Delivering Revenue, Insight

and Efficiency to Local Government

Fiscal Analysis of the

Commercial Cannabis Industry

Prepared for

the

County of Santa Barbara

October 31st, 2017

Table of Contents

Introduction

HdL is providing this fiscal analysis of the commercial cannabis industry in Santa Barbara County to help guide the process of shaping taxation policy for this emerging industry. Specifically, HdL was asked to identify tax options and revenue estimates for the various types of cannabis businesses that might operate in the future under a County-regulated program, and to identify the local economic impacts of the cannabis industry. This report also seeks to analyze any financial constraints, including the overall tax and regulatory burden, which may impact both the industry's long-term stability and its ability to successfully transition to a legal, regulated paradigm that can outcompete the existing black market.

Discussion of regulating and taxing the cannabis industry can too often overshadow the larger jobs and economic development issues that typically accompany efforts to attract new industry. Word that a new business or industry is looking to bring hundreds of new jobs to a community is more commonly met with open arms and offers of tax incentives. The cannabis industry is perhaps completely unique in that the inherent jobs and economic development benefits are welcomed more grudgingly and met with the disincentive of special taxes. While the tax revenue potential is attractive to local governments, imposing excessively high rates may reduce the number of businesses that step forward and decrease the likelihood that they will succeed in the regulated market. In this way, higher taxes could result in less revenue.

As with regulations, taxes provide the opportunity to encourage and incentivize certain industry behaviors while discouraging or disincentivizing others. In this way, the effect of taxes on the cannabis industry should be no different than any other industry. If the County desires to generate revenue from this industry through taxes, then it must find tax rates and structures that are acceptable or beneficial to those aspects of the industry it wishes to support or encourage.

In considering whether to impose taxes, and at what rates, local decision makers must start with a candid assessment of their goals. What is their community's relationship with this industry currently? What would they like it to be in the future? How can they use a combination of land use, regulation, taxes and law enforcement to move this industry in the desired direction? Doing so can allow the County, with the help of numerous State agencies, to regulate this industry so as to reduce harm to consumers, the community, and the environment that have gone unmitigated for too long.

Cannabis cultivation, manufacturing distribution and retail sales each offer different challenges and opportunities for the County. Retailers serve the local population, so the amount of product they sell and the amount of revenue they collectively generate is not greatly affected by the number of retailers through which that product flows. From a tax perspective, retail sales are a zero-sum game in that, eventually, new retailers simply cannibalize sales from existing ones.

Cannabis manufacturing presents the best opportunity for growing new businesses and jobs, but this sector has a high degree of mobility. The manufacturing segment is growing and expanding, and offers lots of opportunity for innovation and job creation. Clear regulatory policies and low tax rates will be essential for attracting or holding on to this sector.

Equally important to tax rates is setting a clear and unambiguous direction for regulatory policy. As with any other industry, the cannabis industry desires regulatory certainty. This is a pivotal moment in time for the cannabis industry in California and Santa Barbara County, and delay can cause lost opportunities for those cannabis businesses that are looking to make the transition to a legal, regulated market. We encourage the County to provide as much clarity as possible regarding its goals for this emerging industry, and to establish a clear and methodical process for working towards those goals in a timely manner. Doing so will provide the greatest opportunity for the County's cannabis industry to succeed in a rapidly changing world.

Legal and Regulatory Background for California

The legal and regulatory status of cannabis in the State of California ("State") has been continually evolving ever since the passage of Proposition 215, the Compassionate Use Act of 1996 ("the CUA"), which de-criminalized the use, possession and cultivation of cannabis for qualifying patients and their primary caregivers when such use has been recommended by a physician. The CUA did not create any regulatory program to guide implementation, nor did it provide any guidelines for local jurisdictions to establish their own regulations.

The lack of legal and regulatory certainty for medical marijuana (or cannabis) continued for nearly 20 years, until the passage of the Medical Cannabis Regulation and Safety Act ("MCRSA") in October of 2015. MCRSA creates a State licensing program for commercial medical cannabis activities, while allowing counties and cities to maintain local regulatory authority. The State will not issue a state license without first receiving authorization by the applicable local jurisdiction.

Under MCRSA, commercial medical cannabis activities are regulated by a variety of State agencies. The California Department of Food and Agriculture (CDFA) will create, issue, and suspend or revoke licenses for the cultivation of medical cannabis. The Bureau of Medical Cannabis Regulation (later renamed the Bureau of Cannabis Control, or BCC) in the Department of Consumer Affairs, will administer, enforce, create, issue, renew, discipline, suspend, and/or revoke licenses for distributors, testing laboratories, and retailers. The California Department of Public Health's newly created Office of Manufactured Cannabis Safety (OMCS), will license cannabis product manufacturers, and will develop standards for the production and labeling of all medical cannabis products.

On November 8, 2016, the voters of the State of California approved Proposition 64, the Adult Use of Marijuana Act ("the AUMA"), which allows adults 21 years of age or older to legally grow, possess, and use marijuana for non-medical purposes, with certain restrictions. The AUMA requires the State to regulate non-medical marijuana businesses and tax the growing and selling of medical and non-medical marijuana. Cities and counties may also regulate non-medical marijuana businesses by requiring them to obtain local permits or restricting where they may be located. Cities and counties may also completely ban marijuana related businesses if they so choose.

On June 27, 2017, the State of California passed SB 94, which repealed MCRSA and incorporated certain provisions of MCRSA into the licensing provisions of AUMA. These consolidated provisions are now known as the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA). MAUCRSA revised references to "marijuana" or "medical marijuana" in existing law to instead refer to "cannabis" or "medicinal cannabis," respectively. MAUCRSA generally imposes the same requirements on both commercial medicinal and commercial adult-use cannabis activity, with certain exceptions.

All State license types other than Type 8 Testing Laboratories shall be designated either "A" for Adult Use or "M" for Medical". A single licensee will be allowed to hold both A and M licenses. , but it's unclear whether they will be able to operate both on the same premises.

Figure 1 lists the 20 different license types available from the State under MAUCRSA, plus two additional types (N and P manufacturers) that are anticipated to be created through the rulemaking process over the next few months. As noted, the licensee must be in compliance with any local regulations before the State will issue any license.

Figure 1:

State License Types Under MAUCRSA					
Type	**Activity**	**Description**	**Details**	**Licensing Agency**	**Notes**
1	Cultivation	Outdoor; Specialty, Small	Up to 5,000 sf, or 50 plants on non-contiguos plots	CDFA	A, B, C
1A	Cultivation	Indoor; Specialty, Small	501 sf - 5,000 sf	CDFA	A, B, C
1B	Cultivation	Mixed-Light; Specialty, Small	2,501 sf - 5,000 sf	CDFA	A, B, C
1C	Cultivation	Outdoor/indoor/mixed; Specialty Cottage, Small	Up to 25 plants outdoor; up to 2,500 sf mixed light; up to 500 sf indoor	CDFA	A, B, C
2	Cultivation	Outdoor; Small	5,001 sf - 10,000 sf	CDFA	A, B, C
2A	Cultivation	Indoor; Small	5,001 sf - 10,000 sf	CDFA	A, B, C
2B	Cultivation	Mixed Light, Small	5,001 sf - 10,000 sf	CDFA	A, B, C
3	Cultivation	Outdoor; Medium	10,001 sf - one acre	CDFA	A, B, C, D
3A	Cultivation	Indoor; Medium	10,001 sf - 22,000 sf	CDFA	A, B, C, D
3B	Cultivation	Mixed-Light; Medium	10,001 sf - 22,000 sf	CDFA	A, B, C, D
4	Cultivation	Nursery		CDFA	A, B, C
5	Cultivation	Outdoor; Large	Greater than 22,000 sf	CDFA	A, B, C, E
5A	Cultivation	Indoor; Large	Greater than 22,000 sf	CDFA	A, B, C, E
5B	Cultivation	Mixed-Light; Large	Greater than 22,000 sf	CDFA	A, B, C, E
6	Manufacturer 1	Extraction; Non-volatile	Allows infusion, packaging and labeling	OMCS	A, B
7	Manufacturer 2	Extraction; Volatile	Allows infusion, packaging and labeling, plus non-volatile	OMCS	A, B
N	Manufacturer	Packaging and Labeling	No extraction allowed	OMCS	A, B, F
P	Manufacturer	Infusion for Edibles, Topicals	No extraction allowed	OMCS	A, B, F
8	Testing		Shall not hold any other license type	BCC	A
10	Retailer	Retail sale and delivery		BCC	A, B
11	Distributor			BCC	A, B
12	Microbusiness	Cultivation, Manufacturer 1, Distributor and Retailer	< 10,000 sf of cultivation; must meet requirements for all license types	BCC	A, B

CDFA	California Department of Food and Agriculture
OMCS	Calfornia Department of Public Health, Office of Manufactured Cannabis Safety
BCC	Bureau of Cannabis Control
A	All license types valid for 12 months and must be renewed annually
B	All license types except Type 8 Testing must be designated either "A" (Adult Use) or "M" (Medical)
C	Anticipated that there will be a limit of 4 acres for any combination of cultivation licenses per licensee
D	CDFA shall limit the number of licenses allowed of this type
E	No Type 5 licenses shall be issued before January 1, 2023
F	Not yet in law, but expected to be established through rulemaking process

MAUCRSA incorporated the Type 5, 5A and 5B cultivation licenses from AUMA, which will allow for cannabis farms of unlimited size. No Type 5 licenses will be issued before 2023, however, and local jurisdictions will still retain the authority to disallow or limit the size of cannabis cultivation. It is anticipated that CDFA will limit the number of Type 5 licenses, but this is not yet clear.

