County of Los Angeles
CHIEF EXECUTIVE OFFICE
Kenneth Hahn Hall of Administration
500 West Temple Street, Room 713, Los Angeles, California 90012
(213) 974-1101
http://ceo.lacounty.gov

SACHI A. HAMAI
Chief Executive Officer

November 15, 2016

To: Supervisor Hilda L. Solis, Chair
Supervisor Mark Ridley-Thomas
Supervisor Sheila Kuehl
Supervisor Don Knabe
Supervisor Michael D. Antonovich

From: Sachi A. Hamai
Chief Executive Officer

REPORT REGARDING THE PASSAGE OF PROPOSITION 64, THE ADULT USE OF MARIJUANA ACT

On October 20, 2016, the CEO's Office of Marijuana Management (OMM) provided your Board with a short memorandum detailing the OMM's roles and responsibilities with respect to marijuana regulation and coordination. At that time, we committed to providing your Board with an economic analysis of potential marijuana tax revenues and regulatory costs, as well as a summary of potential next steps for regulating marijuana.

On November 8, 2016, voters approved Proposition 64, the Adult Use of Marijuana Act ("AUMA"), by a statewide approval rating of approximately 56 percent, and a countywide approval rating of approximately 58 percent.

AUMA generally legalizes the cultivation, possession, and use of nonmedical (recreational) marijuana by adults aged 21 years and over. AUMA also allows the commercial cultivation, manufacturing, distribution, and sale of nonmedical marijuana by licensed businesses.

With the passage of Proposition 64, both medical and nonmedical marijuana are legal under State law. This includes the personal use of medical and nonmedical marijuana and specified commercial activities involving medical and nonmedical marijuana.

The OMM has prepared the attached report in response to the passage of Proposition 64. The report addresses the following areas:

- AUMA's key provisions and its relationship to medical marijuana legislation;
- Current County laws regarding medical marijuana;
- AUMA's potential impacts and benefits to the County;
- How banning or allowing marijuana businesses in unincorporated County affects AUMA's potential impacts and benefits;
- Projected tax revenues and regulatory costs;
- Special considerations for regulating marijuana; and
- Options available to your Board with respect to marijuana.

Summary of the Report

Impacts from Legal Medical and Nonmedical Marijuana

The County will be impacted by legal medical and nonmedical marijuana regardless of whether the County decides to allow marijuana businesses in unincorporated areas. For example:

- Instances of driving under the influence of marijuana could increase;
- County hospitals could see more cases of accidental overconsumption of marijuana products such as edibles;
- Marijuana cultivation typically uses large amounts of electricity and water, which could increase the demand for local supplies; and
- County departments that operate countywide, such as the Sheriff, District Attorney, Fire Department, and Public Health, will have to train employees, regulate businesses, and educate residents.

If the County decides to allow medical and nonmedical marijuana businesses in unincorporated areas, the County may experience increased impacts in the short term, as the legal marijuana marketplace and communities adjust to new regulations. These impacts are expected to decrease over time as licensed operators displace unlicensed and unregulated activity, which tends to have a greater impact on neighborhoods and the environment.

Benefits from Legal Medical and Nonmedical Marijuana

The County will also see benefits from legal medical and nonmedical marijuana, again regardless of whether the County decides to allow marijuana businesses in unincorporated areas. Potential benefits include cost savings to law enforcement and County jails from decreased criminal penalties for marijuana-related offenses.

If the County decides to allow and tax medical and nonmedical marijuana businesses in unincorporated areas, the County could see additional benefits from:

- Tax revenues;
- Reduced black and grey market activity over time;
- Increased safety of marijuana products;
- Economic development opportunities; and
- Job creation.

Estimated Tax Revenues

Actual tax revenues depend on a number of variables, including the following: (a) whether County voters approve a tax on marijuana businesses and at what rate; (b) whether the County allows marijuana businesses in unincorporated areas; (c) whether the County taxes marijuana businesses in incorporated cities; and (d) the tax rate cities impose on marijuana businesses.

To provide your Board with estimated projected tax revenue, the following assumptions were made: (a) it was assumed the County would allow marijuana businesses in unincorporated areas; (b) it was assumed County voters would impose a countywide tax; (c) it was assumed that cities would tax medical and nonmedical marijuana at 6 and 8 percent, respectively, or at 5 and 10 percent, respectively, based on competing ballot measures pending in the City of Los Angeles; and (d) it was assumed that cities would allow sufficient marijuana businesses to satisfy estimated demand.

Based on these assumptions, estimated annual County tax revenues are as follows:

- Approximately $85 million if the County applied a 5 percent tax on medical and nonmedical marijuana countywide;

- Approximately $127 million if the County applied a 10 percent tax on medical and nonmedical marijuana countywide; and

- Approximately $105 million if the County applied a 5 percent tax on medical and nonmedical marijuana in incorporated cities, and a 10 percent tax on medical and nonmedical marijuana in unincorporated areas.

The above County tax rates were applied to test the effect of alternate rates on revenues, as well as any potential effects on black and grey market activity. It is estimated the County marijuana market would sustain an effective tax rate of 43 percent. This effective tax rate includes State taxes, expected city taxes, and could also include a 5 percent County tax applied countywide. Alternatively, the County could impose a 5 percent tax rate within cities and a 10 percent tax rate in unincorporated areas, to account for the absence of city taxes in unincorporated areas. Whether to tax marijuana businesses, how to apply those taxes, and at what rates is within your Board's discretion, as approved by County voters.

Estimated Regulatory Costs

The attached report attempts to estimate annual costs to the County to operate and enforce a regulatory program for marijuana. Due to time and informational limitations, costs were based in part on comparable regulatory activity in Denver, Colorado. Actual costs to the County may be higher than estimated in the report due to the types of policies the Board adopts to regulate marijuana, and costs unique to County departments.

With these caveats, the estimated costs to the County to operate a regulatory program for medical and nonmedical marijuana are roughly estimated to range from $9 million to $30 million, depending largely on County policies and priorities, as well as the number of licensed businesses operating within the County's cities and unincorporated areas.

A portion of costs will be recoverable through fees charged for permits, licenses, inspections, and other services performed by County departments. The remainder of costs is not likely to be directly recoverable and will rely on revenues from taxation. These non-recoverable costs include increased costs to law enforcement, public health and education campaigns, activities County departments take to enforce regulations, community outreach, and costs related to policy study, data collection, and monitoring.

Challenges with Banning Marijuana Businesses

Banning unlicensed marijuana businesses is difficult and expensive to enforce. Many cities and counties, including unincorporated County areas and the City of Los Angeles, have dedicated considerable resources to closing unlicensed businesses. Unlicensed activity endures in spite of these efforts, and new unlicensed businesses continue to open.

The unlicensed and unregulated cultivation, processing, and sale of marijuana and marijuana products have the potential to harm County residents and consumers of marijuana in a number of ways, including the following:

- Unlicensed cultivators are more likely to cause environmental damage and misuse pesticides;
- Unlicensed marijuana product is not inspected or tested for mold, fungus, or other contaminants;

- Unlicensed manufacturers are more likely to create safety hazards by diverting electricity without permits and operating dangerous extraction laboratories in or near residences without proper equipment or ventilation;
- Unlicensed retail locations tend to locate in low-income neighborhoods and communities of color, causing an overconcentration in those areas; and
- Unlicensed activity can be a source of revenue for criminal enterprises.

Challenges with Allowing and Regulating Marijuana Businesses

Allowing and regulating marijuana businesses could increase consumer safety and decrease negative community and environmental impacts over time as licensed operators displace unlicensed activity. However, regulating marijuana businesses presents a unique set of challenges. Regulations must be appropriately calibrated to allow marijuana businesses in a way that avoids negative community impacts.

Some of the challenges with regulating marijuana include the following:

- Marijuana remains illegal under federal law, which causes banks, credit cards, and other institutions to refuse to participate in the marijuana industry. The result is that marijuana is primarily a cash business, which leads to underreporting of revenues and opportunities for crime.

- Regulations must also contend with a now-thriving black and grey marijuana market. Taxing businesses too much, or over-regulating businesses, could cause high operating costs and high retail prices, which create incentives for continued black and grey market activity. Regulations must also address and curtail opportunities for legally grown marijuana to enter black and grey market channels.

Data must be collected and closely monitored to ensure the efficacy of any regulatory program. Regulations must be flexible enough to adjust readily to changing market conditions.

Options Available to your Board

Under applicable State law, your Board can: (1) ban all marijuana businesses in unincorporated areas; or (2) allow some or all types of marijuana businesses in unincorporated areas. If your Board decides to allow some or all types of marijuana businesses in unincorporated areas, your Board could also decide to regulate these businesses more strictly than under State law. Such regulations could include rigorous operational requirements, limits on the size of facilities, and a limit on the number of available licenses.

For your Board's convenience, attached to this memorandum is a separate document listing the specific actions your Board may take to effectuate either choice.

Should you have any questions, please contact me at (213) 974-1101, or Joseph M. Nicchitta, Countywide Coordinator for the Office of Marijuana Management, at (213) 974-4530.

SAH:JJ
JMN:rld

Attachments

c: Executive Office, Board of Supervisors
Assessor
County Counsel
Department of Agricultural Commissioner/Weights and Measures
Department of Business and Consumer Affairs
Department of Public Health
Department of Public Works
Department of Regional Planning
District Attorney
Fire Department
Sheriff
Treasurer and Tax Collector

POTENTIAL ACTIONS IN RESPONSE TO PROPOSITION 64

OPTION 1: BAN ALL MARIJUANA BUSINESSES

If your Board decides to ban all marijuana businesses in unincorporated areas of the County, your Board may take the following actions:

1. Direct the Department of Regional Planning and County Counsel, in coordination with the Chief Executive Office ("CEO"), to prepare an ordinance amending Title 22 of the County Code (Zoning Code) which:

    a. Bans the cultivation, manufacture, processing, transportation, and retail sale of medical and nonmedical marijuana in the unincorporated territory of the County; and

    b. Sets reasonable regulations for personal cultivation of medical and nonmedical marijuana, including but not limited to an appropriate limit on the total number of plants which may be cultivated for personal use.

2. Direct the CEO to coordinate with County departments with countywide responsibilities, such as inspecting, permitting, licensing, or otherwise dealing with marijuana businesses in incorporated cities, to:

    a. Prepare necessary ordinance amendments to address issues unique to the marijuana industry and appropriately regulate the activity of marijuana businesses, including but not limited to establishing an appropriate fee for services performed by departments; and

    b. Develop appropriate safety protocol for County employees who will be directly involved in the inspection of marijuana businesses. Such safety protocol should include, at a minimum, training modules to ensure that County employees are aware of and can identify and appropriately respond to or avoid risks and hazards unique to the marijuana industry.

3. Direct the Department of Public Health, in coordination with the CEO and in partnership with community groups, schools, and other stakeholders, to prepare and begin implementing education and prevention campaigns to deter young people from consuming marijuana, and to educate all people about the risks of using marijuana.

4. Direct the Department of Human Resources, in coordination with the CEO, to evaluate current drug use policies for County employees, and report back to the Board on any recommended policy changes, if any.

5. Recommend the Sheriff and the District Attorney develop and implement training protocols to detect when drivers are under the influence of marijuana.

6. Direct the CEO to coordinate with affected County departments to evaluate potential options to tax marijuana businesses operating in incorporated cities to ensure, at a minimum, that the County is fully reimbursed for services it performs in incorporated areas.

OPTION 2: ALLOW SOME OR ALL MARIJUANA BUSINESSES

If your Board decides to allow some or all marijuana businesses, your Board may take the following actions:

1. Direct the CEO to coordinate with affected County departments, including but not limited to County Counsel, Sheriff, District Attorney, Regional Planning, Public Health, Agricultural Commissioner/Weights and Measures, Public Works, Fire, Treasurer and Tax Collector, Business and Consumer Affairs, and the Assessor, to:

    a. Prepare necessary ordinance amendments, including but not limited to amendments to Title 22 of the County Code (Zoning Code) and Title 7 of the County Code (Business Licenses), to allow, license, and appropriately regulate the cultivation, transportation, distribution, processing, manufacturing, retail sale, and delivery of medical and nonmedical (recreational) marijuana in unincorporated County areas.

    b. Incorporate into such ordinances requirements and best practices for regulating medical and nonmedical marijuana, including but not limited to the following:

        i. Regulations and best practices which limit and/or address impacts to the public health and safety, County neighborhoods (including but not limited to disparate impacts and overconcentration in low-income communities), and the environment, as described in the CEO's report dated November 15, 2016.

        ii. Regulations and best practices that promote meaningful jobs and economic development in all areas of the County, with equal opportunities to participate for all County residents. Best practices could include, if feasible, local worker hire requirements and opportunities for small business participation.

        iii. Regulations and best practices that minimize the participation of criminal elements in the legal marijuana market, and that will lead to an end of the black and grey marijuana markets in the County, including but not limited to development standards that reduce opportunities for crime, such as minimum security requirements, hours of operation, the usage of security cameras, and other appropriate regulations to prevent diversion of marijuana to black and grey markets.

iv. Regulations and best practices to promote sustainable businesses with limited impact on the environment, including incentives to utilize energy efficient lighting, reduce overall lighting requirements, utilize water reduction and recycling techniques, and cultivate strains which require less water.

v. Regulations and best practices with respect to licensing, permitting, and/or registering of marijuana businesses, owners, and employees to promote a culture of compliance and compatibility with surrounding uses, including but not limited to a potential cap on the number of business licenses which will be issued within any one supervisorial district and/or Countywide.

vi. Regulations which put into place an appropriate County governance model to implement, oversee, and enforce the regulatory program.

c. Conduct appropriate outreach and public meetings with community members, business owners, and other stakeholders to obtain feedback on regulations and best practices.

d. Report back to the Board on options available to the County to tax marijuana businesses, with the goal of maximizing revenues while fostering a regulated legal marketplace which minimizes the black and grey marijuana markets.

e. Deploy a robust data collection program to monitor marijuana usage among adults and young people; crime rates associated with marijuana; traffic incidents and other injuries involving marijuana; marijuana cultivation and sales; employment and job statistics; energy and water usage and other environmental effects of marijuana businesses; and all other data indicators necessary or desirable to measure the effects of legal marijuana on County residents and the effectiveness of the County's regulatory program.

f. Develop appropriate safety protocol for County employees who will be directly involved in the inspection of marijuana businesses. Such safety protocol should include, at a minimum, training modules to ensure that County employees are aware of and can identify and appropriately respond to or avoid risks and hazards unique to the marijuana industry.

2. Direct the CEO, in coordination with affected County departments, to:

a. Work with local cities to promote uniformity of regulations and best practices within the entire County, with the goal of preventing impacts to any one city or unincorporated community from marijuana businesses in nearby cities or communities.

b. Advocate that the State of California and the federal government develop effective statutes and regulations at the State and federal levels, including but not limited to statutes and regulations that address problems associated with the disproportionately high use of cash in marijuana businesses.

3. Direct the Department of Regional Planning to conduct an appropriate environmental review pursuant to the California Environmental Quality Act (CEQA), and, in coordination with the CEO and County Counsel, prepare an ordinance which:

    a. Bans the cultivation, manufacture, processing, transportation, and retail sale of medical marijuana in the unincorporated territory of the County until the County adopts a comprehensive regulatory framework for medical and nonmedical marijuana; and

    b. Sets reasonable regulations for personal cultivation of medical and nonmedical marijuana, including but not limited to an appropriate limit on the total number of plants which may be cultivated for personal use in any one dwelling unit and on a single parcel.

4. Direct the Department of Public Health, in coordination with the CEO and in partnership with community groups, schools, and other stakeholders, to implement education and prevention campaigns to deter young people from consuming marijuana and to educate all people about the risks of using marijuana.

5. Direct the Department of Human Resources, in coordination with the CEO, to evaluate current drug use policies for County employees, and report back to the Board on any recommended policy changes, if any.

6. Recommend the Sheriff and the District Attorney implement training protocols to detect when drivers are under the influence of marijuana.

REPORT

– REPORT ON PROPOSITION 64, THE ADULT USE OF MARIJUANA ACT – PREPARED BY THE LOS ANGELES COUNTY CHIEF EXECUTIVE OFFICE, OFFICE OF MARIJUANA MANAGEMENT NOVEMBER 15, 2016

TABLE OF CONTENTS

I. INTRODUCTION

On November 8, 2016, California voters approved Proposition 64, the Adult Use of Marijuana Act ("AUMA"). Generally, AUMA makes it legal for adults aged 21 and over to grow, possess, and use nonmedical (recreational) marijuana. AUMA also allows licensed businesses to grow, distribute, and sell nonmedical marijuana.

AUMA became effective immediately on November 9, 2016. Commercial nonmedical marijuana activity, however, will not start until January 1, 2018, when the State will begin licensing activities for marijuana businesses. Businesses cannot operate without appropriate State-issued licenses and any required local licenses and approvals.

In addition to AUMA, the California Legislature recently approved a package of bills to regulate medical marijuana. This package of bills is referred to as the Medical Cannabis Regulation and Safety Act ("MCRSA"). MCRSA generally legalizes the personal use of medical marijuana for persons with a doctor's recommendation, as well as the commercial cultivation, processing, and sale of medical marijuana. Together, MCRSA and AUMA constitute State law governing medical and nonmedical marijuana.

This report analyzes AUMA and MCRSA, and discusses the impacts, benefits, revenues, and costs to the County that may result from legal marijuana. This report also describes issues unique to marijuana regulation, and sets forth various options available to your Board in response to the passage of Proposition 64.

This report is organized into the following topic areas:

- Summary of AUMA and MCRSA;
- Voting statistics for Proposition 64;
- Current County laws regarding medical marijuana businesses;
- AUMA's potential impacts and benefits to the County;
- How banning or allowing marijuana businesses in unincorporated areas affects the potential impacts and benefits to the County;
- Taxation and regulatory costs;
- Special considerations for regulating marijuana; and
- Options available to your Board.

II. SUMMARY OF AUMA AND MCRSA

A. Key Provisions of AUMA

Key provisions of AUMA include the following:

- AUMA decriminalizes the possession, transport, and personal use by adults of up to one ounce of dry marijuana and up to eight grams of marijuana concentrates, such as hash, wax, or butane honey oil (BHO).

- AUMA allows adults to grow up to six marijuana plants for nonmedical purposes in a private residence or on the grounds of a private residence, provided the plants are out of public view and in a secured location.

