Urban Econ. (2017)

Timothy G. Conley

## GMM estimation with cross sectional dependence

J. Econom. (1999)

Benjamin Crost *et al.*

## The effect of alcohol availability on marijuana use: evidence from the minimum legal drinking age

J. Health Econ. (2012)

Angela K. Dills *et al.*

## The effect of alcohol prohibition on alcohol consumption: evidence from drunkenness arrests

Econ. Lett. (2005)

Ilyana Kuziemko *et al.*

## An empirical analysis of imprisoning drug offenders

J. Public Econ. (2004)

Daniel Montolio *et al.*

## How time shapes crime: the temporal impacts of football matches on crime

Impacts of football matches on crime

Reg. Sci. Urban Econ. (2016)

Mark W. Nichols *et al.*

The impact of legalized casino gambling on crime

Reg. Sci. Urban Econ. (2017)

Paulo MDC. Parente *et al.*

A cautionary note on tests of overidentifying restrictions

Econ. Lett. (2012)

Matthew P. Steinberg *et al.*

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Reg. Sci. Urban Econ. (2019)

Tate Twinam

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# **EXHIBIT 14**

DISCUSSION PAPER SERIES

IZA DP No. 11567

**High on Crime? Exploring the Effects of  
Marijuana Dispensary Laws on Crime in  
California Counties**

Priscillia Hunt  
Rosalie Liccardo Pacula  
Gabriel Weinberger

MAY 2018

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# High on Crime? Exploring the Effects of Marijuana Dispensary Laws on Crime in California Counties

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MAY 2018

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## ABSTRACT

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# High on Crime? Exploring the Effects of Marijuana Dispensary Laws on Crime in California Counties\*

Regulated marijuana markets are more common today than outright prohibitions across the U.S. states. Advocates for policies that would legalize marijuana recreational markets frequently argue that such laws will eliminate crime associated with the black markets, which many argue is the only link between marijuana use and crime. Law enforcement, however, has consistently argued that marijuana medical dispensaries (regulated retail sale and a common method of medical marijuana distribution), create crime in neighborhoods with these store-fronts. This study offers new insight into the question by exploiting newly collected longitudinal data on local marijuana ordinances within California and thoroughly examining the extent to which counties that permit dispensaries experience changes in violent, property and marijuana use crimes using difference-in-difference methods. The results suggest no relationship between county laws that legally permit dispensaries and reported violent crime. We find a negative and significant relationship between dispensary allowances and property crime rates, although event studies indicate these effects may be a result of pre-existing trends. These results are consistent with some recent studies suggesting that dispensaries help reduce crime by reducing vacant buildings and putting more security in these areas. We also find a positive association between dispensary allowances and DUI arrests, suggesting marijuana use increases in conjunction with impaired driving in counties that adopt these ordinances, but these results are also not corroborated by an event study analysis.

**JEL Classification:** K14, K42, H75

**Keywords:** crime, marijuana markets, local ordinances

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## 1. Introduction

The impact of liberalizing marijuana laws on crime is a subject of great political and scholarly debate. Advocates for policy reform in states considering liberalization laws, both medical marijuana laws (MMLs) allowing for dispensaries as well as policies promoting retail sale for recreational purposes, suggest that bringing marijuana markets out of the shadows of the black market is a clear net public safety gain.<sup>1</sup> Indeed such a position is supported by scholarly work seeking to identify a causal link between marijuana use and violence, but not finding any (Arseneault et al. 2000; Mulvey et al. 2006). Nonetheless, law enforcement agencies in jurisdictions that have already adopted dispensary systems for medical marijuana claim that these dispensaries are inextricably connected to crime (California Police Chiefs Association 2009; Ingold and Lofholm 2016; Powers 2014).

The difficulty in reconciling these two positions can to some extent be comprehended by understanding the different mechanisms through which marijuana liberalization laws might potentially influence crime. First, there is the obvious impact of legitimizing what was previously an illegal market. By transitioning marijuana transactions from illegitimate exchanges that had to be actively enforced to legitimate transactions, there is an immediate reduction in the burden of enforcement assuming the legal market replaces the black market (Miron and Zwiebel 1995; Shepard and Blackley 2005). Law enforcement and the Courts may then transition resources to other, arguably more violent, types of crimes (Huber, Newman, and LaFave 2016; Miron and Zwiebel 1995). Second, there is the potential for liberalization laws to influence crime rates through an increase in marijuana (mis)use (e.g. psychopharmacological crime), to the extent that marijuana use induces criminogenic behavior. While there is no clear causal link between

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<sup>1</sup> For example, see the “Issues” webpage for the Marijuana Policy Project: <https://www.mpp.org/issues/>.

marijuana use and criminogenic behavior, there is suggestive evidence for a positive correlation between use and property crime (Green et al. 2010; Pacula and Kilmer 2003).<sup>2</sup> A third potential mechanism through which liberalization laws could plausibly influence crime, which might also explain the positive correlation between use and property crime, is that these liberalization ordinances enable the creation of new brick and mortar and delivery businesses that, because of the federal prohibition and banking laws that prevent (until recently) debit cards from being accepted in stores, operate entirely on a cash basis, creating strong targets for burglaries or thefts (California Police Chiefs Association 2009).

A whole new body of scholarly work has emerged exploiting the natural experiment created by new state laws that liberalize the sale of medical marijuana to examine this relationship. As of November 2016, medical marijuana laws have been passed by 28 states plus the District of Columbia. The enactment of state laws since 1996 provide an opportunity to empirically test the effect of regulated markets on outcomes of interest. Studies have evaluated outcomes such as marijuana use (Chu 2014; Harper, Strumpf, and Kaufman 2012; Hasin et al. 2015; Lynne-Landsman, Livingston, and Wagenaar 2013; Pacula et al. 2015; Wall et al. 2011; Wen, Hockenberry, and Cummings 2015), crime rates (Chu and Townsend 2017; Gavrilova, Kamada, and Zoutman 2017; Huber, Newman, and LaFave 2016; Morris et al. 2014; Shepard and Blackley 2016), and other health outcomes (Anderson, Rees, and Sabia 2014; Chu 2015; Smart 2015). These studies all use a difference-in-difference methodology where the treatment is a change in a state law that loosens restrictions on the sale of marijuana.

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<sup>2</sup> Another important factor to consider is marijuana use and victimization, although any evidence of a causal link pointing to an increase in victimization has been inconclusive (Markowitz 2005; Office of National Drug Control Policy 2013).

The concern with these state-level studies is that many states, particularly the early adopting states, actually defer to local entities when it comes to regulating marijuana supply and production, which leads to variation in treatment within states (Dilley et al. 2017; Freisthler et al. 2013). For example, in Colorado and Washington State, which legalized the sale of recreational marijuana in 2014, various types of policies exist at the community level and a significant portion of the population live in communities where the sale of recreational marijuana is not allowed (Colorado Department of Revenue 2016; Dilley et al. 2017). Moreover, medicinal marijuana laws within a state may differ on important elements, such as bans on dispensaries and cultivation (Pacula, Boustead, and Hunt 2014). Therefore, studies that generalize a MML across the state are ignoring heterogeneity within their treatment sample, possibly leading to the inconsistent findings in the MML literature (Pacula et al. 2015). Given the localized nature of crime and the importance of levels of aggregation, this (mis)measurement of the treatment dosage is especially problematic for estimating effects on crime rates (Freeman, Grogger, and Sonstelie 1996; Hipp 2007).

The objective of this study is to investigate whether a particular element of MMLs, namely allowance for dispensaries, affects local crime and other indicators of marijuana misuse (i.e. driving under the influence). We are also able to identify other dimensions of MMLs, such as allowance for home cultivation, but due to little variation in these other dimensions, we focus on allowances for dispensaries.<sup>3</sup> Moreover, we estimate effects on different types of crime, as well as arrests indicating marijuana use, to better understand the mechanisms driving the results. By utilizing a novel dataset that codifies elements of MMLs across local jurisdictions within California, we capture heterogeneity on the treatment variable that is present in other studies. Moreover, by focusing on local variation within a single state with a long experience with the

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<sup>3</sup> We still control for whether a jurisdiction has limitations on home cultivation in all of our models.

policy, we are able to implicitly control for changing state norms and marijuana use that could be independently associated with marijuana-involved crime. Other state-level factors that could bias estimates of crime rates across states, such as depenalization of marijuana, are also implicitly controlled in our analysis (Huber, Newman, and LaFave 2016). This analysis can help inform policies at the local level, where regulation is usually enacted, that better balance safety and access to medical marijuana.

We find no evidence that ordinances allowing for marijuana dispensaries lead to an increase in crime. In fact, we see some evidence of a reduction in property crime along with an increase in DUI and misdemeanor marijuana arrests, pointing to possible increases in misuse of marijuana that do not result in more crime. Supplementary analyses indicate that the significant effects may be driven by pre-existing trends, so we limit our conclusions to the fact that counties allowing dispensaries did not experience an increase in crime. The rest of this paper proceeds as follows: Section 2 provides some background into the literature on regulation of marijuana markets and crime, Section 3 describes the methods used for the analysis, Section 4 provides results, and Section 5 concludes with a discussion of policy implications and limitations.

## **1. Background**

### *2.1. Why Might Dispensary Laws Affect Reported Crime Rates and Arrests?*

It is clear that explicitly writing into law that entities are permitted to engage in retail distribution of medical marijuana reduces the criminal justice risks of supplying marijuana. Theoretically, we might expect this to increase availability and access to marijuana, which could increase demand at both the extensive, and potentially the intensive margins. Indeed there is consistent evidence that laws on-the-books explicitly permitting entities to produce and distribute medical marijuana increase non-medical use of marijuana among adults (Hasin et al. 2017; Pacula

et al. 2015; Wen, Hockenberry, and Cummings 2015). The laws appear to have no general impact on youth marijuana use (Choo et al. 2014; Hasin et al. 2015; Lynne-Landsman, Livingston, and Wagenaar 2013; Anderson, Hansen, and Rees 2015; Shu-Acquaye 2016), although there is some evidence from studies accounting for the relative size of these evolving marijuana market that larger and/or more competitive markets do in fact influence youth marijuana use (D'Amico et al. 2015; Smart 2015); It is *a priori* unclear, however, what effect this increased use among adults may have on community-level violent and property crime or driving under the influence. Moreover, the replacement of a black market by a new cash-based business may or may not lead to a change in reported robberies, burglaries, and thefts (California Police Chiefs Association 2009). Although we cannot hypothesize on the overall directional change, by applying the Goldstein (1985) typology of drug crime, we consider the potential mechanisms driving changes in crime.

The first set of crimes in the typology is those committed due to intoxication, or psychopharmacological crimes. As was summarized in a recent report by ONDCP, there is little evidence for a causal link between marijuana intoxication and pharmacological crime (Office of National Drug Control Policy 2013, 14). Marijuana has been linked to correlates of violence such as development of psychosis disorders, aggression later in life, and delinquent behavior (Arseneault et al. 2000; Hall and Degenhardt 2008; White and Hansell 1998); but laboratory studies have not found a link between cannabis and violence (Moore and Stuart 2005) and there is reason to believe that marijuana use alone may lower the propensity to commit an aggressive act (Ostrowsky 2011). If marijuana is a substitute for alcohol, then increased availability of marijuana through retail outlets may lead to substitution away from alcohol, thereby reducing crime that would otherwise be associated with alcohol intoxication (Carpenter and Dobkin 2010; Carpenter

2007) and DUIs (Anderson, Hansen, and Rees 2013). However, if alcohol and marijuana are complements (Pacula 1998; Williams et al. 2004), it is possible that their joint consumption could lead to more aggressive behavior than alcohol or marijuana alone. Therefore, on net, we are *a priori* ambivalent towards the expected directional change (if any) in reported crime and DUI arrests due to pharmacological criminality, resulting from legal dispensaries or looser rules on cultivation.

A second type of crime in the typology is “economic-compulsive” crimes caused by those in need of income to pay for a drug habit (Goldstein 1985). We can expect that legalization of marijuana, even for medical purposes, will reduce the price of obtaining marijuana, and indeed there is limited evidence showing that potency has risen while prices for potency-adjusted fixed amounts have fallen (Anderson, Hansen, and Rees 2013; Sevigny, Pacula, and Heaton 2014). Substantially larger price declines have been observed with full legalization (Smart et al. 2017). Overall, we would expect a minimal increase in income-producing property crime driven by economic-compulsive behavior as a result of legalizing dispensaries.

The third category of crime is “systemic crimes,” or those associated with the provision and distribution of drugs in black markets. There is very limited evidence of violence attributed to illicit retail marijuana markets, although a recent study has found that counties bordering Mexico in states that passed MMLs have experienced a decrease in violent crime by decreasing the financial incentives of drug trafficking organizations (Gavrilova, Kamada, and Zoutman 2017; Reuter 2009). Nevertheless, any possible violence would have likely been mitigated in California given that home cultivation was allowed in most counties for many years before dispensary laws.<sup>4</sup>

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<sup>4</sup> Our models will control for whether the county had any restrictions on self-cultivation.

However, the presence of dispensary store-fronts may, themselves, lead to a change in both violent and property crimes in a given area, although again the direction is theoretically ambiguous. On the one hand the sale of marijuana, even for medicinal purposes, is illegal to the federal government. Therefore, no banks with a national charter are willing to provide credit or regular services to dispensaries that sell these goods. This has meant that most dispensaries must operate on a cash-basis, and they have a lot of cash (California Police Chiefs Association 2009; McDonald and Pelisek 2009). On the other hand, dispensaries have lots of security in and around them because of their cash business and highly desirable product. They often are zoned in areas that previously had empty buildings, and so by moving into these areas and bringing their own security systems they provide more “eyes on the ground” which can deter crime.

Spatial models that measure the density of dispensaries in a given area are an effective way to test the effect of store fronts on crime, but the results from these have been quite mixed. A few correlational studies have found a positive relationship with crime either in the immediate area (Contreras 2016) or in adjacent neighborhoods (Freisthler et al. 2016). A recent study exploiting an exogenous shock that led to closings of dispensaries in Los Angeles County, though, found that these closures actually led to an increase in crime in the immediate vicinity (Chang and Jacobson 2017). The authors argue that the increase in crime was a result of a loss of “eyes on the street” being provided by the dispensaries that were forced to close. Overall, we cannot say whether we expect a change in the distribution of marijuana caused by the legalizing dispensaries to have a positive or negative effect on reported crime in California.

Because theory does not provide any clear guidance on anticipated effects of these laws, it has been viewed an empirical question. A recent set of studies examine the relationship between MMLs and crime by exploiting variation in uptake across states and using Part I reported crimes

at the aggregate level. Morris et al. (2014) and Shepard and Blackley (2016) both use a difference-in-difference methodology, with the former employing a sample of all states in the period between 1990-2006 and the latter a sample of only the eleven states that make up the Western Census Region between 1997 and 2009.<sup>5</sup> Chu and Townsend (2017) adopt a similar approach while measuring crime at the city policy agency level to improve measurement, but still rely on a state-level classification of MMLs. Huber (2016) add information about whether states have depenalized marijuana to their difference-in-difference model, arguing that depenalization has an effect on non-drug crime by shifting enforcement resources. Finally, Gavrilova, Kamada, and Zoutman (2017) employ a difference-in-difference-in-difference approach to study the added effect of MMLs on crime in counties bordering Mexico compared to inland adopting counties (where MMLs are measured at the state-level). These studies have mostly found very little evidence of a relationship between uptake of medical marijuana laws and reported crime,<sup>6</sup> with the exception of the Huber study that estimated a 5% significant decrease in robberies, larcenies, and burglaries.

The current paper addresses important limitations of the prior studies. First, prior studies that exploit state-level policy variation assume the treatment (exposure to medical marijuana dispensaries) is homogenous across the state. It is clear from recent work that this is not the case, as many local jurisdictions choose to adopt bans on medical marijuana dispensaries (Dilley et al. 2017; Pacula et al. 2015). Crime rates are also not constant across a state, and in fact are very localized, which raises uncertainty as to whether variation in aggregated crime rates observed at the state level are being driven by the same or different jurisdictions in which medical marijuana dispensaries are allowed (Dilley et al. 2017; Freeman, Grogger, and Sonstelie 1996). Our study is

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<sup>5</sup> They argue that because up until 2009 only four states outside of the Western Region had passed a MML, a sample of only western states provides a more similar control group.

<sup>6</sup> The Gavrilova study finds a significant decrease in violent crime in Mexico-bordering counties with MMLs, but a negligible insignificant effect on violent crime in inland counties with MMLs.



able to explicitly address this concern by examining more localized measures of crime and dispensaries at the county level. Second, prior state analyses frequently omit other relevant policy variables that are also changing during this time period, such as cannabis depenalization, that might also be important for determining crime and arrest rates (Huber, Newman, and LaFave 2016). Our study overcomes this limitation by exploiting variation within one very large state, thereby holding constant across our treated and control counties changes in other state-specific laws (Shepard and Blackley 2005).