AUMA and MAUCRSA eliminated the Type 12 Cannabis Transporter license type from MCRSA. Instead, cannabis cultivators, manufacturers and retailers (but not testing laboratories) are now allowed to transport their own product, provided they have a separate distributor license. Independent cannabis distributors will likely pick up a larger portion of that business, too. In its place, MAUCRSA incorporated the Type 12 license for cannabis "Microbusinesses" from AUMA, which allows a combined non-medical cannabis business with up to 10,000 square feet of cultivation, and which can manufacture, distribute and sell their product on-site to retail customers, provided they meet all of the individual license requirements for all of the activities they choose to undertake.

MAUCRSA also made a fundamental change to the local control provisions. Under MCRSA, an applicant could not obtain a State license until they had a local permit. Under MAUCRSA, an applicant for a State license does not have to first obtain a local permit, but they cannot be in violation of any local ordinance or regulations. The State licensing agency shall contact the local jurisdiction to see whether the applicant has a permit or is in violation of local regulations, but if the local jurisdiction does not respond within 60 days, then the applicant will be presumed to be in compliance and the State license will be issued.

On September 16, 2017, Governor Brown signed AB 133, which makes a number of major and minor "clean up" changes to the State's regulations, most notably regarding vertical integration. MAUCRSA authorizes a person to apply for and be issued more than one license only if the licensed premises are separate and distinct. With the passage of AB 133, a person or business may co-locate multiple license types on the same premises, allowing a cultivator to process, manufacture or distribute their own product from a single business location. This includes the allowance to cultivate, manufacture, distribute or sell cannabis for both medical and adult use from a single location. However, these allowances are still subject to local land use authority, so anyone seeking to operate two or more license types from a single location would be prohibited from doing so unless local regulations allow both within the same zone.

Current Cannabis Production in Santa Barbara County

Cannabis cultivation exists in every county and region in California, either legally or through the black market, though the size and nature of the industry can vary greatly from place to place. A Standardized Regulatory Impact Assessment (SRIA) prepared for the California Department of Food and Agriculture (CDFA) estimates statewide cannabis production at 13.5 million pounds, though its estimate of the amount of cannabis consumed by California residents is just 2.5 million pounds[i], suggesting a significant amount of overproduction that is presumably exported to other states through the black market. A separate study performed for the California Cannabis Industry Association (CCIA) put statewide consumption even lower, at 1.6 million pounds[ii].

The SRIA relies upon three sources of information: registered farms, eradications, and mapped but unregistered farms. The data captured is assumed to be accurate, but it does not capture unknowns such as indoor cultivation sites that have escaped detection. It also does not distinguish between black market cultivation and those who are seeking to become legal. These figures also do not include small amounts of cannabis grown for personal use or cannabis that is imported from Mexico. Given these constraints, it is likely that the actual amount of cannabis grown in California is even greater, perhaps far greater, than the 13.5 million pounds projected.

This same study found that the South Coast Region (which includes Santa Barbara, Ventura, Los Angeles, and San Diego counties) produces 625,000 pounds of cannabis annually, which amounts to about 5% of the cannabis grown in California. 48% of the region's production is believed to be cultivated outdoors, with 22% using mixed-light cultivation and 30% being produced indoors. The SRIA does not break down estimates of production for individual counties, nor does it differentiate between the unincorporated counties and the cities within their boundaries. Dividing 650,000 pounds equally among the 5 counties in the region would give a figure of about 125,000 pounds for each county, though there is no reason to assume such an even regional apportionment.

In August of 2016, CDFA conducted an online survey of interest in the various commercial cannabis license types for each county in California. This survey data was gathered solely through self-reporting from respondents all around California who voluntarily chose to participate by going to CDFA's website. The survey methods were neither detailed nor conclusive and did not require any evidence or corroboration of a respondent's stated intent to apply for a given type of license in any particular county. The survey data also does not distinguish between the County's unincorporated jurisdiction and the cities within the County.

The CDFA survey had 160 respondents for the various cultivation license types in Santa Barbara County. Applying standard assumptions for canopy size, production yield and harvests per year, we calculate that these respondents could potentially produce around 450,000 pounds of cannabis per year, which is almost three-quarters of the amount estimated to be produced by the entire region. Bear in mind, too, that the cultivation figures cited in the SRIA include the amount produced by and for the black market. The County's production share of the legal market would be much smaller.

With a population of 423,895, a favorable climate and lots of mountainous terrain, it would be highly unlikely for the County to have fewer than 1,000 commercial-scale cannabis growers, not including those who grow only small amounts for personal use. Many counties have organized local chapters of cannabis trade associations which are able to give fairly accurate numbers for the size and scope of their local industry. Unfortunately, this is not currently the case with the industry in Santa Barbara, which currently lacks any unified "voice".

Though there are no membership organizations to provide firm numbers, conversations with representatives of a number of statewide cannabis organizations provided some narrative indication of the size and nature of the existing industry. From these conversations, it is estimated that there might be between 2,000 and 2,500 cannabis growers in Santa Barbara County, with a "best guess" of 2,300. It is believed that perhaps 2,000 of these growers would fall into the smaller Type 1 licenses (5,000 square feet or less) with about 300 Type 2 licenses (5,001 to 10,000 square feet). These contacts doubted that there are many current Type 3 growers (10,000 to 22,000 square feet) due to the difficulty in hiding a large-scale operation in a county that currently does not permit commercial cultivation at all.

According to these sources, Type 1 and 2 growers are likely split with perhaps 40% growing outdoors, 40% growing mixed-light in greenhouses and 20% indoors. Any Type 3 facilities would likely be split with perhaps 75% mixed light in greenhouses and 25% indoor.

These contacts also suggested that the large, indoor "warehouse" operations have been migrating to other communities that offer a better business environment for the cannabis industry. Factors affecting this migration include cheaper real estate values, lower operational costs and better proximity to their primary market of the Los Angeles area, as well as a more welcoming regulatory environment with well-defined regulations and reasonable taxes.

County Cannabis Registry

The County of Santa Barbara has gathered data through its own online cannabis registry to gauge interest in the various license types available under MCRSA. Prospective applicants are asked to answer a long list of questions, regarding which State license types they anticipate applying for, where within the County their prospective operation will be located, whether they have identified a specific parcel, what environmental constraints they may face, etc. Most pertinent to this analysis is the data collected regarding license types, prospective cultivation area, harvest cycles per year, and number of employees.

The registry closed as of June 31st, by which time 509 people had registered their intent to pursue future operations under one or more State license types. Though the registration form is quite detailed, the data it requests is nonetheless rather subjective, and many of the responses are significantly lacking in data. There are significant discrepancies between categories that would presumably have some numerical relationship. There are also difficulties arising from the way some of the data fields are sorted. Many respondents registered their interest in applying for numerous types of licenses. Some listed 4, 5 or 6 potential license types. A few showed interest in as many as 18.

The data for "Total Canopy SqFt" aggregates the area for all cultivation types by any one respondent, making it impossible to determine how that canopy area would be divided among the various license types. For example, numerous applicants stated their intent to engage in a combination of outdoor, indoor and mixed-light cultivation. In such cases, a single figure for cultivation area does not allow us to accurately apply differential tax rates for the three cultivation types.

Additionally, some of the respondents appear to have been unclear on what information was being requested, or on the limitations imposed under existing State law. In some cases respondents indicated an amount of cultivation area that far exceeds what is allowed for their intended license type.

These and other issues with some of the data limit its applicability for making accurate revenue projections based upon each specific registrant. However, we believe the aggregated data is still valuable for making projections by modeling the data to determine averages. For this reason, we have made a number of adjustments to the data set:

1. Not all who intend to apply for cultivation licenses listed their planned amount of canopy area, and some who marked only non-cultivation license types still listed as much as 5,000 square feet of canopy area. 25 registrants entered less than 100 square feet of canopy, 15 entered 0, and 3 entered negative numbers. For purposes of this analysis, we counted 33 respondents who did not appear to have any plans for cultivation.

2. Though there were 472 registrants for cultivation license types, they collectively anticipate applying for 1,365 separate cultivation licenses.

3. We have removed a few outliers that dramatically skewed the data and, thus, any

Figure 2:

County Registry Summary		
Category	**License Type**	**Quantity**
Cultivation	1	106
	1A	87
	1B	106
	1C	79
	2	121
	2A	91
	2B	168
	3	283
	3A	91
	3B	233
Total Cultivation		1365
Nursery	4	280
Manufacturing	6	188
	7	140
Testing	8	65
Retail	10	141
Distributor	11	204
Transporter	12	118
Micro-Business	12A	160

projections based on it. For example, the 8 largest registrants each anticipated cultivating from 1 million to over 4 million square feet of canopy. When these are included in this analysis, the total canopy area for all 472 cultivation registrants is over 49 million square feet, and the average size is 104,311 square feet. When these 8 are removed, the total area for the remaining 464 registrants comes down to 29 million square feet, with an average of just 63,415 square feet. These 8 registrants account for over 40% of the total square footage, which wildly skews the averages.

4. Since it is not possible to correlate the anticipated cultivation area by license type for each of the respondents, we have applied standard figures that assume growers will, on average, cultivate 75% of the maximum allowable area for their license type. For example, we assume that Type 2 licenses which allow from 5,000 to 10,000 square feet of canopy will average 7,500 square feet. This is the midpoint of the range for each license type.

5. The registry shows 280 individuals planning to seek Type 4 licenses for nurseries. Nurseries are distinctly different from other cultivation types, as they do not produce an end-user product for retail sale, and they do not have regular harvest rotations. As such, they should be handled separately from other types of cultivation. Conversations with industry sources suggests that commercial nurseries may average around 15,000 square feet, but we anticipate the anticipate that most of these would be much smaller, as they would likely supply or support cultivation by the same owner, rather than operate as a separate enterprise.