- AUMA allows businesses to cultivate, distribute, process/manufacture, and sell nonmedical marijuana for commercial purposes, provided the businesses are first licensed by State authorities and by the local government.

- The State Departments of Consumer Affairs, Public Health, and Food and Agriculture are responsible for the regulation and licensing of marijuana businesses. These entities will begin issuing licenses to marijuana businesses no earlier than January 1, 2018.

- The Bureau of Marijuana Control (formerly, the Bureau of Medical Cannabis Regulation), within the State Department of Consumer Affairs, is responsible for coordinating the activities of State agencies with respect to marijuana regulation, licensing, and enforcement.

AUMA allows local governments to control nonmedical marijuana within their jurisdictions. Specifically:

- While AUMA prevents local governments from banning personal cultivation of nonmedical marijuana by adults, local governments may "reasonably regulate" such personal cultivation, including by requiring that all cultivation take place indoors.

- AUMA preserves the right of local governments to ban commercial nonmedical marijuana activity within their jurisdictions.

- Alternatively, AUMA allows local governments to regulate commercial marijuana activities within their boundaries, including by adopting local zoning and land use requirements, business license requirements, and standards for environmental protection, testing, security, safety of marijuana products, and worker protection.

With respect to taxation:

- AUMA provides for a 15 percent State excise tax on all retail sales of medical and nonmedical marijuana and a State cultivation tax of $9.25 per ounce of dry marijuana flowers and $2.75 per ounce of dry marijuana leaves. These taxes are in addition to other applicable State and local sales and use taxes. However, under AUMA, sales of medical marijuana and marijuana products are exempt from State sales and use taxes. Medical marijuana and marijuana product sales are still subject to sales and use taxes imposed by local governments.

- State tax revenue will be used to cover the State's costs to administer and enforce marijuana regulation. Remaining revenues would be distributed as follows:

    - $2 million per year to the University of California at San Diego Center for Medical Cannabis Research to study medical marijuana;

    - $10 million per year for 11 years for public California universities to research and evaluate new nonmedical marijuana laws;

    - $3 million per year for five years to the California Highway Patrol to establish and adopt protocols to detect impaired driving; and

    - $10 million per year, increasing each year by $10 million reaching $50 million in 2022, for grants to local health departments and community-based nonprofits supporting "job placement, mental health treatment, substance use disorder treatment, system navigation services, legal services to address barriers to reentry, and linkages to medical care for communities disproportionately affected by past federal and state drug policies."

- Remaining revenues would be distributed as follows:

    - 60 percent to youth programs, including drug education, prevention, and treatment;

    - 20 percent to prevent and alleviate environmental damage from illegal marijuana producers; and

    - 20 percent to programs designed to reduce driving under the influence of marijuana and a grant program designed to reduce negative impacts on health or safety resulting from AUMA.

- Local governments are eligible to receive grants through programs funded by State tax revenue. If local governments ban marijuana businesses or outdoor personal cultivation, they will be ineligible to receive some grants.

- In addition to State taxes, AUMA allows local governments to tax marijuana businesses. Counties may tax medical and nonmedical marijuana businesses operating in their unincorporated territories, as well as medical and nonmedical marijuana businesses operating within their incorporated cities.

Finally, AUMA reduces criminal penalties for illegal marijuana possession and cultivation. Under AUMA, a person with a prior marijuana conviction may petition the court to change his or her criminal record, or to reduce his or her sentence.

B. History of Medical Marijuana Legalization

In 1996, California voters approved Proposition 215, the Compassionate Use Act ("CUA"). The CUA decriminalized the cultivation and possession of marijuana, but only for a patient or the patient's primary caregiver upon the recommendation of a physician.

In 2003, the California Legislature enacted the Medical Marijuana Program Act ("MMPA"). Among other things, the MMPA established a voluntary ID card program for patients and their caregivers administered by county health departments. The MMPA also exempts cooperative and collective cultivation of medical marijuana by qualified patients and their primary caregivers from certain State criminal sanctions.

In October 2015, the California Legislature enacted MCRSA, a comprehensive package of bills establishing statewide regulations for the cultivation, testing, distribution, and manufacturing of medical marijuana and marijuana products. MCRSA became effective January 1, 2016. Under MCRSA, local governments may implement additional standards to permit, regulate, or ban medical marijuana businesses in their jurisdictions.

In addition, like AUMA, MCRSA allows counties to tax marijuana businesses in unincorporated areas and within incorporated cities.

C. Relationship of AUMA to MCRSA

AUMA is patterned largely after MCRSA. AUMA also makes certain changes to MCRSA, including strengthening requirements for obtaining and maintaining medical marijuana ID cards. Although there are some differences between the two laws, their relative uniformity allows local governments to implement regulatory programs that need not materially differentiate between medical and nonmedical marijuana.

D. Types of Commercial Activity Allowed under AUMA and MCRSA

The following table summarizes commercial activity allowed under AUMA and MCRSA:

Commercial Activity Allowed under AUMA and MCRSA	
Medical Marijuana • Cultivation • Manufacturing • Retail Sales • Distribution • Delivery • Laboratory Testing	Nonmedical Marijuana • Cultivation • Manufacturing • Retail Sales • Distribution • Delivery • Laboratory Testing • Microbusinesses

1. Cultivation

AUMA and MCRSA together allow the cultivation of medical and nonmedical marijuana. Cultivation includes the planting, growing, harvesting, drying, curing, grading, and trimming of marijuana. Cultivation can take place indoors, outdoors, and in a mixed-light facility such as a greenhouse which is illuminated only at night. Cultivators can also operate nurseries, which will produce only clones, immature plants, and seeds for planting, propagating, and cultivating of marijuana.

Under MCRSA, outdoor cultivation of medical marijuana is limited to a maximum one acre, and indoor and mixed-light cultivation is limited to 22,000 square feet. These limitations are the same for nonmedical marijuana under AUMA until January 1, 2023, when these limits will be lifted for nonmedical marijuana cultivation.

2. Manufacturing

The manufacturing of marijuana products is allowed under both AUMA and MCRSA. Marijuana products include concentrates, such as hash, wax, and oil, and edibles. Properly licensed manufacturers can utilize volatile solvents to extract THC, including explosive gases such as butane. AUMA and MCRSA task the State Department of Public Health with establishing minimum standards for the safe manufacture of marijuana using volatile solvents.

3. Distribution

Distribution includes the procurement, sale, and transport of marijuana and marijuana products between cultivators, manufacturers, and retail locations. Both AUMA and MCRSA preclude distributors from taking marijuana or marijuana products out-of-state.

4. Retail sales

Retailers sell marijuana and marijuana products to consumers. Retailers must have separate licenses to sell medical and nonmedical marijuana.

5. Delivery

Delivery involves the transfer of marijuana or marijuana products from a licensed retailer to a customer. It also includes any technology platform owned or controlled by a licensed retailer to effectuate deliveries, including websites and apps.

Under AUMA and MCRSA, a local government can ban deliveries of marijuana to customers living within its jurisdiction, but cannot prevent the transportation of marijuana through its jurisdiction on public roads.

6. Laboratory testing

Laboratory testing involves the testing of marijuana and marijuana products for potency, chemical residue from solvents used in the manufacturing process and pesticides, and contaminants and foreign materials such as molds, fungus, insects, and hair.

Prior to sale, all medical and nonmedical marijuana and marijuana products must be batch tested by licensed laboratories.

7. Onsite consumption

Under AUMA, your Board can adopt an ordinance to allow the consumption of nonmedical marijuana products onsite in a licensed retail location, provided the area where marijuana consumption is allowed is restricted to persons aged 21 and over, consumption is not visible from any public place or non-age-restricted area, and alcohol or tobacco is not sold or allowed on the premises. Onsite consumption would not be allowed absent such an ordinance.

8. Separate licenses required

Both AUMA and MCRSA require that businesses obtain a separate license for each type of commercial activity in which they engage. This includes separate licenses for cultivation facilities, manufacturing facilities, and retail locations. One exception to this rule is a "microbusiness" license under AUMA. A licensed "microbusiness" can engage in cultivation of less than 10,000 square feet of marijuana, distribution, manufacture using nonvolatile solvents or no solvents, and retail sales of marijuana and marijuana products with only a single license.

Both medical and nonmedical marijuana businesses must also obtain separate licenses for each location where they engage in commercial activity. Businesses that are licensed as laboratories cannot hold any other type of medical or nonmedical marijuana business license.

9. "Dual" State and local licensing

Both medical and nonmedical marijuana businesses must be appropriately licensed by the State to operate.

Under MCRSA, a medical marijuana business must first obtain a local license as a prerequisite to receiving a State license. However, MCRSA allows existing medical marijuana businesses to continue to operate, provided they apply for a State license and are in compliance with all local laws.

Under AUMA, a nonmedical marijuana business need not obtain a local license prior to the issuance of a State license. However, the State may not issue a license to a nonmedical marijuana business if doing so would be inconsistent with local zoning or licensing requirements.

The State will not begin issuing licenses for medical or nonmedical businesses until January 1, 2018.

III. CURRENT COUNTY LAWS GOVERNING MEDICAL MARIJUANA

Medical marijuana dispensaries are currently banned in all unincorporated County areas. (Los Angeles County Code section 22.56.196.)

On April 12, 2016, the County adopted an urgency ordinance banning the cultivation, manufacturing, laboratory testing, and distribution of medical marijuana in unincorporated areas. The urgency ordinance was twice extended, on May 24, 2016, and again on June 28, 2016. The urgency ordinance will expire on June 28, 2017.

If your Board decides to allow medical and nonmedical marijuana businesses in the County, your Board may also consider directing the Department of Regional Planning to prepare an ordinance banning the cultivation, manufacturing, laboratory testing, and distribution of medical marijuana in unincorporated areas, until the County adopts regulations governing both medical and nonmedical marijuana businesses.

IV. POTENTIAL IMPACTS TO LOS ANGELES COUNTY

A. Impacts to Public Health and Safety

1. Driving under the influence of marijuana

There is consensus among law enforcement and public health officials that consuming marijuana, and especially consuming marijuana together with other drugs such as alcohol, negatively impacts a person's ability to operate a motor vehicle safely. However, no clear standard exists to determine whether a person under the influence of marijuana is too impaired to drive. There is also no accepted field testing device, such as a breathalyzer, to determine whether a person is impaired due to marijuana consumption. While early data from the States of Washington and Colorado, where medical and nonmedical marijuana are legal, shows an increase in positive tests for marijuana associated with higher rates of traffic accidents and driving infractions, it is not yet known whether these increases are due to more marijuana use, increased field testing by and training of law enforcement officers, or another cause. Moreover, a positive result for marijuana does not necessarily indicate impairment, since marijuana stays in the system much longer than alcohol, for example.

Nevertheless, County law enforcement and public health officials will need to reinforce prevention, deterrence, and education programs to reduce driving under the influence of drugs, including marijuana. Law enforcement officials will require additional training to develop accurate, practical field testing for marijuana.

2. Underage use

Experts concur that the use of marijuana by minors impacts brain development. Although many people under the age of 21 currently use marijuana in California, legalization and social acceptance of marijuana could cause young people to believe that marijuana is not harmful. This decreased perception of risk could lead to increased use of marijuana by minors in California over time.

County public health officials and education professionals will need to increase efforts to prevent underage use, including education campaigns designed to alert children to the risks of marijuana consumption. Education campaigns can also target parents and users of marijuana products to encourage adults to keep marijuana secure and to monitor supply.

With your Board's direction, County departments, including Public Health, Consumer and Business Affairs, Regional Planning, Treasurer and Tax Collector, and others, may be involved in developing regulations that restrict advertising, signage, packaging, and other aspects of marijuana marketing to protect children and young people and deter underage use.

3. Marijuana dependency and abuse

Legalization of marijuana could result in an increase in the rate of marijuana dependency and abuse. For example, Colorado reported statistically significant increases in hospitalizations where marijuana abuse, dependency, or poisoning was suspected after medical marijuana became commercially available in Colorado in 2010, and again after nonmedical marijuana became commercially available in 2014. It is not known, however, whether these increases resulted from legalization as opposed to other causes, such as better screening or patients self-reporting marijuana use at greater rates.

County public health and education officials will need to continue, and likely expand, programs to prevent and treat marijuana dependency and abuse. Strategies must also be implemented to minimize patterns of use that could lead to abuse and dependence in the first place.

4. Injury/illness from consumption of marijuana products

A person can be injured or made ill by consuming marijuana products that contain fungus, mold, pesticides and other chemicals, or which are unsafe to eat for other reasons, such as spoilage or bacterial contamination. A person can also be injured or made ill by consuming too much marijuana, including by overconsuming marijuana products such as edibles, whose full effects may not be felt for some time after the product is consumed.

The Environmental Health division of the Department of Public Health has primary authority over the production, wholesale, and retail of food products within most parts of the County. This authority will need to be extended to the production of marijuana products, including edibles and concentrates. Additional training, inspectors, and staff will be needed to properly regulate marijuana products marketed to consumers.

With respect to pesticides, the United States Environmental Protection Agency ("EPA") is primarily responsible for evaluating and approving pesticides for certain uses and applications. The State Department of Pesticide Regulation ("DPR") has primarily responsibility for implementing the EPA's requirements for each pesticide and registering pesticides for use within California. Among other things, county agricultural commissioners are responsible for issuing the site- and time-specific permits to use restricted pesticides in agriculture. Because marijuana remains illegal under federal law, however, the EPA has not evaluated pesticide use in marijuana cultivation. Therefore, the County Agricultural Commissioner will have to work with DPR to ensure that pesticide use associated with the cultivation of marijuana is appropriate and safe.

Finally, with your Board's direction, County public health officials, as well as the County Department of Consumer Affairs and others, will have to develop appropriate regulations to protect users from overconsumption. Such regulations could include requiring that marijuana products contain certain warnings or symbols, and requiring that dosing information is readily and accurately disclosed on marijuana packaging.

B. Impacts to Neighborhoods

1. Odors

Marijuana plants are particularly fragrant when flowering. In cultivation facilities where a large number of plants are concentrated, odor production and migration offsite can be significant. Personal cultivation may also produce odors that are detectable offsite. Should the County decide to allow marijuana businesses in unincorporated areas, appropriate zoning controls and mitigation measures should be considered to minimize offsite odor problems.

2. Incompatibility with surrounding uses

Marijuana businesses, in particular facilities which process marijuana using volatile solvents such as butane to extract THC, may not be compatible with nearby residences, businesses, or other uses. Retail marijuana locations and dispensaries have the potential to attract a high volume of customers. If these businesses do not provide sufficient parking or interior waiting area, customers could congregate on neighborhood streets and sidewalks, and in parking lots. This may result in noise complaints and concerns about public marijuana consumption. Should the County decide to allow marijuana businesses in unincorporated areas, appropriate controls should be established to ensure that the location and operation of marijuana businesses are compatible with surrounding uses.

3. Crime

Marijuana businesses operate largely in cash. In addition, marijuana products remain illegal in many states and in other countries, and stolen marijuana can be sold on the black market for large profits. These factors make marijuana businesses a potential target for robberies and burglaries. Should the County decide to allow marijuana businesses in unincorporated areas, appropriate standards should be developed to ensure marijuana businesses are secured and operated in a way that deters crime.

4. Unlicensed commercial activity

There are currently approximately 65 unlicensed marijuana businesses operating in the unincorporated County, despite the County's ban on marijuana businesses. Unlicensed activity could continue if barriers to market entry make it difficult to establish a licensed business. Such barriers could include high startup costs, difficulty obtaining a license as competition for licenses increases, and the limited availability of lawful locations due to zoning regulations. Some operators may avoid obtaining a license because they want to remain unregulated. Unlicensed locations tend to locate in low-income neighborhoods to avoid detection or organized opposition. Unlicensed marijuana businesses are less likely to be "good neighbors" and more likely to affect the wellbeing of surrounding communities.

The County should continue efforts to combat unlicensed activity. Should the County decide to allow marijuana businesses in unincorporated areas, it should enact regulations to deter unlicensed operations. For example, the County could partner with licensed businesses to identify and pursue unlicensed activity. Consumer education campaigns may also be helpful to direct consumers to licensed facilities.

5. Overconcentration

Marijuana businesses may be likely to locate near each other, which could result in cumulative impacts to surrounding neighborhoods. Some evidence also suggests marijuana businesses may be more likely to locate in low-income areas. Should the

County decide to allow marijuana businesses in unincorporated areas, appropriate distancing, separation, and other requirements should be developed to ensure that marijuana businesses do not unduly concentrate in a single community.

6. "Home-grows"

As stated above, the County cannot ban personal cultivation. However, the County should explore reasonable regulations to ensure home-grow operations are safe, secure, self-contained, and compatible with surrounding neighbors. Potential regulations which should be explored further include requiring personal cultivators to register with the County, requiring that plants be grown indoors, and limiting the total number of plants that can be grown on a single zoned lot, regardless of the number of residences on the lot.

C. Impacts to the Environment

Marijuana cultivation has the potential to impact the environment in a number of ways.

Indoor cultivation utilizes large amounts of electricity to power lights and HVAC systems. Denver energy officials stated that, in 2013, marijuana cultivation accounted for approximately 1.45 percent of Denver's total electrical usage, but represented nearly half of the city's growing electrical demand.

Marijuana cultivation also requires a significant amount of water, with some reports estimating that each plant requires as much as six gallons of water per day, although estimates vary and anecdotal reports claim indoor cultivation uses less water than outdoor cultivation. Wastewater generated by indoor marijuana cultivation will result in additional loads in County sewers and treatment facilities.

In Northern California, illegal outdoor cultivation is a recognized source of serious environmental damage, including wildlife poisoning by pesticides, over-drafted, diverted, and polluted rivers, deforestation, and erosion.

If the County decides to allow marijuana businesses in unincorporated areas, the County should consider whether to allow outdoor or indoor cultivation, or both. The County should also incentivize the use of best practices to reduce energy and water consumption and limit environmental damage associated with marijuana cultivation.

D. Impacts to County Infrastructure, Staffing, and Budgeting

Proposition 64 will impact County infrastructure, staffing, and budgeting. For example, the Sheriff's Department and District Attorney will require additional resources, such as drug recognition experts, to investigate suspected DUIDs (driving under the influence of drugs), additional equipment to test marijuana products, and more training of personnel to detect unlicensed marijuana activity.