## *2.2 California Experiment: Medical Marijuana Laws across California Counties*

In 1996, California was the first state to pass a law allowing for the legal possession and cultivation of marijuana for medicinal purposes. The initiative changed a section of the Health and Safety code to protect patients who used marijuana with the recommendation from a physician from state prosecution. Passed through a ballot initiative, Proposition 215 (later to be known as the Compassionate Use Act (CUA)), did not address any channels through which marijuana might be supplied or obtained due in large part because of its explicit contradiction with federal law, which still maintained a strict prohibition on marijuana for medicinal purposes by classifying it as a Schedule 1 drug.

A few factors encouraged county and city jurisdictions in California to start crafting their own medical marijuana regulations, creating the variation over time we exploit in this study. First, the lack of specificity in the CUA regarding the production and distribution of marijuana left local governments with the authority to adopt whatever regulations they felt was appropriate, as there was no state pre-emption of any local regulations (Freisthler et al. 2016). Second, the ambiguity of the state law meant that the distribution of marijuana within the state remained illegal unless localities specifically addressed the issue.

These two factors paved the way for subsequent policy decisions since the passage of the CUA in 1996 that have affected medicinal marijuana regulation in California and solidified the role of counties and cities to create their own laws related to medical marijuana dispensaries. Statute SB 420, which provided legal protection to marijuana dispensaries operating within the state as of January 1, 2004, gave local jurisdictions the autonomy to decide whether and how to permit dispensaries. While it exempted the “collective or cooperative cultivation” from prosecution, it left it to local jurisdictions the authority to implement and regulate them (State of California. October 12, 2003, §1(b), (c)). The “Ogden memo,” published in October, 2009, strengthened the incentive localities had to develop clear regulations over dispensaries, as it specified that the Federal government would not prioritize prosecuting patients or caregivers that were acting in clear compliance with state laws (Ogden 2009). As California law delegated these authorities to local jurisdictions, this memo signaled to city and county governments that local ordinances regarding dispensaries would be binding.<sup>7</sup> As demonstrated by the increase in counties after 2004 and 2009 with dispensary laws shown in Figure 1, the evolution of these rulings and decisions has spurred the variation in local policy that is currently observed within the state of California today.

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<sup>7</sup> The authority of local governments to regulate dispensaries in their jurisdiction was reinforced in 2013 after the Supreme Court of California ruled in the case of *Riverside vs. Inland Empire Patients Health and Wellness Center* (56 Cal. 4<sup>th</sup> 729 [2013]) that the city of Riverside had the right to abolish marijuana dispensaries through zoning laws.

## 2. Data and Methods

### 3.1. Data

#### *City and County Ordinance Data*

This study uses a database of medical marijuana legal provisions adopted across all 58 counties of California as well its most populous 14 cities (those with a population exceeding 200,000 residents). The database is based on legal analysis of the language in the public law versions of county ordinances that were adopted between the period January 1, 1997 through December 31, 2014. The year 1997 is used as a starting point because California's statewide policy passed in November of 1996.

The legal database includes jurisdictions' (dis)approval on provisions related to the distribution of cannabis supply-related products. By December 31, 2014, 28% (16 out 58) of jurisdictions had made legally effective a county ordinance permitting co-operatives or dispensaries.<sup>8</sup> In order to limit the subjectivity of the database associated with subsequent implementation of the provisions and to ensure every jurisdiction's county ordinances were assessed along the same criteria, e.g. as written in public version, this study does not include successive interpretations of courts or policies established by regulatory bodies.

An indicator variable was created that is defined as "1" for counties that explicitly allow dispensaries in a given year and "0" otherwise. This is a reasonable definition because none of the state-level statutes or court rulings explicitly allow for dispensaries. Inevitably, some counties changed their policy throughout the year and we have created an annual dataset, so we use the law

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<sup>8</sup> The peak number of dispensaries open in one year is actually 18 during 2013, but two counties stopped allowing for dispensaries the following year.

in place for the majority of the year.<sup>9</sup> Additionally, because home cultivation is allowed by the Compassionate Use Act, we assume that home cultivation is allowed with no limits unless explicitly stated. We create a variable that identifies whether the county has placed any limits<sup>10</sup> on cultivation for the given year. To make it easier to interpret along with the dispensary variable, the indicator variable is defined as “1” when there are no limits placed by the county on home cultivation and “0” when the county either explicitly prohibits or places any sort of limit on home cultivation.

A significant complication to the analysis is that a county ordinance applies to the unincorporated part of a county, which is the area of a county that does not pertain to an incorporated city. Incorporated cities may create different laws than the county they are nested in, which apply to residents within the city limits. Estimation of impacts of just county ordinances ignoring the specific ordinances of the cities incorporated within them could therefore lead to biased results. This is why in addition to the county ordinances, the research team also completed the same categorization procedure of ordinances for the 14 incorporated cities in California with a population larger than 200,000. Doing so meant that in most counties we would capture the laws that applied to the greatest share of the county population in each county.

While crime offense data are available at the level of police agencies within counties, our main analysis will be conducted at the county level because it mitigates the problem of agency jurisdiction borders and because more control variables are available at the county level. The distinction between counties and cities, however, means we have to be careful to account for the

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<sup>9</sup> The data on ordinances is at the monthly level, but because crime offense data should be interpreted at the annual level we collapse the ordinance data annually (very little variation is lost by collapsing the ordinance data to the annual level). We also show as a robustness check the results from estimating the treatment variable as the fraction of the year in which the policy was in place (for example, 0.5 if dispensaries were allowed for 6 months).

<sup>10</sup> We categorize this variable as “any limits” because it is rare for counties to place limits on cultivation. Counties that place any limits, then, should be different than those that do not regulate cultivation.

treatment of cities that had laws different than that of the county (and for the possibility of differences for those cities in which we do not have information). Therefore, we construct a county-level policy indicator using the following rules: (1) the county unincorporated area policy is used if we don't have information on any city within a county, or if the city information is consistent with the county; (2) when information on a city within a county is available and contradicts that of the county policy, we use the county or city policy that applies to the larger share of the full county population.<sup>11</sup> As a sensitivity analysis, we collect data on police agency-level reported crime for the 14 cities and the unincorporated areas of each of the 58 counties; and run a similar analysis using ordinances for these 72 independent jurisdictions to ensure that our results are not driven by different laws within jurisdictions in a county. We also conduct robustness checks using other methods of classifying the treatment variable.

Figure 1 displays the distribution of counties in each year that have a policy that allows for dispensaries, using the policy definition described above. It shows that the change in this element of the MMLs was a gradual process that, with the exception of 2 counties (San Francisco and Santa Clara), starts in 2004 after SB420 passed. By 2010, 12 of the 58 counties allow dispensaries and in 2013 18 counties do so. Finally, by the end of our sample period in 2014, 16 of the 58 counties allow for dispensaries. One may note that the number of counties allowing for dispensaries can decrease, and this is a function of the fact that counties that allow dispensaries may either (a) include sunset provisions, or (b) subsequently pass ordinances that disallow them. Our indicator variable reflects these subsequent changes as well.<sup>12</sup>

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<sup>11</sup> There are 3 counties (Alameda, San Diego, and Los Angeles) that have 2 cities within its boundaries that fit the criteria of a population of 200,000 or more. In these cases, we use the city with the larger population.

<sup>12</sup> This is complicated in our event study analyses, but we account for it by adding a dummy variable to the model indicating years post-treatment when the county no longer allows for dispensaries.

### *Crime Incident Data*

The second source of data we have compiled for use in this study are the number of total offenses reported to police by type of crime, for each county and each year in our sample period. The data on reported offenses for the seven types of index crimes are pulled from the State of California Department of Justice (Criminal Justice Statistics Center 1997-2014) website. The California DOJ publishes raw county-level data<sup>13</sup> from the information it receives from each police agency. We also create a variable for violent offenses that corresponds to the Uniform Crime Report (UCR) Part I violent crimes: homicide, rape,<sup>14</sup> robbery, and aggravated assault; and property offenses refers to UCR Part I property crimes: burglary, larceny/theft,<sup>15</sup> and motor vehicle theft.

Since the UCR is based on the Hierarchy Rule, only the most severe crime is counted per incident. The importance of this for our purposes is that if marijuana has an effect on the severity of crimes, we may observe this as a change in crime; although no change in the actual number of incidents. For example, where two offenses (e.g. aggravated assault and theft) occurred during an incident; this incident will be recorded as an aggravated assault. If marijuana results in a fall in pharmacological crime (such as aggravated assault), but still affects economic-crimes (theft), we would observe a decrease in aggravated assault and an increase in thefts. While in this scenario the former is true (there is indeed a fall in assault), the latter is not true; the offense of theft occurred in both incidents.

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<sup>13</sup> Raw data means that no imputation procedures are used to account for possible missing values. California does not conduct a state-wide version of the National Crime Victimization Survey, meaning that reported crime-offense reports is the only source for measuring the level of crime.

<sup>14</sup> We don't show results for effects on rape because there is no reason to believe dispensaries would have an effect and agencies in California were allowed to start using the new expanded definition in January 2014.

<sup>15</sup> Larceny/theft includes both felony and misdemeanor crimes. The classification for felony theft in California changed in 2011 and it was not possible to go back and re-classify all previous felony offenses into misdemeanors, so the state decided to include all larceny and theft crimes, regardless of monetary value, under felony property crime.

### *Final Dataset*

We have created a dataset of aggregate crime by year and county and merged it with the ordinance data to create a panel dataset from 1997 to 2014. Figure 2, Panels A, B, and C, track how reported violent offense, property offense, and DUI arrest rates, respectively, have changed over our sample time period for counties that started allowing dispensaries at any period between 1997 and 2014 and those that never allowed dispensaries during that same period. The vertical axes signify the two years (2004 and 2009) that begin an “episode” when more counties start entering the treatment group, as well as a year (2011) when various important state criminal justice policies are passed.<sup>16</sup> The first important pattern to note is that crime has decreased in the state as a whole since 1997, regardless of whether dispensaries were allowed. This downward trend in crime per capita is consistent with the decline in crime that has been observed throughout the United States. Secondly, it appears that there are parallel trends throughout most of the pre-treatment time period between the two groups of counties, with the exception that counties that never allowed dispensaries had a larger decline in violent and property offense rates between 1999 and 2001 than counties that allowed dispensaries at any point in time, and DUI arrests between the two groups start to converge around 2009. Nevertheless, because jurisdictions start allowing dispensaries at different times, it is difficult to draw conclusions about the relationship between dispensaries and crimes from these broad state trends.

We also collect data on variables at the county level that have been shown in the literature to influence the crime rate. These variables include the one-year lagged unemployment rate (Raphael and Winter-Ebmer 2001), the average per capita income, the density of alcohol outlets per capita (Gruenewald and Remer 2006), and the county population density (Shepard and

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<sup>16</sup> These include decriminalization of marijuana as well as AB 109, a major policy that led to a shift in resources among all law enforcement agencies.

Blackley 2005). Lastly, we include an indicator for 2011 and later, the year that California both decriminalized recreational marijuana use and substantially changed its criminal justice system through a process that has been termed “Public Safety Realignment.” The unemployment rate comes from the Bureau of Labor Statistics, the per capita income from the Bureau of Economic Analysis, the alcohol outlets from the California Department of Alcohol and Beverage Control, and the land area and population from the United States Census Bureau.

Table 1 shows the summary statistics for the different types of crime we are analyzing and the independent variables used in our model. One will note that most of the total property crime is made up of larceny/thefts and most of the total violent crime is made up of aggravated assaults.

### *3.2 Empirical Strategy*

To test whether allowing dispensaries affects aggregated criminal activity, we analyze the impact of local dispensary laws on UCR reported violent and property crime rates as well as DUI and marijuana-related arrest rates.<sup>17</sup> Using the county-year as our unit of analysis, we will capture the effect from a change in dispensary allowance through a staggered difference-in-difference approach. Counties become part of the treated group at different times as they adopt laws throughout our sample period, and the changes resulting from adoption are compared to a control group that never adopts. All our model specifications include county fixed effects, as we are confident that there are unique unobservable county characteristics, which may cause a spurious correlation between crime rates and policy adoption. To account for the fact that there are trends in crime and arrest rates that are common across counties, we also include in the model a continuous (annual) time variable and a second order term. We choose this specification, over the

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<sup>17</sup> DUIs include driving under the influence of any substance that may impair driving, so driving under the influence of marijuana is included in these figures..



more common method of including year dummy variables, to preserve more power after observing a clear quadratic trend in all crime.<sup>18</sup> Finally, we control for various time-variant county characteristics, described in the previous section, that may be correlated with both changes in crime and a county's propensity to adopt an ordinance allowing for dispensaries.

Our preferred specification is one that also adds county-specific time trends to the model. If counties across the state had differing pre-treatment trends, this specification helps create a better fit of the data. Studies that examine crime as an outcome across states, including in the MML literature, have argued for the inclusion of these jurisdiction-specific trends (Chu and Townsend 2017; Gavrilova, Kamada, and Zoutman 2017; Raphael and Winter-Ebmer 2001). California is very diverse with counties that differ in economic, political, and demographic characteristics; creating differences in crime trends one would usually associate with states. Moreover, there were differential impacts of the Great Recession and Public Safety Realignment across counties because of these different characteristics, resulting in differential crime trends that we can see when we look at counties individually.

The model specification is represented by the equation

$$\log(y_{ict}) = \alpha + \delta D_{ct} + \rho Cult_{ct} + \beta X_{ict} + \alpha_c + \omega Time_t + \tau Time^2_t + f_{ct} + \varepsilon_{ict}$$

where  $y_{ict}$  represents the logarithm of the reported crimes per 100,000 residents<sup>19</sup> of crime type  $i$  for county  $c$  in year  $t$ . Our main treatment variable is represented by  $D_{ct}$ , an indicator for whether county  $c$  in year  $t$  allows for dispensaries.  $\alpha_c$  controls for the county-specific variation,  $Time$  and  $Time^2$  control for state trends over the study's time-period, and  $f_{ct}$  accounts for the county-specific trend (we will show results based on different functional forms used to model the trend).  $Cult$

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<sup>18</sup> We run all the models including year dummies as well to ensure that the coefficients are not affected by this choice.

<sup>19</sup> We ran a variety of tests for model fit and found that this model best described the data generating process. Additional models were also tested and available upon request.

controls for whether the county had a restriction in place on amount or location with regards to cultivation and  $X_{ict}$  represents a vector of county time-varying covariates that have been shown to be associated with crime rates in the literature.<sup>20</sup> The coefficient of interest,  $\delta$ , estimates the average effect in reported offenses for counties that allowed dispensaries compared to those that did not.<sup>21</sup> Finally, our models are robust to clustered standard errors.

A primary assumption in the difference-in-difference methodology is that of pre-policy parallel trends in outcomes, or that there are no variables in the error term correlated to the outcome as well as the decision for a jurisdiction to adopt a dispensary policy. If this type of policy endogeneity were occurring or if pre-policy trends in crime between the treated and untreated groups differed for other reasons, we'd expect the trend for policy-adopting jurisdictions to change before the passage of an ordinance, leading to a biased coefficient of the treatment variable. One advantage from our technique is that the treatment is staggered over time, mitigating the probability that something happened at the state level that affected both crime and county-specific entry into treatment. Moreover, as ordinances are legislative processes, it is likely that many factors are attributable to the passage that have nothing to do with changes in crime (Williams and Bretteville-Jensen 2014). Finally, dispensaries were adopted by large and small, urban and rural counties, which mitigates the concern that counties adopting dispensaries are inherently different.

As a check that the parallel trends assumption holds and to explore possible dynamic effects of treatment, we complement our average effect model with an event study. The event study

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<sup>20</sup> The covariates used are: An indicator for when California decriminalized marijuana starting in 2011, the density of alcohol outlets in the county, log of per capita income for the county, the lagged unemployment rate in the county, and the log of the population density in the county.

<sup>21</sup> While there is a wide range in populations and urban density in counties across California, which could lead to variance in the error term that is not constant across observations, we decided not to incorporate a weighted least squares regression. Models incorporating a WLS regression, testing various weights, did not improve estimates for homoskedasticity, so we did not feel that we fully understood the structure of the variance component to properly adjust for it. Results from these tests are available upon request.

disaggregates  $D_{it}$  into a set of dummy variables indicating whether a county-year observation represents a certain number of years before or after treatment. The model specification will be the same as that shown above, to account for other state and county characteristics and trends that affect county-specific crime rates.