Figure 3:

License Types: CDFA Survey vs County Regsitry

MCRSA License Type	Number of Licenses (County Registry)	Number of Licenses (CDFA Survey)	Numerical Difference (County /CDFA)	Percentage Difference (County /CDFA)
1	106	24	82	442%
1A	87	19	68	458%
1B	106	20	86	530%
1C	79	0	79	
2	121	20	101	605%
2A	91	16	75	569%
2B	168	17	151	988%
3	283	28	255	1011%
3A	91	13	78	700%
3B	233	23	210	1013%
4	280	20	260	1400%
Totals	**1,645**	**200**	**1,445**	

The CDFA survey and the County's registry resulted in two separate sets of numbers for how many people might be interested in or intending to apply for each of the cultivation license types in Santa Barbara County. The CDFA survey had 200 responses, while the County registry had 509 people registering interest in 1,645 permits. Not surprisingly, the numbers for the County registry were higher in all categories, sometimes by a factor of 10. Some of the numbers track very closely between the two surveys, despite the larger number of respondents to the County registry. Given the different survey methods, different parameters and the vastly different number of responses, it is hard to find true statistical parallels between the two. However, there are a few similarities. Both show high demand for the Type 3 Medium Outdoor license, and low demand for the Type 3A Medium Indoor. There appears to be consistently strong demand for all Mixed Light license types (1B, 2B and 3B), as well as Outdoor (1, 2 and 3). All size classes (Specialty, Small and Medium) show Indoor as having the least demand. (Note: The CDFA survey did not include the Type 1C permit, which did not yet exist at the time.)

Taxing Cultivation

There are four main approaches to taxing the various cannabis commercial activities:

1) A tax on cultivation area by square foot: This is the method most commonly used by local jurisdictions to tax cannabis cultivation, as discussed in detail below.
2) A tax on gross receipts of a cannabis business; The State's 15% excise tax is an example of a tax on the business's gross receipts. This is the method most commonly applied to cannabis businesses other than cultivation.
3) A per-unit tax on the product by weight or volume: The State's cultivation tax of $9.25 per ounce of dried flower or $2.75 per ounce is a tax on product by weight, which does not consider the value of the product.
4) A retail sales tax at point of sale: All retail sales of cannabis and cannabis products are subject to State and local sales taxes, with a limited exception for qualifying patients with a State-issued ID card. State and local sales taxes in California are limited to a combined maximum of 10.250%

When multiple tax methods are applied at both the local and state levels, each adds to the final price of the product, even though the taxes are collected upstream from the end user in most cases. Varying tax structures at both the local and state levels can make it hard to find a common denominator for determining the cumulative tax rate. To measure the cumulative tax rate on cannabis, or to determine how a square footage tax compares with a gross receipts tax or other methods, we must find a common denominator between square footage, weight of product, and gross receipts.

Square Footage Tax

Cannabis cultivation is most commonly taxed on the square footage of the canopy or cultivation area. Draft regulations developed by the California Department of Food and Agriculture (CDFA) for implementation of MCRSA[1] define "canopy" to mean all of the following:

1) The designated area(s) at a licensed premises that will contain mature plants at any point in time;
2) Canopy shall be calculated in square feet and measured using clearly identifiable boundaries of all area(s) that will contain mature plants at any point in time, including all of the space(s) within the boundaries;
3) Canopy may be noncontiguous but each unique area included in the total canopy calculation shall be separated by an identifiable boundary such as an interior wall or by at least 10 feet of open space; and

[1] In late June, the Legislature passed and the Governor signed into law, the Medicinal and Adult-Use Cannabis Regulation and Safety Act (MAUCRSA), which repealed MCRSA and creates one regulatory system for both medicinal and adult-use cannabis. As a result, CDFA, the California Department of Public Health and the renamed Bureau of Cannabis Control have withdrawn their proposed regulations and are each developing new proposed regulations based on the new law. It is expected that the revised rules will track closely with the previous proposed rules. The agencies will use the emergency rulemaking process for the new proposed regulations, which are expected to be published in the fall for approval and implementation by January 2, 2018.

4) If mature plants are being cultivated using a shelving system, the surface area of each level shall be included in the total canopy calculation.

The State's proposed definition arguably makes "canopy" the same as the permitted cultivation area. Using this same definition for local regulatory and tax ordinances would allow the County's cultivation tax to be directly tied to the specific square footage of the permitted cultivation area. This has a number of benefits to both the cultivator and the taxing agency.

A tax on the square footage of the permitted cultivation area allows both the grower and the county to know exactly how much the annual tax will be at the time the permit is applied for or issued. The tax is a fixed amount, rather than a variable, so the grower can factor the cost into their financing or business plan without any uncertainty as to the amount of their tax liability for the year. Similarly, this foreknowledge allows the local government to accurately predict their annual revenues from the cultivation tax, for improved budgeting.

With a square footage tax, the tax liability is known upfront, so payment can be made at any time rather than having to wait until the end of the year. Payment of the tax upfront at the time of permitting may create cashflow problems for the grower, as it would require a significant capital outlay far in advance of harvest and sale. Alternately, tax payments can be made in monthly installments, or deferred until time of harvest. Since the amount of the tax liability would be known upfront, there would be no end-of-year tax surprises for either the cultivator or the County.

A square footage tax does have a significant shortcoming in that it does not account for variations in yield or price. As an agricultural crop, cannabis can be subject to crop loss due to pests, bugs, mites, viruses, mold and mildew. Unless there is some accommodation or mechanism put in place to address crop loss, the cultivator may find themselves paying the same amount of tax on half a crop, or even no crop, as they would have on a full, healthy crop.

Gross Receipts Tax on Cultivation

A tax on the gross receipts of a business may be paid either monthly or annually. Since cultivation is cyclical, growers are likely to have some months where they have no reportable gross receipts, and other months where their gross receipts are high. This is especially the case for cultivation that uses only natural light (commonly referred to as "outdoor" cultivation, though this may occur in a greenhouse) which typically only achieves one harvest per year. The amount of their tax liability to the County or not be known until harvest time, which may leave some growers with a significant end-of-year tax burden beyond what they had planned for. However, this difference between projections and actual yield would be a positive, in that the cultivator would only have to pay a higher than expected tax if they were in the enviable position of having a higher than expected yield, or of selling their product for a higher than expected price. By contrast, under a square footage tax, a cultivator who experiences crop loss could have to pay the same amount of tax on a lower, perhaps much lower, yield.

While gross receipts taxes are common for cannabis manufacturers and retailers, they are generally less common for cultivation. Perhaps one of the reasons for this is that a cultivation tax could be seen as taxing a land use activity, rather than a product. In such case, the tax should be proportional to the impact of that activity. Cannabis cultivation is directly proportional to the amount of area to be cultivated, particularly in the case of outdoor or greenhouse cultivation. The impacts, too, may be seen as proportional to this cultivation area, whether it be the clearing of land, water supply or other

environmental factors. However, these arguments in favor of a tax on the area of impact are less compelling when considering indoor or mixed-light cultivation.

A cultivation tax based on gross receipts is a tax on production or earnings, rather than activity. The cultivator's tax liability increases as productivity increases, even if the amount or area of activity has not changed. A cultivator who succeeds in producing more product, or a higher value product, from a given-size cultivation area, will pay more than a cultivator who produces less, or lower value product, from the same size area. As noted above, though, the cultivator would only be in the position of paying more tax if they made more money.

Lastly, it's important to bear in mind that a tax on gross receipts is a tax on *gross income*, rather than actual profit. What portion of that income the cultivator is able to realize as profit depends upon their business skills and other factors that are beyond the scope of this report.

Economies of scale

As with regulations, taxes provide the opportunity to encourage and incentivize certain industry behaviors while discouraging or disincentivizing others. They can be used to level the playing field, or to tilt it as desired. Higher taxes are generally seen as creating a less-welcoming regulatory environment, while tax incentives are sometimes offered to help attract businesses. In this way, the effect of taxes on the cannabis industry should be no different than any other industry. While retailers must be located to serve the local population, both cultivation and manufacturing have some option to move to other jurisdictions with a more advantageous regulatory climate. If the County desires to generate revenue from this industry through taxes, then it must find tax rates and structures that are acceptable or beneficial to those aspects of the industry it wishes to allow, support or encourage. Simply put, the County will not realize any revenue from businesses which choose to locate elsewhere due to a burdensome or unwelcoming regulatory and tax climate.

Scenarios presented in this report make a number of baseline assumptions regarding the impact of taxes. It is assumed that a high tax burden presents a greater challenge to smaller businesses than to larger ones, which have certain benefits from economies of scale. This is not to say that higher taxes are beneficial to larger businesses; it is only to suggest that larger businesses generally have a somewhat greater capacity to accommodate and absorb overhead such as taxes and, conversely, that smaller businesses are more acutely affected by this increased overhead. Studies suggest that the economies of scale are larger for outdoor cultivation than for indoor, but that they are nonetheless relatively mild (Hawken, 2013).[iii]

Economies of scale may be a consideration for the County in that they create a slight advantage for larger cannabis businesses. All other things being equal, a larger business with lower per-unit operational costs will have certain advantages over smaller competitors, potentially leading to more large businesses and fewer small ones, especially if there is only a limited number of permits to be available. The County may regard this as either a non-issue or even as beneficial, if it desires to incentivize large cannabis businesses over small ones. On the other hand, if the County desires to either level the playing field or to incentivize smaller cannabis operations, it may want to consider a tiered tax structure with a slight increase on the larger operations. This is discussed later in this analysis.

Harvest Cycles

It is assumed that indoor and mixed-light cultivation are capable of multiple harvest cycles per year, as opposed to a single harvest cycle for outdoor cultivation. Though cultivation methods, harvest cycles and productivity can vary greatly, a standard rule of thumb among many in the industry is that outdoor (natural light) cultivation yields one harvest cycle per year, while mixed-light yields three harvests, and full-indoor commonly yields five. A flat, square-foot tax on the cultivation area thus gives mixed-light and indoor operations the advantage of being able to amortize that tax over far more product, granting them a distinct price advantage over outdoor cultivation. However, both indoor and mixed-light are far more infrastructure intensive than outdoor cultivation and typically carry far greater up-front investment and operational costs[iv]. Both of these factors should be considered when developing an appropriate tax strategy.