It is expected that the Department of Public Health's Division of Environmental Health will oversee the following for unincorporated County areas and 85 cities: (a) permitting/licensing of edible retail or manufacturing facilities; (b) marijuana manufacturing and extraction, including composting and waste management, water resources, onsite water backflow prevention and cross-connection, and general sanitation such as onsite toilets; (c) collectives and dispensaries, including the processing of edibles, packaging, labeling, and product retailing; and (d) complaint investigations related to odors and other potential nuisance activity. Enforcement programs would need to be developed along with fees to support the associated costs.

The Department of Public Health will also have to increase efforts to prevent underage marijuana use, and to treat drug dependency and addiction.

In addition, the Department of Regional Planning and the Treasurer and Tax Collector will likely experience increased caseloads associated with applications for permits and licenses for marijuana businesses.

Examples of some less obvious potential impacts include the following:

- If the County decides to tax marijuana businesses, the Treasurer and Tax Collector may have to upgrade its cashiering system and, because marijuana businesses operate largely in cash due to federal banking restrictions, may need to contract for armored car services and upgrade security protocols.

- The Agricultural Commissioner/Weights and Measures ("ACWM") investigates complaints of pesticide-related illnesses countywide, which are reportedly on the rise in Oregon as persons who have consumed marijuana suspect they are sickened by pesticide residues. ACWM is also responsible for ensuring the accuracy of measuring and weighing devices countywide, including scales used to weigh marijuana products. These scales are extremely sensitive and require a longer, more intensive testing procedure than, for example, a grocery store scale for weighing produce. Finally, the California Department of Food and Agriculture ("CDFA") is charged with creating a cultivator licensing program, establishing a system to apply unique identifiers to each individual cannabis plant grown, a database with which to "track and trace" all harvested product, and to establish regulations to prevent potential water contamination, excessive water consumption, and environmental damage. ACWM will be working with CDFA in identifying and coordinating future related regulatory activities.

- The District Attorney, Public Defender, Alternate Public Defender, and potentially the Probation Department will have an increased workload related to requests for resentencing or the changing of marijuana convictions.

V. POTENTIAL BENEFITS TO LOS ANGELES COUNTY

A. Tax Revenues

As more thoroughly explained below, should the County decide to allow and regulate marijuana businesses, County tax revenues are estimated between $85 million and $127 million annually. The methodology and assumptions used to derive these revenue estimates are discussed below and in Attachment I to this report.

B. Cost Savings from Decreased Criminal Penalties

In connection with its analysis of Proposition 64, the California Legislative Analyst's Office estimated "[n]et reduced costs potentially in the tens of millions of dollars annually to state and local governments primarily related to a decline in the numbers of marijuana offenders held in state prisons and county jails." It should be noted, however, that some law enforcement officials dispute that there are large numbers of offenders presently serving jail time for marijuana-related offenses and argue that any cost savings will be offset by training and enforcement efforts to stop drugged driving and unlicensed black and grey market activity.

C. Reduction in Black and Grey Marijuana Markets

One potential benefit of a legal, regulated marijuana marketplace is the reduction of the black and grey marijuana markets over time. The alcohol industry provides an example of an industry that converted from a black market during prohibition to a predominately regulated industry in the present day.

Some argue that the black and grey marijuana markets will continue to thrive until marijuana becomes legal under federal law and in most other U.S. states, as diversion to places where marijuana is illegal will remain highly profitable. Others argue that a consistent supply of legal marijuana could allow legitimate businesses to outcompete black and grey markets locally.

In addition, government efforts to educate consumers about the risks of consuming unlicensed, untested, and potentially adulterated marijuana products could drive consumers away from the black and grey market to licensed suppliers. By way of example, some consumers are strongly influenced by the letter grades issued by the Department of Public Health for food establishments. A comparable marijuana-industry effort is underway in the City of San Diego, where the city has partnered with licensed marijuana dispensaries to display a special insignia on storefronts that identifies the dispensary as city-approved. The city also developed an advertising campaign dubbed "Buy Safe Buy Legal" to encourage consumers to buy from licensed dispensaries.

D. Increased Safety of Marijuana Products

Dried marijuana flower and processed marijuana products can be considered unsafe for a number of reasons. Pesticides used in the cultivation of marijuana can remain on dried flowers at dangerous levels when smoked. Pesticide levels can become further concentrated when flowers are processed into marijuana concentrates or used in edibles and other products. Marijuana can also be contaminated with mold or fungus, which can result in illness.

Regular testing of marijuana products for pesticide residues, mold, and fungus is expected to decrease the rate of unhealthy chemicals and spores in marijuana products.

Marijuana products can also be unsafe if they are not appropriately labeled as to their contents or the amount of THC contained in the product, or if the product contains more THC than anticipated. Other problems include THC that is not evenly distributed throughout the entirety of the product (homogenized), unsafe chemical content, spoilage, and unsanitary preparation.

Regular inspection by the Department of Public Health of edible processing facilities and extraction facilities, as well as monitoring of edible labeling, is expected to increase product safety. Regulation will also allow for coordinated recalls to remove unsafe product from store shelves.

E. Economic Development and Job Creation

Some have argued that legalizing commercial medical and nonmedical marijuana business activity will result in economic benefits and job creation as businesses establish and operate. In Denver, officials report significant reinvestment in formerly blighted areas as cultivation facilities acquire vacant warehouses and other industrial space. With respect to jobs, at year's end in 2015, the State of Colorado reported approximately 27,000 persons actively and directly employed by marijuana businesses.

Questions remain, however, whether marijuana businesses will translate into jobs for local residents, or whether businesses will predominately employ out-of-area workers. Current ownership trends also show that only a small portion of existing marijuana businesses are minority- or female-owned. Some in Denver have argued that marijuana businesses are displacing other new industries that would also reinvest in industrial and blighted areas.

VI. HOW BANNING OR ALLOWING MARIJUANA BUSINESSES IN UNINCORPORATED AREAS AFFECTS THE POTENTIAL IMPACTS AND BENEFITS TO THE COUNTY

Generally, some level of the impacts identified above is expected to occur regardless of whether the County decides to allow marijuana businesses in unincorporated areas, for two primary reasons.

First, the County's two most populous cities – Los Angeles and Long Beach – have legalized or are expected to legalize some form of commercial medical and nonmedical marijuana activity.[1] Impacts are expected to be felt in unincorporated areas adjacent to these cities, and elsewhere in unincorporated County as people travel to and from these cities and unincorporated areas. Other County cities may follow suit and allow some form of medical or nonmedical marijuana businesses, which could also impact unincorporated areas.

Second, experience has shown that bans of marijuana businesses have been difficult and expensive to enforce. As stated above, the County currently bans medical marijuana dispensaries in unincorporated areas. County Counsel reports, however, that there are approximately 65 dispensaries illegally operating in unincorporated areas, despite enforcement efforts by County Counsel and the District Attorney. As of the date of this report, County Counsel has three pending cases against medical marijuana dispensaries and the District Attorney is currently pursuing 25 active cases.

The City of Los Angeles also bans medical marijuana businesses, with the exception of 135 businesses operating with limited immunity under applicable city ordinances. In August 2015, however, a report published by *Reuters* estimated the number of medical marijuana dispensaries in the City of Los Angeles at over 400.[2]

For these reasons, a continued ban in unincorporated areas could encourage Illegal businesses to continue to establish and operate, causing impacts to surrounding neighborhoods.

Some potential benefits are also expected to occur regardless of whether the County decides to allow marijuana businesses in unincorporated areas, including cost savings associated with decriminalization of certain marijuana offenses and an increased safety in marijuana products sold at licensed facilities.

Should the County decide to allow and regulate marijuana businesses in unincorporated areas, the County will likely experience increases in the impacts identified above in the short term, as the legal market develops and regulations are adjusted to address

---

[1] On November 8, 2016, Long Beach voters approved Measures MA and MM, which established a regulatory program and rate of taxation to legalize medical and nonmedical marijuana businesses in the City of Long Beach. On March 17, 2017, Los Angeles residents will vote on two competing measures, a citizen-sponsored initiative and a measure approved by the City Council, both of which would legalize medical and nonmedical marijuana businesses.

[2] Alex Dobuzinskis, "Los Angeles closes 500 medical marijuana shops, but hundreds remain," Reuters (April 9, 2015), http://www.reuters.com/article/us-usa-marijuana-california-idUSKBN0N02DE20150409.

emerging conditions. Over time, the County may experience economic development and job creation from new marijuana businesses. The County will also benefit from increased tax revenues, provided that regulatory costs do not exceed revenues.

Because overall effects are difficult to predict, any regulatory program for medical and nonmedical marijuana should be flexible enough to adjust quickly to changing market conditions and emerging impacts.

VII. TAXATION AND REGULATORY COSTS

A. Revenue and Cost Projections

In order to provide your Board with a high-level estimate of projected tax revenues and regulatory costs, the CEO retained a consultant, the Marijuana Policy Group, to study the market size, demand, tax revenues, and regulatory burdens expected for both the unincorporated and incorporated areas of the County. The report prepared by the Marijuana Policy Group is contained in Attachment I to this report.

With respect to market size and demand, the Marijuana Policy Group concluded the 2018 market value of regulated marijuana in the County is estimated to reach $1.6 billion. This figure does not include the approximately 30 percent of the market that is expected to remain unregulated in 2018 (i.e., black or grey market activity).

With respect to tax revenues, the Marijuana Policy Group found that potential County tax revenues are highly dependent on: (a) whether the County allows marijuana businesses in unincorporated areas; (b) whether the County taxes marijuana businesses in incorporated cities; and (c) the tax rate cities impose on marijuana businesses.

To account for these variables, the Marijuana Policy Group made certain assumptions. First, it was assumed the County would allow marijuana businesses in unincorporated areas. Second, it was assumed the County would impose a countywide tax. Third, it was assumed that cities would tax medical and nonmedical marijuana at 6 and 8 percent, respectively, or at 5 and 10 percent, respectively. This assumption is based on tax rates that would be established if City of Los Angeles voters approve one of two competing ballot measures in March 2017. Both ballot measures, one industry-sponsored and one city-sponsored, would regulate and tax medical and nonmedical marijuana businesses in the City of Los Angeles. Fourth, it was assumed that cities would allow sufficient marijuana businesses to satisfy estimated demand.

Using these assumptions, the Marijuana Policy Group estimated revenues under three potential County tax rates: 5 percent countywide; 10 percent countywide; and a dual rate of 5 percent within cities and 10 percent in unincorporated areas, to account for the fact that there are no city taxes within unincorporated areas.[3]

Based on these assumptions, the Marijuana Policy Group estimates annual County tax revenues as follows:

- Approximately $85 million if the County applied a 5 percent tax rate on medical and nonmedical marijuana countywide;
- Approximately $127 million if the County applied a 10 percent tax rate on medical and nonmedical marijuana countywide; and
- Approximately $105 million if the County applied a 5 percent tax rate on medical and nonmedical marijuana in incorporated cities, and a 10 percent tax rate on medical and nonmedical marijuana in unincorporated areas.

With respect to regulatory costs, the Marijuana Policy Group estimates the County will spend from approximately $9 million to approximately $30 million to regulate marijuana businesses countywide, depending on how many businesses are allowed to locate within the County. These costs are based on reported costs from other jurisdictions which allow and regulate medical and nonmedical marijuana. Further research is needed to more definitively project the County's regulatory burden.

B. Importance of Tax Rate to the Black and Grey Markets

A primary goal of any regulatory program for legal marijuana should be to prevent criminal participation in the legal market, and to eliminate parallel black and grey markets. In the context of marijuana black and grey market activity, taxation matters because high tax rates are more likely to increase business and retail costs. If it is too expensive for businesses to participate in the legal market, they may opt to cultivate, distribute, and sell illegally. If marijuana products cost significantly less on the black or grey market, consumers may be less likely to purchase through legal channels.

On the other hand, while a low tax rate will make it easier for legal outlets to compete with black and grey market suppliers and result in less expensive marijuana products for consumers, lower tax rates also impact revenue sources to local governments. Rates that are too low could result in general fund dollars being spent to regulate and enforce

[3] The Marijuana Policy Group was not asked to recommend a particular tax rate, but to test the effect of alternate tax rates on revenues, as well as any potential effects on black and grey markets.

marijuana regulations, taking money away from other important and necessary government activities and programs.

The Marijuana Policy Group concluded that the County nonmedical marijuana market could support an effective tax rate of 43 percent without diverting a significant percentage of sales to the black and grey markets. This 43 percent effective tax rate includes taxes levied by the State under AUMA, assumed taxes levied by cities as explained above, and a County tax rate of 5 percent countywide. A "dual" County tax rate of 10 percent within unincorporated areas and 5 percent within incorporated cities would also fall within the 43 percent effective tax rate and allow for additional County revenue.

The effective tax rate for nonmedical marijuana is expected to be less than 43 percent due to exemptions from State sales tax and expected lower tax rates for medical marijuana within incorporated cities, such as the City of Los Angeles.

C. Taxation of Medical Marijuana versus Nonmedical Marijuana

Under AUMA, the State imposes the same excise and cultivation taxes on both medical and nonmedical marijuana. Medical patients with state-issued ID cards are exempt from the State's current 7.5 percent sales tax.

Under AUMA and MCRSA, the County is permitted to tax marijuana businesses in unincorporated areas and within the County's incorporated cities. The County could choose to tax medical and nonmedical marijuana differently or at the same rate. With some limited exceptions, there is often no difference between marijuana products sold as "medical" versus "recreational."

Taxing medical and nonmedical marijuana at the same rate locally could incentivize those who use medical marijuana recreationally to convert to the recreational market over time. Moreover, the Treasurer and Tax Collector reports that a single tax rate for all marijuana products will result in efficiencies in processing and collecting taxes.

On the other hand, patients who legitimately use marijuana as medicine, especially critically ill patients, may be more cost sensitive to even small percentage increases marijuana taxes.

D. Taxing in Unincorporated Areas versus Incorporated Cities

Under AUMA, the County can tax marijuana businesses in both incorporated and unincorporated areas. Because the County has various duties and responsibilities in both incorporated and unincorporated areas, and because many County departments operate countywide, including but not limited to the Sheriff, District Attorney, Department of Public Health, Department of Public Works, the Fire Department, and the Agricultural Commissioner/Weights and Measures, taxing within incorporated areas may be justified to produce general fund revenues for use in all County areas and to recoup unrecovered costs.

However, cities are also entitled to tax marijuana businesses operating within their boundaries. Cooperation with cities is essential to ensure that the combined city and County tax rates do not inadvertently result in effective bans or the proliferation of unlicensed or black market activity in those areas.

E. Different Ways to Tax Marijuana Businesses

AUMA and MCRSA authorize the County to tax all marijuana businesses, from cultivation to retail. The County may choose to tax cultivators based on the value of their product, or based instead on the total square footage or on number of plants. Taxes at each point in the supply chain must be carefully considered, as cumulative taxation could result in retail prices that are not competitive with black market prices. Certain types of taxes may also be complicated to assess and collect.

F. Other Taxes Also Applicable

In addition to specific taxes on marijuana businesses, those businesses will be subject to all other applicable local taxes, including but not limited to local sales and use taxes and personal business property tax.

G. Cost Recovery from Permit, License, Inspection, and Other Fees

Generally, County departments obtain cost recovery for services performed by charging fees for permits, licenses, inspections, and other services. County departments must establish appropriate fees for services and entitlements provided to marijuana businesses to maximize cost recovery by County departments.

Enforcement activities often result in less than complete cost recovery. While departments may be able to levy administrative fines or obtain monetary judgments in court proceedings against noncompliant businesses, many businesses are unable or unwilling to pay such fines or judgments. Collection efforts can be time-consuming and unsuccessful. For this reason, fines and other penalties against noncompliant marijuana businesses must be sufficient to deter noncompliance in the first instance, and should include license suspension, forfeiture, and revocation where appropriate.

VIII. SPECIAL CONSIDERATIONS FOR REGULATING MARIJUANA

A. Marijuana Is Illegal under Federal Law

Marijuana is classified as a Schedule I drug under the federal Controlled Substances Act ("CSA"). Schedule I drugs, substances, or chemicals are defined as drugs with no currently accepted medical use and a high potential for abuse. Examples of Schedule I drugs including heroin, LSD, marijuana, ecstasy, and peyote.

In response to the legalization of marijuana under some states' laws, on August 29, 2013, the U.S. Department of Justice issued guidance to federal prosecutors. This guidance became known as the "Cole Memorandum," after its author, Deputy Attorney General James M. Cole. The Cole Memorandum represented a significant shift of government priorities away from strict enforcement of federal marijuana prohibition and toward a more hands-off approach.

The Cole Memorandum instructed federal prosecutors and law enforcement to focus on the following eight priorities in enforcing the CSA against marijuana-related conduct:

- Preventing the distribution of marijuana to minors;
- Preventing revenue from the sale of marijuana from going to criminal enterprises, gangs, and cartels;
- Preventing the diversion of marijuana from states where it is legal under state law to states where marijuana is illegal;
- Preventing state-authorized marijuana activity from being used as a cover or pretext for the trafficking of other illegal drugs or other illegal activity;
- Preventing violence and the use of firearms in the cultivation and distribution of marijuana;
- Preventing drugged driving and the exacerbation of other adverse public health consequences associated with marijuana use;
- Preventing the growing of marijuana on public lands; and
- Preventing marijuana possession or use on federal property.

AUMA and MCRSA are drafted to be consistent with Cole Memorandum guidance. Local governments must also ensure that their regulations result in compliance with the terms of the Cole Memorandum.

Despite the Cole Memorandum, however, marijuana's listing as a Schedule I drug under the CSA causes unique problems for marijuana businesses operating in states where marijuana is legal under state law.

First, the Cole Memorandum represents *existing* Department of Justice priorities in the enforcement of the CSA. Those priorities could change, and federal prosecutors could once again shift toward strict enforcement of CSA prohibitions against marijuana. Such a shift could disrupt marijuana industries in states where some form of marijuana is legal.

Second, marijuana's status as an illegal drug under federal law causes banks, credit cards, and other national or federally insured entities to decline to participate in the marijuana marketplace. As a result, marijuana is almost entirely a cash business. The difficulties this creates are described below.

B. Problems Created by Marijuana as a Cash Business

As just described, marijuana is classified a Schedule I drug and remains illegal under federal law. For this reason, licensed marijuana businesses face difficulties opening bank accounts and accepting credit card transactions. As a result, most marijuana-related transactions take place in cash. This includes retail transactions as well as payments to employees, vendors, insurance companies, and landlords. Many marijuana business owners even pay their taxes in cash.