The event study allows for identifying potential endogeneity if there are significant effects in the years leading up to policy adoption. For example, it picks up effects from the years preceding the passage of the law if suppliers sense that the county legislature or law enforcement are amenable to dispensaries and start to operate before an ordinance is officially put in place. The event study model also addresses a limitation from our model in which the average effect may mask differences in the development stage of dispensary operations after implementation (Meer and West 2015). It may be the case that there is a lag in observed effects as development of dispensaries takes place in the first few years.

### *3.3 Local Jurisdictions and Sensitivity Checks*

As mentioned in the section describing the data, the analysis incorporates a measure of crime and arrests at the county level even though it is not always the case that a dispensary ordinance applies throughout the entire county. We address this issue by also running our difference-in-difference model at the ecological level of police-agency jurisdictions, where the reported crime rates should reflect 100% of the geographical area defined by our treatment variable. We collected agency-level data on the reported offenses by crime type from the UCR database for each of the 14 cities for which we have ordinance information and for the unincorporated areas of each of the 58 counties. For the cities, we use offense data that are reported by the police department of the city (e.g. reported offenses according to the Los Angeles Police Department to measure crime in Los Angeles City). For the unincorporated parts of each county,

we use offense data reported by the Sheriff's department of the county. This leaves us with crime rates from a total of 72 independent jurisdictions, which match the 72 jurisdictions for which we have information on ordinances regarding allowance for dispensaries.

We follow the same empirical model from the main analysis, where the explanatory variable of interest is now an indicator for whether dispensaries are allowed in each jurisdiction, for the 72 independent jurisdictions over the 18-year sample period. One complication of running the analysis at the level of individual police-agency jurisdictions is that the covariates used in the regressions from the previous section are not available at this geographic level. Nevertheless, this should not affect the results because the variations across years within jurisdictions for variables that affect crime rates are minimal and are mostly absorbed by the controls that exploit the panel data structure. In the current model, we incorporate dummies indicating the independent jurisdictions to control for unobserved heterogeneity across individual jurisdictions and the same continuous time variables as above to control for state-level changes. Lastly, we estimate standard errors robust to clustering at the county-level, as even across two independent agencies, there may be correlation within the same county.

We also apply other sensitivity checks that address less serious, but important, concerns. First, we present results removing certain counties that may be different than the rest because they adopted a dispensary policy very early, even before the passage of SB 420. Second, we conduct robustness checks related to the issue of differential city ordinances contained within a county by estimating the model using other methods to choose the applicable ordinance for the jurisdiction. Third, we address the difficulty in properly identifying the amount of time during a year in which the policy was active by presenting results of a model measuring the main treatment variable using fractional years based on the month that the policy went into effect. Finally, we estimate a model

with a sample consisting of only control counties and treated counties with a policy in place five or more years. Similar results to the main analysis would point to consistent effects on crime over the treatment period.

### 3. Results

#### *4.1 County Level Crime and Arrests*

We present in Table 2 the results of the average effect on overall violent and property crime based on specifications with no county-specific time trend (columns (1) and (4)), as well as with county-specific trends using linear (columns (2) and (5)) and quadratic functional forms (columns (3) and (6)).<sup>22</sup> The first important result to observe is that our estimates are sensitive to an inclusion of the county-specific time trend, as it leads to an increase in the magnitude of the coefficients for both overall violent and property crimes. For property crimes, it changes a roughly zero effect size to at least a partially significant coefficient. The choice of functional form for the county-specific trends is less important, with coefficients that are roughly similar across the different specifications. As we found differential property crime trends in some counties in supplemental analyses (not reported here), we have greater confidence in models that adjust these series for the county-specific time trend.

We find no significant impact of dispensaries on violent crime in any of our models. Table 3 shows that even when we disaggregate by crime type, none of the violent crimes (columns 1-3) are affected by dispensary laws. The consistency of findings regardless of inclusion or exclusion

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<sup>22</sup> We also ran the model using a cubic functional form for the county-specific time trend, but don't show the results for simplicity, as they are very similar to the quadratic functional form model.

of the county-specific time trend is reassuring, but not surprising in light of the more consistent trends observed across counties in these measures.

For property crimes, we see no effect from adopting dispensaries in the model excluding county-specific time trends. However, the model incorporating a linear trend shows a 5.1% statistically significant drop in reported property offenses during the years in which counties allowed for dispensaries, while the quadratic specifications shows a 6.3% decrease that is statistically significant. Further decomposing these results, Table 3 shows that the effect on property crime appears to be driven by a decrease in thefts.

Only a brief discussion of the other covariates is warranted. As previously mentioned, due to very lax regulations on cultivation, the variable for cultivation regulations only measures whether there were any explicit limits set by a county. While Table 2 does show a sharp drop in violent crime of almost 10% in counties that didn't restrict cultivation, when county-specific trends are not included, this relationship becomes insignificant with the inclusion of time trends. The effects from the other covariates included in the model are difficult to interpret due to limited variation once the fixed effects and time trends are controlled for.<sup>23</sup>

Table 4 shows results for the effects on variables that may be informative with regards to marijuana (mis)use. We see a very strong and robust effect on DUI arrests, as adopting dispensary laws was associated with at least a statistically significant 7.7% increase in DUI arrests.<sup>24</sup> This effect increases when county-specific time trends are included in the model, with the preferred specification indicating a significant increase in DUIs of 9.1%. As DUIs in California (at least

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<sup>23</sup> Supplemental analyses not shown here reveal that nearly all of the variation in our other descriptors (more than 90%), with the notable exception of unemployment, can be captured by fixed effects and county-specific time trends.

<sup>24</sup> While the increase in DUIs may be a result of changes in enforcement in counties that allowed for dispensaries, it is unlikely that there is a high correlation between the timing of dispensary laws and changes in DUI enforcement. Many factors impact enforcement, and cultivation of marijuana was allowed in almost all counties well before dispensaries opened (Williams and Bretteville-Jensen 2014).

during the study period) apply to any substance use, this increase may have been a result of more marijuana-impaired driving arrests. This is equivalent to 65 more DUI arrests per 100,000 residents on average per year,<sup>25</sup> as a result of dispensaries. Arrests for felony and misdemeanor marijuana arrests are noisy due to important changes across the state that led to an overall large drop in both types of arrests statewide. Our results demonstrate a significant increase in misdemeanor arrests with our preferred specification, though, which does reinforce the evidence of possible increases in marijuana misuse.

The event study analysis results, demonstrated in the panels in Figure 3 where the graphs show the effect of each individual year relative to the passage of a law, can help in interpreting the results described above. Note that the sample is not perfectly balanced; many counties adopted dispensary laws later in the sample period so they did not have as many years of post-treatment observations. The tails in the figures below, the values -3 and 4 on the x-axis, represent dummy variables that incorporate all the years before or after, respectively, relative to the year of adoption (0 value on the x-axis).

Panels A of Figure 3 show that for overall violent crime, the failure to observe an effect is not due to a violation of the parallel trends assumption. The effect sizes of for violent crime consistently include 0 in both the pre- and post-policy periods and do not demonstrate any clear trends. Panels B, C, and D, on the other hand, demonstrate pre-existing trends for property crime and DUI and misdemeanor marijuana arrests. Moreover, it appears from the left tail of the figures that, historically, counties that adopt dispensary laws have higher property crime rates and lower DUI and misdemeanor arrests than non-adopting counties, and that regression towards the mean was occurring before dispensaries were allowed. Possible policy endogeneity makes it difficult to

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<sup>25</sup> We took the average across non-adopting years for counties that would eventually adopt dispensaries for this calculation because counties that adopted dispensary laws had lower DUIs on average (see Figure 2).

measure the magnitude of any possible overall and dynamic effects, though the trends continuing past zero, even if not significant, point to the significant effects shown in Table 2.

#### *4.2 Sensitivity Checks*

In this section, we show the results from a variety of sensitivity checks that account for limitations to our main analysis. Each row in Table 5 shows the coefficient for the “allows dispensary” variable of a different analysis, with regressions run for property and violent crime, as well as DUIs, presented in the columns. We show these three outcomes because our main analysis has not demonstrated any significant effects on specific types of these crimes, with the exception of theft, which seems to track the property crime variable.<sup>2627</sup>

The results for our first sensitivity check, shown in the first row of Table 5, represent the average effect of allowing dispensaries when variables are measured at the police-agency jurisdiction level. We see that the coefficient magnitudes are similar to those of the main analysis, even though the DUI arrests and property crime variables are no longer significant. This may occur because our new unit of analysis is smaller, leading to more variation from year to year and noisier data. Overall, these results do not contradict those of the main analysis.

In the next two rows, we check for whether how we define the treatment variable changes our findings. “Unincorporated County” means that we identify the treatment based only on the county (i.e. unincorporated part of the county) law even if a city exists within the county with a different law, and “City Always” defines a variable that uses the city law (if available) to identify treatment regardless of whether the unincorporated population is larger. The following row shows the results of a model allowing for the treatment variable to be a fraction if an ordinance was passed

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<sup>26</sup> We also ran these models on theft crimes and find similar results to those shown for property crime.

<sup>27</sup> We use county-specific time trends instead of agency-specific because county rates should have smoother trends. This decision has no impact on the results shown.



after January of that year. The two rows labelled “No San Francisco” and “No Santa Clara” show the results of analyses that exclude each of these counties. These two counties adopted dispensaries very early on, even before the enactment of SB 420, which might indicate something unique about them.<sup>28</sup> Moreover, given the changing trend in crime over our sample period, the timing of their “post-intervention” may impact the results (even after adjusting for county-specific linear trends) in addition to the higher leverage demonstrated by San Francisco due to it experiencing more years of treatment. Finally, the last row presents the effects of dispensary laws when we restrict the treatment sample to counties with laws for five or more years. All of these sensitivity checks point to the same findings as our main analysis, indicating a significant increase in DUI arrests and decrease in reported property crime offenses. While the analysis excluding San Francisco leads to an insignificant coefficient for property crime, it is still negative and similar in magnitude to the other models.

#### **4. Discussion**

California is experimenting with opening recreational marijuana retail stores, which will make it the largest state (in population and size) to do so. Again, localities will get to decide where and how many stores are allowed to open in each of their jurisdictions. Insights from the opening of medical marijuana dispensaries may be useful for better understanding the likely impacts of opening these recreational stores, and could serve to help police agencies and the courts and correctional systems prepare.

This study improves upon the work conducted thus far evaluating the impact of retail medical marijuana stores on crime. We use a novel longitudinal local ordinance database that allows us to assess the extent to which types of violent, property, and substance abuse crime rates

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<sup>28</sup> In fact, Santa Clara County is unique in that it stops allowing dispensaries to operate after 3 years and then adopts a new ordinance allowing for dispensaries in 2011.

are impacted over time with the decision by local jurisdictions to allow dispensaries to open. Consideration of local variation within a state where substantial differences exist in allowances is crucial but had been previously ignored in the literature. Moreover, by examining variation within a single state, we can account for important statewide changes that are also important for driving marijuana use and potentially crime, including rules related to cultivation and decriminalization.

Evidence from our statistical analysis of a quasi-experimental setting finds no impacts on any type of violent crime, although counties adopting local ordinances did potentially experience a small decrease in property crime and increase in DUI arrests. Due to evidence of pre-existing trends, it is not possible to make a conclusive statement about the magnitude of these effects.

Our study is not without its own limitations, however. A clear problem is that our policy indicator is not capturing the actual exposure to the law for the residents in a county, since cities within counties can adopt conflicting ordinances. Our analysis at the police-agency level suggests that, at the very least, we are not missing increases to reported crime due to incongruence in treatment exposure. It also does not provide enough evidence to refute our findings of increases in DUI arrests. Moreover, when we measure our treatment variable using two alternative methods, we find similar results.

Second and relatedly, our study does not empirically assess the impact of having many versus few dispensaries within a jurisdiction (i.e. the “intensive margin”). Studies focusing on dispensary density and crime in the immediate vicinity, though, have not been much more definitive, finding no effect on any crime (Kepple and Freisthler 2012), a negative relationship with property crimes (Chang and Jacobson 2017), and small increases on property and violent crimes in adjacent areas (Freisthler et al. 2016). We do know that within California, counties differed substantially in their approach to dispensary allowances, with some jurisdictions

significantly limiting the total number of dispensaries allowed from the beginning and others not imposing any thresholds until much, much later. The lack of annual store-front data (pertaining to density) makes it more difficult to interpret dynamic effects, as there is scant research on the length of time we should expect for dispensary laws to be fully implemented within a jurisdiction and whether there are threshold effects in terms of total number of open dispensaries. There is also little to no information about delivery services, and laws associated with delivery services. The impact of delivery services may cause property crimes to rise in areas outside of the immediate vicinity of the dispensaries, thereby influencing property theft crimes in jurisdictions outside of those choosing to adopt the policy.

Third, a significant limitation in all difference-in-difference analyses is that there is no direct mechanism to test whether the treatment variable is correlated to an unobserved variable that affects the outcome, leading to a violation of the parallel trends assumption. We performed an event study analysis that did not refute our conclusions in the case of violent crimes, although there was evidence of policy endogeneity for property crime and DUI arrests. Until the policy endogeneity is explicitly addressed, the magnitude of the true effect on these outcomes cannot be easily determined.

Our study appears to reinforce the conclusions from other studies that fail to find an increase in the type of crime predicted by law enforcement. We find no effects on burglary, robberies, or assaults, which are the types of crimes one would expect if dispensaries were prime targets as a result of their holding large amounts of cash. It is important to note, though, that it may merely be the case that crime is such a localized effect that there is too much variation even within our treatment exposure aggregated to the city or county level (Hipp 2007). Pertaining to our findings of potentially decreasing property crime rates, there is a theoretical reason for why

dispensary store-fronts may decrease crime. Dispensaries may open in otherwise desolate areas, creating foot traffic, or “eyes on the street,” that makes these areas safer (Chang and Jacobson 2017).

We do find some interesting preliminary results with respect to the relationship between dispensaries and DUIs. Anderson, Hanson, and Rees (2013) find that MMLs in Colorado led to a substitution away from alcohol use, but the potential positive relationship between dispensaries and DUI arrests we find in our analysis suggests that either increases in marijuana-impaired driving exceeded reductions in alcohol impaired driving (a hypothesis we find highly unlikely) or that the opening of dispensaries induced use of both substances among those who were willing to drive impaired (more likely). The latter interpretation would have important ramifications for crime rates, given the known association between using alcohol together with other illicit substances and violent behavior (Office of National Drug Control Policy 2013). It is possible that our null results mask an increase in violent crime due to concurrent use of marijuana and alcohol, which is being offset by other mechanisms such as a decrease in pharmacological crimes due to an increase in marijuana use alone.

As we can only measure an aggregate effect, future research should attempt to tease out the effects on crime due to different mechanisms and actions of local actors. While some attributes of dispensaries may have led to a reduction in crime compared to the status quo, other aspects may have promoted crime. Moreover, the effect on crime rates will depend on other actions taken on by the local policymakers, dispensary owners, and law enforcement. For example, dispensaries may have adopted home delivery methods, which would reduce the potential number of victims near dispensaries. There may have also been specific actions taken by police that prevented an increase in crime rates, and these should be identified. Further research that identifies elements of

MMLs along with more specific aspects of implementation can help policymakers respond with actions that address crime-promoting aspects of allowing for retail dispensaries.

Our findings indicate that policymakers should be careful in how they regulate the presence of dispensaries, while not jumping to the conclusion that dispensaries are clearly crime generating hot-spots. Similarly, while police are right to be wary about potential crime effects from the introduction of cash-dependent businesses, our results demonstrate that current policy has not led to a wave in crime (even if this may be due to actual police practices). Our findings suggest that it is possible to regulate these markets and find a common ground between safety and access to medical marijuana. Natural experiments like the one being undertaken in California will only further help researchers better understand exactly how to find this ideal common ground.