For purposes of this analysis, we have modified the one, three and five harvest cycles per year above to assume just four cycles for indoor cultivation. This assumption is modified for the sake of providing more conservative projections and to recognize that there are a range of practices and regimens for indoor cultivation. It is generally accepted that cannabis requires a minimum of 60 days to reach flowering maturity, which would allow for a maximum of six harvest cycles per year (some cultivators claim to achieve as many as eight harvests per year, but this is likely neither realistic nor sustainable at the commercial level). Assuming four harvest cycles per year also reflects the higher volatility of a more rigorous and demanding rotation schedule by allowing for the possibility of crop loss due to pathogens or other causes.

Yield is assumed to average one pound of cannabis flower for every 10 square feet of cultivation area. This metric is drawn from a 2010 study by the Rand Corporation[v]. Though the study is fairly old for such a young industry, its findings are consistent with more recent studies. Some cultivation facilities can yield one pound for every eight square feet, and others cite yields that are much lower (more square feet per pound), but 10 square feet remains a commonly used metric which provides for conservative estimates.

Each State cultivation license type allows a range for the amount of area that can be cultivated. Types 1, 1A and 1B ("Specialty") each allow up to 5,000 square feet. Types 2, 2A and 2B ("Small") allow from 5,001 up to 10,000 square feet. Type 3 ("Medium") allows from 10,001 square feet up to a full acre (for outdoor cultivation) while Types 3A and 3B allow from 10,001 up to 22,000 square feet. The Type 5, 5A and 5B ("Large") licenses created by AUMA will allow for unlimited cultivation sizes, starting in 2023. The Type 5 licenses were not included in either the CDFA survey or the County's registry, and so are not a part of this analysis.

It is not possible at this time to know the actual size of the cultivation area that will be permitted for each applicant, but any variables can only push these figures downward, as they cannot exceed the maximum allowed by their license type. For purposes of this analysis, we will generally assume that the average canopy area for each license type would be 75% of the allowable maximum.

Comparing Square Footage and Gross Receipts

Determining how a gross receipts tax rate for manufacturers, retailers or other cannabis businesses affects the overall, cumulative tax rate on cannabis is fairly easy, as it can be reverse engineered. This allows us to compare the relative tax burden on different cannabis activities, as well as the cumulative burden on the end consumer.

Determining an appropriate tax on cultivation area based on square feet is more difficult, as we have to convert the tax rate per square foot to a percentage of both product and value. To do this, we have to take into account the differences in harvest cycles per year, as noted above. If all other factors are equal, then indoor cultivation should be able to absorb a tax rate that is four times higher than the tax rate for outdoor cultivation.

We have provided a number of generic tables to demonstrate the difference between factors of harvest cycles and scale of operation. Each of these tables (figures 3 through 7) consider a sample area of just 1,000 square feet for each cultivation type. By using increments of 1,000 square feet as a standard unit of measure, it is easy to extrapolate to determine what the yield, value, and annual tax paid would be for larger sizes. Outdoor cultivation, mixed light and indoors are assumed to yield one, three and four harvest cycles per year, and we assume an average value of $1,000 per pound, as discussed previously. This allows us to compare square footage and gross receipts with a common denominator.

Flat Tax

Figure 4, below, shows the uneven result of a simple "flat tax" on cultivation area. In this example, all license types are taxed at a simple $1.00 per square foot rate, for illustration purposes. Though this may sound fair and equitable, the effective tax rate varies by a factor of four. Each cultivation type pays the same tax rate of $1.00 per square foot and the same amount of tax at $1,000. However, when the tax is amortized to capture the number of cycles per year, the equivalent gross receipts tax rate for mixed light drops to $0.33 per square foot and indoor drops to $0.25 per square foot. The tax per pound varies from $10.00 for outdoor down to just $2.50 for indoor, and the tax as a percent of value varies from 1.00% down to just 0.25%. Clearly, a flat tax gives a huge advantage and incentive to indoor cultivation, with its potential for four or more cycles per year, while presenting a significant disadvantage for outdoor cultivation.

Figure 4:

Flat Tax of $1 per Square Foot									
Cultivation Type	Harvest Cycles /Year	Sample Area (sq ft)	Yield (lbs)	Value @ $1,000/lb	Tax Rate $1.00/sf	Total Annual Tax Paid	Tax Rate per Cycle	Tax per Pound	Tax as Percent of Value
Outdoors	1	1,000	100	$100,000	$1.00	$1,000	$1.00	$10.00	1.00%
Mixed Light	3	1,000	300	$300,000	$1.00	$1,000	$0.33	$3.33	0.33%
Indoors	4	1,000	400	$400,000	$1.00	$1,000	$0.25	$2.50	0.25%

Figure 5 presents the same scenario, but with a tax rate that varies depending upon the cultivation type and the anticipated number of harvest cycles per year. In this example, the tax rate for outdoor stays at $1.00 per square foot, but the tax on mixed light and indoor are increased to $3.00 per square foot and $4.00 per square foot, respectively. The amount of tax paid ranges from $1,000 to $4,000 for the same cultivation area but, when amortized over the number of harvest cycles, the tax rate is an even $1.00 per square foot, the tax per pound is an even $10.00 and the equivalent tax rate as a percent of value is 1.00% for all cultivation types. Using this example, it is easy to see how higher tax rates could be based upon multiples of this 1/3/4 structure, such as 2/6/8 or 3/9/12.

Figure 5:

Variable Tax Adjusted by Harvest Cycles per Year									
Cultivation Type	Harvest Cycles /Year	Sample Area (sq ft)	Yield (lbs)	Value @ $1,000/lb	Variable Tax Rate	Total Annual Tax Paid	Tax Rate per Cycle	Tax per Pound	Tax as Percent of Value
Outdoors	1	1,000	100	$100,000	$1.00	$1,000	$1.00	$10.00	1.00%
Mixed Light	3	1,000	300	$300,000	$3.00	$3,000	$1.00	$10.00	1.00%
Indoors	4	1,000	400	$400,000	$4.00	$4,000	$1.00	$10.00	1.00%

As a general (but not universal) rule, larger operations typically have some ability to accommodate higher overhead, as it is spread across more production. Conversely, a given tax rate may be harder for small cultivators to absorb, increasing the likelihood that small growers may give way to larger operations. The next three scenarios are based on the varied tax rate above, but we have added in tiers that increase the tax rate by 25% for each larger cultivation class (Specialty, Small and Medium).

Figure 6:

Tiered Variable Tax Adjusted by Harvest Cycles per Year and Cultivation Area - Example 1									
Cultivation Type	Harvest Cycles /Year	Sample Area (sq ft)	Yield (lbs)	Value @ $1,000/lb	Tiered Variable Tax Rate	Total Annual Tax Paid	Tax Rate per Cycle	Tax per Pound	Tax as Percent of Value
Specialty Outdoors	1	1,000	100	$100,000	$1.00	$1,000	$1.00	$10.00	1.00%
Specialty Mixed Light	3	1,000	300	$300,000	$3.00	$3,000	$1.00	$10.00	1.00%
Specialty Indoors	4	1,000	400	$400,000	$4.00	$4,000	$1.00	$10.00	1.00%
Small Outdoors	1	1,000	100	$100,000	$1.25	$1,250	$1.25	$12.50	1.25%
Small Mixed Light	3	1,000	300	$300,000	$3.75	$3,750	$1.25	$12.50	1.25%
Small Indoors	4	1,000	400	$400,000	$5.00	$5,000	$1.25	$12.50	1.25%
Medium Outdoors	1	1,000	100	$100,000	$1.50	$1,500	$1.50	$15.00	1.50%
Medium Mixed Light	3	1,000	300	$300,000	$4.50	$4,500	$1.50	$15.00	1.50%
Medium Indoors	4	1,000	400	$400,000	$6.00	$6,000	$1.50	$15.00	1.50%

Figure 6 (above) uses the 1/3/4 rate structure from Figure 5 for the "Specialty" cultivation classes (License Types 1, 1A and 1B; up to 5,000 square feet). For the "Small" cultivation classes (Type 2, 2A and 2B; up to 10,000 square feet), we have added in a 25% increase over the base rate, and for the "Medium" classes (Type 3, 3A and 3B; up to 22,000 square feet for indoor and mixed light, or one acre for outdoor) we have added an additional 25%. The tax rates vary more greatly, from a low of $1.00 per square foot for Specialty Outdoor, up to $6.00 per square foot for Medium Indoor, and the amount of tax paid on the 1,000 square feet sample area varies accordingly; from $1,000 up to $6,000. However, the tax rate amortized by harvest cycles per year only varies from $1.00 per square foot to $1.50 per square foot. The tax per pound ranges from $10.00 to $15.00, and the tax as a percent of value (assuming $1,000 per pound) equals just 1% to 1.5%.

Figure 7 builds upon the previous scenario, but increases the base tax rate for outdoors cultivation up to $3.00 per square foot. The base rate for mixed light is set at $9.00 per square foot, and the base rate for indoors is $12.00 per square foot. As with the previous model, the rate increases by 25% for each larger cultivation class. This pushes the tax rate for Medium Indoors cultivation up to $18.00 per square foot,

or $18,000 for a 1,000 square foot sample area. While on its face this appears to be a very high tax rate, when amortized over four harvest cycles the rate is just $4.50 per square foot, and the tax as a percent of value is 4.50%.