The proliferation of cash in marijuana businesses means that all transactions may not be accounted for, resulting in less tax revenue to the State and local governments. Cash also creates opportunities for money laundering, robberies, and other crimes.

Innovative solutions could help reduce the amount of cash used by marijuana businesses, such as a debit card system created exclusively for marijuana transactions. Such a system could also provide real-time transaction data and increase tax accountability. The feasibility of such a system and other available solutions will need further exploration.

C. Dealing with the Black and Grey Marijuana Markets and Established Criminal Elements

As explained above, the black and grey marijuana markets continue to be of concern even in states, counties, and cities where both medical and nonmedical marijuana is legal. In fact, law enforcement officials in Colorado, Oregon, and Washington have argued that the illegal sale, cultivation and diversion of marijuana continue to thrive in these states, despite legalization.

In Colorado, for example, government officials have cited loose home-grow, medical caregiver, and cooperative rules as resulting in marijuana product that is sold illegally.

In addition, narcotics officials are concerned that established criminal organizations currently profiting from marijuana will operate purportedly legal marijuana businesses as fronts for continued criminal activity. Gangs may also extort lawful marijuana businesses and divert legally grown marijuana to places where it remains illegal.

As explained above, the balance between appropriate regulation, taxation, and the elimination of the black and grey markets will require close evaluation.

D. Sustainability

As described above, marijuana cultivators use a lot of electricity and water. With the passage of Proposition 64, marijuana entrepreneurs are expected to flood to California and the Los Angeles area in what has been described as an impending "green rush." Without appropriate regulations and controls, new cultivation facilities could impact the County's electrical and water supplies, and cause other environmental harm.

Government agencies and nonprofits around the country are working to help the marijuana industry operate with little environmental impact. Some strategies include managing peak energy demand, educating businesses about emerging technologies that increase efficiency, and providing free or low-cost environmental consultation.

A responsible regulatory program will consider appropriate regulations and incentives to cause businesses to be more environmentally sustainable while remaining competitive against the black and grey market.

E. Marijuana as Medicine

Many doctors legitimately prescribe marijuana to patients, and many patients report benefitting from using marijuana to treat serious illnesses. A marijuana regulatory program should take into account these patients' need to access medical marijuana.

F. Licensing Marijuana Businesses

AUMA and MCRSA create various license categories for cultivators, manufacturers, laboratory testers, retailers, distributors, and other business types. Licenses within each business type vary. For example, there are 13 separate license types for cultivators, depending on whether the cultivation operation is small, medium, or large, indoors or outdoors, and other factors. Large-scale cultivation licenses are not available under MCRSA, and are only available under AUMA after five years to encourage smaller businesses to establish. Under AUMA, for the first two years, only California residents and businesses controlled by California residents are eligible for licenses.

Local governments must consider various factors to determine appropriate licensing for marijuana businesses:

- Whether to replicate the license types issued by the State, or whether to simplify the types of licenses that may be issued locally.
- Whether the number of marijuana business licenses will be capped, and whether the cap will differ based on the type of business (e.g., cultivator versus retailer versus testing laboratory).

- Whether licenses will be issued on a competitive basis, which awards licenses to businesses that best meet certain clearly established requirements. Such requirements could include capitalization minimums, liquidity requirements, residency requirements, and specific ownership structure mandates. Alternatively, applicants can be considered on a first-come-first-served basis, on a lottery basis, or through some other procedure.

- Whether to require home-grow operations to obtain a license or registration.

- Whether to require a state-licensed business to obtain a County license before it may commence operation in unincorporated County areas.

- What fees to charge for a license, whether the license must be renewed annually, and what factors an owner must satisfy to renew a license.

- Whether licenses are transferable, and if so whether transferees must satisfy the same requirements and standards that an applicant for a new business would have to satisfy.

Cities and counties in states where marijuana is legal have taken very different approaches to licensing marijuana businesses and home-grow operations. The experiences of these cities and counties must be evaluated, and appropriate licensing processes established to fit the County's unique circumstances and needs.

G. Zoning

Under AUMA and MCRSA, local governments must determine the zones in which certain marijuana businesses may locate, and may also set distancing and separation requirements different from those established in AUMA and MCRSA. Local governments must consider:

- How far away businesses must be from certain sensitive uses.

- What uses are considered "sensitive" in the context of different marijuana businesses. Examples of potentially sensitive uses could include schools, day care centers, drug and alcohol rehabilitation facilities, residences, churches, parks, playgrounds, and senior centers.

- How far away marijuana businesses must be from each other.

- The number of parcels that remains available for marijuana businesses after all zoning restrictions are applied, and where those parcels are located.

- What development standards marijuana businesses must comply with, such as hours of operation, security protocol, parking standards, interior lobby space standards, shelf-space limitations, and limitations on cultivation square footage.

- Whether home-grows must take place indoors only, or whether they can also take place outdoors in front yards, side yards, backyards, or on roofs or balconies.

H. Marijuana Business Owners and Employees

Applicants for State medical and nonmedical marijuana business licenses will be subject to mandatory background checks. However, prior convictions for certain non-serious drug offenses are not presumptively disqualifying for nonmedical marijuana business license applicants, whereas such offenses are presumptively disqualifying under medical marijuana legislation.

Local governments can also impose additional reasonable requirements on marijuana business license applicants and their employees, including whether to conduct local background checks on owners, managers, employees and others who control business activities, and whether to "badge" employees (i.e., require that each employee obtain a County-issued ID card with a unique identifier).

I. Selecting an Appropriate Governance Model to Regulate Marijuana

A regulatory program that licenses marijuana businesses must also consider the benefits and drawbacks of various governance structures. Some options for the County include:

- Assigning various responsibilities for marijuana licensing and regulation to existing departments based on their areas of expertise; or

- Centralizing certain marijuana functions in a single department or division within an existing department, such as policy analysis and data-gathering, while ensuring coordination across the various other departments that deal with marijuana-related licenses and issues.

J. Data Collection and Evaluation

Data is critically important to monitoring and evaluating the effects and consequences of legal marijuana and regulations put in place to control it.

Both medical and nonmedical marijuana will be subject to a State-operated "track and trace" system to track the movement of marijuana and marijuana products through the distribution chain, from seed to sale. This system will provide the State with important information about the marijuana industry and the effect of State and local regulations.

The County must also allocate sufficient resources to collect data of local significance. Data collection should be robust enough to track marijuana use patterns over time, changes in crime, economic impacts of marijuana businesses, job statistics, the location of businesses, the numbers of plants being produced and sold, and other key data indicators.

K. Employee Safety

Local government employees, including fire fighters, building inspectors, code enforcement officers, and health inspectors, among others, will be required to visit and inspect marijuana businesses. Marijuana businesses present unique risks and hazards to County employees. The County should train its employees to take proper precautions to minimize risks associated with marijuana businesses.

L. Employment Policies Regarding the Use of Marijuana

Legal nonmedical marijuana may result in increased use in the workplace. The County, as one of the largest employers in the State of California, must continue to educate its employees that being under the influence of drugs in the workplace, including marijuana, is not permitted.

The County should also reevaluate its employment policies to ensure that they are appropriately drafted in light of the passage of Proposition 64.

IX. OPTIONS AVAILABLE TO YOUR BOARD

A. Ban All Medical and Nonmedical Marijuana Commercial Activity

Under AUMA and MCRSA, your Board has the option to ban all commercial medical and nonmedical marijuana activity. Such a ban could include a ban on the delivery of medical and nonmedical marijuana to residents in unincorporated areas. However, the ban could not prohibit people from using County public rights-of-way to deliver and transport medical and nonmedical marijuana.

Should your Board decide to ban all commercial medical and nonmedical marijuana activity, your Board should direct the Department of Regional Planning to prepare an ordinance amending Title 22 of the County Code (Zoning Code) to ban the establishment and operation of such activity in all unincorporated County areas.

B. Allow Some or All Commercial Medical and Nonmedical Marijuana Activity

1. Types of commercial activity and available limits

Under AUMA and MCRSA, your Board has the option of allowing some or all of the following medical and nonmedical marijuana commercial activity:

- Cultivation;
- Manufacturing;
- Laboratory Testing;
- Retail Sales;
- Distribution;
- Delivery; and
- Microbusinesses (nonmedical only).

For each type of commercial activity, your Board can decide to allow all levels of activity authorized under AUMA and MCRSA. Alternatively, your Board can limit each type of commercial activity. Examples of available limits include:

- Limiting cultivation to a maximum number of square feet that is less than what is allowed under AUMA and MCRSA;
- Requiring that cultivation take place indoors only;
- Limiting manufacturing to facilities that use nonvolatile solvents or no solvents only; and
- Limiting the number of licenses that will be issued countywide or within any one supervisorial district.

If your Board allows cultivation, retail sales, or distribution of medical or nonmedical marijuana, your Board should also allow a sufficient number of laboratory testing facilities to accommodate testing requirements for commercially sold marijuana and marijuana products.

2. Recommended regulations

If your Board decides to allow some or all commercial medical and nonmedical marijuana activity, your Board should direct the CEO to coordinate with affected County departments to study, recommend, and prepare necessary ordinances to regulate commercial marijuana activity. Ordinance provisions should:

- Limit and/or address the impacts to public health and safety, County neighborhoods, and the environment, as described in this report;
- Promote meaningful jobs and economic development in all areas of the County, including, for example, by evaluating the feasibility of local worker hire and small business incentive programs;
- Minimize the participation of criminal elements in the legal marijuana marketplace and reduce the black and grey marijuana markets by implementing development standards that reduce opportunities for crime, such as minimum security requirements, hours of operation, and the usage of security cameras, and other appropriate regulations to prevent the diversion of marijuana to black and grey markets;
- Promote sustainable businesses, including incentives to utilize energy efficient lighting, reduce overall lighting requirements, utilize water reduction and recycling techniques to reduce water needs, and cultivate strains which require less water;
- Promote a culture of compliance and compatibility with surrounding uses through appropriate licensing, permitting, and/or registration requirements, including but not limited to a potential cap on the number of business licenses that will be issued countywide and/or within any one supervisorial district; and
- Put into place an appropriate County governance model to implement, oversee, and enforce the regulatory program.

The Board should also direct the CEO to coordinate with affected County departments to:

- Study available options to tax marijuana businesses and recommend a tax scheme that maximizes County revenues while limiting opportunities for continued black and grey market activity;
- Conduct appropriate outreach with community members, business owners, and other stakeholders to obtain feedback on regulations and best practices;

- Work with local cities to promote uniformity of regulations and best practices within the entire County, with the goal of preventing impacts to any one city or unincorporated community from marijuana businesses in nearby cities or communities; and

- Advocate that the State and federal governments address problems unique to the marijuana industry, including the disproportionately high use of cash in marijuana businesses.

To address the expiration in June 2017 of the County's urgency ordinance banning the cultivation, distribution, and manufacture of medical marijuana and marijuana products, your Board should direct the Department of Regional Planning to coordinate with CEO and County Counsel to:

- Conduct an appropriate environmental review pursuant to the California Environmental Quality Act (CEQA); and

- Prepare an ordinance which bans the cultivation, manufacturing, processing, transportation, and retail sale of medical marijuana in the unincorporated territory of the County until such time as the County adopts a comprehensive regulatory framework for medical and nonmedical marijuana.

3. Additional considerations and possible actions

In addition to the recommendations above, your Board can take additional actions to address impacts to the County which are likely to occur regardless of whether your Board allows marijuana businesses in unincorporated areas. These additional actions include:

- Directing the Department of Regional Planning, in coordination with CEO, to prepare ordinance amendments setting reasonable regulations for personal cultivation;

- Direct the CEO to coordinate with affected departments to establish a robust data collection program to monitor marijuana usage, crime rates, traffic incidents involving marijuana, industry statistics, and other key indicators;

- Direct the CEO to coordinate with affected departments to develop appropriate safety protocols and training programs for County employees who will be inspecting and working onsite at marijuana businesses;

- Direct the Department of Human Resources, in coordination with CEO, to evaluate whether County employee drug use policies require amendment in light of AUMA and MCRSA;

- Direct the Department of Public Health, in coordination with CEO, to implement education and prevention campaigns to deter young people from consuming marijuana and to educate all people about the risks of using marijuana; and

- Recommend the Sheriff and District Attorney implement training protocols for law enforcement to detect when drivers are under the influence of marijuana.

Additionally, your Board may consider whether to tax marijuana businesses in incorporated cities, despite the ban in unincorporated areas.

X. CONCLUSION

This report was prepared by the CEO's Office of Marijuana Management, in consultation with affected County departments. Should you have any questions concerning the contents of this report, please contact Joseph M. Nicchitta, Countywide Coordinator for the Office of Marijuana Management, at (213) 974-4530.

ATTACHMENT I

MPG | MARIJUANA POLICY GROUP

Los Angeles County Marijuana Market Size, Tax Revenues, and Regulatory Burden

Prepared for Los Angeles County Chief Executive Office

FINAL REPORT
NOVEMBER 11, 2016

Final Report
November 11, 2016

Los Angeles County Marijuana Market Size, Tax Revenues, and Regulatory Burden

Prepared for
Los Angeles County
Chief Executive Office
500 W. Temple St.
Los Angeles, CA 90012

Prepared by
Jacob Rowberry
Adam Orens
Clinton Saloga
Miles Light

Marijuana Policy Group
1999 Broadway, Suite 2200
Denver, Colorado 80202-9750
www.mjpolicygroup.com
303.551.0607

MPG MARIJUANA POLICY GROUP

Table of Contents

Table of Contents

MPG | MARIJUANA POLICY GROUP

Executive Summary

On November 8, 2016, California voters approved Proposition 64, legalizing the cultivation, manufacturing, distribution, and consumption of marijuana for recreational purposes. Under the new law, Los Angeles County (LAC) will face a number of regulatory decisions, with particular consideration for the potential tax revenues of the legal markets and the regulatory burden of designing and implementing marijuana policy. LAC previously examined these issues in a brief report by the LAC Chief Executive Office to the LAC Board of Supervisors in May 2015 preliminarily estimating the potential tax revenues under Proposition 64.

In October 2016, the LAC Chief Executive Office retained the Marijuana Policy Group (MPG) to conduct a deeper analysis of the impacts of the forthcoming marijuana market and update its prior analysis. This report in intended to: 1) estimate the total 2018 demand for marijuana by LAC residents and visitors; 2) estimate the volume and value of marijuana sales within the regulated LAC markets; 3) examine potential tax revenues under various scenarios; and 4) describe and quantify at a high level the regulatory costs associated with legal medical and recreational marijuana markets.

Several key findings of this study, based on MPG's analysis as described in body of report, are summarized below.

ES Figure 1.
Summary of Market Demand, Market Size, and Tax Revenue Estimates

	Medical	Recreational	Total
Demand (regulated markets only, metric tons)	85.3	65.3	150.6
Market Value ($ millions)	$694.3	$983.9	$1,678.2
Tax Revenues (5% LAC Tax, $ millions)	$38.1	$48.9	$87.0
Tax Revenues (10% LAC Tax, $ millions)	$53.1	$75.2	$128.3

Source: Marijuana Policy Group.

- Marijuana regulation will involve multiple LAC departments. The regulatory costs of marijuana will vary depending on the legal requirements for regulation, policies implemented by each department, local priorities, and the number of licensed marijuana businesses. MPG estimates that the potential number of marijuana licenses for LAC is between 2,313 and 6,550, based on license and population data from the Denver and Seattle metro areas.
- The average regulatory cost per license is estimated to be between $4,000 and $4,500, based on licensing and expenditure data from Denver. Depending on the policy choices made by LAC, MPG estimates that the total annual regulatory costs associated with the legal marijuana markets will likely be between $9 million and $30 million per year, largely dependent upon LAC cost recovery philosophy and regulatory/enforcement level of

service. LAC expenditure will undoubtedly be different from these projections and will follow the values of Los Angeles citizens and policymakers.

- The projected regulatory costs to LAC for regulating the legal marijuana markets are significantly lower than the estimated tax revenues in each scenario, suggesting that the market would generate a net gain for the LAC budget.

The following report is organized into four sections: 1) Los Angeles County Demand for Marijuana; 2) Los Angeles County Potential Marijuana Tax Revenue Analysis; 3) Los Angeles County Regulatory Burden Analysis; and 4) Opportunities for Additional Research.

Los Angeles County Resident Demand for Marijuana

Utilizing marijuana use prevalence data from the National Survey on Drug Use and Health (NSDUH), MPG estimates the 2018 total number of past-month (810,624) and past-year (1,253,460) marijuana users among LAC residents aged 21 and over[1,2]. Figure 1 provides a description of the 2018 prevalence and user estimates used to subsequently calculate LAC resident demand.

Figure 1.
Adult Marijuana Users in Los Angeles County, 2018

Source:

Substance Abuse and Mental Health Administration – NSDUH State and Sub-state estimates, 2012-2014. California Department of Finance 2018 Demographic Forecasts.

2018 Estimate	Value
Population Aged 21+	7,606,576
Past-Month MJ Use Prevalence, 21+	10.7%
Past-Year MJ Use Prevalence, 21+	16.5%
Past-Month MJ Users, 21+	810,624
Past-Year MJ Uses, 21+	1,253,460

Total resident demand is calculated by combining the number of adult marijuana users in each use frequency category and the average daily consumption quantity of each user type[3,4]. Figure 2 shows that the MPG point estimate of 2018 total demand for marijuana by adult LAC residents is 196.5 metric tons of marijuana flower equivalent[5].

Figure 2.
Adult Marijuana Users and Total Demand among Los Angeles County Residents, 2018

Frequency of Use	Percent of Past Month Users	Adult MJ Users	Average Daily Consumption	Annual Demand	Share of Los Angeles County	
Days/Mo.			Grams	Metric Tons	Users	Demand
<1	-	1,253,460	0.30	2.3	60.7%	1.1%
1-5	36.6%	302,519	0.67	7.3	14.7%	3.7%
6-10	8.5%	70,257	0.67	4.5	3.4%	2.3%
11-15	7.3%	60,338	0.67	6.3	2.9%	3.2%
16-20	7.3%	60,338	0.67	8.7	2.9%	4.4%
21-25	7.3%	57,596	1.60	25.4	2.8%	12.9%
26-31	32.9%	259,576	1.60	142.0	12.6%	72.3%
Total:	100.0%	2,064,084	-	**196.5**	100%	100%

Source: Substance Abuse and Mental Health Administration – NSDUH State and Sub-state estimates, 2012-2014. California Department of Finance 2018 Demographic Forecasts. MPG "Market Size and Demand for Marijuana in Colorado: 2016 Market Update."