## 5. References

- Anderson, D. Mark, Benjamin Hansen, and Daniel I. Rees. 2013. "Medical Marijuana Laws, Traffic Fatalities, and Alcohol Consumption." *Journal of Law and Economics* 56 (2):333-369. doi: 10.1086/668812.
- Anderson, D. Mark, Daniel I. Rees, and Joseph J. Sabia. 2014. "Medical Marijuana Laws and Suicides by Gender and Age." *American Journal of Public Health* 104 (12):2369-2376. doi: 10.2105/AJPH.2013.301612.
- Anderson, Mark D., Benjamin Hansen, and Daniel I. Rees. 2015. "Medical Marijuana Laws and Teen Marijuana Use." *American Law and Economics Review* 17 (2):495-528. doi: 10.1093/aler/ahv002.
- Arseneault, L., T. E. Moffitt, A. Caspi, P. J. Taylor, and P. A. Silva. 2000. "Mental disorders and violence in a total birth cohort: Results from the dunedin study." *Archives of General Psychiatry* 57 (10):979-986. doi: 10.1001/archpsyc.57.10.979.
- California Police Chiefs Association. 2009. White Paper on Marijuana Dispensaries.
- Carpenter, Christopher, and Carlos Dobkin. 2010. "Alcohol regulation and crime." In *Controlling crime: Strategies and tradeoffs*, 291-329. University of Chicago Press.
- Carpenter, Christopher 2007. "Heavy Alcohol Use and Crime: Evidence from Underage Drunk-Driving Laws." *The Journal of Law and Economics* 50 (3):539-557. doi: 10.1086/519809.
- Chang, Tom Y., and Mireille Jacobson. 2017. "Going to pot? The impact of dispensary closures on crime." *Journal of Urban Economics* 100:120-136. doi: <http://dx.doi.org/10.1016/j.jue.2017.04.001>.
- Choo, Esther K., Madeline Benz, Nikolas Zaller, Otis Warren, Kristin L. Rising, and K. John McConnell. 2014. "The Impact of State Medical Marijuana Legislation on Adolescent Marijuana Use." *Journal of Adolescent Health* 55 (2):160-166. doi: <https://doi.org/10.1016/j.jadohealth.2014.02.018>.
- Chu, Yu-Wei Luke. 2014. "The effects of medical marijuana laws on illegal marijuana use." *Journal of Health Economics* 38:43-61. doi: <http://dx.doi.org/10.1016/j.jhealeco.2014.07.003>.
- Chu, Yu-Wei Luke. 2015. "Do Medical Marijuana Laws Increase Hard-Drug Use?" *The Journal of Law and Economics* 58 (2):481-517. doi: doi:10.1086/684043.
- Chu, Yu-Wei Luke, and Wilbur Townsend. 2017. Joint Culpability: The Effects of Medical Marijuana Laws on Crime. SSRN.
- Colorado Department of Revenue. 2016. Annual Report 2016. edited by Colorado Department of Revenue.
- Contreras, Christopher. 2016. "A Block-Level Analysis of Medical Marijuana Dispensaries and Crime in the City of Los Angeles." *Justice Quarterly*:1-27. doi: 10.1080/07418825.2016.1270346.
- D'Amico, Elizabeth J., Jon M. Houck, Sarah B. Hunter, Jeremy N. V. Miles, Karen Chan Osilla, and Brett A. Ewing. 2015. "Group motivational interviewing for adolescents: Change talk and alcohol and marijuana outcomes." *Journal of Consulting and Clinical Psychology* 83 (1):68-80. doi: 10.1037/a0038155.
- Dilley, Julia A., Laura Hitchcock, Nancy McGroder, Lindsey A. Greto, and Susan M. Richardson. 2017. "Community-level policy responses to state marijuana legalization in Washington State." *International Journal of Drug Policy* 42:102-108. doi: 10.1016/j.drugpo.2017.02.010.

- Freeman, Scott, Jeffrey Grogger, and Jon Sonstelie. 1996. "The Spatial Concentration of Crime." *Journal of Urban Economics* 40 (2):216-231. doi: <https://doi.org/10.1006/juec.1996.0030>.
- Freisthler, Bridget, Nancy J Kepple, Revel Sims, and Scott E Martin. 2013. "Evaluating medical marijuana dispensary policies: Spatial methods for the study of environmentally-based interventions." *American journal of community psychology* 51 (1-2):278-288.
- Freisthler, Bridget, William R. Ponicki, Andrew Gaidus, and Paul J. Gruenewald. 2016. "A micro-temporal geospatial analysis of medical marijuana dispensaries and crime in long beach California." *Addiction*:n/a-n/a. doi: 10.1111/add.13301.
- Gavrilova, Evelina, Takuma Kamada, and Floris Zoutman. 2017. "Is Legal Pot Crippling Mexican Drug Trafficking Organisations? The Effect of Medical Marijuana Laws on US Crime." *The Economic Journal*. doi: 10.1111/econj.12521.
- Goldstein, Paul J. 1985. "The Drugs/Violence Nexus: A Tripartite Conceptual Framework." *Journal of Drug Issues* 15 (4):493-506. doi: 10.1177/002204268501500406.
- Green, Kerry M., Elaine E. Doherty, Elizabeth A. Stuart, and Margaret E. Ensminger. 2010. "Does heavy adolescent marijuana use lead to criminal involvement in adulthood? Evidence from a multiwave longitudinal study of urban African Americans." *Drug and Alcohol Dependence* 112 (1-2):117-125. doi: <http://dx.doi.org/10.1016/j.drugalcdep.2010.05.018>.
- Gruenewald, Paul J, and Lillian Remer. 2006. "Changes in outlet densities affect violence rates." *Alcoholism: Clinical and Experimental Research* 30 (7):1184-1193.
- Hall, Wayne, and Louisa Degenhardt. 2008. "Cannabis use and the risk of developing a psychotic disorder." *World Psychiatry* 7 (2):68-71. doi: 10.1002/j.2051-5545.2008.tb00158.x.
- Harper, Sam, Erin C Strumpf, and Jay S Kaufman. 2012. "Do medical marijuana laws increase marijuana use? Replication study and extension." *Annals of Epidemiology* 22 (3):207-212.
- Hasin, D. S., A. L. Sarvet, M. Cerdá, and et al. 2017. "Us adult illicit cannabis use, cannabis use disorder, and medical marijuana laws: 1991-1992 to 2012-2013." *JAMA Psychiatry* 74 (6):579-588. doi: 10.1001/jamapsychiatry.2017.0724.
- Hasin, Deborah S., Melanie Wall, Katherine M. Keyes, Magdalena Cerdá, John Schulenberg, Patrick M. O'Malley, Sandro Galea, Rosalie Pacula, and Tianshu Feng. 2015. "Medical marijuana laws and adolescent marijuana use in the USA from 1991 to 2014: results from annual, repeated cross-sectional surveys." *The Lancet Psychiatry* 2 (7):601-608. doi: [http://dx.doi.org/10.1016/S2215-0366\(15\)00217-5](http://dx.doi.org/10.1016/S2215-0366(15)00217-5).
- Hipp, John R. 2007. "Block, Tract, and Levels of Aggregation: Neighborhood Structure and Crime and Disorder as a Case in Point." *American Sociological Review* 72 (5):659-680. doi: 10.1177/000312240707200501.
- Huber, Arthur, Rebecca Newman, and Daniel LaFave. 2016. "Cannabis Control and Crime: Medicinal Use, Depenalization and the War on Drugs." *The BE Journal of Economic Analysis & Policy* 16 (4).
- Ingold, John , and Nancy Lofholm. 2016. "Medical-marijuana dispensaries' effect on crime unclear." *The Denver Post*, March 12. [http://www.denverpost.com/ci\\_17178820](http://www.denverpost.com/ci_17178820).
- Kepple, Nancy J., and Bridget Freisthler. 2012. "Exploring the Ecological Association Between Crime and Medical Marijuana Dispensaries." *Journal of Studies on Alcohol and Drugs* 73 (4):523-530.
- Lynne-Landsman, Sarah D, Melvin D Livingston, and Alexander C Wagenaar. 2013. "Effects of state medical marijuana laws on adolescent marijuana use." *American Journal of Public Health* 103 (8):1500-1506.

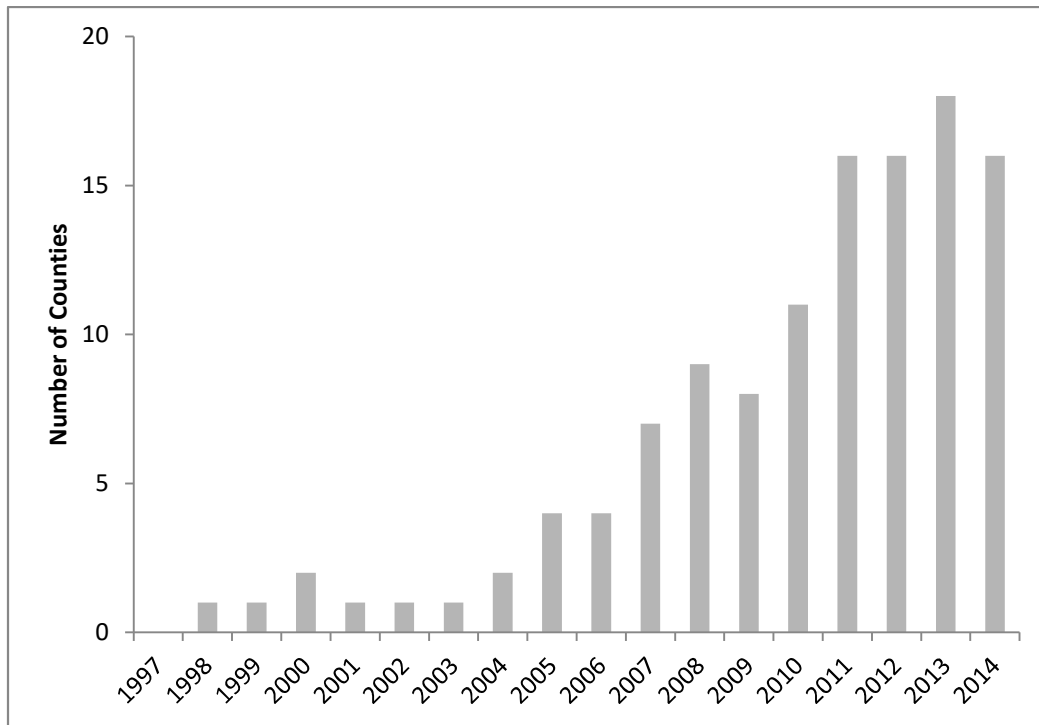
- Markowitz, Sara. 2005. "Alcohol, Drugs and Violent Crime." *International Review of Law and Economics* 25 (1):20-44. doi: <https://doi.org/10.1016/j.irle.2005.05.003>.
- McDonald, Patrick R., and Christine Pelisek. 2009. "L.A.'s Medical-Weed Wars." LA Weekly.
- Meer, Jonathan, and Jeremy West. 2015. "Effects of the Minimum Wage on Employment Dynamics." *Journal of Human Resources*. doi: 10.3368/jhr.51.2.0414-6298R1.
- Miron, Jeffrey A., and Jeffrey Zwiebel. 1995. "The Economic Case Against Drug Prohibition." *The Journal of Economic Perspectives* 9 (4):175-192. doi: 10.2307/2138396.
- Moore, Todd M., and Gregory L. Stuart. 2005. "A review of the literature on marijuana and interpersonal violence." *Aggression and Violent Behavior* 10 (2):171-192. doi: <https://doi.org/10.1016/j.avb.2003.10.002>.
- Morris, Robert G., Michael TenEyck, J. C. Barnes, and Tomislav V. Kovandzic. 2014. "The Effect of Medical Marijuana Laws on Crime: Evidence from State Panel Data, 1990-2006." *PLoS ONE* 9 (3):e92816. doi: 10.1371/journal.pone.0092816.
- Mulvey, Edward P, Candice Odgers, Jennifer Skeem, William Gardner, Carol Schubert, and Charles Lidz. 2006. "Substance use and community violence: a test of the relation at the daily level." *Journal of consulting and clinical psychology* 74 (4):743.
- Office of National Drug Control Policy. 2013. Improving the Measurement of Drug-Related Crime. Washington, DC: Executive Office of the President.
- Ogden, David W. 2009. Memorandum for Selected United States Attorneys. edited by Office of the Attorney General U.S. Department of Justice.
- Ostrowsky, Michael K. 2011. "Does Marijuana Use Lead to Aggression and Violent Behavior?" *Journal of Drug Education* 41 (4):369-389. doi: 10.2190/DE.41.4.c.
- Pacula, Rosalie L., Anne E. Boustead, and Priscillia Hunt. 2014. Words Can Be Deceiving: A Review of Variation among Legally Effective Medical Marijuana Laws in the United States. In *Journal of Drug Policy Analysis*.
- Pacula, Rosalie L., and Beau Kilmer. 2003. Marijuana and crime: Is there a connection beyond prohibition? : National Bureau of Economic Research.
- Pacula, Rosalie L., David Powell, Paul Heaton, and Eric L. Sevigny. 2015. "Assessing the Effects of Medical Marijuana Laws on Marijuana Use: The Devil is in the Details." *Journal of Policy Analysis and Management* 34 (1):7-31. doi: 10.1002/pam.21804.
- Pacula, Rosalie L. 1998. "Does increasing the beer tax reduce marijuana consumption?" *Journal of Health Economics* 17 (5):557-585. doi: [https://doi.org/10.1016/S0167-6296\(97\)00039-8](https://doi.org/10.1016/S0167-6296(97)00039-8).
- Powers, Scott. 2014. "Sheriffs take lead against legalizing medical pot." *Orlando Sentinel*, May 1. [http://articles.orlandosentinel.com/2014-05-01/news/os-medical-marijuana-opponents-emerge-20140423\\_1\\_amendment-2-florida-sheriffs-association-law-enforcement](http://articles.orlandosentinel.com/2014-05-01/news/os-medical-marijuana-opponents-emerge-20140423_1_amendment-2-florida-sheriffs-association-law-enforcement).
- Raphael, Steven, and Rudolf Winter-Ebmer. 2001. "Identifying the effect of unemployment on crime\*." *Journal of Law and Economics* 44 (1):259-283.
- Reuter, Peter. 2009. "Systemic Violence in Drug Markets." *Crime Law and Social Change* 52 (3):275-284. doi: 10.1007/s10611-009-9197-x.
- Sevigny, Eric L., Rosalie L. Pacula, and Paul Heaton. 2014. "The effects of medical marijuana laws on potency." *International Journal of Drug Policy* 25 (2):308-319. doi: <http://dx.doi.org/10.1016/j.drugpo.2014.01.003>.
- Shepard, Edward M, and Paul R Blackley. 2005. "Drug Enforcement and Crime: Recent Evidence from New York State\*." *Social Science Quarterly* 86 (2):323-342.



- Shepard, Edward M., and Paul R. Blackley. 2016. "Medical Marijuana and Crime: Further Evidence From the Western States." *Journal of Drug Issues* 46 (2):122-134. doi: 10.1177/0022042615623983.
- Shu-Acquaye, Florence. 2016. "The Role of States in Shaping the Legal Debate on Medical Marijuana." *Mitchell Hamline Law Review* 42:697-755.
- Smart, Rosanna. 2015. "The Kids Aren't Alright, But Older Adults Are: How Medical Marijuana Market Growth Impacts Adult and Adolescent Substance-Related Outcomes." doi: <http://dx.doi.org/10.2139/ssrn.2574915>.
- Smart, Rosanna, Jonathan P. Caulkins, Beau Kilmer, Steven Davenport, and Greg Midgette. 2017. "Variation in cannabis potency and prices in a newly legal market: evidence from 30 million cannabis sales in Washington state." *Addiction* 112 (12):2167-2177. doi: 10.1111/add.13886.
- Wall, Melanie M, Ernest Poh, Magdalena Cerdá, Katherine M Keyes, Sandro Galea, and Deborah S Hasin. 2011. "Adolescent marijuana use from 2002 to 2008: higher in states with medical marijuana laws, cause still unclear." *Annals of epidemiology* 21 (9):714-716.
- Wen, Hefei, Jason M. Hockenberry, and Janet R. Cummings. 2015. "The effect of medical marijuana laws on adolescent and adult use of marijuana, alcohol, and other substances." *Journal of Health Economics* 42:64-80. doi: <http://dx.doi.org/10.1016/j.jhealeco.2015.03.007>.
- White, Helene Raskin, and Stephen Hansell. 1998. "Acute and long-term effects of drug use on aggression from adolescence into adulthood." *Journal of Drug Issues* 28 (4):837-858.
- Williams, J., Rosalie Liccardo Pacula, Frank J. Chaloupka, and Henry Wechsler. 2004. "Alcohol and marijuana use among college students: economic complements or substitutes?" *Health Economics* 13 (9):825-843. doi: 10.1002/hec.859.
- Williams, Jenny, and Anne Line Bretteville-Jensen. 2014. "Does liberalizing cannabis laws increase cannabis use?" *Journal of Health Economics* 36:20-32. doi: <http://dx.doi.org/10.1016/j.jhealeco.2014.03.006>.