Figure 7:

Tiered Variable Tax Adjusted by Harvest Cycles per Year and Cultivation Area - Example 2									
Cultivation Type	Harvest Cycles /Year	Sample Area (sq ft)	Yield (lbs)	Value @ $1,000/lb	Tiered Variable Tax Rate	Total Annual Tax Paid	Tax Rate per Cycle	Tax per Pound	Tax as Percent of Value
Specialty Outdoors	1	1,000	100	$100,000	$3.00	$3,000	$3.00	$30.00	3.00%
Specialty Mixed Light	3	1,000	300	$300,000	$9.00	$9,000	$3.00	$30.00	3.00%
Specialty Indoors	4	1,000	400	$400,000	$12.00	$12,000	$3.00	$30.00	3.00%
Small Outdoors	1	1,000	100	$100,000	$3.75	$3,750	$3.75	$37.50	3.75%
Small Mixed Light	3	1,000	300	$300,000	$11.25	$11,250	$3.75	$37.50	3.75%
Small Indoors	4	1,000	400	$400,000	$15.00	$15,000	$3.75	$37.50	3.75%
Medium Outdoors	1	1,000	100	$100,000	$4.50	$4,500	$4.50	$45.00	4.50%
Medium Mixed Light	3	1,000	300	$300,000	$13.50	$13,500	$4.50	$45.00	4.50%
Medium Indoors	4	1,000	400	$400,000	$18.00	$18,000	$4.50	$45.00	4.50%

Figure 8 shows the effect of applying this model to a higher base rate of $5.00 per square foot. Using the same multipliers for harvest cycles, the base rate for mixed-light cultivation goes up to $15.00 per square foot and the base rate for indoor goes up to $20.00 per square foot. The highest rate for the medium indoors cultivation class climbs all the way to $30.00 per square foot, which equals a tax per pound of $75.00, and an equivalent tax rate as a percent of value of 7.50%.

Figure 8:

Tiered Variable Tax Adjusted by Harvest Cycles per Year and Cultivation Area - Example 3									
Cultivation Type	Harvest Cycles /Year	Sample Area (sq ft)	Yield (lbs)	Value @ $1,000/lb	Tax Rate $1.00/sf	Total Annual Tax Paid	Tax Rate per Cycle	Tax per Pound	Tax as Percent of Value
Specialty Outdoors	1	1,000	100	$100,000	$5.00	$5,000	$5.00	$50.00	5.00%
Specialty Mixed Light	3	1,000	300	$300,000	$15.00	$15,000	$5.00	$50.00	5.00%
Specialty Indoors	4	1,000	400	$400,000	$20.00	$20,000	$5.00	$50.00	5.00%
Small Outdoors	1	1,000	100	$100,000	$6.25	$6,250	$6.25	$62.50	6.25%
Small Mixed Light	3	1,000	300	$300,000	$18.75	$18,750	$6.25	$62.50	6.25%
Small Indoors	4	1,000	400	$400,000	$25.00	$25,000	$6.25	$62.50	6.25%
Medium Outdoors	1	1,000	100	$100,000	$7.50	$7,500	$7.50	$75.00	7.50%
Medium Mixed Light	3	1,000	300	$300,000	$22.50	$22,500	$7.50	$75.00	7.50%
Medium Indoors	4	1,000	400	$400,000	$30.00	$30,000	$7.50	$75.00	7.50%

Adding tiers for larger cultivation license types can be an effective, incentive-based tool to either level the playing field for small operations, or to actively encourage small growers over larger ones. Limiting the number of licenses available for each license type accomplishes this same goal in a more prescriptive manner.

This model demonstrates both the ability to use a square footage tax as a proxy for either gross receipts (percent of value) or for unit of product (per pound) and for understanding how gross receipts relates to cultivation area. All three models are sound, and each has their advantages. A square footage tax has greater ability to incentivize or disincentivize certain cultivation practices by applying different rates to different cultivation types or sizes. However, if this is not the goal, then this flexibility is needless. Unless there is a desire to provide such incentives, then rates would typically be adjusted to create parity among the different cultivation types and sizes, which is the same effective outcome as a gross receipts tax or a tax per pound.

Each of these taxing methods (per square foot, per pound, and percent of value) have their advantages and disadvantages. A square footage tax is the easiest to administer[2], as the amount of the tax is known by both the County and the cultivator at the time the permit is issued, but it is less-well suited for capturing variables in price or production, or for accommodating circumstances such as crop loss. A gross receipts tax directly reflects the actual earnings of the business, but the amount of the tax liability can vary greatly from year to year, making budget projections difficult. A per-pound tax on production has the advantage of being consistent with the State's cultivation tax, but this also can vary, and does not capture huge variables in product value. Both the gross receipts tax and the per-pound tax can also be difficult to administer, as the County must verify the business's reported earnings or production.

[2] Another administratively simple method of taxing is a flat licensing tax. Mendocino County, for example, charges a tax of $2,500 on all cannabis distribution, delivery, manufacturing, nurseries, and testing laboratories, regardless of their size or gross receipts. This is separate from fees that cover the costs of permitting.

State Tax Considerations

To determine what local tax rates or structures might be most appropriate, they must be considered in the context of other taxes imposed by the State. Any local taxes will be in addition to those taxes applied through the Adult Use of Marijuana Act (AUMA), which imposes both a 15% excise tax on purchases of cannabis or cannabis products and a separate cultivation tax on harvested cannabis that enters the commercial market, as well as sales tax. Taxes are most commonly expressed as a percent of price or value, so some method of conversion is necessary to allow development of an appropriate cultivation tax based on square footage.

The State cultivation tax is set at a rate of $9.25 per ounce of dried flower or $2.75 per ounce of dried leaf. Because these rates are set per ounce, rather than as a percentage of price paid, the tax is the same whether the cultivator is producing commercial-grade cannabis at $500 per pound or top-grade cannabis at $2,500 per pound. The cultivator is generally responsible for payment of the tax, though that responsibility may be passed along to either a manufacturer or distributor via invoice. at the time the product is first sold or transferred. The distributor is responsible for collecting the tax from the cultivator upon entry into the commercial market, and remitting it to the Board of Equalization.

The cultivation tax of $9.25 per ounce of dried flower is equivalent to $148 per pound. Assuming an average wholesale market price for dried flower of $1,480 per pound, that $148 would be equal to 10% of value. However, some industry watchers project that competitive market forces enabled by legalization will bring the average price for cannabis down to around $1,000 per pound, or even less (cannabis prices vary greatly based on quality of the product)[vi]. While this is certainly a concern for cultivators, it may also be a concern to counties or cities which have a cultivation tax based on gross receipts, as they could see their tax revenues fall as the price goes down. If we apply the 9.25 per ounce to this lower average price, then it represents approximately 15% of value. We shall generally round up to 15% for purposes of the calculations in this analysis.

Cumulative Tax Rate on Cannabis

Converting a square footage cultivation tax to an equivalent tax rate allows us to more easily figure the cumulative tax burden that would be borne by the industry, as all taxes are expressed as a percent of value. At the cultivation level, we can add any local cultivation tax to the State's 14.8% to determine the total tax rate paid. If the county or city chose to set an equivalent tax rate of 7%, for example, then the total tax rate on cultivation (before testing costs are applied) would be 21.8%, increasing the theoretical price from $1,000 per pound to $1,220 per pound. A 3% equivalent tax would put the total at 17.8%; a 10% rate would push the total to 24.8%.

AUMA requires that all dried cannabis flower or leaf must be tested for tetrahydrocannabinol (THC) and cannabidiol (CBD) content, contaminants, impurities and other factors before it can be sold to a manufacturer, distributor, dispensary or end user. Batch testing for raw cannabis requires a 2.3 gram sample per pound, which works out to a loss of 0.5% of the volume (the sample must be destroyed after testing). The draft regulations from the Bureau of Cannabis Regulation limit the maximum batch size to no more than 10 pounds. The costs for all of the tests as required under AUMA have not yet settled into a clear norm, but an online survey of a number of cannabis testing facilities in California suggest an average of $500 per 10-pound batch, or $50 per pound, which equals 5% of the $1,000 per pound price. The cost and loss of product amount to an additional 5.5% cost to the product, bringing the total cumulative tax rate on cultivation to 27.3%.

Testing is a semi-regulatory function mandated by the State to protect consumer health and safety, and which amounts to a State-imposed cost on the product. Unlike cultivation or manufacturing, testing does not create product or add value to the product, and unlike distributors or retailers, the testing laboratory is prohibited from having any ownership interest in the product. MAUCRSA requires that testing laboratories be completely independent from any other cannabis business, and prevents them from benefitting from, or having any interest in, the results of the test or the value of the product. In this way, testing laboratories are categorically different from any other cannabis business type. An analogy might be an independent auto shop that does State mandated smog tests for used car dealerships. They perform the test to State standards for a given price, but they don't benefit in any way from the sale of the car, or from its sale price. Given this, it arguably would be inconsistent to apply a tax to testing facilities.

Cannabis distributors are a fairly new part of the legal cannabis industry, and so we do not yet have data to determine the average markup they will add to the product. However, common distributor markups for other product types average in the range of 20%, and do not typically exceed 40%[vii]. For purposes of figuring the cumulative tax rate, we will assume an average markup of 30%, though we anticipate this will settle out closer to 20% over time.

Figure 9:

Cumulative Cannabis Taxes			
Category	**Amount**	**Increase**	**Cumulative Price**
Producer Price	$1,000/lb	$1,000	$1,000
State Cultivation Tax	$9.25/oz	$148	$1,148
County Tax	3.00%	$30	$1,178
Batch Testing	$50/lb, + 0.50%	$55	$1,233
Wholesale Price w/ Taxes		$1,233	
Total Tax at Wholesale		$233	
Tax as %		23.30%	
Distributor Markup	30.00%	$370	$1,603
County Tax	3.00%	$48	$1,651
Total Distributor Price		$1,651	
Total Taxes at Distributor		$281	
Total Tax as %		17.03%	
Retailer Markup	100.00%	$1,651	$3,302
County Tax	5.00%	$165	$3,467
State Excise Tax	15.00%	$495	$3,962
Total Retailer Price		$3,962	
Total Taxes at Retail		$941	
Total Tax as %		23.76%	
Sales Tax (non-medical)	8.25%	$327	$4,289
Total Taxes at Retail		$1,268	
Total Tax as %		29.57%	

Dispensary pricing norms are still developing, but reports from cultivators selling their product suggest that retailers commonly pay around $110 per ounce for medium quality flower, which they then sell for an average of $10 per gram. The current overabundance of cultivators in California allows retailers to buy low and sell high. For our analysis, we have assumed a dispensary markup of 100%, which is fairly consistent with the markup described, and tracks well with the fairly standard $10 per gram retail price.