---

[1] MPG assumes a five percent rate of underreporting for heavy users (21+ days per month), and ten percent for all other users. Recent literature suggests casual users are more likely to underreport marijuana use data compared to heavy users.

[2] The prevalence of past-month and past-year marijuana use in California has increased by an average of 3.9 percent and 2.7 percent per year over the past five years, according to historical NSDUH data.

[3] See Marijuana Policy Group. "Market Size and Demand for Marijuana in Colorado: 2016 Market Update." 2016. *Prepared for the Colorado Department of Revenue.*

[4] See Caulkins, J., Kilmer B., et. al. "Beyond prevalence: Importance of estimating drug consumption and expenditures." 2015. *Addiction*, 110, 743-745.

[5] The metric "marijuana flower equivalent" is used to standardize all marijuana products to a common denominator of marijuana flower.

Los Angeles County Visitor Demand for Marijuana

In addition to estimating Los Angeles County resident demand for marijuana, MPG also analyzed marijuana demand attributable to non-residents (i.e., visitors and tourists). Using 2018 projections of annual visitation data[6,7], which details visitor origin and average length of stay[8] and corresponding marijuana use prevalence data, the MPG estimated total 2018 visitor demand for LAC marijuana at 18.7 metric tons. Figure 3 below presents the MPG estimates of visitor demand for LAC in 2018.

Figure 3.
Visitor Demand for Los Angeles County Marijuana, 2018

2018 Domestic/International Visitation	2018 Annual Visitors	2018 MJ Use Days by Visitors Aged 21+	Annual MJ Demand (Metric Tons)
Domestic	42,042,672	19,964,664	16.3
International	7,387,343	3,654,232	2.4
Grand Total Visitor Demand	49,430,015	23,618,896	18.7

Source: Discover Los Angeles – "LA Tourism by Numbers 2015 Quick Facts". Substance Abuse and Mental Health Administration – "NSDUH State Estimates, 2012-2014". Bureau of Labor Statistics –"Travel Expenditures, 2005–2013: Domestic and International Patterns in Recession and Recovery". United Nations Office of Drug Control Statistics. Inter-American Drug Abuse Control Commission – "Report on Drug Use in the Americas 2015". World Health Organization – "Management of Substance Abuse: Facts & Figures".

Los Angeles County Demand for Regulated Medical and Recreational Marijuana

The total combined resident (196.5 metric tons) and visitor demand (18.7 metric tons) for LAC marijuana in 2018 is estimated at 215.2 metric tons, as shown in Figure 4. MPG next considers the share of the total 2018 demand for LAC marijuana supplied by the regulated medical and recreational markets, as opposed to the unregulated black and gray markets (i.e. caregivers, home cultivation, dealers, etc.).

MPG anticipates that 70 percent of the total demand will be supplied by regulated markets and expects that 60 percent of the regulated market demand for marijuana will likely be supplied by the medical market, while the remaining 40 percent will be supplied by the recreational market. These supply modality estimates are based upon the first year of legal recreational sales in Colorado and Washington, with additional adjustments to account for LAC marijuana market characteristics, including higher prevalence rate of medical marijuana patients, physician prescribing practices for medical marijuana, annual fee associated with medical marijuana card,

---

[6] *Discover Los Angeles*. "Los Angeles Tourism by Numbers - 2015 Quick Facts." Updated January, 2016. https://view.flipdocs.com/?ID=10008315_503984.

[7] Annual visitation is grown by 2.8 percent per year from 2014 to 2018, based on historic tourist visitation growth.

[8] State-level NSDUH data is adjusted to account for the average U.S. prevalence growth rates of four percent and 4.9 percent for past-month and past-year marijuana use, respectively, as well as a 10 percent overall rate of underreporting. Aggregated to domestic and international categories for presentation purposes in Figure 3.

and other factors. MPG estimates that the 2018 demand for regulated LAC marijuana is 150.6 metric tons, shown in Figure 4.

Figure 4.
Demand for Los Angeles County Marijuana, by Origin, User Type, and Market (metric tons)

LAC Resident Demand	Share	Total Demand	Regulated Market Demand (70%)	Unregulated Market Demand (30%)
Total	**100.0%**	**196.5**	**137.5**	**58.9**
Medical Marijuana Patients	*60.0%*	*117.9*	*82.5*	*35.4*
Recreational Marijuana Users	*40.0%*	*78.6*	*55.0*	*23.6*
LAC Domestic Visitor Demand				
Total	**100.0%**	**16.3**	**11.4**	**4.9**
Non-California Residents	59.0%	9.6	6.7	2.9
California Residents	41.0%	6.7	4.7	2.0
Medical Marijuana Patients	*60.0%*	*4.0*	*2.8*	*1.2*
Recreational Marijuana Users	*40.0%*	*2.7*	*1.9*	*0.8*
LAC International Visitor Demand				
Total	**100.0%**	**2.4**	**1.7**	**0.7**
Grand Total 2018 Demand for LAC Marijuana		**215.2**	**150.6**	**64.6**

Source: MPG calculations based on Washington and Colorado market data.

MPG estimates that the total demand for medical marijuana by LAC residents in 2018 will be 82.5 metric tons, while LAC resident demand for recreational marijuana is estimated at 55 metric tons. The total demand for regulated marijuana by domestic visitors is 11.4 metric tons, 2.8 metric tons of which are associated with non-LAC California medical marijuana patients. Finally, international visitors' demand for regulated marijuana is limited to the recreational market, and is estimated at 1.7 metric tons.

Los Angeles County Product Market Share by Market and Type

Consumers in the LAC regulated marijuana markets will have several marijuana product types to choose from, including flower, edibles, concentrated extracts, and infused non-edibles. In recent years, the popularity of edibles and concentrates has grown significantly in states with regulated sales. MPG examines Colorado state data from 2014 to make an informed estimate of the market share for each product type in each regulated market.

MPG calculated average prices for marijuana products in California's medical marijuana market and in other states with regulated medical and recreational sales in order to estimate the total market size, in terms of dollar sales. Figure 5 provides the estimated share of each product type in the medical and recreational markets, the associated average retail price, and the total market value from the sales of each product type.

Figure 5.
Marijuana Product Market Share, by Regulated Market

Product Type	Demand (Metric Tons of Flower Equivalent)	Average Price	Market Value ($ Millions)
Medical Marijuana			
Flower	71.7	$6.00 Per Gram	$430.0
Concentrates	6.0	$25.00 Per Gram	$29.3
Infused Edibles	6.4	$10.00 Per 50mg Unit	$130.5
Infused Non-Edibles	1.3	$8.00 Per Unit	$104.4
Total	**85.3**	-	**$694.3**
Recreational Marijuana			
Flower	48.3	$10.00 Per Gram	$483.3
Concentrates	5.2	$40.00 Per Gram	$41.0
Infused Edibles	9.8	$13.00 Per 50mg Unit	$259.8
Infused Non-Edibles	2.0	$10.00 Per Unit	$199.8
Total	**65.3**	-	**$983.9**
Grand Total LAC Marijuana Market Size	**150.6**		**$1,678.2**

Source: MPG calculations based on Colorado and Washington market data, as well as review of California medical marijuana prices.

Los Angeles County Potential Marijuana Tax Revenue Analysis

This section calculates potential marijuana tax revenues for Los Angeles County. Additional revenues can be secured from licensing fees, inspection fees, and other administrative payments. Those fees are typically commensurate with the cost of administration for the County and borne only by the relatively small population of marijuana business owners. This section explains how best to estimate marijuana tax revenues in the presence of price-sensitive consumers, and how the County tax will interact with various city and state taxes.

Understanding Marijuana Taxation

Estimating tax revenues from marijuana sales is difficult, because there are two segmented markets – medical and recreational marijuana, and within each market segment there are several alternatives to buying marijuana from a regulated vendor. Consumers can search for lower prices across different jurisdictions, in the same manner that car drivers search for lower-priced fuels, alternatively, they can revert to their previous (illegal) vendor, who either cultivates the product directly, or smuggles the product into LA County from low-cost areas. Finally, they can even grow their own marijuana at home. If tax rates are too high, many of the heaviest users will make an effort to obtain lower-cost products that are untaxed.

This was the lesson learned from Washington State in 2014. At that time, Washington regulators were advised to apply three 25 percent tax rates along different points of production, leading to an effective tax rate of 90 percent. As a result, single gram servings initially cost $18-$29 at licensed stores in the state, compared to $10 per gram on the black market. Not surprisingly, most users stayed with their illegal suppliers, resulting in only 18 percent of demand shifting into the regulated market that year.

Regulators changed the tax rate mid-year in 2015, to a single 37 percent ad-valorem tax on sales. Almost immediately, regulated sales rose sharply, as did tax revenues. This reveals that Washington marijuana consumers are highly-price responsive. If they have options, they will choose lower-cost suppliers, even if they are illegal.

Heavy users - those who consume marijuana daily or near-daily - comprise the largest share of marijuana demand. These consumers are more price-sensitive than occasional or casual users, because marijuana represents a large share of their monthly budget. In Colorado, for example, a typical medical patient will spend $360 per month on marijuana. For lower-middle income consumers, this is a significant share of their discretionary monthly budget.

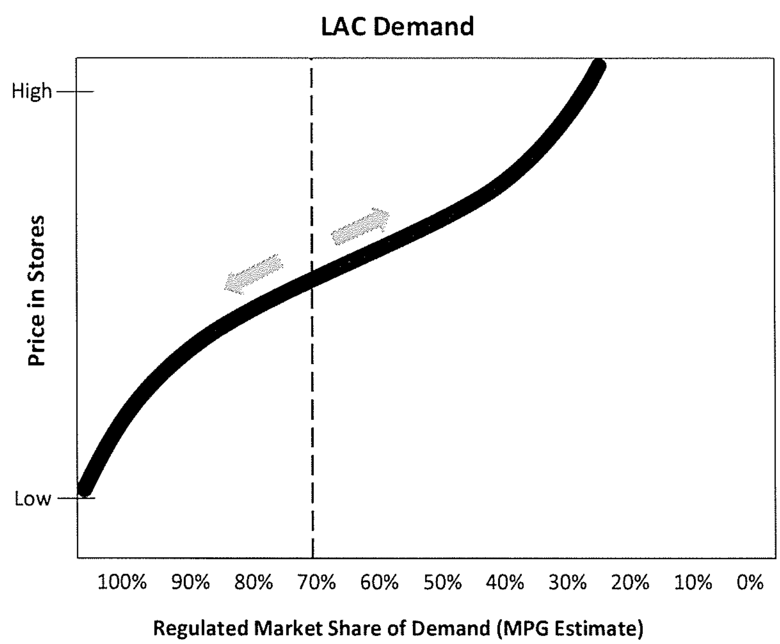
Casual recreational users are less price-sensitive than heavy users, because they consume less often and in smaller quantities. Therefore, the tax burden is proportionately smaller for casual users, and convenience is more important than small differences in price. However, recreational users also have access to unlicensed suppliers, making them relatively sensitive to market prices.

Figure 6 below is a conceptual graph that illustrates this effect. The share of total demand that is sold through regulated markets is estimated to be 70 percent during the demand analysis in the first section. However, if the price rises, fewer consumers will choose licensed (and taxed) vendors, and will opt instead for illegal or smuggled products. If the price declines, then a larger share of the market will flow through licensed vendors, both due to price-parity with black market (illegal) vendors, and due to the convenience and security of purchasing from a regulated vendor.

The horizontal axis of the graph in Figure 6 represents the portion of the overall market captured by the regulated recreational and medical market (as opposed to the black market and home grows). The steepness of this curve depends upon how easily consumers can substitute between regulated vendors and those who are unregulated. A steep curve suggests that consumers in LAC are not as responsive to price changes, and that a higher tax rate will yield more revenues. A flatter curve suggests that there are alternative suppliers or substitute goods, and that quantity demanded will decline more as prices increase with taxation.

Figure 6. Marijuana Price Sensitivity and Regulated Market Share

Source:
Marijuana Policy Group.



Overly-simplistic tax revenue estimates will assume that the curve is completely vertical – meaning that the price has no effect upon the regulated share in the market. This is untrue based upon the Colorado and Washington regulated markets – and tax revenue estimates should reflect the fact that marijuana consumers are likely to "optimize" and buy from the lowest cost supplier, if available. In sum, Figure 6 shows that lower prices (and taxes) will encourage participation in the regulated market. Consumers will likely remain with black market suppliers if prices (and taxes) are too high. Colorado had lower taxes and prices than Washington and had more success at reducing black market activity than Washington in 2014 and 2015.

Tax Rates in LA County and California

Each city has the ability to impose its own tax rate for recreational and medical marijuana. While some cities aim to attract marijuana vendors and producers, other cities may prohibit recreational and medical sales altogether. In order to estimate County tax rates, however, it is necessary to make assumptions about the level of taxation cities within LAC will impose. This report analyzes marijuana tax rates proposed for the City of Los Angeles (LA City) and imputes those tax rates to all cities within the County, as explained below. Actual tax rates will vary by city, and some cities will ban marijuana businesses altogether. However, because LA City and unincorporated LAC together account for approximately 49.7% of the total County population[9], utilizing proposed LA City tax rates provides the best available basis to estimate city tax rates.

In Figure 7 below, an example incorporating a proposed Los Angeles City tax rate from a citizen initiative to be decided in March 2017; and a hypothetical 5 percent county rate is used to compute the total effective tax rate for consumers. While actual county revenues will be close to this example, they are not the same, since different cities will likely apply different rates.

Under Proposition 64 and a citizen initiative to be decided in March 2017, Los Angeles' marijuana tax rate would be 8 percent for recreational sales. LA city currently imposes a 6 percent gross receipts tax on medical marijuana. Considering the potential LA city taxes, state taxes and a hypothetical 5 percent LAC tax, the effective ad-valorem rate that consumers pay for recreational marijuana would be 43 percent. This rate is decomposed in the figure below.

Figure 7.
Example of Rate Breakdown and Total Revenues in LA County – Assuming No Demand Response to Taxation, and Application of LA City Tax Rates and a 5 percent LA County Tax Rate

	Tax Rates		Tax Revenues		
	RMJ	MMJ	RMJ	MMJ	Total
Total Sales Value			**\$983.9**	**\$694.3**	**\$1,678.2**
Standard State/Local Sales Tax	9%	0%	\$88.6	\$0.0	**\$88.6**
CA State MJ Tax	15%	15%	\$147.6	\$104.1	**\$251.7**
Proposed LA City MJ Tax	8%	6%	\$78.7	\$41.7	**\$120.4**
Proposed LA County MJ Tax	5%	5%	\$49.2	\$34.7	**\$83.9**
Total Tax Rate:	37%	26%	\$364.0	\$180.5	**\$544.6**
Excise / Product Tax:	8.2%	8.2%	\$22.2	\$26.7	**\$48.9**
Effective Tax Rate:	43%	31%	\$386.2	\$207.2	**\$593.4**

Notes: (1) The proposed LA City tax rates for recreational (RMJ) and medical (MMJ) marijuana are based on the LA city citizens' initiative, one of two competing tax initiatives. LA City voters will determine the tax rates in March 2017.

(2) Product taxes are applied to the wholesale output quantity, thus the ad-valorem combined rate is different from a simple additive rate.

Source: MPG Calculations.

---

[9] http://ceo.lacounty.gov/forms/Population%20Pg Color.pdf

The regular sales tax rate in LA City is 9 percent, which is a combination of state and local rates. This tax would not be applied to medical marijuana under Proposition 64. Next, three marijuana specific tax rates, often called excise taxes, are applied at the state, county, and city level.[10] The state would impose a 15 percent tax on both recreational and medical products, the City applies an 8 percent tax[11] on recreational and 5 percent on medical marijuana. Finally, in this example, the County applies a 5 percent tax to both product types. These taxes, when added together equal 37 percent recreational and 25 percent medical.

Upstream, the State will also apply a fixed-price excise tax upon production (cultivation) of marijuana plants. The rate is $9.25 per ounce of marijuana flower and $2.75 per ounce of marijuana trim (i.e., leaves in Proposition 64 language). This equals $148.00 per pound of flower, and $44 per pound of trim. In order to include this tax into the combined tax stack, it must be converted from a fixed price into an ad-valorem rate. If the average price of flower equals $1,800 per pound, then this tax is equal to an 8.2 percent ad-valorem rate. Similarly, if the average price of trim is $325, then the ad-valorem rate is also 8.2 percent[12].

However, this rate is applied at the point of production, or the wholesale price. In the marijuana industry, this wholesale price is typically about one-half of the retail price. So the 8.2 percent rate is divided by two, and then medical and recreational taxes are applied to the net-of-tax product, to calculate the total tax rate.

For recreational marijuana in this case, the effective tax rate is 43 percent. For medical marijuana the effective rate is 30 percent. While these rates are higher than some legal states, such as Colorado and Oregon, they are lower than in Washington State. Figure 8 shows a rough comparison of tax rates across different states, using a representative city for an example.

---

[10] Technically, it is incorrect to call these marijuana taxes "excise" taxes, because excise taxes are applied at the point of production, whereas these taxes are applied at the point of sale. They have been called excise taxes primarily because they are taxes that have been applied to an excisable product (marijuana). In other jurisdictions, outside of California, they are called "Special" marijuana taxes.

[11] Los Angeles City voters will decide in March 2017 whether to tax recreational marijuana gross receipts at a rate of 8% through a citizen ballot imitative measure. There is also a competing city initiative proposing a 10% tax rate. MPG examines both scenarios in this report.

[12] Average flower and trim prices reflect the current average wholesale prices as reported by the state of Colorado. Colorado reports the average wholesale market rate on a semi-annual basis. However, marijuana prices fluctuate and are subject to overall market conditions, similar to any other consumer product.