## 6. Figures

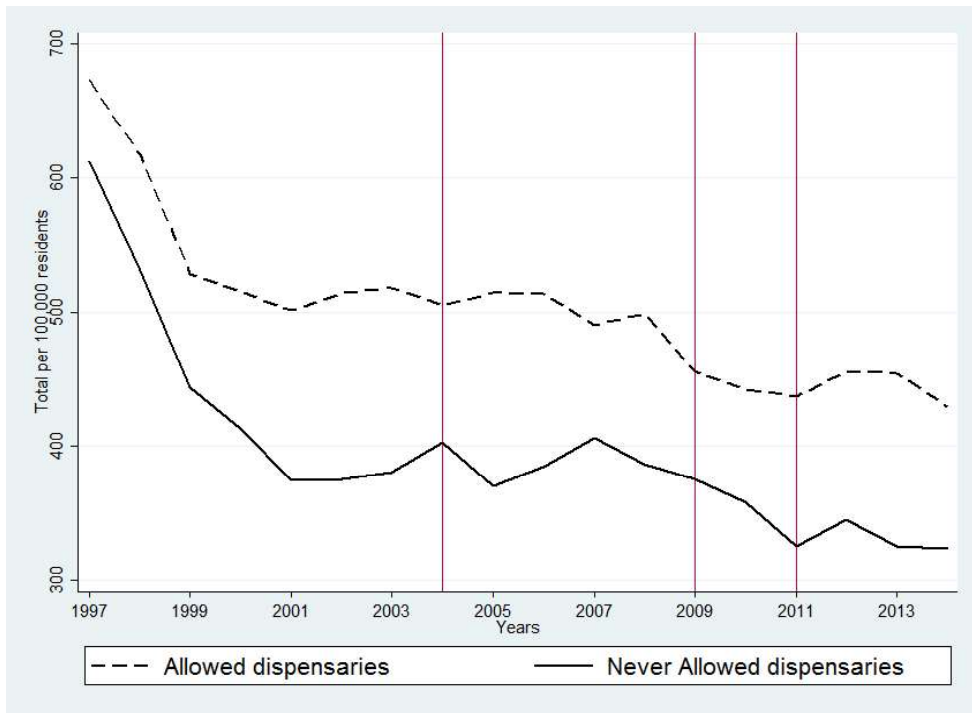
Figure 1: Number of Counties that Allow Medical Marijuana Dispensaries, by Year



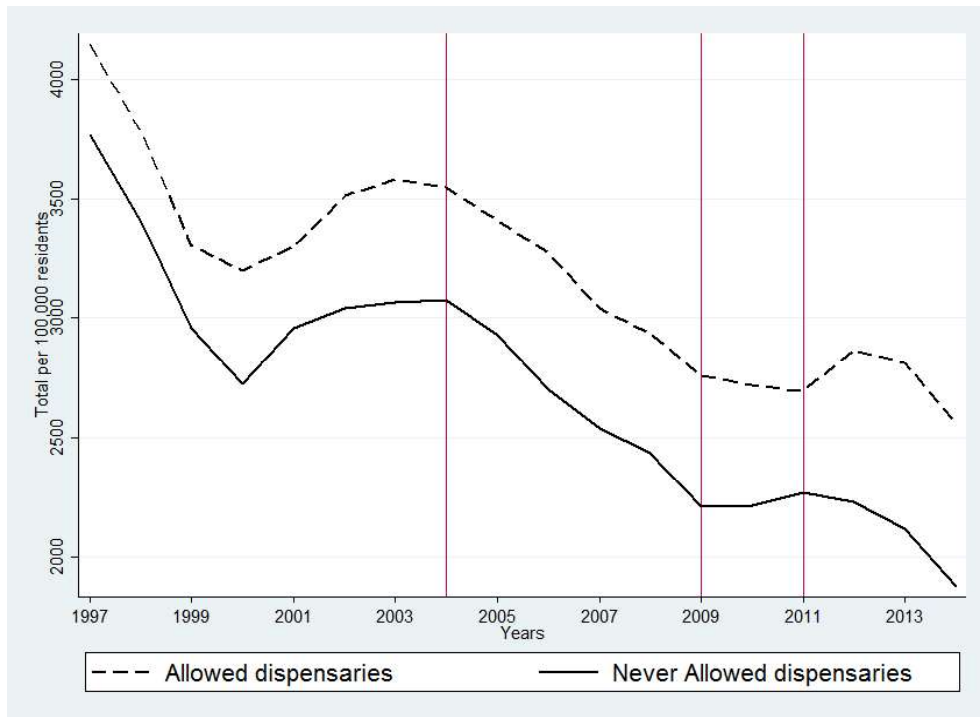
Note: This figure represents the method of using a county's ordinance unless there is a city in the county that has the largest share of the population in the county.

Figure 2: Crime Rates per 100,000 residents, by Whether County Ever Allows Dispensaries

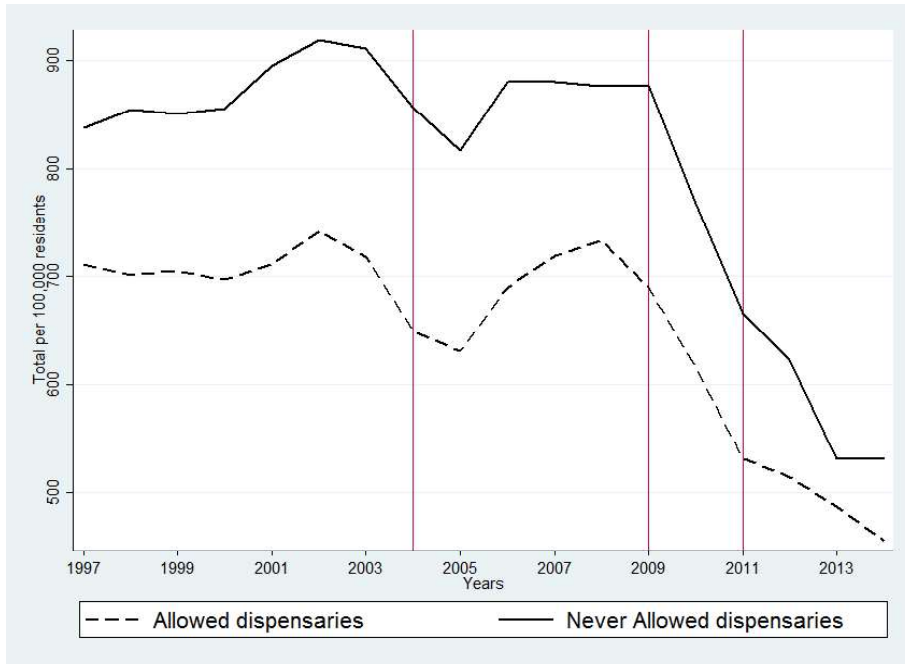
Panel A: Total Violent



Panel B: Total Property

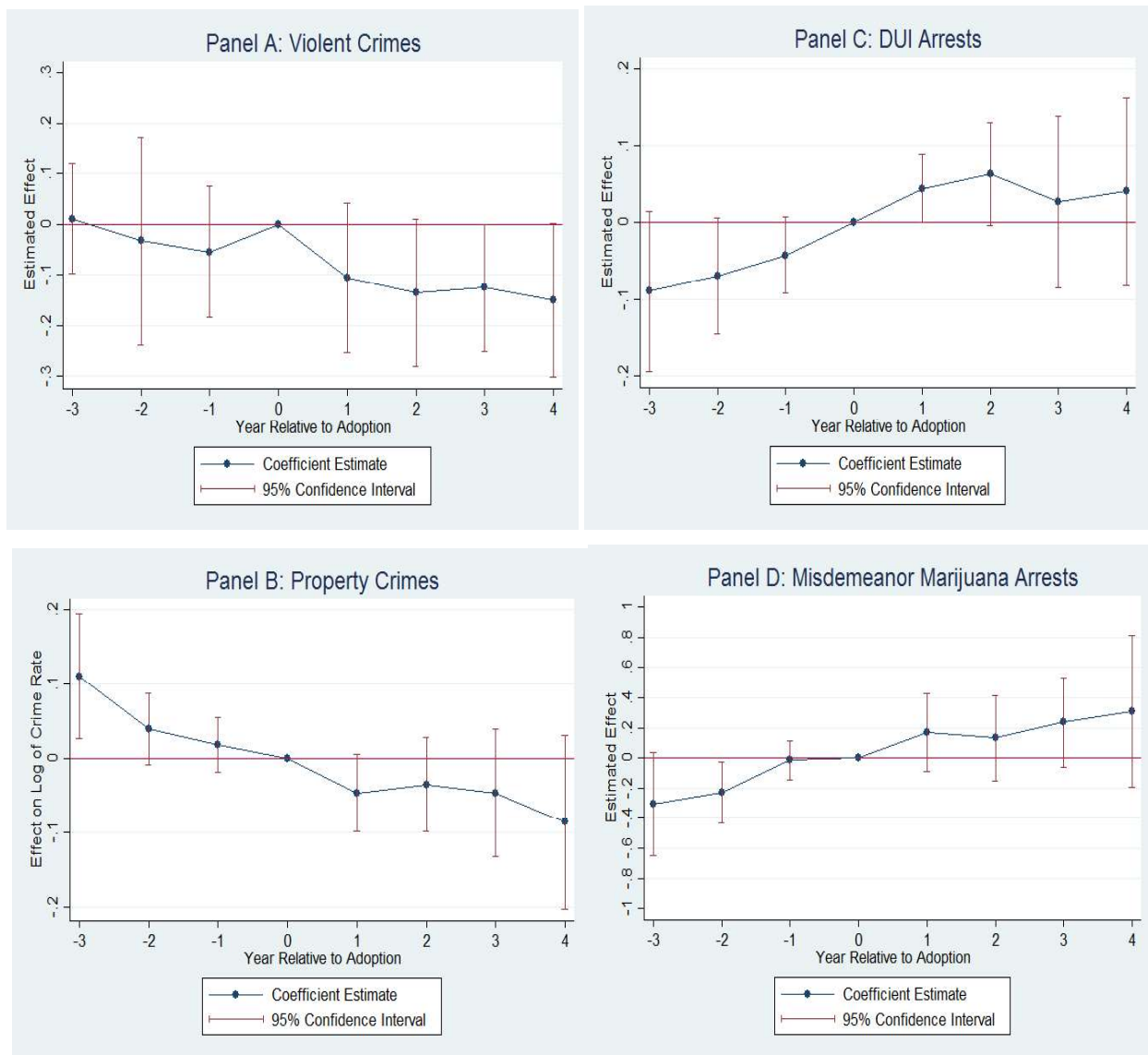


Panel C: DUI Arrests



Notes: The dashed line represents the counties that ever allow dispensaries in the sample period. The solid line represents counties that up until the end of the sample period, had never allowed dispensaries. The vertical lines represent the years 2004 and 2009 because these were important transition years.

Figure 3: Event Study



Notes: “Year 0,” indicating year when policy adopted, is omitted from the regression to provide an excluded category. Counties never adopting a law have a 0 for all indicator variables. Dummy variables for 3+ years pre- and 4+ years post-intervention are represented by -3 and 4, respectively. Regressions also include the covariates from the model described in Section 3.2. An indicator variable in the model controls for county-year observations for periods after an adopting county no longer allows for dispensaries.

## 7. Tables

Table 1: Summary Statistics

	Mean	Standard Deviation
All Violent Crime Rate	433.3	156.3
Homicide Crime Rate	4.3	2.2
Robbery Crime Rate	85.7	82.7
Assault Crime Rate	312.7	109.3
All Property Crime Rate	2,866.1	980.0
Burglary Crime Rate	735.8	225.8
Theft Crime Rate	1,768.1	695.8
Motor Vehicle Theft Crime Rate	362.3	219.1
DUI Arrests	749.4	346.1
Felony Marijuana Arrests	59.5	61.0
Misdemeanor Marijuana Arrests	140.6	110.7
Alcohol Outlet Density	32.4	27.6
Per Capita Income	34,852.5	11,069.5
Unemployment Rate	9.0	3.1
Population Density	659.1	2,298.9

All rates are calculated per 100,000 residents. Alcohol outlet density is calculated as the number of outlets per 10,000 people in the county. Population density is calculated as the number of people per square mile of land area in the county. All violent crime rate includes rape crimes even though we do not study the effect on rape crimes alone.

Table 2: Effect of Allowing Dispensaries on Violent and Property Crime Rates

	Violent Offenses			Property Offenses	
	(1)	(2)	(3)	(4)	(5)
Allows	0.006	-0.020	-0.013	0.008	-0.051
Dispensaries	(0.065)	(0.071)	(0.064)	(0.029)	(0.025)
Cultivation-No	-0.096	-0.047	-0.048	-0.044	-0.056
Limits	(0.043)	(0.054)	(0.055)	(0.037)	(0.038)
Alcohol Outlet	-0.000	-0.000	0.000	0.001	-0.000
Density	(0.001)	(0.002)	(0.001)	(0.001)	(0.001)
Post CJ	-0.137*	-0.154**	-0.151**	0.081*	0.084*
Reforms	(0.042)	(0.044)	(0.043)	(0.026)	(0.025)
Population	-0.871	1.495	1.161	-0.072	0.912
Density	(0.432)	(1.292)	(0.894)	(0.197)	(0.630)
Per Capita	-0.300	0.043	-0.139	-0.209	-0.122
Income	(0.364)	(0.267)	(0.301)	(0.296)	(0.182)
Unemployment	0.003	0.004	0.006	0.002	0.001
Rate	(0.005)	(0.004)	(0.004)	(0.003)	(0.003)
$R^2$	0.22	0.43	0.41	0.52	0.66
County-specific trends	None	Linear	Quadratic	None	Linear
					Quadratic

+  $p < 0.0167$ ; \*  $p < 0.0083$ ; \*\*  $p < 0.00167$  (p-values are adjusted for multiple testing using the Bonferroni adjustment for 6 tests)

Outcome variable is in log scale of the per/100,000 population. All models include county fixed effects and a continuous time trend (including 2nd order term). Standard errors (in parentheses) are adjusted for clustering within counties. The county ordinance is based on the ordinance of the major city when that city has a population greater than 200,000 and a population greater than the unincorporated area. Each regression has 1,044 observations and covers the period from 1997-2014.

Table 3: Effect from Allowing Dispensaries, by Crime Type

	Homicide (1)	Robbery (2)	Assault (3)	Burglary (4)	Theft (5)	MV Theft (6)
Allows Dispensaries	0.249 (0.185)	0.299 (0.247)	-0.047 (0.077)	-0.016 (0.026)	-0.060* (0.029)	-0.098 (0.075)
Cultivation-No Limits	-0.449 (0.330)	-0.064 (0.167)	-0.027 (0.063)	-0.033 (0.045)	-0.078+ (0.041)	-0.081 (0.121)
Alcohol Outlet Density	-0.016 (0.013)	-0.001 (0.002)	-0.000 (0.002)	0.000 (0.001)	-0.000 (0.001)	-0.004 (0.004)
Post CJ Reforms	0.129 (0.292)	-0.090 (0.180)	-0.134* (0.054)	0.002 (0.035)	0.104** (0.031)	0.263 (0.176)
Population Density	6.447 (4.161)	8.287+ (4.306)	1.681 (1.501)	-0.650 (0.829)	1.176* (0.508)	-2.146 (3.986)
Per Capita Income	-0.263 (3.372)	-1.616 (1.061)	-0.045 (0.298)	0.016 (0.221)	-0.282 (0.258)	0.120 (1.274)
Unemployment Rate	-0.001 (0.050)	-0.006 (0.020)	0.003 (0.005)	0.012** (0.004)	-0.002 (0.003)	0.001 (0.020)
$R^2$	0.08	0.11	0.46	0.51	0.64	0.09

+  $p < 0.1$ ; \*  $p < 0.05$ ; \*\*  $p < 0.01$

Outcome variable is in log scale of the per/100,000 population. All models include county-specific linear time trends, as well as fixed effects and a continuous time trend (including 2nd order term). Standard errors (in parentheses) are adjusted for clustering within counties. The county ordinance is based on the ordinance of the major city when that city has a population greater than 200,000 and a population greater than the unincorporated area. Years since adoption is calculated from January of the first year dispensaries were explicitly allowed. Each regression has 1,044 observations and covers the period from 1997-2014.