Conversations with cannabis industry trade groups suggest that the cumulative tax rate on the end product should remain at or under 30%. Higher rates create too much price disparity between legal and illegal cannabis, making it harder for the regulated industry to compete with the black market. Higher local tax rates can also make a county or city less attractive to the industry, especially for manufacturers and distributors, which have greater flexibility in choosing where to

locate. We believe that setting rates that adhere to this 30% rule will help keep the local cannabis industry competitive with other cultivators across California, thus encouraging the transition to a legal industry.

Figure 9 shows how the cumulative tax rate on cannabis builds as the product moves towards market (note: manufacturers are not included in this cumulative chart because there are simply too many possible products and too many variables to consider). The combination of taxes on cultivation hover around 23.30%. After the distributor's markup is figured in, the tax as a percentage of total price comes down to 17.03%, with a local tax of 3.0% included. Both the local tax and the State 15% excise tax are added to the final retail price, bringing the total amount of taxes paid to $941.48 per pound, or 23.76%. Non-medical purchases would pay an additional 8.25% retail sales tax, for a total tax paid of $1,268.38 per pound, and a total tax rate of 29.57%.

AUMA's 15% excise tax is measured by the average market price at retail (currently about $10 per gram, which works out to approximately $4,500 per pound at the one-gram unit price), instead of by the actual gross receipts. In this way, neither the cultivation tax nor the excise tax are based on the actual price paid for the product. However, this pricing tracks closely with our model. The Board of Equalization is still developing its methodology for determining the average market price and for collecting the tax from cannabis distributors.

Though a total tax of around 30% would almost certainly be considered high for any business or product, it is still within the range of taxes imposed by other states that have legalized cannabis[viii]. The State of Colorado charges combined State taxes of 23% on retail (non-medical) cannabis. Combined State and local sales taxes can range greatly from 2.9% to 11.2%, but are commonly around 4.9% in unincorporated areas. This would give us a comparison rate of 27.9%. Oregon originally imposed an excise tax of 25%, which was later reduced to 17%. Local jurisdictions are allowed to impose an additional 3% local tax, which would bring the total to 20%, but there is otherwise no additional state or local sales tax in Oregon. The State of Washington imposes a 37% excise tax on cannabis before any regular state or local sales taxes are applied. These are commonly around 8.1% in unincorporated areas, which would give a total of 45.1%.

General Economic Impacts

Discussion of regulating and taxing the cannabis industry can too often overshadow the larger jobs and economic development issues that typically accompany efforts to attract new industry. Word that a new business or industry is looking to bring hundreds of new jobs to a community is more commonly met with open arms and offers of tax incentives. The cannabis industry is perhaps completely unique in that the inherent jobs and economic development benefits are welcomed more grudgingly and met with the disincentive of special taxes.

As with any other industry, the cannabis industry does not exist in a vacuum. Those businesses that actually grow, process, manufacture, distribute and sell cannabis products support a wide variety of other businesses that may never touch the actual product itself. Cultivators support garden supply stores, green house manufacturers, irrigation suppliers, soil manufacturers, and a wide variety of contractors including building and construction, lighting and electrical, HVAC, permitting, and engineering. Manufacturers support many of these same businesses, plus specialized tooling and equipment manufacturers, and product suppliers for hardware, packaging, and labeling. All of these businesses support, and are supported by, a host of ancillary businesses such as bookkeepers, accountants, tax preparers, parcel services, marketing and advertising agencies, personnel services, attorneys, facilities maintenance, security services, and others.

The economic benefits are not limited to those in the cannabis industry, itself. Cultivators bring new money into the community by selling their products into a statewide market. Their profits and the salaries they pay move into the general local economy, supporting stores, restaurants, car dealerships, contractors, home sales and other businesses. In Humboldt County, a study done in 2011 found that at least $415 million dollars in personal income was entering the local economy annually from the cannabis industry, roughly equal to one quarter of the county's entire $1.6 billion economy.

While Humboldt is likely an outlier, research done by HdL for other clients suggests that other counties see similar, if smaller, economic inputs from this industry, with some in the range of $100 million dollars or more annually. As this industry adapts to a legal paradigm, the challenge for some counties will be mitigating and minimizing the economic loss as the black market slowly fades away.

Because of the emerging nature of this industry, it is currently populated primarily (but not solely) by small, independently-owned businesses. Numerous studies have demonstrated that locally-owned, independent businesses recirculate a far higher percentage of every dollar back into the local community than large, corporately-owned businesses do. The same economic development arguments that are used to support other independent, locally-owned businesses apply to this industry, too. The County should expect to see typical economic benefits from these new (or newly daylighted) businesses on par with other new businesses, separate from any tax revenue that may be generated.

Industry experts believe that California's current statewide production is five to eight times higher than the State's population consumes[ix], a figure derived from the SRIA done for CDFA's cannabis cultivation program. That assessment found that California's cannabis industry produces some 13.5 million pounds of cannabis per year, which would be enough to provide over half a pound of cannabis per year for every Californian 21 and over. However, the assessment also found that California's 4.5 million cannabis users only consume about 2.5 million pounds of cannabis per year. A separate study performed for the California Cannabis Industry Association put statewide consumption even lower, at 1.6 million pounds[x]. The majority of the cannabis produced in California is presumably supplying other states that do not have legalized cannabis.

The Bureau of Cannabis Control projects that more than half of the adult use purchases currently in the black market will transition to the legal market to avoid the inconvenience, stigma and risks of buying unknown product through an unlicensed seller[xi]. Essentially, the easier, cheaper and more reliable it is for consumers to access quality cannabis legally, the less reason they will have to purchase it through the black market. That same study projects that 60% of those currently in the legal, medical cannabis market will shift to the adult use market, for the reasons noted above. The availability of legal adult use cannabis is also anticipated to produce a small 9.4% increase in consumer demand.

Given these figures, counties should expect to see some increase in retail sales as these shifts occur in the market. More significantly, the existence of legally permitted cannabis retailers will allow a far greater portion of existing cannabis sales to be captured by legal (and tax-paying) retailers.

The shift from medical to adult use sales is not expected to change the overall volume of sales, only the category into which they fall. Once the legal, adult use market is properly functioning, it is anticipated to capture about 61.5% of the overall cannabis market in California. The legal medical cannabis market is projected to decline to just 9% of the overall market. The other 29.5% is expected to remain in the black market[xii].

These numbers only apply to the 1.6 million to 2.5 million pounds of cannabis that is consumed in California, representing the potential size of the legal cannabis market. If 29.5% of the cannabis consumed in California continues to come from the black market, then the size of the market for legal cannabis must be adjusted downward accordingly. This would reduce the size of the legal market in California to between 1.13 million and 1.76 million pounds. This is a very important figure to bear in mind when considering how much market share may be available for cannabis grown in Santa Barbara County.

The limited size of California's legal cannabis market should be considered the primary limiting factor on potential production for any individual county or city. Using the larger figure of 1.76 million pounds, it would take just over 400 growers cultivating one acre each outdoors to provide all of the cannabis for every legal user in California. Using mixed-light cultivation, it would take less than 270 growers, each getting 3 harvests out of just 22,000 square feet, to supply the entire State.

Santa Barbara is just one of 58 counties in California, but with almost 500 registrants seeking as many as 1,365 separate cultivation permits, the County's growers could potentially produce over 3.7 million pounds of cannabis per year, which is more than double the amount of legal cannabis consumed by the entire State. Santa Barbara County is not alone in having this kind of outsized production. Numerous individual counties in California have enough growers seeking cultivation permits that they could individually supply all of California's needs. An analysis of the 2016 CDFA survey shows that if everyone who responded to that survey obtained their desired cultivation permits, they could collectively produce over 40 million pounds of cannabis per year. This is almost 23 times the amount of legal cannabis the State's residents consume, and 3 times the total estimated production, including the black market.

Given this huge amount of overcapacity by growers seeking to enter California's legal market, we would urge the County to be exceedingly cautious in its expectations about the number of growers who might actually obtain permits and succeed in the free market. This is not to say that the County should cap the number of growers at any arbitrary number. Rather, the County should be judicious in the amount of time and resources spent permitting a larger number of cultivators, when a higher number may just result in a higher failure rate as growers succumb to a market that has grossly exceeded its saturation point.

Enforcement and Permitting Costs

Despite the legalization of cannabis, even jurisdictions which ban commercial cannabis businesses may still see an increase in cannabis activities. Neither the legal industry nor the black market operates as a closed loop within any given county. If a county or city chooses to ban commercial cannabis businesses, it should be assumed that the local demand will be met either by residents purchasing cannabis legally in neighboring jurisdictions or by the continuing black market. Cultivators, manufacturers, and distributors which are disallowed in one location have the option of moving to a neighboring or nearby jurisdiction, from which they will continue to supply the local market. Retailers are somewhat less able to jurisdiction shop, since they are bound by proximity to the market they wish to serve. However, they still may shop between the unincorporated county, cities within that county, or in neighboring jurisdictions to serve a specific market.

Banning commercial cannabis businesses may also result in bolstering the illegal industry by increasing the share of demand that is met by the black market instead of a local regulated market. This drives up the profits for black market operators, making them more competitive against the legalized market. All of the community impacts from the black market continue as before, and may even be exacerbated by an increase of illegal cannabis activity. With this comes all of the existing costs to government services, including law enforcement, healthcare, child services, and environmental control, with no additional resources from the state or local taxes.