Figure 8.
Marijuana Tax Rates in Major Cities in Western States

Comparison of Existing and Proposed Tax Rates for Marijuana

Los Angeles, CA	RMJ	MMJ	Denver, CO	RMJ	MMJ
Excise / Production Tax	8.2%	8.2%	Excise / Production Tax	15%	0%
State / Local Sales Tax	9%	0%	State Sales Tax	2.9%	2.9%
CA State MJ Tax	15%	15%	State MJ Special Sales Tax	10%	0%
LA County MJ Tax	5%	5%	Local MJ Sales Tax	3.5%	3.5%
LA City MJ Tax	8%	6%	Local Sales Tax	3.65%	3.65%
			Regional Transportation Sales Tax	1%	0%
Total Sales and MJ Tax	**37%**	**26%**	**Total Sales Tax**	**21.1%**	**10.1%**
Effective Tax Rate	**43%**	**31%**	**Effective Tax Rate**	**28.6%**	**10.1%**
Seattle, WA			**Las Vegas, NV**		
State Sales Tax	6.5%	0%	Excise / Production Tax	15%	2%
Local Sales Tax	9.5%	9.5%	State Sales Tax	4.6%	0%
Special MJ Sales Tax	37%	37%	County Sales Tax	3.55%	3.55%
Total Sales Tax	**53.0%**	**46.5%**	**Total Sales Tax**	**8.15%**	**3.55%**
			Effective Tax Rate	**16.3%**	**4.59%**
Oregon					
State MJ Sales Tax	25%	0%			
Total Sales Tax	**25%**	**0%**			

Notes: (1) The LA City tax rates for recreational (RMJ) and medical (MMJ) marijuana are based on one of two competing tax initiatives. LA City voters will determine the tax rates in March 2017.

According to Figure 8, taxes are highest in Seattle, Washington, where the State levy is a flat rate of 37 percent. The State and City of Seattle also apply their own 6.5 and 9.5 percent regular sales taxes, respectively, for a final tax rate of 53 percent. The Washington State sales tax is exempted for medical marijuana, so that total rates are 46.5 percent.

The lowest average rates for recreational marijuana are in Nevada, where the state does not apply a marijuana specific sales tax. However, they do apply a 15 percent production tax, similar to that in Colorado and California, so the effective rate is 16.3 percent.

The lowest tax rate for medical marijuana is zero, in Oregon. The rate differential between Oregon and California is large enough that it may lead to cross-state diversion (smuggling), where buyers load up on marijuana products in Southern Oregon, with the intention to re-sell them in California. Similarly, visitors to Las Vegas may purchase large quantities and drive them back to Los Angeles. This type of smuggling is already common for cigarettes. In 2015, it was estimated that more than half of the cigarettes purchased in New York City were illegally purchased.

In general, tax rates proposed for Los Angeles are not prohibitive, and they are not expected to be a major deterrent to regulated sales. Washington State's revenues increased sharply after moving to their 37 percent flat rate (plus state and local taxes), suggesting that the market will readily bear tax rates of this magnitude. LAC should be mindful of the total tax rate that consumers will bear and take into account the presence of city marijuana taxes, which could be anywhere from 0 percent to 20 percent (City of Carson approved 18% marijuana tax).

Tax Estimation Methodology

Los Angeles County tax revenues will depend crucially upon the quantity of legal sales inside the county. In turn, these sales will grow or shrink, based upon the final price of marijuana products in each of the County's cities, and based upon the relative prices of marijuana between the legal and illegal markets.

However, if multiple cities in LA County choose to ban sales, it is unlikely to impact the County's revenues, so long as there are a number of cities where marijuana is sold, including large cities like LA City and Long Beach, and the County tax is applied.

In order to calculate County-wide revenues, the MPG first reviewed current and proposed tax measures for each city. Next, the population in that city was used to estimate a relative share of potential recreational and medical marijuana sales. Finally, the relative tax rates were compared against a "benchmark" tax rate of 37 percent for recreational[13] and 28 percent[14] for medical products.

If the combined tax rate in a city (including the county tax), is higher than 37 percent, then quantity sold is expected to be lower. Conversely, if a city's cumulative tax rate is low, then demand in that city will be slightly higher, yielding higher tax revenues for LAC. Demand within each city and the unincorporated area is computed in this manner, and is then combined for a total demand quantity and subsequent tax revenue amount.[15] Figure 9 illustrates how the demand in each city is computed, and then combined for total revenues.

Figure 9.

Example tax collection estimates - by city within LA County[16]

	Population	Population Share	State & Local Tax: Medical Exempt Under Prop 64	State Retail Excise Tax (REC and MED)	City Rate	County Rate	Cumulative Rate	Demand / Sales	LAC Revs (response)
						5.0%	**37.0%**		
LA County Total	10,900,000	100.0%						$983,900,000	$59,558,744
UNINCORPORATED AREAS	1,724,545	15.8%	9.0%	15.0%	0.0%	10.0%	34.0%	$155,667,874	$18,435,062
INCORPORATED CITIES									
Los Angeles	4,005,565	36.7%	9.0%	15.0%	8.0%	5.0%	37.0%	$361,566,551	$18,078,328
Long Beach	475,647	4.4%	9.0%	15.0%	8.0%	5.0%	37.0%	$42,934,778	$2,146,739
Santa Clarita	217,550	2.0%	9.0%	15.0%	8.0%	5.0%	37.0%	$19,637,380	$981,869
Glendale	202,759	1.9%	9.0%	15.0%	8.0%	5.0%	37.0%	$18,302,255	$915,113
Lancaster	161,850	1.5%	9.0%	15.0%	8.0%	5.0%	37.0%	$14,609,561	$730,478
Palmdale	158,517	1.5%	9.0%	15.0%	8.0%	5.0%	37.0%	$14,308,704	$715,435
Pomona	153,278	1.4%	9.0%	15.0%	8.0%	5.0%	37.0%	$13,835,800	$691,790
Torrance	149,291	1.4%	9.0%	15.0%	8.0%	5.0%	37.0%	$13,475,910	$673,795
Pasadena	142,280	1.3%	9.0%	15.0%	8.0%	5.0%	37.0%	$12,843,054	$642,153
El Monte	116,601	1.1%	9.5%	15.0%	8.0%	5.0%	37.5%	$10,525,112	$512,316

[13] The 37 percent benchmark rate was chosen after observing the experience of Washington State, discussed on page 11.

[14] The rate of 28 percent was chosen instead of 25 percent, as in the example, based on the assumption that most cities (except LA City) will place identical rates on both product types, for simplicity.

[15] Each city will decide its own tax rate. Most cities have not set their rate as of November 2016. MPG assumes a baseline 8 percent for all cities that have not decided their tax rate, and shows the impact of different unincorporated LAC and LA city rates, which account for about half the county population. An 8 percent rate passed in Long Beach and is on the ballot in LA city. Each of the other municipalities has a relatively small share of population and differences in each municipal tax rate will not materially affect the result. If all other cities raised their tax rate by 2 percentage points to 10 percent, and the county tax rate is held constant, county revenue would decline by about $3 million. Conversely, if all other cities lowered their tax rates to 6 percent, county revenue would increase by about $3 million.

[16] The example in figure 9 shows a 10 percent hypothetical county rate. See figure 10 and 11 and associated discussion.

Results—LA County Marijuana Tax Revenues

Figure 10 shows the MPG revenue estimates for LA County for a 5 percent and 10 percent marijuana tax rate, if imposed together with the most-likely city and state rates. This is called the "Single County Rate" estimate, because it assumes a single rate for incorporated and unincorporated districts of the County. A single countywide tax rate would create a situation where the unincorporated areas would have a lower effective tax rate because consumers would not be required to pay a city tax rate—only the state and county rates. The scenario also evaluates LAC tax revenues under two scenarios of LA city tax rates. The scenarios below show the rates of two competing initiatives in LA City that will be decided by voters in March 2017.

Figure 10.
Tax Revenue Estimates for LA County – Single Countywide Rate Scenario

	5% LAC Rec/Med Tax 8% LA City Rec Tax/6% Med Tax		10% LAC Rec/Med Tax 8% LA City Rec Tax/6% Med Tax		5% LAC Rec/Med Tax 10% LA City Rec Tax/5% Med Tax		10% LAC Rec/Med Tax 10% LA City Rec Tax/5% Med Tax	
	Sales ($ millions)	Tax Revenue ($ millions)	Sales ($ millions)	Tax Revenue ($ millions)	Sales ($ millions)	Tax Revenue ($ millions)	Sales ($ millions)	Tax Revenue ($ millions)
Recreational	$978.2	$48.9	$752.0	$75.2	$942.0	$47.1	$727.1	$72.7
Medical	$737.1	$36.9	$516.6	$51.7	$761.2	$38.1	$530.7	$53.1
Combined	**$1,715.3**	**$85.8**	**$1,268.6**	**$126.9**	**$1,703.2**	**$85.2**	**$1,257.8**	**$125.8**

Source: MPG Estimates.

LAC can expect combined medical and recreational marijuana tax revenues of $87.0 million dollars when a single, 5 percent rate is used. This value is slightly higher than a straight calculator rate, because demand will be slightly higher in lower-tax areas, such as the unincorporated portions of the county in the single rate system.

However, when LAC rates are doubled to 10 percent, total revenues do not double to $167.8 million, as one might think. Instead, they rise to $128.3 million, which is a 47.5 percent increase, rather than a 100 percent. This reflects the fact that demand, and thus sales, will decline under higher taxation.

LA City has a competing initiative advanced by the city (as opposed to the citizens' 8 percent measure) that would impose a 10 percent tax on recreational marijuana purchases, a 5 percent tax on medical marijuana purchases, a 2 percent tax on the wholesale value of cultivation and a 1 percent tax on transportation, testing and research. Figure 10 also provides LAC tax projections if LA City voters approve the city-sponsored initiative in March 2017. In the above projection, LAC would capture slightly less revenue under the 5 percent and 10 percent single rate scenarios, due to the demand response to the higher tax rates.

MPG did not model the effects of the transportation or production tax because there would be little impact on LAC revenues from these city taxes. These taxes would be imposed on wholesale values thus lowering the effective tax rate by half due to the customary 100 percent markup between wholesale and retail. The incidence of the tax is upon the producer. Thus, the producer may pass the cost along, but they could also simply absorb the tax and sell their product at the market price. It's also unclear how much production will occur in LA City due to higher industrial lease rates compared to outlying areas.

The following table shows a projected breakdown of LAC tax collections between unincorporated and incorporated areas for the single countywide rate scenario.

Figure 11.
Tax Revenue Estimates for LA County – Single Countywide Rate Scenario

	5% LAC Rec/Med Tax 8% LA City Rec Tax/6% Med Tax		10% LAC Rec/Med Tax 8% LA City Rec Tax/6% Med Tax		5% LAC Rec/Med Tax 10% LA City Rec Tax/5% Med Tax		10% LAC Rec/Med Tax 10% LA City Rec Tax/5% Med Tax	
	Sales ($ millions)	**Tax Revenue ($ millions)**	**Sales ($ millions)**	**Tax Revenue ($ millions)**	**Sales ($ millions)**	**Tax Revenue ($ millions)**	**Sales ($ millions)**	**Tax Revenue ($ millions)**
Incorporated	$1,449.7	$72.5	$1,085.1	$108.5	$1,437.8	$71.9	$1,074.3	$107.4
Unincorporated	$265.5	$13.3	$183.6	$18.4	$265.5	$13.3	$183.6	$18.4
Combined	**$1,715.3**	**$85.8**	**$1,268.6**	**$126.9**	**$1,703.2**	**$85.2**	**$1,257.8**	**$125.8**

Source: MPG Estimates.

In each scenario above, about between 14 percent and 15 percent of tax revenues will be collected in unincorporated areas.

Dual Rate Scenario. If LAC is allowed to impose different rates within cities and unincorporated areas, then a more "optimal" tax regime can be imposed, one that reduces distortions between city and unincorporated areas and that increases revenues compared to a flat-rate system. Under this approach, the rate would be 5 percent in incorporated areas, and 10 percent in unincorporated areas.

By using a dual rate system, LAC could capture the tax revenues for those areas that do not have a city tax rate. The county would substitute a higher county tax in unincorporated areas that would take the place of the city rate and increase its revenue in unincorporated areas. MPG is presenting this option to LAC because it will result in a more efficient market with more uniform pricing across the county.

Figure 12.
Estimated Revenues under a Dual Rate (5% / 10%) Tax Rate System

Source:
MPG Estimates.

	LAC Dual Tax Rate 5% / 10% 8% LA City Rec Tax/6% Med Tax		LAC Dual Tax Rate 5% / 10% 10% LA City Rec Tax/5% Med Tax	
	Sales ($ millions)	**Tax Revenue ($ millions)**	**Sales ($ millions)**	**Tax Revenue ($ millions)**
Recreational	$1,006.8	$59.6	$970.7	$57.8
Medical	$765.1	$45.1	$789.2	$46.4
Combined	**$1,771.9**	**$104.7**	**$1,759.9**	**$104.1**

Revenues are higher than for a uniform 5 percent rate, because about 11 percent of the county's population will remit 10 percent to the county for marijuana purchases, yet the total rate would be no higher than for most cities. Total collections would be $104.7 million. This is $21 million less than a uniform 10 percent tax, and but is also $19 million higher than a uniform 5 percent tax. This rate could be considered to be "optimal", because the lower average rate across 89 percent of the county will be lower, and will encourage more purchases from local vendors. It also leaves room for a rate increase, if the Board of Supervisors decides that it is warranted. Under the city supported initiative scenario, LAC revenue would be about $104.1 million.

The following table shows a projected breakdown of LAC tax collections between unincorporated and incorporated areas for the dual rate scenario.

Figure 13.
Estimated Revenues under a Dual Rate (5% / 10%) Tax Rate System

Source:
MPG Estimates.

	LAC Dual Tax Rate 5% / 10% 8% LA City Rec Tax/6% Med Tax		LAC Dual Tax Rate 5% / 10% 10% LA City Rec Tax/5% Med Tax	
	Sales ($ millions)	**Tax Revenue ($ millions)**	**Sales ($ millions)**	**Tax Revenue ($ millions)**
Incorporated	$1,449.7	$72.5	$1,437.8	$71.9
Unincorporated	$322.1	$32.2	$322.1	$32.2
Combined	**$1,771.9**	**$104.7**	**$1,759.9**	**$104.1**

In the dual rate scenario, LAC would collect about 30 percent of marijuana tax revenue in the unincorporated areas.

From a revenue perspective, the County faces a sort of "prisoners' dilemma" where it is competing with each city (and the state) for marijuana tax revenues. Each jurisdiction wishes to collect as much as possible, but by acting in their own self-interest, if each jurisdiction imposes a high rate, the combined rate would be too high, and would push consumers away from the regulated market altogether, thereby reducing revenues for everybody. An effective rate of 43 percent (see Figure 7) for recreational marijuana is high, but not untenable for LA County.

Los Angeles County Regulatory Burden Analysis

Currently, unincorporated areas of LAC are under a moratorium on marijuana cultivation, manufacturing, testing, and distribution, which is set to expire in June 2017. In the meantime, the Board of Supervisors and regulatory agencies have the opportunity to decide whether and how to allow and regulate medical and recreational marijuana business activities within LAC under Proposition 64 and the Medical Marijuana Regulation and Safety Act (MMRSA). The early policy choices by LAC present an opportunity for policymakers to shape the nascent marijuana market according to local preferences and priorities. However, market regulation also generates costs that increase with the demands they place on government agencies, employees, and resources.

Many different government agencies and activities incur costs associated with regulating legal marijuana markets. While most jurisdictions have created departments dedicated to their legal marijuana markets, the overall regulatory burden is shared among several government agencies. The regulatory costs borne by each agency depend heavily on the legal requirements for regulation, the policies implemented by each agency, and local priorities.

In a new market, local governments are often concerned with balancing the costs of regulation with the anticipated revenue generated by new taxes. This section describes and quantifies the regulatory costs incurred by local governments with legal medical and recreational marijuana markets, and provides a projection of LAC regulatory costs based on the best data available[17].

The city and county of Denver outline four main categories of government activities specific to marijuana market regulation: Regulation, Enforcement, Education Programs, and Public Health programs. The costs associated with each area of regulation vary depending on the policies in place, the activities of each agency, and the size of the regulated marijuana market.

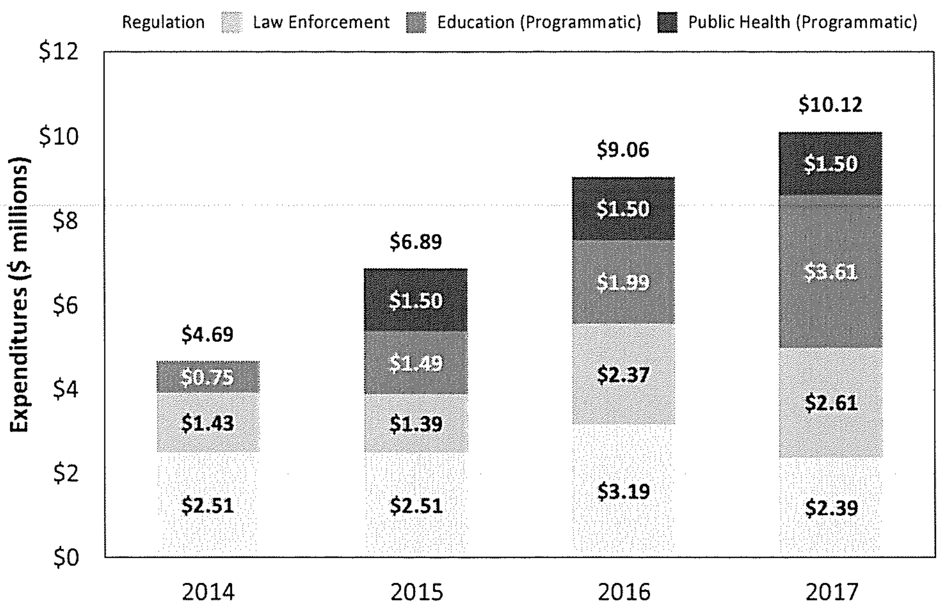
In order to provide insights on the functions that each LAC department may provide in the context of legal marijuana regulation and associated costs, MPG examined regulatory spending in each category for the city and county of Denver from 2014-2017 (budgeted).

---

[17] MPG relied on detailed data from the city and county of Denver, which is the only local government that provides cross-departmental data on marijuana regulatory expenditures.

Figure 14 illustrates the annual expenditures on each area of marijuana regulation for the city and county of Denver.

Figure 14.
Annual Denver Expenditures on Marijuana Regulatory Activities ($ millions)



Source: Denver Office of Marijuana Management.

The figure above illustrates the operating expenditures necessary for the Denver marijuana markets once the recreational industry became active. However, in the first year of regulated recreational marijuana sales, the city and county of Denver had to dedicate significant resources towards regulatory agencies and activities in order to get the regulatory system in place. These startup costs were distributed across several agencies and for several purposes.