Table 4: Effect of Allowing Dispensaries on Marijuana-Related Arrests

	(1)	DUI Arrests (2)	(3)	(4)	Felony Marijuana (5)	(6)	(7)	Misdemeanor Marijuana (8)	(9)
Allows Dispensaries	0.077* (0.024)	0.091* (0.026)	0.088** (0.025)	-0.022 (0.092)	-0.015 (0.083)	-0.049 (0.084)	0.087 (0.120)	0.215 (0.106)	0.125 (0.080)
Cultivation-No Limits	0.034 (0.032)	0.070 (0.039)	0.085 (0.038)	-0.113 (0.106)	-0.135 (0.100)	-0.090 (0.092)	-0.383 (0.174)	-0.241 (0.133)	-0.095 (0.098)
Alcohol Outlet Density	0.001 (0.001)	0.001 (0.001)	0.000 (0.001)	0.002 (0.004)	-0.000 (0.003)	0.001 (0.002)	0.003 (0.003)	-0.002 (0.002)	-0.003 (0.003)
Post Reforms	- 0.198** (0.030)	- 0.195** (0.032)	-0.204** (0.033)	- 0.337** (0.061)	-0.434** (0.089)	-0.429** (0.102)	- 1.628** (0.163)	-1.666** (0.187)	-1.714** (0.161)
Population Density	-0.657* (0.226)	-1.715 (0.817)	-1.701** (0.463)	-0.064 (0.622)	-5.463 (2.955)	-1.413 (1.560)	2.343 (1.217)	-0.341 (1.704)	-2.521 (1.522)
Per Income	-0.177 (0.146)	-0.151 (0.206)	0.042 (0.231)	1.075 (0.785)	2.611 (1.570)	2.608 (1.773)	-3.052 (2.784)	-2.206 (2.377)	-0.679 (1.599)
Unemployment Rate	-0.003 (0.004)	-0.003 (0.005)	-0.002 (0.005)	0.033 (0.014)	0.053* (0.018)	0.048 (0.019)	-0.010 (0.018)	-0.001 (0.019)	0.003 (0.015)
R <sup>2</sup>	0.47	0.58	0.57	0.03	0.16	0.15	0.55	0.66	0.68
County- specific trends	None	Linear	Quadratic	None	Linear	Quadratic	None	Linear	Quadratic

+  $p < 0.0111$ ; \*  $p < 0.0055$ ; \*\*  $p < 0.0011$  (p-values are adjusted for multiple testing using the Bonferroni adjustment for 9 tests)

Outcome variable is in log scale of the per/100,000 population. All models include county fixed effects and a continuous time trend (including 2nd order term). Standard errors (in parentheses) are adjusted for clustering within counties. The county ordinance is based on the ordinance of the major city when that city has a population greater than 200,000 and a population greater than the unincorporated area. Each regression has 1,044 observations and covers the period from 1997-2014.

Table 5: Sensitivity Checks

	Violent Offenses (1)	Property Offenses (2)	DUI Arrests (3)
City Agencies	-0.036 (0.067)	-0.042 (0.026)	0.160 (0.145)
Unincorporated County	-0.027 (0.085)	-0.068+ (0.031)	0.056 (0.038)
City Always	-0.034 (0.075)	-0.054 (0.026)	0.090** (0.028)
Partial Year	-0.022 (0.088)	-0.052 (0.031)	0.099** (0.030)
Removing San Francisco	-0.008 (0.074)	-0.036 (0.022)	0.097** (0.027)
Removing Santa Clara	-0.033 (0.081)	-0.059 (0.028)	0.087* (0.030)
Only Counties 5+ years	-0.170+ (0.069)	-0.088 (0.044)	0.089 (0.041)

+  $p < 0.0333$ ; \*  $p < 0.0067$ ; \*\*  $p < 0.0033$  (p-values are adjusted for multiple testing using the Bonferroni adjustment for 3 tests)

City Agencies refers to using city agency crime rates and laws. Unincorporated County refers to analysis using laws according to county, even when larger cities exist. City Always refers to analysis always choosing law applicable to city within county if available. Partial Year refers to using fractions for treatment variable, in case a law was passed after January. Removing San Francisco, Removing Alameda, and Removing Santa Clara refers to excluding each of these counties, individually, from the analysis. Only Counties 5+ Years refers to analysis with sample of non-adopters and counties that had law in place 5+ years.

Outcome variable is in log scale of the per/100,000 population. All models include county fixed effects, a continuous time trend (including 2nd order term), and county-specific linear time trends. Standard errors (in parentheses) are adjusted for clustering within counties. Each regression (except City Agencies) has 1,044 observations and covers the period from 1997-2014

# **EXHIBIT 15**



WHITE PAPER

# The Great Hemp Hoax:

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Much of what's sold as "hemp" today isn't hemp at all — it's a mix of synthetic intoxicants and illicit THC masquerading as a legal, natural product.

By     Tiffany Devitt, *Groundwork Holdings, Inc.*  
       Josh Swider, PhD, *Infinite Chemical Analysis Labs*  
       Kristin Heidelberg, *United Food and Commercial Workers, Western States Council*  
       Robert Dean, Investigator (*Licensed California Private Investigator #189087, Retired San Bernardino County Sheriff's Homicide Sgt., Retired San Diego County District Attorney Investigator*)

A project of the San Diego/Imperial Counties Joint Labor Management Cannabis Committee, which includes UFCW Local 135 — representing over 13,000 unionized employees — along with March and Ash, Inc. and Embarc, two community-oriented dispensary chains employing over 600 union workers.

Testing provided by Infinite Chemical Analysis Labs (C8-0000047-LIC | ISO/IEC17025:2017 Accredited)

February 12, 2025

## Executive Summary

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This study examines the composition and potency of hemp products in California, focusing on chemically synthesized cannabinoids. Our analysis of 104 products from 68 brands found that 95 percent contained synthetics despite their prohibition under California law. These compounds, often far more potent than naturally occurring THC, present significant consumer safety concerns.

More than half of the tested products exceeded the federal 0.3 percent THC limit, classifying them as cannabis rather than hemp under federal law. Under California's stricter "Total THC" definition, 88 percent failed to meet state hemp standards. Many of these products also vastly exceeded THC potency limits imposed on regulated cannabis products. Some "hemp-derived" gummies contained up to 325 milligrams of THC per serving — more than 32 times the 10-milligram cap in California's legal market. On average, "hemp" vape products had THC equivalency levels 268 percent above the state's threshold for adult-use cannabis.

The widespread use of synthetic cannabinoids distorts consumer expectations regarding potency and safety. Nearly half the tested products contained THCP, a compound up to 30 times stronger than delta-9 THC, raising concerns about over-intoxication and adverse health effects, including strokes, seizures, and psychosis. Additionally, some products — such as *Cheech & Chong's Kosmic Chews* — contained psychoactive additives like kratom (an addictive, opiate-like herb), while others included hallucinogenic mushrooms, compounding health risks.

The reliance on synthetic cannabinoids in "hemp" products is not incidental — it is necessary. Extracting sufficient delta-8 or delta-9 THC from hemp is inefficient and cost-prohibitive. Producing a single 2-gram vape cartridge of *natural* delta-8 THC would require about 19 pounds of biomass. Extracting delta-9 THC from hemp is similarly impractical, requiring 50 times more plant material than cannabis to produce comparable amounts of THC. Because of these inefficiencies, most so-called "hemp-derived" THC products are, in reality, synthetic cannabis — reminiscent of illegal products like "Spice" that flooded California a decade ago.<sup>1</sup>

The absence of oversight also enables widespread tax evasion. A staggering 91 percent of products analyzed were sold without collecting California's required sales taxes, and none of the vendors remitted the state's cannabis excise tax when legally obligated to do so.<sup>2</sup> The failure to ensure tax accountability (tied to the lack of "track-and-trace") allows unregulated "hemp" products to undercut the legal cannabis market while depriving the state of revenue meant for public health, environmental mitigation, and enforcement. To restore order to the market and bring clarity and certainty to consumers, all THC-containing products should be regulated as cannabis within California's established framework. This will protect consumer safety, ensure tax compliance, and uphold the intent of the state's cannabis laws.

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## Study Objectives

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This study investigates the composition and potency of consumer hemp products available in California, with a specific focus on identifying chemically synthesized cannabinoids. These laboratory-engineered compounds are designed to mimic the effects of delta-9 THC but often undergo structural modifications to increase potency. These modifications intensify their intoxicating effects and amplify health risks, ultimately making these substances more similar to illegal designer drugs like Spice, Bath Salts, or K2 than to natural cannabis. This study aims to detect the presence of these compounds, evaluate their potency, and assess whether these products align with the legal definition of hemp while examining the potential health risks associated with their use.

## Testing Scope, Criteria, Limitations & Exclusions

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### SCOPE

This study tested 104 consumer “hemp” products from 68 distinct brands to evaluate their composition and potency. We focused on two popular product categories: “hemp-derived” vapes and gummies. These categories were chosen because of their widespread availability and high consumer demand, making them representative of the broader market for “hemp” products.

### CRITERIA

This study evaluated the presence and quantity of chemically manufactured cannabinoids, specifically synthesized (rather than naturally extracted) delta-8 THC and delta-9 THC, as well as THCO Acetate, THCP, HCC, and HHC-O Acetate, which do not naturally occur in the plant in meaningful quantities, if at all.

Additionally, we assessed the estimated aggregate potency of these products. Many chemically synthesized cannabinoids are designed to be more potent than naturally occurring delta-9 THC. To accurately compare the potency of “hemp” products containing these compounds to natural cannabis products sold in licensed dispensaries, we applied a multiple based on the relative binding affinity of each compound to CB1 receptors compared to traditional (delta-9) THC. This methodology was informed by the scientific literature cited below. In cases where scientific data was unavailable, anecdotal reports from industry were used to inform our analysis.

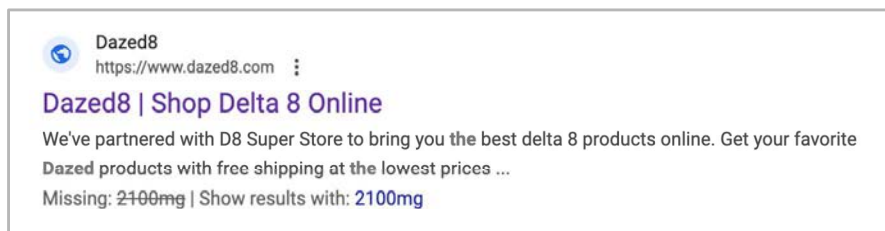
## LIMITATIONS

On September 23, 2024, the California Office of Administrative Law approved regulations proposed by the California Department of Public Health (CDPH) requiring that hemp products intended for human consumption have no detectable THC per serving. Additionally, under Assembly Bill 45 (Aguiar-Curry), signed into law in 2021, hemp products must not include cannabinoids produced through chemical synthesis. These regulations create a legal framework that, in theory, should prevent the sale of hemp products containing THC and chemically synthesized cannabinoids in the state.

Despite these legal restrictions, we were able to easily purchase hundreds of “hemp” products online, most of which were delivered via the U.S. Postal Service<sup>a</sup> without age verification.<sup>b</sup> This raises concerns about potential selection bias in our sampling, as all products included in this study were shipped illegally to California. As a result, the findings may disproportionately reflect the practices of “bad actors” who flout regulatory compliance.

However, this issue is not limited to lesser-known or rogue operators. While not the focus of this investigation, well-established brands in the hemp-infused beverage space — such as CANN and St. Ides (owned by Pabst) — also sold us THC-infused products in violation of state law. This challenges the assumption that only bad actors are engaging in the illegal sale of intoxicating hemp products in California.

Additionally, the distribution practices of some companies further influenced the sample composition. While certain companies, such as Cheech & Chong<sup>3</sup> and Cookies,<sup>4</sup> sell intoxicating “hemp” products directly to consumers through their websites, many prominent brands in the intoxicating hemp space rely on third-party distributors and online “superstores” to market their products. This group includes well-known brands like 3Chi, Cake, Cali Extrax, Dome Wrecker, ELF, Exodus, Torch, and TRE House. Some of these companies disavow any knowledge that third parties in California are selling their products in violation of state laws. Others, like Dazed, explicitly advertise their partnerships with online “hemp” superstores.



<sup>a</sup> We asked experts why these companies primarily use USPS to deliver these products. They explained that this is common in the illegal narcotics trade because private carriers like FedEx have user agreements allowing them to inspect packages, while USPS requires reasonable suspicion or a warrant to do so.

<sup>b</sup> None of the companies shipping to us required a signature or age verification upon delivery. All but two relied solely on an online checkbox for purchasers to self-verify their age as being over 21.



In summary, the distribution strategies of “hemp” companies could have influenced the composition of our sample. But while the study may overrepresent products from companies that openly disregard state law, this does not mean such products are rare exceptions. The widespread availability of intoxicating hemp products, including from brands with mainstream credibility, suggests that our findings reflect broader market trends rather than an anomaly caused by selection bias alone.

## EXCLUSIONS

This study did not examine pesticide, solvent, or heavy metal contaminant levels. Researchers and legal experts investigating the unregulated hemp market have extensively documented these problems.<sup>5,6,7,8</sup> The lack of mandatory third-party testing, batch tracking, and accurate product labeling in this marketplace makes the presence of such contaminants unsurprising.

## Definitions

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For this paper:

- **Synthetic cannabinoids or chemically synthesized cannabinoids** refer to compounds that are chemically manufactured rather than naturally extracted from the plant. These include synthetic delta-8 and delta-9 THC, which are typically made by isolating CBD from hemp and converting its molecular structure through an acid-catalyzed reaction that relies on corrosive solvents and heavy metal catalysts. Synthetics also include those likely made from non-hemp starter materials.
- **Delta-9 THC** (also known as D9, THC, traditional THC, or natural THC) refers to *delta-9 tetrahydrocannabinol*, the primary psychoactive component of cannabis.
- **Intoxicating hemp** is colloquially used to describe products marketed as “hemp” that contain concentrated THC, chemically synthesized cannabinoids, and/or non-cannabinoid psychoactive agents like kratom, psilocybin, and *amanita muscaria*.
- **THCA** (also known as delta-9-THCA or *tetrahydrocannabinolic acid*) is a chemical found in cannabis plants. In its raw form, it is non-intoxicating. However, it serves as a precursor to THC. When heated — as occurs when THCA flower is smoked or vaped — or decarboxylated, it converts to the intoxicating agent delta-9 THC at a rate of 87.7 percent. State cannabis markets, such as California’s, include THCA in the definition of THC and the calculation of total THC content,<sup>9</sup> as does the United States Department of Agriculture (USDA).<sup>10</sup>

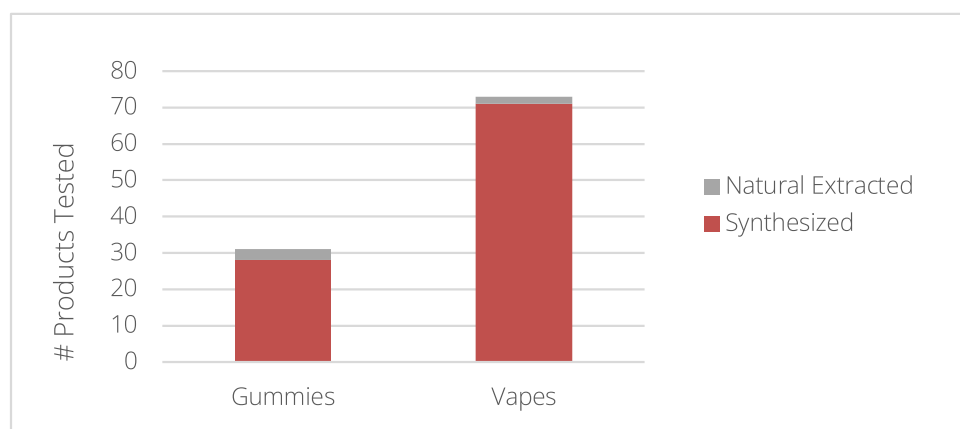
# Results

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## PREVALENCE OF SYNTHETICS

Assembly Bill 45 (Aguiar-Curry, 2021) plainly states: “‘Industrial hemp’ does not include cannabinoids produced through chemical synthesis.”<sup>11</sup> In accordance with this, hemp products cannot legally contain compounds like delta-8 THC that have been chemically synthesized from CBD isolate. Only cannabinoids naturally extracted from the plant are permitted. Yet, our analysis of 104 products showed that 95 percent contained synthetics, including 97 percent of vapes and 90 percent of gummies.

### *Products with Synthesized vs. Naturally Extracted Cannabinoids:*



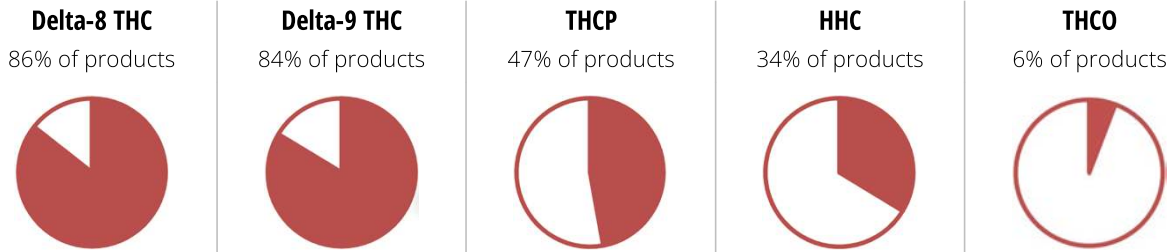
The most common chemically synthesized cannabinoid was delta-8 THC (found in 86 percent of all products), followed closely by delta-9 THC. Although both can theoretically be extracted from hemp, doing so at a commercially viable scale is wildly impractical. To obtain enough delta-8 THC from natural extraction, manufacturers would need a jaw-dropping 19 pounds of hemp biomass to produce a single 2-gram vape cartridge.<sup>12,13</sup> Similarly, if manufacturers source delta-9 THC from hemp rather than cannabis, they will need 50 times more biomass,<sup>14</sup> making it an unlikely approach, which is why “hemp” brands so often turn to synthetics or old-fashioned marijuana.