Some California counties have analyzed the cost of maintaining a ban by determining the number of staff resources required by each department to be effective, and estimating the number of business that will continue to operate illegally. In one county that cost was estimated to require approximately 13 full-time equivalent (FTE) employees at a cost of $3.1 million annually[3]. In another analysis, that county evaluated their actual costs for enforcing their existing ban and determined that it cost an average of $25,000 to $50,000 per operator to effectively shut down and prosecute the illegal businesses.

We do not have data to tell us how many cannabis-related businesses are currently operating illegally in Santa Barbara County. However, if we assume that perhaps 20% of the 336 potential cannabis businesses identified in the CDFA survey are currently operating without permits then, at the cost range above, the County could expect to spend between $1.6 million and $3.35 million to enforce a ban against some 67 illegal cannabis businesses.

Under a ban, all commercial cannabis activities remain criminal violations, requiring primary enforcement by the Sheriff's office. The full cost (salary and benefits) for a 40-hour, POST-certified Deputy Sheriff typically ranges from around $100,000 per year to over $200,000 per year (depending on hours, years of experience, overtime and other factors). Additional costs are borne by the office of the District Attorney. Both the Sheriff's Office and the Office of the District Attorney are paid for primarily from the County's general fund.

From a fiscal standpoint, choosing to permit and regulate cannabis businesses at the local level opens up opportunities to reduce general fund liabilities by shifting them onto the regulated industry, and away from the taxpayers generally. The legal, regulated industry pays its own way (in whole or in part) through fees, thus reducing both the burden on law enforcement and the drain on the general fund. As with any other industry, the County has the discretion to charge full cost recovery or to subsidize the permitting costs if it believes that doing so would serve the public interest. Whether or not the County is successful

[3] HdL did not receive permission to identify these clients for this report.

in recovering all of these costs should be a deliberative decision, and is not a question that is unique to this industry.

Though the cost of regulating this industry should be borne by the permit applicants, there may be a need to increase staffing upfront to accommodate the additional workload. Permitting 100 or more businesses of this type may well require additional staff. Staffing up for this work would likely have to happen before the permits can be processed, and before the fees can be collected. Though ultimately permit processing should function as an enterprise, there will likely be a need to provide some advance funding through some other means such as a loan from the General Fund.

Permitting fee costs are affected by a number of variables such as the number of permits authorized, the level of regulatory oversight, and the types of commercial cannabis activities being permitted. The two counties mentioned above conducted preliminary costs analyses to determine the projected fees associated with implementing a robust regulatory program for legal cannabis businesses. The first of these counties determined the overall costs of such a program would be approximately $3.1 million, with fees in the range of $15,500 to $25,000 per permit, depending upon the number of permits being processed (processing more permits spreads certain fixed departmental costs across more applicants, reducing the cost per permit). The other county projected their overall cost would be $3.5 million, with fees in the range of $22,000 to $41,700.

These costs include but are not limited to costs for processing fees and applications, inspections and enforcement of the regulatory requirements, and annual regulatory fees related to health inspections, environmental inspections, Agricultural Commissioner inspections for pesticides and weights and measures, Tax Collector audits, and law enforcement staffing to conduct operator/employee backgrounds checks and to assist other department staff when necessary with enforcement assistance. In addition, the County may need to partner with fire districts and other agencies to conduct safety inspections, which may add to the cost for the permittee.

Regulating the industry also presents the opportunity to generate new general fund revenues through taxes on legal, commercial cannabis activities. Though there are a variety of ways to structure cannabis taxes, and a wide range of rates that can be applied, these taxes have the potential to deliver millions of dollars to county or city coffers, which can be used for any public purpose. Commonly, taxes on legal cannabis businesses are used to defray the costs of enforcement against the remaining black market as well as other costs associated with the industry, including environmental cleanup and Health and Human Services programs. In this way, taking a regulatory approach to cannabis allows local governments to shift costs away from the general fund, to develop substantial new revenue sources, and to make the legal, regulated industry pay its own way through fees.

Attrition Due to High Tax Rates

The models presented in the revenue projections that follow do not account for any attrition factor as the tax rate increases. An attrition factor anticipates that for every increase in the local tax rate (as a percent of value, or equivalent), there is some reduction in the rate of return due to growers choosing to move to more welcoming communities, businesses failing due to shrinking margins, or growers simply choosing to stay in the black market. This concept is admittedly speculative, as there is not yet any real data to suggest what the actual rate may be, but we believe the mechanism is sound.

As local tax rates go up, the County becomes incrementally less competitive with other counties and cities. At some point, the cost of paying the tax outweighs the cost of picking up and moving to a jurisdiction with a more welcoming regulatory and tax climate. At some point, too, tax rates reduce margins to an unsustainable level for those businesses which are least stable (typically small "Mom n' Pop" businesses), pushing them into failure. And, lastly, at some point the overall tax and regulatory burden makes the whole idea of moving from the black market into the legal market simply unattractive for those growers who are on the fence. This last point is likely more of an issue for regions which have large, well-established industries, as opposed to those that are seeing a new influx of cannabis growers

The nominal figures in these scenarios all assume that the same number of cultivators will seek and obtain permits, regardless of the tax rates imposed, and that they will all succeed in the regulated market, regardless of how those taxes affect their ability to compete. This seems very unlikely. Higher tax rates should be assumed to have a dampening effect on both permit applications and on the ability of cultivators to succeed. The County should expect to see a reduction in the number of permit applications as the tax rate climbs.

We do not yet have actual data to tell us what the actual attrition rate will be, but our inability to meaningfully quantify that impact doesn't mean it isn't there, or that it isn't significant. As applied to cultivation, we anticipate that this attrition would begin to be noticeable at tax rates of around 5%, increasing marginally at around 7%, with a significant drop off above 10%. We would strongly caution the County from assuming that an increase in the tax rate will result in a corresponding linear increase in tax revenue.

Revenue Projections

We have provided revenue projections using 5 different scenarios using numbers based on both the CDFA survey and on percentages of the County's registry. As noted previously, the 1,365 separate cultivation permits represented by the County registry (not including 280 Type 4 nurseries) could potentially produce more than double the amount of legal cannabis consumed by the entire State. For this reason, we have chosen scenarios using figures of 10%, 20%, 30% and 40% of the registry. The 180 cultivation permits from the CDFA survey is likely also an overstatement of the realistic potential for the County, but we shall use it here as is.

Figure 10 shows the number of licenses and the total cultivation area under each of these scenarios. We have included Type 4 nurseries here, as their taxation can be similarly based upon square footage, but it is important to keep in mind that they do not add to the total amount of cannabis production for the County. Due to this, our numbers will include nurseries where appropriate, and exclude them when discussing total production.

Figure 10:

Cultivation Area by License Type												
		CDFA Survey		Registry	10% of Registry		20% of Registry		30% of Registry		40% of Registry	
License Type	Average s/f	# of Licenses	Total Area (s/f)	# of Licenses	# of Licenses	Total Area (s/f)	# of Licenses	Total Area (s/f)	# of Licenses	Total Area (s/f)	# of Licenses	Total Area (s/f)
Type 1	3,750	24	90,000	106	11	39,750	21	79,500	32	119,250	42	159,000
Type 1A	3,750	19	71,250	87	9	32,625	17	65,250	26	97,875	35	130,500
Type 1B	3,750	20	75,000	106	11	39,750	21	79,500	32	119,250	42	159,000
Type 2	7,500	20	150,000	121	12	90,750	24	181,500	36	272,250	48	363,000
Type 2A	7,500	16	120,000	91	9	68,250	18	136,500	27	204,750	36	273,000
Type 2B	7,500	17	127,500	168	17	126,000	34	252,000	50	378,000	67	504,000
Type 3	32,670	28	914,760	283	28	924,561	57	1,849,122	85	2,773,683	113	3,698,244
Type 3A	16,500	13	214,500	91	9	150,150	18	300,300	27	450,450	36	600,600
Type 3B	16,500	23	379,500	233	23	384,450	47	768,900	70	1,153,350	93	1,537,800
Type 4	7,500	20	150,000	280	28	210,000	56	420,000	84	630,000	112	840,000
Totals		**200**	**2,292,510**	**1,566**	**157**	**2,066,286**	**313**	**4,132,572**	**470**	**6,198,858**	**626**	**8,265,144**

Our projections also exclude the Type 1C "Specialty Cottage" permits, which did not exist at the time of the CDFA survey. This license type allows for small amounts of cultivation either outdoors, indoors, or using mixed light, with different limitations for each. However, there is not enough information in the registry to know how many of these would fall into each category. While this leaves 79 potential licenses out of our tally (bringing the total down to 1,566), this is the smallest number anticipated for any license type. The Type 1C also allows the least cultivation area, and so has the smallest cultivation potential. We calculate that the Type 1C licenses will only account for perhaps one-half of one percent of the County's cannabis production, giving them a negligible effect on potential revenues.

These scenarios use the structures discussed in the section on Taxing Cultivation, to demonstrate the revenue potential from applying different rates. The specific rates shown here include two variable taxes, adjusted by harvest cycles per year, as in Figure 5, and two tiered variable taxes, adjusted by harvest cycles per year and by cultivation area, as in Figures 6, 7 and 8. The base rates in both cases are $1/$3/$4 (outdoor/mixed-light/indoor) and $3/$9/$12. The tiered rates include a 25% increase above the base rate for each larger cultivation class.

In all of these scenarios nurseries are taxed at a rate that is half of the lowest base rate. This reduced rate is to recognize that nurseries area a part of the supply chain, and do not provide a retail product for the end consumer.