In 2014, the Denver Office of Marijuana Policy (OMP) had no budget allocation from the Mayor's Budget. During the first year, the Mayor appointed an Executive Director of Marijuana Policy to oversee and coordinate all marijuana-related activities within Denver. The funding necessary for that full time equivalent (FTE) position, however, was not established until the following year when an executive manager position was transferred from the Office of Safety Management to the Department of Excise and Licensing, where the OMP was relocated.

During 2014, however, several other departments were allocated additional resources to design and implement regulations for the new legal marijuana market. Six full time equivalents (FTEs) were recommended to the Department of Excise and Licenses to support audit recommendations and implementation of Amendment 64[18], with a combined salary of $361,000. This department also received $90,400 for services and supplies related to compliance and licensing hearings. The Community Planning and Development Department received one additional FTE within the Office of the Manager to assist with the implementation of Amendment 64, with a salary of $52,600. Three FTEs were also created within Development Services to support plan reviews, permits, and inspections, with a total personnel cost of $228,700.

Police Department Operations received five uniformed officer FTEs with a budget of $503,000 to regulate the implementation of Amendment 64, including an officer to staff the Department of Excise and Licenses, and four to provide training and enforcement of driving under the influence of drugs (DUIDs) violations. One public health investigator FTE was added Environmental Health to inspect facilities selling marijuana infused food products, at a cost of $65,000, while another was created to inspect cultivation centers and respond to neighborhood odor and noise complaints, with a salary of $69,500.

In total, the city and county of Denver created 17 new FTEs in 2014 in preparation for the first year of legal marijuana sales. The budgeted expenditures for personnel that year totaled $1,279,800, with an additional $90,400 budgeted for services and supplies. Figure 15 summarizes the budgeted FTEs and expenditures for Denver marijuana activities in 2014.

These figures from Denver are provided for reference and comparison only. Denver-based costs are difficult to translate to LAC costs because of differing policies, priorities, and employment and resources costs in LAC. However, startup costs in LAC are expected to far exceed the approximately $1.37 million in costs reported by Denver based on population figures alone. In 2014, the population of Denver was 680,000, compared to the current LAC population of 10.4 million.

---

[18] Amendment 64 legalized recreational use of marijuana in Colorado in November 2012.

Figure 15.
Budgeted Regulatory Expenditures by the City and County of Denver in the First Year of Legal Recreational Marijuana (2014)

	FTEs	Budgeted Expenditure
Excise and Licenses		
Three licensing technicians for Amendment 64 implementation and MMJ audits	3.0	$179,300
Three business license inpections for Amendment 64 implementation and MMJ audits	3.0	$181,700
Services and supplies for compliance, audits, and licensing	0.0	$40,000
Personnel services to support hearings associated with Amendment 64	0.0	$50,400
Community Planning and Development - Office of the Manager		
Personnel services for temporary support of Amendment 64 implementation	1.0	$52,600
Community Planning and Development - Development Services		
Personnel services for temporary support of recreational marijuana plan reviews, permits, and inspections	3.0	$228,700
Police Department - Operations		
Personnel services from five additional uniformed officers to regulate implementation of Amendment 64, including an officer to staff Excise and Licenses, and four to provide training and enforcement of DUIDs[1]	5.0	$503,000
Environmental Health - Public Health Inspection		
Personnel services for additional public health investigator to inspect facilities selling marijuana infused food products	1.0	$65,000
Environmental Health - Environmental Sustainability and Liability Management		
Personnel services for addition of public health investigator to inspect marijuana cultivation centers, and to respond to odor and noise complaints	1.0	$69,500
TOTAL	**17.0**	**$1,370,200**

Source: City and County of Denver 2014 Mayor's Budget.

Within LAC, there is some overlap between city and county agencies across these areas of regulation, and the county's regulatory burden resulting from licensed businesses will depend on whether they are located within the unincorporated area of LAC, in which case the county will be solely responsible for regulation, or within incorporated cities, in which case the county will likely share oversight responsibilities with the city. MPG reviewed the respective activities and expenditures of LAC agencies to better understand the potential distribution of regulatory responsibilities. Figure 16 provides an overview of LAC agencies and their potential involvement with marijuana regulation.

Figure 16.
Los Angeles County Departments and Marijuana-Related Activities

Area of Oversight and Agency Involved	Description of Marijuana Regulatory Activities
Regulatory Activities	
Office of Marijuana Management	Coordinate with impacted departments to ensure implementation of the LAC Board of Supervisors' marijuana policy goals;
Agricultural Commissioner	Develop new marijuana weight/measurement best practices; Develop new regulations on pesticide use and environmental protection; Monitoring measurement equipment and pesticide use; Investigate pesticide and injury reports; Inspect marijuana cultivation facilities;
Department of Regional Planning	Develop new planning and zoning rules for MJ businesses; Review and issue new permits to MJ businesses; Ongoing planning and zoning services; Perform code enforcement;
Department of Public Works	Review site improvements required to establish and operate marijuana cultivation, manufacturing, testing, and distribution businesses; Evaluate projects using established codes, requirements and guidelines within the respective areas of responsibility; Develop new safety protocols to protect the health, safety, and welfare of inspectors;
Fire Department	Develop and implement fire inspection criteria for MJ businesses; Perform building plan reviews; Perform fire safety inspections (including new construction and annual business inspections, and minor plan checks); Issue permits for manufacturing and hazardous materials; Provide fire protection and response to MJ businesses; Enforce fire safety code;
Department of Public Health	Develop new public health rules for consumption and MJ products in LAC ordinance; Perform health inspections for MJ businesses (i.e. commercial kitchens); Enforce public health ordinance; Inspect wholesale, retail, and marijuana production facilities in 85 cities; Investigate odor complaints and commercial/residential marijuana consumption (smoking, illness or accidental ingestion of edibles); Perform plan reviews for 85 LAC cities (excludes Vernon, Long Beach, Pasadena); Maintain MMJ registry;
Treasurer and Tax Collector	Develop and implement new tax collection requirements and mechanisms for MJ businesses; Issue LAC business licenses; Monitor sales and tax reporting for MJ businesses; Perform audits of MJ businesses;
County Counsel	Review and provide legal support for regulatory design and implementation; Enforce unlicensed activity;

Source: Los Angeles County Department websites; MPG.

Figure 16 (continued).
Los Angeles County Departments and Marijuana-Related Activities

Area of Oversight and Agency Involved	Description of Marijuana Regulatory Activities
Law Enforcement Activities	
Sheriff's Department	Enforce new marijuana laws; Investigate and arrest for marijuana law violations; Provide policing and safety services to MJ businesses and customers;
District Attorney's Office	Prosecute marijuana crimes; Train law enforcement; Process resentencing request cases under Proposition 64;
Public Defender (and Alternate)	Provide legal representation to persons charged with MJ crimes; Process resentencing request cases under Proposition 64;
Education Programs	
Office of Marijuana Management	Coordinate with LAC departments to develop new programs to educate public about MJ consumption, products, labeling and packaging, potency, recalls, driving under the influence, etc.
Department of Consumer and Business Affairs	Develop consumer awareness and protection programs; Develop new programs to educate public about MJ consumption, products, safety, and recalls; Investigate consumer law violations; Dispute resolution;
Public Health	Develop new education programs to educate public about consumption, intoxication, products, potency;
Public Health & Safety Programs	
Department of Public Health	Enforce public health ordinance; Provide public health services; Design and implement marijuana use health and education programs;

Source: Los Angeles County Department websites; MPG.

Regulation

Marijuana market regulation broadly consists of developing and implementing the policies that govern marijuana business operations and licensing, sales and taxation, consumption and possession, and unlicensed production and sales. Under MMRSA and Proposition 64, LAC has the authority to implement additional rules, regulations, and taxes on marijuana activities beyond what is specified in state law.

The LAC Chief Executive Office created the Office of Marijuana Management (OMM) in the fall of 2016 to coordinate the work of affected departments to ensure implementation of the LAC Board of Supervisors' marijuana policy goals. The activities likely to involve OMM coordination include developing regulations for marijuana business licensing and operations, and creating policies to govern the overall management of LAC's legal marijuana markets across all involved agencies.

While the OMM will be responsible for coordinating impacted county departments for the regulation of LAC marijuana markets, other departments will have a hand in crafting and implementing policy. In Denver, the Office of Marijuana Policy (OMP) was originally positioned within the Mayor's Office, but was relocated under the Department of Excise and Licensing in 2015. Under the new department, the Denver OMP took on additional activities that the LAC OMM will not be directly responsible for, including license inspections for signage, alarm systems, product packaging and labeling, and other licensing requirements. According to recent OMP reports, these licensing inspections require an average of 55 minutes per licensee.

The Agricultural Commissioner, which is responsible for testing, registration, and weights and measurement within the agricultural industry, may contribute regulations regarding harvesting, weight and measurement, and the testing of marijuana, as well as policies on pesticide use and environmental protection. The Department of Regional Planning will be responsible for implementing planning and zoning rules for marijuana businesses, performing zoning inspections and issuing permits, and enforcing the zoning code. During the initial years, zoning inspections and permitting can be particularly demanding in terms of man hours, with the City and County of Denver reporting an average of 120 minutes per inspection for marijuana businesses in 2015.

The Department of Public Works, Building and Safety Division, will also become involved in marijuana business regulation. Building and Safety is among the many LAC Departments who would review any new site improvements required to establish and operate the cultivation, manufacturing, laboratory testing, and distribution of marijuana. Building and Safety will evaluate projects of this nature using established codes, requirements, and guidelines in their areas of responsibility. New safety protocols for staff are needed to protect their health, safety, and welfare while performing inspections. Given the unique building, equipment, and production and waste requirements of marijuana businesses, inspections may require more time than for other business types. According to the City and County of Denver, marijuana business building inspections require an average of 50 to 90 minutes, depending on the scope of the inspection.

The Fire Department performs fire inspections and building plan reviews, and will likely need to develop rules and practices specific to the marijuana industry. They will also be responsible for issuing permits for manufacturing and hazardous materials, in addition to providing fire protection and response to the marijuana industry. Once again, marijuana businesses have an assortment of equipment and activities that present unique fire and hazardous waste risks, creating increased demands on fire inspectors. Fire inspections in Denver required an average of 150 minutes in 2015.

With new marijuana products entering the market, the Department of Public Health will be required to develop new rules to ensure public health and safety, including packaging and labeling, potency, odors, and consumption in commercial and residential areas. These rules are generally incorporated into local ordinance, and enforced by public health inspectors. The

Department of Public health will also perform plan reviews and inspections of marijuana businesses for 85 of the 88 incorporated cities within LAC.[19]

In 2015, public health inspectors in Denver spent an average of 60 minutes per location. In early 2014, Denver recorded an average of one violation per public health inspection for marijuana businesses. By mid-2016, this figure fell to 0.25 violations per inspection, illustrating that marijuana businesses learn and become more compliant with local regulations over time. The Department of Public Health is also currently responsible for maintaining the medical marijuana patient registry.

The tax collection requirements and mechanisms for regulated marijuana sales in LAC are the responsibility of the Treasurer and Tax Collector, which is also responsible for issuing business licenses within LAC. This agency will need to ensure that proper policies are in place for reporting sales and remitting taxes, imposing sanctions for violations, and performing audits as needed.

Finally, the County Counsel will likely be involved in reviewing and providing legal support for regulatory design and implementation across many of these agencies, as well as enforcing unlicensed activities. In each case, these agencies will likely need to hire and train new staff and compliance officers to develop policy and to ensure that marijuana businesses are compliant with license application and operating requirements. Once regulations are in place and staff is trained, the total time required to perform all inspections for a marijuana business is substantial. Figure 17 provides a summary of Denver data on the time requirements of each type of inspection for the initial licensing of marijuana businesses. Note that these figures describe the combined time of initial inspections required for licensing, and does not include follow-up inspections due to violations, licensee changes, or other licensing or compliance issues.

Figure 17.
Marijuana Business License Metrics,
Denver and Seattle Metropolitan Areas

Source:
Denver Marijuana Management Symposium. October 27, 2016. "Measuring the Impacts" Presentation.

Denver Marijuana Business Inspections

Inspection Type	Time Required
Building Inspection	50 minutes
Zoning Inspection	120 minutes
Environmental Quality Inspection	90 minutes
Public Health Inspection	60 minutes
Fire Inspection	150 minutes
Excise & Licensing Inspection	55 minutes
Total per Licensee	**8.75 hours**

[19] Excludes Vernon, Long Beach, and Pasadena.

Law Enforcement

Local law enforcement and criminal justice agencies are generally responsible for enforcing state and local marijuana laws. Under Proposition 64 and MMRSA, there will be a new set of laws for multiple agencies to enforce, requiring significantly different activities than under marijuana prohibition and the former lax medical marijuana rules. Even with a fully legalized marijuana regime, there are new opportunities for consumers and businesses to violate the law, creating new challenges for enforcement agencies.

Within LAC, the Sheriff's Department will still be charged with investigating and enforcing illegal black market marijuana activity and providing policing and safety services to marijuana businesses and consumers as they would for other industries. However, the implementation of new laws and proliferation of newly licensed businesses will present new law enforcement challenges. The shift in marijuana law enforcement focus will reduce efforts designed to enforce prohibition such as possession arrests, but will result in new efforts focused on trafficking and diversion, underage sales, public consumption, illegal seizures, theft and burglary, and unlicensed or secondary producers and sellers that try to operate under the guise of legalization and MMRSA. In order to address the new types of crime under the new marijuana laws, the Sheriff's Department will need to adopt policies for enforcing these new laws and train officers and agents to investigate and arrest new marijuana offenses.

This means that the law enforcement costs associated with marijuana activities may not necessarily decrease immediately following legalization. In some jurisdictions that have legalized marijuana, black market activities still persist, sometimes to a large degree, as seen in Washington State's first year (2014). It is possible that the law enforcement costs of legalization could potentially outweigh the costs of enforcing prohibition. The city of Denver and the state of Colorado have seen a reduction in possession arrests and associated judicial costs. However, other types of marijuana-related crimes such as burglaries of licensed facilities and public consumption citations have increased. The overall impact of legalization on marijuana law enforcement costs is uncertain, and will ultimately depend on the priorities and efforts of the agencies involved.

The District Attorney's Office and Public Defenders will also be affected by changes in marijuana laws. Some types of cases such as simple possession are likely to decrease dramatically following legalization. However, other cases associated with diversion, underage sales, public consumption, and unlicensed producers and sellers are expected to increase. Caseloads may also increase to handle resentencing requests under Proposition 64. The degree to which these caseloads increase depend on the policies adopted by law enforcement agencies, and the intensity of enforcement.

For example, if LAC places an emphasis on minimizing black market activities, caseloads may increase to deal with unlicensed actors. However, if LAC emphasized public health, for example, a majority of new cases could be concentrated on public consumption and sales to minors. Regardless of LAC prioritization, the agencies charged with enforcing marijuana laws must develop and implement policies to properly investigate violations and impose appropriate sanctions to those that act outside the confines of the law.

Education Programs

Colorado, Washington, and Oregon have all implemented programs to educate the public about the risks of marijuana consumption, intoxication, dependence, driving under the influence, and youth prevention. Other public outreach opportunities include detailed reporting of tax revenues and expenditures, sales, licensing outcomes (i.e. issuances, rejections, and suspensions or revocations), and other regulatory outcomes such as new policies. Within the city and county of Denver, Education and Public Health programs currently represent half of all marijuana expenditures.

Multiple County departments are likely to be responsible for public education programs surrounding the regulated marijuana market. The appropriate departments will need to issue policy and regulation updates as they are adopted and implemented, as well as reports on tax revenues and expenditures resulting from the legal production and sales of marijuana. These activities will ensure that the public is informed on the state of the industry, and that the government policies, revenues, and expenditures are transparent. The Office of Marijuana Management (OMM) will serve to coordinate these policies and education efforts across departments, the overall effect and transparency of which can significantly influence public opinion and support for policymaking efforts and proposed programs and expenditures across all regulatory areas.

The Department of Consumer and Business Affairs may develop programs designed around consumer awareness, particularly regarding product safety and recalls. This department will also allow consumers to file complaints against marijuana businesses, and help resolve disputes. The programs and services offered by Department of Consumer and Business Affairs are very important for ensuring that consumers can interact with and provide feedback on industry actors. However, these activities may not require a drastic makeover of current operations and are not likely to demand a major influx of resources.

Marketing campaigns on public consumption and youth usage and drug use and abuse prevention programs are often initiated by the Department of Public Health following legalization, with the aim of educating the public on the potential health risks associated with marijuana. These programs can range from after-school and summer programs for youth, flyer handouts and booths at public events, or television, radio, and print advertisements on the available programs and services available to mitigate health risks.

Based on the experiences of other jurisdictions with legal medical and recreational marijuana markets, government expenditures on public education tend to be a function of tax revenues once the industry is operating. While some early pilot programs are advisable, such as reporting mechanisms for sales, revenues, and recalls, the growing tax revenues collected as the market matures will allow LAC to develop and implement more education programs over time.

Public Health & Safety Programs

The Public Health and Safety area of marijuana market policy focuses on protecting the health of LAC residents, marijuana consumers, and industry employees from the risks presented by the legal market.

In many cases, this policy area often overlaps with public education since public health and safety programs generally have an education component. One example would be a program designed to announce public health concerns such as product recalls. By educating the public about the presence of unsafe products on the market, this type of program would also be protecting public health. The remainder of this section focuses on programs that directly address public health and safety, as opposed to simply disseminating information.

The Department of Public Health will likely bear a large majority of the public health and safety responsibility for legalized marijuana. This agency is responsible for enforcing the LAC health ordinances, and will be actively involved in addressing and mitigating public health concerns that result from violations. The Department is also responsible for providing public health services such as prevention programs, and drug use and abuse treatment and recovery facilities. These types of programs address public health concerns at the individual level, as well as throughout affected communities.

As with public education, increased public health and safety expenditures are typically the result of increased tax revenues. There are certain minimum requirements for programs and activities to protect public health following legalization, however LAC will be able to implement additional services as revenues grow over time.

Despite the regulatory costs described above, the ability for local governments to regulate legal marijuana markets also presents substantial benefits and opportunities for LAC. Proper regulation and taxation can balance a new stream of revenues with regulatory costs, while minimizing the potential harms of legalization. As the legal marijuana market matures, growing tax revenues will allow LAC to increase regulatory capacity and implement more programs, yielding a more efficient policy environment over time.

This has been the case for Denver, which saw marijuana-related revenues grow from $10.3 to $14 million between 2014 and 2016, while expenditures grew from $4.7 to $9.1 million. The remaining $5 million surplus for 2016 allowed for flexibility and programmatic expenditures that were not possible in earlier years.