The next most popular synthetic, found in almost half of products, was the ultra-potent THCP, followed by HHC. Neither can be found in cannabis in commercially meaningful amounts, if at all. The once popular THCO, which ran afoul of the DEA in 2023,<sup>c</sup> was found in six percent of products.

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<sup>c</sup> Three years ago, THCO was a dominant synthetic in the hemp market. After the DEA ruled in 2023 that THCO is a controlled substance, manufacturers pivoted to THCP and HHC. See *DEA THCO Response to Kight*. (2023, February).

### Prevalence of Specific Synthesized Cannabinoids:

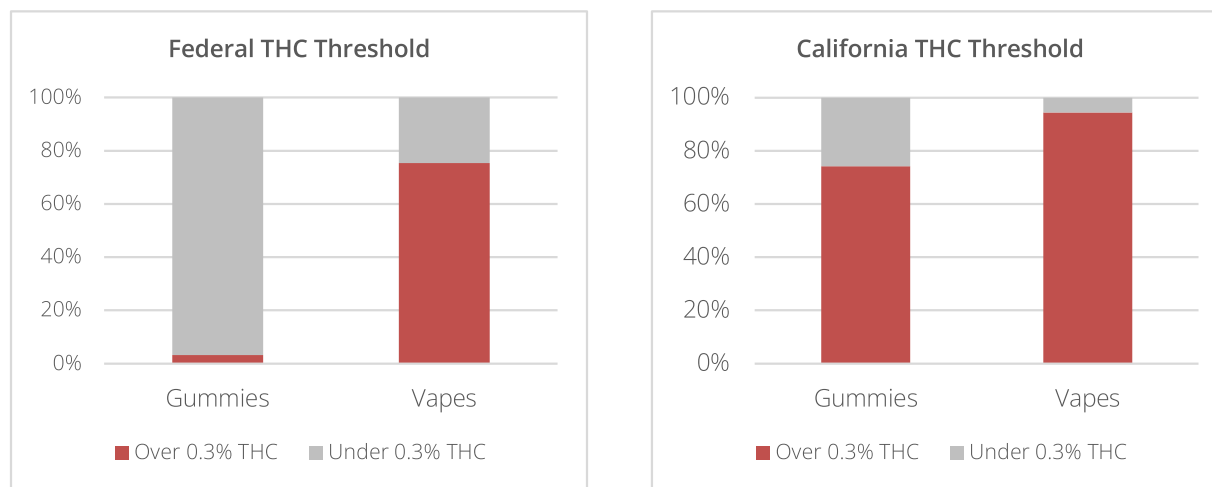


These products are often marketed to consumers on the basis that they are more potent and cheaper than products in the regulated cannabis industry.

### CROSSING THE THC LINE

Beyond the widespread use of synthetic cannabinoids, our analysis found that over half of the tested products (56 of 104 products) exceeded the federal THC limit for hemp (0.3 percent). Under federal law, these products do not qualify as hemp and should be classified as cannabis. Furthermore, under California's stricter "Total THC" definition, which includes delta-8 THC,<sup>15</sup> 88 percent of products failed to meet state hemp standards.

### Percentage of Products Exceeding Hemp THC Limits by Category:



State cannabis programs impose strict potency limits on THC levels in edibles and vape products. In California, edible products may contain a maximum of 10 milligrams of THC per serving and 100 milligrams per package.<sup>16</sup> Vape cartridges may contain up to 1,000 milligrams of THC per package for non-medical consumers and 2,000 milligrams for medical patients.

Despite these regulations, the “hemp” products tested in our study frequently exceeded these limits:

- 84 percent of gummies exceeded the THC per serving cap.
- 81 percent surpassed the total THC per package cap.
- The average package of “hemp” gummies contained 1,388 mg of THC — nearly 14 times California’s legal limit for cannabis products.
- The average THC per gummy was 89 mg — almost 9 times the per-serving cap in California’s cannabis market.
- Over one-third of the gummies (11 of 31) contained between 100 and 325 mg of THC per piece.

These findings suggest that many of the “hemp” products contain significantly higher THC levels than permitted in the regulated cannabis market.

## THE TRUE POTENCY OF “HEMP” VAPE PRODUCTS

The presence of synthetic cannabinoids in these products doesn’t just challenge their classification as “hemp” — it also fundamentally distorts consumer expectations around potency. Many of the lab-made cannabinoids found in our analysis are far more potent than natural delta-9 THC, meaning a product’s psychoactive effects may be dramatically understated if potency is assessed solely by delta-9 THC content.

A prime example is THCP, which was detected in roughly half the tested products. Research suggests that THCP is up to 30 times stronger than delta-9 THC due to its substantially higher binding affinity to CB1 receptors.<sup>17</sup> As a result, a THCP product with little to no delta-9 THC could be exponentially stronger than consumers or regulators assume, leading to a dangerous underestimation of its effects.

After adjusting for the higher potency of synthetic cannabinoids,<sup>d</sup> the effective THC strength of many of the vape products appeared to exceed what their “hemp” designation implied:

- The average THC equivalency for vapes in our study was 2,682 mg per cartridge — 268 percent above the California limit for adult-use cannabis products.
- Over half (38 of 71) contained between 2,000 and 14,000 mg of THC equivalent per vape.

These results indicate that “hemp” products are often far more potent than natural products sold in the regulated cannabis market.

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<sup>d</sup> See Appendix A for an explanation of our methodology for calculating THC potency equivalencies.

# Discussion

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## SAFETY CONCERNS WITH SYNTHETICS

Designed to mimic the effects of natural cannabinoids like THC, synthetic cannabinoids do not have the same pharmacological safety profiles as natural cannabinoids.

1. **Potency and Efficacy Concerns:** Synthetic cannabinoids can be significantly more potent than THC, but potency alone does not determine their impact. The key factor is *efficacy* — how strongly a substance activates human receptors. Unlike natural THC, which is a partial CB1 agonist, many synthetic cannabinoids are full agonists, driving receptors to much higher levels of activity. This heightened activation increases the risk of severe psychological<sup>18</sup> and physiological<sup>19,20</sup> reactions, including cardiovascular distress,<sup>21</sup> stroke,<sup>22</sup> seizures,<sup>23</sup> and psychosis.<sup>24,25</sup> Additionally, some synthetic cannabinoids have been linked to lung injuries<sup>26</sup> (as seen during the 2019 “vaping crisis”), cardiotoxicity,<sup>27</sup> and genotoxicity.<sup>28</sup> The Safety Data Sheet for delta-9 THCP specifically warns that the compound is “harmful if swallowed or inhaled” and “may cause anemia, cough, CNS depression, drowsiness, headache, heart damage, lassitude (weakness, exhaustion), liver damage, narcosis, reproductive, and teratogenic effects.”<sup>29</sup>
2. **Novel and Unknown Isomers:** Novel and unknown isomers associated with chemically synthesized cannabinoids, like delta-8 THC, may present significant risks due to their unpredictable chemical and physical properties. Commercially available delta-8 THC is typically produced through an unpurified chemical reaction that generates multiple non-natural isomers, including  $\Delta 8$ -iso-THC and  $\Delta 4(8)$ -iso-THC, which are not found in cannabis and whose effects on human health are unknown. These byproducts are difficult to measure and almost impossible to remove from the final product. Moreover, additional abnormal isomers like regioisomers, along with degradation products such as olivetol and chlorinated compounds, can form during the conversion process. Lastly, the chemical conversion process (from CBD isolate to THC) can leave solvent and heavy metal remnants.<sup>30</sup> Without proper regulatory oversight and stringent testing, these unregulated processes result in unsafe products.<sup>31,32,33</sup>
3. **Risk of Over-Intoxication:** Our findings reveal that the actual psychoactive potency of these products is often magnitudes stronger than natural cannabis products found in licensed dispensaries. Coupled with inaccurate labeling and a lack of proper testing, consumers cannot be certain about what they are vaping, increasing the risk of over-intoxication.

**Examples of inaccurate labeling:**

Half of the vape products marketed as “THCA vapes” contained no THCA whatsoever, including the products shown below.



4. **Potential Addiction and Behavioral Effects:** Some synthetic cannabinoids, including Mepirapim, have been linked to addictive behaviors. Studies suggest that these drugs activate the CB1 receptor at much higher levels than natural cannabinoids, contributing to changes in brain chemistry that may promote addiction.<sup>34</sup> The use of synthetic cannabinoids has also been associated with significant neurocognitive impairment and impulse control disorders.<sup>35</sup>

In sum, synthetic cannabinoid products pose significant safety risks due to their increased potency and efficacy, novel chemical structures, and lack of safety data. Ironically, they are often marketed as a “safe,” “100% natural,” and “100% legal” alternative to state-regulated cannabis.

## PSYCHOACTIVE ADDITIVES

A recent trend in the industry involves the addition of kratom and hallucinogenic mushrooms to products sold as “hemp.” These additives are marketed to enhance the intoxicating effects of the product, thereby increasing their appeal to consumers seeking intensified psychoactive experiences.

The inclusion of kratom, hallucinogenic mushrooms, or similar substances in “hemp” products directly violates Section 17300 of California’s state cannabis regulations, which explicitly prohibits the use of “any non-cannabinoid additive that would increase potency, toxicity, or addictive potential.” More critically, adding these substances poses additional risks to consumer safety by triggering unpredictable and potentially hazardous interactions and increasing the likelihood of addiction, particularly due to the opioid-like properties of kratom. The lack of testing and contaminant standards for these unregulated intoxicants further exacerbates these dangers.

*Examples of “hemp” products with non-cannabinoid intoxicants:*



*Don't Trip Dozo's Vape Cartridges, which features kid-friendly flavors like Mushy Marshmallow, Hubble Bubble, Cosmic Donut, and Smurf's Dream, combine hallucinogenic mushrooms, THCA, and an alphabet soup of chemically synthesized cannabinoids.<sup>36</sup>*



*Cheech & Chong's Kosmic Chews promise a “deeper high” with 15mg of THC plus 25mg of kratom per piece. While marketed for the amplified high, the fine print notes that “some people have developed kratom dependency after prolonged daily use.”<sup>37</sup>*

## Tax Compliance Issues

Our analysis of online “hemp” retailers revealed widespread tax evasion among vendors selling in California. A staggering 91 percent of the products we ordered were shipped tax-free, with vendors failing to collect required state and local taxes, including California’s Sales and Use Tax. Additionally, no vendor collected and remitted the state’s cannabis excise tax, despite being obligated to do so under Section 34015.1 of the California Revenue & Tax Code,<sup>38</sup> which specifies that operators are liable for all state cannabis taxes, fees, and penalties even if they are operating without a state cannabis license.

Major “hemp superstores” uniformly failed to collect any taxes,<sup>39</sup> while direct-to-consumer brand websites showed slightly better compliance. This widespread failure to collect and remit taxes imposes a significant financial cost on the state, depriving it of critical revenue and exacerbating regulatory and enforcement challenges within the online “hemp” market. Given this rampant tax fraud, the “hemp” industry’s claim that a more permissive regulatory approach would generate substantial tax revenue for the state appears highly dubious.



## Conclusion

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When the hemp industry engaged with policymakers on AB 45 in 2021, they insisted it was about “rope, not dope,” claiming their focus was on CBD wellness products rather than intoxicants. But the industry’s rapid evolution has made clear that this narrative no longer holds. Today’s “hemp” market isn’t about wellness — it’s about peddling counterfeit cannabis, the ultra-processed junk food of weed, under a different name. Promotional emails with subject lines like “Make America High Again”<sup>40</sup> make it abundantly clear that these companies are selling intoxicants, not health products.

Now, proponents of the “hemp” industry are pushing to overturn California’s emergency regulations banning THC and synthetics in hemp products. They present their case as a carve-out for “full-spectrum” wellness products with “a touch of therapeutic THC” or “low-dose” THC beverages. But given the industry’s track record, such assurances warrant deep skepticism.

In reality, the unregulated “hemp” market poses a far greater risk to public health than California’s regulated cannabis industry. While the hemp market remains chaotic and opaque, the state’s cannabis framework provides critical safeguards for consumers, workers, and the broader community. This system ensures accountability at every stage — from tracking cannabinoid inputs and outputs to full transparency about where, when, and by whom products are made. With mechanisms for instant recalls, rigorous third-party testing, strict lab oversight, and a comprehensive seed-to-sale “track-and-trace” system, California’s regulations are crucial to ensuring that only safe, accurately labeled products reach adult consumers.

Additionally, the regulated cannabis system offers vital protections that the “hemp” market cannot. These include tax compliance records, proper medical oversight for high-dose products, clear packaging, advertising and labeling standards, robust age-gating, and sensible THC caps. The accountability embedded in this system fosters consumer and community confidence — something entirely lacking in the hemp market.

Beyond public health, California’s cannabis industry also supports strong labor protections and well-paying union jobs. By contrast, many “hemp” companies manufacture products out of state or import inputs from China, bypassing labor standards, evading state and local taxes, and contributing nothing to California’s economy.

The regulated cannabis market is not just a business — it’s a critical safeguard for public health. California voters established this system to ensure transparency, safety, and accountability. Allowing counterfeit THC products to masquerade as “hemp” undermines that framework. Keeping all THC within the state’s cannabis regulations isn’t just good policy; it’s essential for public health and consumer trust.



## Appendix A: Methodology for Identifying Chemically Synthesized THC

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To determine whether delta-8 or delta-9 THC was synthesized or naturally occurring, the lab tested for byproducts typically produced during synthetic conversion but not native to hemp or cannabis plants,<sup>41,42</sup> including:

- 4,8-epoxy-*iso*-tetrahydrocannabinol
- 8-hydroxy-*iso*-tetrahydrocannabinol
- 9 $\alpha$ -hydroxyhexahydrocannabinol
- 9 $\beta$ -hydroxyhexahydrocannabinol
- D4-*iso*-tetrahydrocannabinol
- D8-*iso*-tetrahydrocannabinol
- D8-*cis-iso*-tetrahydrocannabinol
- D4,8-*iso*-tetrahydrocannabinol

## Appendix B: Methodology for Calculating THC Potency Equivalencies

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To account for synthetics' amplified potency, we evaluated their total psychoactive strength by converting each synthetic compound to its delta-9 THC equivalent. This adjustment facilitates a more accurate comparison between "hemp" products and natural cannabis products available in dispensaries. The equivalencies were determined using a THC Potency Equivalency Factor (PEF) based on each compound's relative CB1 receptor binding affinity compared to natural delta-9 THC.

The THC equivalencies for synthetics are supported by the scientific literature (cited below) and supplemented with anecdotal reports where peer-reviewed data was unavailable.

After applying these equivalencies, we converted the amount of each synthetic cannabinoid into its delta-9 THC equivalent, aggregating these values to determine each product's total effective THC content.

### *Potency equivalency of synthetic cannabinoids relative to delta-9 THC:*

Compound	Scientific Name	Delta-9 THC Equivalency (multiple)
Delta-9 THCP	<i>Trans-delta-9-tetrahydrocannabiphorol</i>	30.00 <sup>43</sup>
Delta-8 THCP	<i>Trans-delta-8-tetrahydrocannabiphorol</i>	20.10 <sup>44</sup>
Delta-9 THCO	<i>Delta-9-THC-O-acetate</i>	3.00 <sup>45</sup>
Delta-8 THCO	<i>Delta-9-THC-O-acetate</i>	2.01 <sup>46</sup>
HHCO Acetate	<i>Hexahydrocannabinol-O-acetate</i>	1.50 <sup>47</sup>
HHC	<i>Hexahydrocannabinol</i>	1.00 <sup>48</sup>
THCA	<i>Tetrahydrocannabinolic acid</i>	0.877 <sup>49,50</sup>
Delta-8 THC	<i>Delta-8-Tetrahydrocannabinol</i>	0.67 <sup>51</sup>
CBN	<i>Cannabinol</i>	0.25 <sup>52</sup>

## Appendix C: Reference Materials

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1. [Certificates of Analysis for all products](#) (Request access)
2. [Raw Data](#) (Request access)
3. [References](#)
4. [Photo of Received Product](#) (Request access)
5. [White Paper: Pandora's Box: The Dangers of a National, Unregulated, Hemp-Derived Intoxicating Cannabinoid Market](#) (2022)

## Endnotes

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<sup>1</sup> Karlamangla, S. (2016, August 26). "The cheapest buzz you can get on Skid row": Officials try to stop homeless from smoking spice after dozens sickened. Los Angeles Times. <https://www.latimes.com/local/lanow/la-me-spice-skid-row-20160824-snap-story.html>

<sup>2</sup> In California, products that contain more than 0.3% of the psychoactive compound delta-9 tetrahydrocannabinol or that are chemically synthesized (irrespective of the level of THC) fall outside of the State regulations for industrial and raw hemp and are by default under California law cannabis products that are therefore subject to the laws and regulations governing commercial cannabis activities including California's 15% cannabis excise tax. Cal. Health & Safety Code § 11018.5 *et seq.*; Cal. Health & Safety Code, §§ 111921; 111925.2; Cal. Bus. & Prof. Code § 26000 *et seq.* The narrow carveout for industrial or raw hemp products under California's laws is intended to support and promote agricultural activities in the State by allowing for the commercialization of *naturally* derived products therefrom that *do not have the psychoactive traits* of regulated cannabis products or the chemical composition of designer drugs. Specifically, any unlicensed person engaging in the sale of cannabis products (e.g., that do not qualify as industrial or raw hemp) is required to pay the State's cannabis excise tax as if the products were sold at a licensed cannabis retailer together with penalties and interest. Cal. Rev. & Tax. Code §34015.1(a)(1).