The following section describes the MPG methodology for estimating a range of costs for LAC resulting from regulating the legal medical and recreational marijuana markets.

Los Angeles County Regulatory Costs

There are many factors that contribute to the overall cost of regulating legal marijuana markets, including the number of government agencies and employees assigned to the regulatory and enforcement activities above; the degree of regulation imposed on the industry; and the scope of marijuana education and public health programs that the county may implement.

Beyond the initial policymaking phase and staffing of agencies tasked with marijuana-related activities, the overall regulatory and enforcement cost is generally a function of the number of marijuana businesses under Los Angeles County jurisdiction. The following factors will affect County regulatory costs:

- Higher numbers of license applicants require additional reviews and inspections;
- More licensed businesses mean more compliance checks and enforcement across all areas of regulation;
- Increased production resulting from more licensed producers require increased testing costs; and
- Increased consumption and product choices will likely encourage additional public health and education costs.

The city and county of Denver is the only government we found that compiles, organizes and reports cross-departmental expenditure on marijuana-related activities and programs. The following section describes MPG high-level projections for Los Angeles County governmental expenditure following the passage of Proposition 64.

The projections provide a 'high' and 'low' scenario that are based on different concentrations of marijuana businesses in incorporated and unincorporated portions of the county.

Analysis Limitations

It should be noted that the projections reflect the level of service and expenditure priorities of Denver citizens and policymakers. Additionally, the funding levels are mostly a function of the marijuana tax and fee revenue that is generated. LAC expenditure will undoubtedly be different from these projections and will follow the values of Los Angeles citizens and policymakers. The analysis contained herein uses the best available data and provides a very high-level approximation of potential regulatory costs, if LAC provided the same level of service as Denver, and if the cost of government was similar.

We believe that LAC regulatory costs will actually be higher for numerous factors, including a more complex jurisdictional map, different employment standards and compensation, and higher goods and services costs. Denver, like other jurisdictions, sets its annual license fees to recover the cost of regulation and enforcement. To determine regulatory costs with more precision, MPG recommends that LAC complete a detailed cost study that develops staffing requirements, workloads and costs specifically for the intended regulatory program, and then develop appropriate cost-recovery licensing fees.

Marijuana Licenses

MPG collected population and license data from the Denver and Seattle metropolitan areas to provide a picture of a regulated medical and recreational marijuana business footprint in Los Angeles. Washington state is currently issuing new licenses across the state due to an underestimation of need and can be considered a 'low' scenario. The Denver Metropolitan Area can be considered a high scenario, as there are roughly four times as many licenses per 1,000 residents than in the Seattle Metropolitan Area. Figure 18 below presents this analysis, where MPG extrapolated licensing metrics to produce scenarios for LAC.

Figure 18. Marijuana Business License Metrics, Denver and Seattle Metropolitan Areas

Source:

Colorado Department of Revenue – Marijuana Enforcement Division. Washington State Liquor and Cannabis Board. MPG Calculations.

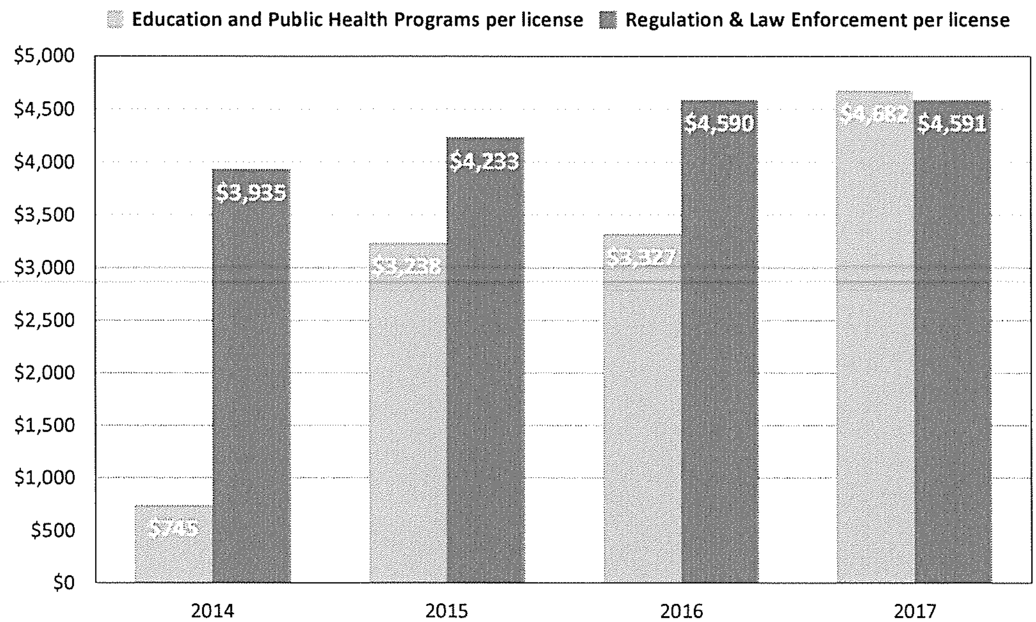
	Seattle Metro Area	Denver Metro Area
License Density Metrics		
Population	3,733,580	3,077,326
Marijuana Licenses	836	1,951
Licenses per 1,000 Residents	0.22	0.63
Projection	**Low Estimate**	**High Estimate**
Los Angeles County Licenses	**2,313**	**6,550**

Governmental Costs per Marijuana License

MPG examined spending by the city and county of Denver and learned that since 2014, when data was first tracked by the city, annual regulatory and law enforcement expenditure is somewhat constant at between $4,000 and $4,500 per license.

Virtually all spending growth is in education and public health programs, including public health media campaigns, targeted youth education and health campaigns and contributions to the city/county affordable housing fund. These expenditures are largely discretionary and have grown along with the increase in marijuana tax collections. The following figure shows city and county of Denver expenditure by category between 2014 and 2017 (budgeted).

Figure 19.
Marijuana Related Annual Expenditure per License, City and County of Denver, 2014 – 2017 (budgeted)



Source: City and County of Denver; Marijuana Policy Group.

As shown above, regulation and enforcement spending has remained somewhat constant and programmatic spending on education and public health objectives has increased more than 6-fold since 2014. Denver funds all marijuana related expenditure with marijuana tax revenue collected through a city marijuana specific retail tax and the redistribution of state retail marijuana tax. LAC will have different circumstances and a different spending balance that will align with its revenue generation profile and spending priorities.

Projected LA County Expenditure

The following graph shows projected LAC expenditure on regulatory and law enforcement activities based on city and county of Denver expenditure metrics and the limitations and scenarios described above. MPG allocated licenses between the incorporated and unincorporated areas based on population.[20]

MPG did not adjust the spending data to account for differences in county spending per license in the incorporated and unincorporated areas. Denver is a combined city/county and provides uniform services to all businesses and residents. LAC has incorporated and unincorporated areas and provides a different set of services depending on whether the area is incorporated or

[20] The unincorporated (11%) and incorporated (89%) share of licenses is determined based on population.

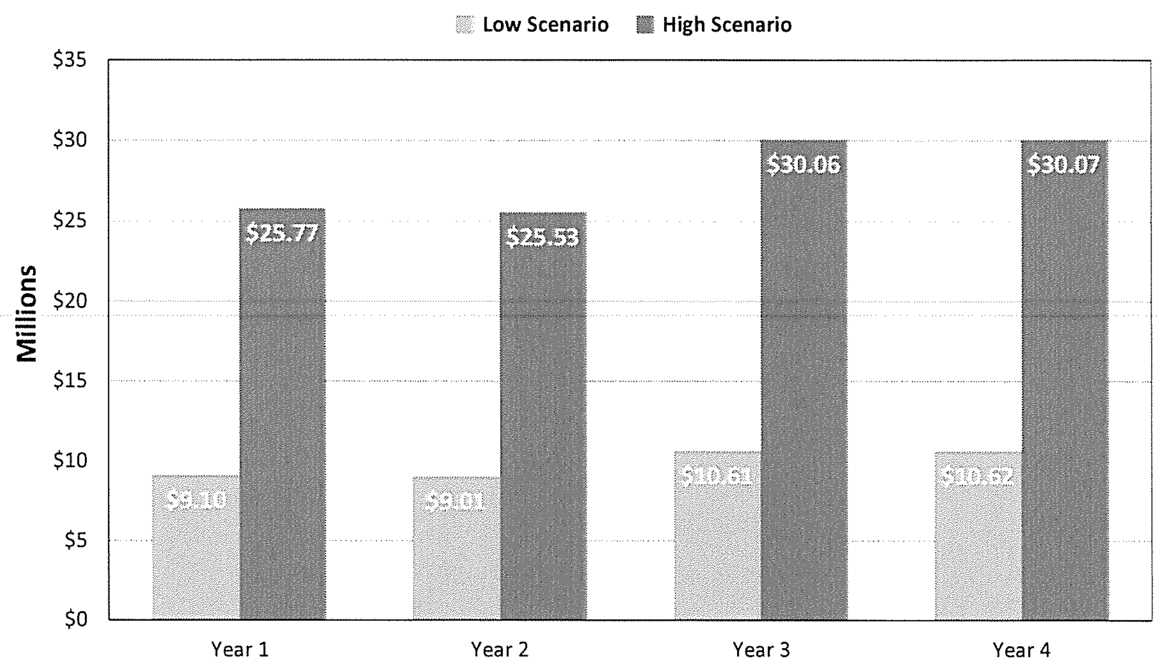
unincorporated. LAC also has numerous service contracts with municipalities where LAC may provide law enforcement, planning, fire, public works or other services.

For the purposes of this high-level analysis, MPG provides an estimate that includes the full set of regulatory and law enforcement services for all licenses regardless of location in a municipality or the unincorporated area. LAC will likely not provide these services to all licensees in practice, so the estimate may be considered high. However, these figures are based on Denver regulatory and enforcement costs and Denver licensing fees, which may be lower than governing costs in LAC. MPG recommends LAC complete a more detailed study of regulatory costs, which is beyond the scope of this study that was completed in a 3-week timeframe.

LAC can expect to spend about $9 million - $10 million per year on regulatory and enforcement activities in the low scenario (2,300 licenses) and about $26 million - $30 million per year in the high scenario (6,500 licenses). Regulatory and law enforcement costs would be borne by the following departments and divisions: agricultural commissioner, office of marijuana management, business and consumer affairs, public health, public works, regional planning, county counsel, fire, treasurer, district attorney, public defender and alternate public defender, and potentially others.

The following graph provides a 4-year projection of regulatory and law enforcement spending for high and low license density scenario.

Figure 20.
LA County Projected Annual Regulatory and Enforcement Expenditure



Source: Marijuana Policy Group.

It is critical to note that programmatic public health and education spending is not included in the above figures. These expenditures currently make up about half of all marijuana related spending in the city and county of Denver. According to the tax projection ($86 million - $129 million), LAC could potentially have ample revenue for necessary regulatory and enforcement functions as well as programmatic expenditures.

Opportunities for Additional Research

The passage of Proposition 64 will create the nation's largest regulated marijuana market, bringing with it a series of complex issues that local authorities must carefully consider. As witnessed in the four existing recreational marijuana states, marijuana policies and regulations enacted at the local level greatly impact the success and trajectory of regulated marijuana markets. Beyond the tax policies currently being considered by LAC—the impetus for this report—a number of high profile policy considerations will quickly emerge as California, and LAC, begin navigating the process of establishing a safe and regulated marijuana market. As the nation's largest local government, LAC's dealings with the regulated marijuana market will be closely examined by lawmakers and regulators throughout the country. The following is intended to provide the L.A. County CEO Office and Supervisors additional topics to research and consider.

Licensing allocations. As one of the largest consumer markets in the nation, recreational marijuana in LAC is bound to generate an immense amount of business interest. Consequently, LAC will need to consider a number of issues pertaining to the issuance of licenses, including:

- What type of marijuana establishments (cultivation, manufacturing, dispensary/storefront, testing, etc.), if any, should be allowed?
- Is there an optimal number of marijuana licenses/establishments to mitigate the regulatory risks of unprofitable operations (e.g., diversion to illegal markets such as minors and out-of-state smuggling)?
    - What is the likely failure rate of regulated marijuana businesses over time?
    - What metric should be used to establish the license limit?
- Should a phased approach to licensing be taken to mitigate the cost of early-stage errors in license criteria and processing?
- What is a reasonable price point for one-time and annually recurring licensing fees?
    - How will these fee amounts impact market concentration and competitiveness (large corporate operations vs. "mom and pop" operations)?
    - How much fee revenue is necessary to support administrative and regulatory functions?
- How will license applications be evaluated and by whom?
    - Standard operating procedures
    - Minimum capital requirements
    - Best practices for each operation (e.g., cultivation – energy efficient equipment and water reduction/reuse grow techniques)

- Zoning and land use considerations
    - How easy or stringent does LAC want to be in terms of where marijuana operations can locate?
    - What distance is appropriate from schools, religious establishments, other marijuana businesses, etc.

Production management. In addition to the regulations put forth by the state, LAC could take additional steps to ensure that the quantity of marijuana produced is as close as possible to that "legally " demanded in LAC in order to promote compliance with the enforcement priorities stated by the Department of Justice in the Cole Memorandum. The production management system chosen should be transparent, systematic, operable, and defensible. A few possible production management systems include:

- Marijuana plant count;
- Production area;
- Lighting-related inputs;
- Weight of finished product; and
- Amount of THC.

Each method has its advantages and disadvantages and regulators should carefully consider the operability, potential market distortions, enforcement burden, and licensee compliance burden when selecting between these mechanisms.

Financial considerations. Given marijuana businesses' current inability to use the traditional banking and financial sector in the U.S., the industry tends to operate predominantly in cash. The cash nature of the industry gives rise to a few important considerations:

- Local jurisdictions have noted that the lack of traditional financial statements and bookkeeping has dramatically increased the amount of time and resources needed to conduct routine audits on marijuana businesses.
- Utilization of "seed-to-sale" inventory tracking software to assist in gathering of financial data for tax audits.
- Continually identifying and analyzing practices employed by marijuana businesses to minimize or circumvent tax payments, a problem compounded by the cash nature of the marijuana industry.

Fiscal evaluation and forecasting. As with any new revenue and expenditure source, it will be critical for LAC to closely monitor and evaluate revenues and costs both directly and indirectly tied to marijuana. As seen in regulated marijuana markets currently, the limited amount of data, especially in the initial phases, requires carefully crafted analysis to generate substantive results and forecasts. From LAC's perspective, the following would be immensely beneficial in better understanding marijuana's fiscal impact:

- Create an internal database to track all marijuana revenues and expenditures.
    - Special attention must be paid to the expenditures side and detailing non-marijuana specific personnel providing hours/service.
    - Separate required regulatory and enforcement spending from programmatic spending.
- Detailed regulatory and enforcement cost analysis—by department, task, staff hours.
- Understand the volatility of the marijuana market. What are plausible scenarios that would lead to marijuana revenue decreases for LAC?

Future tax policy. Effective marijuana tax policy takes into account numerous factors. Consequently, for LAC to maximize their marijuana tax revenue potential, the exercise of evaluating LAC and surrounding marijuana conditions (demand, supply, product mix, etc.) is an ongoing endeavor. Additionally, LAC could consider implementing the following tax policies dependent upon future market conditions:

- Evaluating the tax rate to ensure it is achieving county goals.
- If cultivations are allowed, instituting a cultivation tax,
    - Per: square foot, plant, weight yield, etc.
- If manufacturers are allowed, instituting a manufacturer tax,
    - Per: square foot, purchased flower product for manufacturing, concentrate weight yield (pure weight or THC), etc.

Product compliance and safety. As a new legal market (excluding medical marijuana patients), it will be important to take the necessary precautions to ensure that all marijuana consumers understand the product that they are consuming, and that the quality of the product meets the appropriate health and safety standards, perhaps increasing the standards beyond what state agencies require. Such precautions could include the following:

- Testing for pesticides and having a recall protocol in place;
- Testing for residual solvents and other chemicals in manufactured products;
- Packaging and labeling that prevents youth use and inadvertent consumption;
- Standard consumption amounts for edible and infused non-edible products;
- Purchasing limits based upon THC equivalency of products.

Benchmarking. A critical question LAC will face in the coming years is how has the regulated marijuana market impacted the community? This is inherently a difficult question to answer given the myriad of potential economic and societal outcomes one could base the answer on, but actively collecting data, as well as pulling current and past data to establish a baseline and allow for time series comparisons, in the following areas will be of great benefit:

- Criminal activity related to marijuana (arrests, burglary, etc.);
- Hospital and emergency department visits related to marijuana;
- DUI related to marijuana;
- Youth perception and consumption statistics on marijuana;
- Location of marijuana operations in relation to low-income and minority neighborhoods;
- Energy and water consumption tied to marijuana production;
- Reduction in illicit black market activity;
- Fiscal benefits attributed to marijuana; and
- Persons employed by marijuana industry.

Conclusion

While the passage of Proposition 64 presents a unique set of challenges to LAC, it also represents a new sizeable revenue stream if taxed and regulated in a thoughtful and efficient manner. LAC 2018 medical and recreational sales revenues estimated to be about $1.7 billion, and tax revenues are estimated at $87 million under a five percent uniform marijuana tax, and $128.3 million with a ten percent uniform marijuana tax ($105 million under a dual rate 5 percent incorporated/10 percent unincorporated tax rate system).

Using available data from the cities of Denver and Seattle, scaled to LAC and adjusted based upon departmental differences (responsibilities, staffing levels, etc.), LAC can expect to spend about $9 million - $10 million per year on regulatory and enforcement activities in a low scenario of business licenses located in LAC and about $25 million - $30 million per year in a high scenario of business licenses.

Given these estimates, LAC would have sufficient revenue for necessary regulatory and enforcement functions as well as programmatic expenditures. Moving forward, it would benefit LAC to proactively develop licensing allocation and production management guidelines, conduct detailed fiscal/regulatory burden analyses with LAC-specific data, establish a baseline around societal and economic outcomes and collect relevant data, and regularly revisit tax policies to ensure the county is achieving its goals.

Overall, LAC will become one of the largest, if not *the largest*, local regulated marijuana markets in the world. Consequently, governments throughout the country and world will closely observe LAC's regulated marijuana policies to inform their own future decisions. LAC has an opportunity to build off of other lawmakers and regulators' experience, and become a leader through the thoughtful regulations and policies it enacts on regulated marijuana.