<sup>3</sup> Product sample purchased from <https://cheechandchong.com> on January 13, 2025.

<sup>4</sup> Product sample purchased from <https://hemp.cookies.co> on January 15, 2025.

<sup>5</sup> Gidal, B. E., Vandrey, R., Wallin, C., Callan, S., Sutton, A., Saurer, T. B., & Triemstra, J. L. (2024). Product labeling accuracy and contamination analysis of commercially available cannabidiol product samples. *Frontiers in Pharmacology*, 15. <https://doi.org/10.3389/fphar.2024.1335441>

<sup>6</sup> US Cannabis Council. (2021, June 2). *The US Cannabis Council support the safe and regulated sale of Cannabis Products*. Docslib. <https://docslib.org/doc/9236682/the-us-cannabis-council-support-the-safe-and-regulated-sale-of-cannabis-products>

<sup>7</sup> Meehan-Atrash J, Rahman I. Novel Δ8-Tetrahydrocannabinol Vaporizers Contain Unlabeled Adulterants, Unintended Byproducts of Chemical Synthesis, and Heavy Metals. *Chem Res Toxicol*. 2022 Jan 17;35(1):73-76. doi: 10.1021/acs.chemrestox.1c00388. Epub 2021 Dec 10. PMID: 34889611; PMCID: PMC8898185.

<sup>8</sup> American Council of Independent Laboratories. (2024). *ACIL hemp market study*. June 2024. [https://cdn.ymaws.com/www.acil.org/resource/resmgr/cannabis/P2\\_2024\\_ACIL\\_Product\\_Study\\_r.pdf](https://cdn.ymaws.com/www.acil.org/resource/resmgr/cannabis/P2_2024_ACIL_Product_Study_r.pdf).

<sup>9</sup> California Code of Regulations Title 4, Division 19. *Sec. 15700(rrr)*.

<sup>10</sup> Agricultural Marketing Service, Department of Agriculture (USDA). (2021, January 19). Establishment of a Domestic Hemp Production Program. *The Federal Register*. <https://www.federalregister.gov/documents/2021/01/19/2021-00967/establishment-of-a-domestic-hemp-production-program>

<sup>11</sup> Bill text. Bill Text - AB-45 Industrial hemp products. (2021, October 6).

<sup>12</sup> Delta-8 THC occurs naturally in cannabis at levels below 0.1 percent. *Oregon Liquor and Cannabis Commission*. (n.d.-b). Delta-8-THC: Regulatory Issues Presented by Artificially Derived Cannabinoids. [https://www.oregon.gov/olcc/Docs/commission\\_minutes/2021/OLCC-Delta-8-THC-Presentation.pdf](https://www.oregon.gov/olcc/Docs/commission_minutes/2021/OLCC-Delta-8-THC-Presentation.pdf)

<sup>13</sup> To produce 1 gram of THC oil, we first determine the extraction efficiency from 15% THC biomass, where 1 pound (453.6g) contains 68.1g of THC and yields 16g of oil, giving an extraction efficiency of 23.5% (16 ÷ 68.1). Using this efficiency, 4.26g of THC is required to produce 1g of oil (1 ÷ 0.235). With 0.1% THC biomass (0.001g THC per gram),

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this means 4,260g (or ~9.39 pounds) of plant material is needed to supply the required delta-8 THC for a 1-gram cartridge and 18.78 pounds for a 2-gram cartridge.

<sup>14</sup> Cannabis typically has about 15 percent THC ( $15 \div 0.3 = 50$ ).

<sup>15</sup> From Sec. 15007(rrr) of the California Code of Regulations Title 4, Division 19: "Total THC' means the sum of THC, delta 8 THC, and THCA. Total THC is calculated using the following equation: Total THC (mg/g) = [(delta 8-THCA concentration (mg/g) + delta 9-THCA concentration (mg/g)) x 0.877] + [delta 8-THC concentration (mg/g) + delta 9-THC concentration (mg/g)]."

<sup>16</sup> California Code of Regulations Title 4, Division 19. Sec. 17304.

<sup>17</sup> Citti, C., et al. (2019, December 30). A Novel Phytocannabinoid Isolated from Cannabis Sativa L. with an In Vivo Cannabimimetic Activity Higher than Δ9-Tetrahydrocannabinol: Δ9-Tetrahydrocannabiphorol. *Nature News*. Retrieved August 9, 2022 from <https://www.nature.com/articles/s41598-019-56785-1>.

<sup>18</sup> Theunissen, E. L., et al. (2021, January 26). Psychotomimetic Symptoms After a Moderate Dose of a Synthetic Cannabinoid (JWH-018): Implications for Psychosis. *Psychopharmacology*. Retrieved August 16, 2022 from <https://link.springer.com/article/10.1007/s00213-021-05768-0>.

<sup>19</sup> Devitt-Lee, A. (2019, November 6). *Under the Radar: Synthetic Cannabinoids & EVALI*. Project CBD. <https://www.projectcbd.org/science/under-radar-synthetic-cannabinoids-evali>

<sup>20</sup> Thomsen, R., Axelsen, T. M., Løkken, N., Krogh, L. M., Reiter, N., Rasmussen, B. S., & Laursen, E. L. (2025). Prolonged sedation and unconsciousness after intoxication with the novel semisynthetic cannabinoid hexahydrocannabinioctyl (HHC-C8): Two case descriptions. *Toxicology Reports*, 14, 101912. <https://doi.org/10.1016/j.toxrep.2025.101912>

<sup>21</sup> Ahmed, T., Khan, A., See, V. Y., & Robinson, S. (2020). Cardiac arrest associated with synthetic cannabinoid use and acquired prolonged qtc interval: A case report and review of literature. *Heart Rhythm Case Reports*, 6(5), 283–286. <https://doi.org/10.1016/j.hrcr.2020.02.002>

<sup>22</sup> Rose, D. Z., Guerrero, W. R., Mokin, M. V., Gooch, C. L., Bozeman, A. C., Pearson, J. M., & Burgin, W. S. (2015). Hemorrhagic stroke following use of the synthetic marijuana "spice." *Neurology*, 85(13), 1177–1179. <https://doi.org/10.1212/wnl.0000000000001973>

<sup>23</sup> Gounder, K., Dunuwille, J., Dunne, J., Lee, J., Silbert, P., & Lawn, N. (2020). The other side of the leaf: Seizures associated with synthetic cannabinoid use. *Epilepsy & Behavior*, 104, 106901. <https://doi.org/10.1016/j.yebeh.2020.106901>

<sup>24</sup> Greer, D., Atherton, J., & Girgis, J. (2025). Psychosis and suicide attempt following a single use of delta-9-tetrahydrocannabiphorol: A case report. *Psychiatry and Clinical Neurosciences Reports*, 4(1). <https://doi.org/10.1002/pcn5.70060>

<sup>25</sup> Theunissen, E. L., et al. (2021, January 26). Psychotomimetic Symptoms After a Moderate Dose of a Synthetic Cannabinoid (JWH-018): Implications for Psychosis. *Psychopharmacology*. Retrieved August 16, 2022 from <https://link.springer.com/article/10.1007/s00213-021-05768-0>

<sup>26</sup> Munger, K. R., Jensen, R. P., & Strongin, R. M. (2022). Vaping cannabinoid acetates leads to Ketene Formation. *Chemical Research in Toxicology*, 35(7), 1202–1205. <https://doi.org/10.1021/acs.chemrestox.2c00170>

<sup>27</sup> Simon, G., Tóth, D., Heckmann, V., Kuzma, M., & Mayer, M. (2022). Lethal case of myocardial ischemia following overdose of the synthetic cannabinoid ADB-FUBINACA. *Legal Medicine*, 54, 102004. <https://doi.org/10.1016/j.legalmed.2021.102004>

- 
- <sup>28</sup> Almestafa, A. A., Khabour, O. F., Al-Eitan, L. N., & Alzoubi, K. H. (2025). Synthetic cannabinoids are genotoxic in cultured human lymphocytes. *Current Pharmaceutical Design*, 31. <https://doi.org/10.2174/0113816128340465241227095853>
- <sup>29</sup> Cayman Chemical. (n.d.). *Safety Data Sheet - Δ9-THCP*. <https://cdn.caymanchem.com/cdn/seawolf/msds/30171m.pdf>
- <sup>30</sup> Wakshlag, J. J., Cital, S., Eaton, S. J., Prussin, R., & Hudalla, C. (2020). Cannabinoid, terpene, and heavy metal analysis of 29 over-the-counter commercial veterinary hemp supplements. *Veterinary Medicine: Research and Reports*, Volume 11, 45–55. <https://doi.org/10.2147/vmrr.s248712>
- <sup>31</sup> Scialdone, M. A. (2023, July 28). *Expert gives delta-8 THC thumbs down*. Project CBD. <https://projectcbd.org/hemp/expert-gives-delta-8-thc-a-thumbs-down/>
- <sup>32</sup> Meehan-Atrash J, Rahman I. Novel Δ8-Tetrahydrocannabinol Vaporizers Contain Unlabeled Adulterants, Unintended Byproducts of Chemical Synthesis, and Heavy Metals. *Chem Res Toxicol*. 2022 Jan 17;35(1):73-76. doi: 10.1021/acs.chemrestox.1c00388. Epub 2021 Dec 10. PMID: 34889611; PMCID: PMC8898185.
- <sup>33</sup> Radwan, M. M., Wanas, A. S., Gul, W., Ibrahim, E. A., & ElSohly, M. A. (2023). Isolation and characterization of impurities in commercially marketed Δ8-THC products. *Journal of Natural Products*, 86(4), 822–829. <https://doi.org/10.1021/acs.jnatprod.2c01008>
- <sup>34</sup> Hur, K.-H., Lee, Y., Donio, A. L., Ma, S.-X., Lee, B.-R., Kim, S.-K., Lee, J.-G., Kim, Y.-J., Kim, M., Yoon, S., Lee, S., Lee, Y.-S., Lee, S.-Y., & Jang, C.-G. (2022). MEPIRAPIM, a novel synthetic cannabinoid, induces addiction-related behaviors through neurochemical maladaptation in the brain of rodents. *Pharmaceuticals*, 15(6), 710. <https://doi.org/10.3390/ph15060710>
- <sup>35</sup> Marandure, B. N., Mhizha, S., & Wilson, A. (2022). “Spice was made, by the devil himself”: A thematic analysis of the experience of an addiction to synthetic cannabinoids. *Journal of Psychoactive Drugs*, 55(3), 321–329. <https://doi.org/10.1080/02791072.2022.2083534>
- <sup>36</sup> *Dozo don't trip mushroom extract + thca disposable 2.5g*. Great CBD Shop. (2025, January 31). [https://greatcbdshop.com/product/dozo-dont-trip-mushroom-extract-thca-disposable-3-5g/?attribute\\_strain=Cosmic%2BDonut%2B%28Sativa%29%2B2.5g%2BDISPOSABLE](https://greatcbdshop.com/product/dozo-dont-trip-mushroom-extract-thca-disposable-3-5g/?attribute_strain=Cosmic%2BDonut%2B%28Sativa%29%2B2.5g%2BDISPOSABLE)
- <sup>37</sup> *Cheech & Chong's Kosmic Chews*. Cheech And Chong's Cannabis Co. (2024, November 19). <https://cheechandchong.com/cheech-chongs-kosmic-chews/>
- <sup>38</sup> California Department of Tax and Fee Administration. (n.d.). *Sec. 34015.1. Cannabis Tax Law*.
- <sup>39</sup> Including D8 Super Store, Delta-8 Resellers, Great CBD Shop, The Green Dragon CBD, and D8 Gas.
- <sup>40</sup> Cookies Hemp. (2025, January 26). “Make America High Again.” *Direct-to-Consumer Email Marketing*.
- <sup>41</sup> Gul W, Shahzadi I, Sarma N, Kim NC, ElSohly MA. Development and Validation of a GC-FID Method for the Quantitation of Δ 8-Tetrahydrocannabinol and Impurities Found in Synthetic Δ 8-Tetrahydrocannabinol and Vaping Products. *Planta Med*. 2024 Apr;90(4):316-332. doi: 10.1055/a-2249-7824. Epub 2024 Feb 22. PMID: 38387478; PMCID: PMC11057961.
- <sup>42</sup> Schafroth, M. A., Mazzocanti, G., Reynoso-Moreno, I., Erni, R., Pollastro, F., Caprioglio, D., Botta, B., Allegrone, G., Grassi, G., Chicca, A., Gasparrini, F., Gertsch, J., Carreira, E. M., & Appendino, G. (2021). Δ9-cis-tetrahydrocannabinol: Natural occurrence, chirality, and pharmacology. *Journal of Natural Products*, 84(9), 2502–2510. <https://doi.org/10.1021/acs.jnatprod.1c00513>
- <sup>43</sup> Citti, C., Linciano, P., Russo, F., Luongo, L., Iannotta, M., Maione, S., Laganà, A., Capriotti, A. L., Forni, F., Vandelli, M. A., Gigli, G., & Cannazza, G. (2019). A novel phytocannabinoid isolated from Cannabis Sativa L. with an in vivo

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cannabimimetic activity higher than  $\Delta^9$ -tetrahydrocannabinol:  $\Delta^9$ -tetrahydrocannabiphorol. *Scientific Reports*, 9(1). <https://doi.org/10.1038/s41598-019-56785-1>

<sup>44</sup> The potency of delta-8 THC is estimated to be 67% of delta-9 THC. Based on this ratio, we estimated the potency of delta-8 THCP to be 67% of delta-9 THCP.

<sup>45</sup> Levenson, M. S. (2022, April 12). *Meet THC-O acetate, a hemp-derived compound three times stronger than THC*. Leafly. <https://www.leafly.com/news/cannabis-101/what-is-thc-o>

<sup>46</sup> The potency of delta-8 THC is estimated to be 67% of delta-9 THC. Based on this ratio, we estimated the potency of delta-8 THCO to be 67% of delta-9 THCO.

<sup>47</sup> Binoid CBD. (2024, April 19). *What is HHC-O acetate?* <https://www.binoidcbd.com/blogs/news/what-is-hhc-o-acetate>

<sup>48</sup> Persson, M., Kronstrand, R., Evans-Brown, M., & Green, H. (2024). In vitro activation of the CB1 receptor by the semi-synthetic cannabinoids hexahydrocannabinol (HHC), hexahydrocannabinol acetate (HHC-O) and Hexahydrocannabiphorol (HHC-P). *Drug Testing and Analysis*. <https://doi.org/10.1002/dta.3750>. HHC is to total of 9R-HHC and 9S-HHC.

<sup>49</sup> *Establishment of a Domestic Hemp Production Program*. Federal Register. (2021, January 19). <https://www.federalregister.gov/documents/2021/01/19/2021-00967/establishment-of-a-domestic-hemp-production-program>

<sup>50</sup> California Code of Regulations Title 4, Division 19. *Sec. 15700*.

<sup>51</sup> Hollister, L. E., & Gillespie, H. K. (1973). Delta-8- and delta-9-tetrahydrocannabinol; Comparison in man by oral and intravenous administration. *Clinical Pharmacology & Therapeutics*, 14(3), 353-357. <https://doi.org/10.1002/cpt1973143353>

<sup>52</sup> *Beyond CBD: Understanding different cannabinoids*. Colorado Department of Transportation. (2024, May 7). <https://www.codot.gov/safety/impaired-driving/druggeddriving/campaign-news/beyond-cbd-understanding-different-cannabinoids>