Figure 11:

Scenario 1 - 10% of County Registry														
License Type	# of Licenses	Cycles /Year	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax
Type 1	11	1	$1.00	1.00%	$39,750	$1.00	1.00%	$39,750	$3.00	3.00%	$119,250	$3.00	3.00%	$119,250
Type 1A	9	4	$4.00	1.00%	$130,500	$4.00	1.00%	$130,500	$12.00	3.00%	$391,500	$12.00	3.00%	$391,500
Type 1B	11	3	$3.00	1.00%	$119,250	$3.00	1.00%	$119,250	$9.00	3.00%	$357,750	$9.00	3.00%	$357,750
Type 2	12	1	$1.00	1.00%	$90,750	$1.25	1.25%	$113,438	$3.00	3.00%	$272,250	$3.75	3.75%	$340,313
Type 2A	9	4	$4.00	1.00%	$273,000	$5.00	1.25%	$341,250	$12.00	3.00%	$819,000	$15.00	3.75%	$1,023,750
Type 2B	17	3	$3.00	1.00%	$378,000	$3.75	1.25%	$472,500	$9.00	3.00%	$1,134,000	$11.25	3.75%	$1,417,500
Type 3	28	1	$1.00	1.00%	$924,561	$1.50	1.50%	$1,386,842	$3.00	3.00%	$2,773,683	$4.50	4.50%	$4,160,525
Type 3A	9	4	$4.00	1.00%	$600,600	$6.00	1.50%	$900,900	$12.00	3.00%	$1,801,800	$18.00	4.50%	$2,702,700
Type 3B	23	3	$3.00	1.00%	$1,153,350	$4.50	1.50%	$1,730,025	$9.00	3.00%	$3,460,050	$13.50	4.50%	$5,190,075
Type 4	28	-	$0.50		$105,000	$0.50		$105,000	$1.50		$315,000	$1.50		$315,000
Totals	**157**				**$3,814,761**			**$5,339,454**			**$11,444,283**			**$16,018,362**

Scenario 1 shows the potential revenue that could be generated if 10% of those in the County's registry obtained licenses. In this scenario, there are a total of 157 licenses, 28 of which are nurseries. We have applied the 4 tax structures described above. A base rate of $1 per square foot, multiplied by the number of harvest cycles per year, provides a structure of $1 per square foot for outdoor, $3 per square foot for mixed-light, and $4 per square foot for indoor. This is roughly equivalent to 1% of value, or a 1% tax on gross receipts. Nurseries are taxed at half the base rate, or $0.50 per square foot. This tax structure would generate approximately $3.8 million per year.

Adding in tiers with a 25% increase for each larger license type would raise the rates for Type 2 licenses to $1.25, $3.75 and $5.00 for outdoor, mixed-light and indoor, respectively. The rates for the larger Type 3 licenses would increase to $1.50, $4.50 and $6.00. This would increase the revenue potential to about $5.4 million.

A base rate of $3 per square foot for outdoor, $9 per square foot for mixed-light and $12 per square foot for indoor would be roughly equivalent to 3% of gross receipts, and would generate around $11.4 million in this scenario. Adding in tiers would bump the highest rates to $4.50, $13.50 and $18.00 per square foot, respectively. These rates would potentially generate just over $16 million for the County.

Figure 12:

Scenario 2 - 20% of County Registry														
License Type	# of Licenses	Cycles /Year	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax
Type 1	21	1	$1.00	1.00%	$79,500	$1.00	1.00%	$79,500	$3.00	3.00%	$238,500	$3.00	3.00%	$238,500
Type 1A	17	4	$4.00	1.00%	$261,000	$4.00	1.00%	$261,000	$12.00	3.00%	$783,000	$12.00	3.00%	$783,000
Type 1B	21	3	$3.00	1.00%	$238,500	$3.00	1.00%	$238,500	$9.00	3.00%	$715,500	$9.00	3.00%	$715,500
Type 2	24	1	$1.00	1.00%	$181,500	$1.25	1.25%	$226,875	$3.00	3.00%	$544,500	$3.75	3.75%	$680,625
Type 2A	18	4	$4.00	1.00%	$546,000	$5.00	1.25%	$682,500	$12.00	3.00%	$1,638,000	$15.00	3.75%	$2,047,500
Type 2B	34	3	$3.00	1.00%	$756,000	$3.75	1.25%	$945,000	$9.00	3.00%	$2,268,000	$11.25	3.75%	$2,835,000
Type 3	57	1	$1.00	1.00%	$1,849,122	$1.50	1.50%	$2,773,683	$3.00	3.00%	$5,547,366	$4.50	4.50%	$8,321,049
Type 3A	18	4	$4.00	1.00%	$1,201,200	$6.00	1.50%	$1,801,800	$12.00	3.00%	$3,603,600	$18.00	4.50%	$5,405,400
Type 3B	47	3	$3.00	1.00%	$2,306,700	$4.50	1.50%	$3,460,050	$9.00	3.00%	$6,920,100	$13.50	4.50%	$10,380,150
Type 4	56	-	$0.50		$210,000	$0.50		$210,000	$1.50		$630,000	$1.50		$630,000
Totals	**313**				**$7,629,522**			**$10,678,908**			**$22,888,566**			**$32,036,724**

Scenario 2 (Figure 12) shows the same four tax structures applied to a number of licenses that is equivalent to 20% of the County registry, with a total of 313 licenses. The lowest rates of $1 per square foot for outdoor, $3 per square foot for mixed-light, and $4 per square foot for indoor, would result in approximately $7.6 million in revenue for the County. Adding in tiers, as in the previous scenario, would increase the revenue potential to a little under $10.7 million.

A base rate of $3 per square foot for outdoor, $9 per square foot for mixed-light and $12 per square foot for indoor would generate almost $23 million in this scenario. Adding in tiers would bump that to over $32 million.

Figure 13:

Scenario 3 - 30% of County Registry														
License Type	# of Licenses	Cycles /Year	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax
Type 1	32	1	$1.00	1.00%	$119,250	$1.00	1.00%	$119,250	$3.00	3.00%	$357,750	$3.00	3.00%	$357,750
Type 1A	26	4	$4.00	1.00%	$391,500	$4.00	1.00%	$391,500	$12.00	3.00%	$1,174,500	$12.00	3.00%	$1,174,500
Type 1B	32	3	$3.00	1.00%	$357,750	$3.00	1.00%	$357,750	$9.00	3.00%	$1,073,250	$9.00	3.00%	$1,073,250
Type 2	36	1	$1.00	1.00%	$272,250	$1.25	1.25%	$340,313	$3.00	3.00%	$816,750	$3.75	3.75%	$1,020,938
Type 2A	27	4	$4.00	1.00%	$819,000	$5.00	1.25%	$1,023,750	$12.00	3.00%	$2,457,000	$15.00	3.75%	$3,071,250
Type 2B	50	3	$3.00	1.00%	$1,134,000	$3.75	1.25%	$1,417,500	$9.00	3.00%	$3,402,000	$11.25	3.75%	$4,252,500
Type 3	85	1	$1.00	1.00%	$2,773,683	$1.50	1.50%	$4,160,525	$3.00	3.00%	$8,321,049	$4.50	4.50%	$12,481,574
Type 3A	27	4	$4.00	1.00%	$1,801,800	$6.00	1.50%	$2,702,700	$12.00	3.00%	$5,405,400	$18.00	4.50%	$8,108,100
Type 3B	70	3	$3.00	1.00%	$3,460,050	$4.50	1.50%	$5,190,075	$9.00	3.00%	$10,380,150	$13.50	4.50%	$15,570,225
Type 4	84	-	$0.50		$315,000	$0.50		$315,000	$1.50		$945,000	$1.50		$945,000
Totals	**470**				**$11,444,283**			**$16,018,362**			**$34,332,849**			**$48,055,086**

Scenario 3 (Figure 13)uses numbers that are based on 30% of the County registry. In this scenario, the $1, $3, and $4 rates for outdoor, mixed-light and indoor cultivation, respectively, would potentially generate $11.4 million. Adding in tiers, as in the previous examples, would increase that to just over $16 million.

Applying base rates of $3, $9 and $12 per square foot would generate around $34 million. Adding in tiers would increase the potential revenue to over $48 million.

Scenario 4, in Figure 14, shows the revenue potential from these same rates if 40% of those in the County registry applied for and obtained permits. This amounts to a total of 626 licenses for cultivation, including 112 for nurseries. This figure is likely far higher than any realistic portion of the statewide market, and so should be considered highly unlikely.

Figure 14:

Scenario 4 - 40% of County Registry														
License Type	# of Licenses	Cycles /Year	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax
Type 1	42	1	$1.00	1.00%	$159,000	$1.00	1.00%	$159,000	$3.00	3.00%	$477,000	$3.00	3.00%	$477,000
Type 1A	35	4	$4.00	1.00%	$522,000	$4.00	1.00%	$522,000	$12.00	3.00%	$1,566,000	$12.00	3.00%	$1,566,000
Type 1B	42	3	$3.00	1.00%	$477,000	$3.00	1.00%	$477,000	$9.00	3.00%	$1,431,000	$9.00	3.00%	$1,431,000
Type 2	48	1	$1.00	1.00%	$363,000	$1.25	1.25%	$453,750	$3.00	3.00%	$1,089,000	$3.75	3.75%	$1,361,250
Type 2A	36	4	$4.00	1.00%	$1,092,000	$5.00	1.25%	$1,365,000	$12.00	3.00%	$3,276,000	$15.00	3.75%	$4,095,000
Type 2B	67	3	$3.00	1.00%	$1,512,000	$3.75	1.25%	$1,890,000	$9.00	3.00%	$4,536,000	$11.25	3.75%	$5,670,000
Type 3	113	1	$1.00	1.00%	$3,698,244	$1.50	1.50%	$5,547,366	$3.00	3.00%	$11,094,732	$4.50	4.50%	$16,642,098
Type 3A	36	4	$4.00	1.00%	$2,402,400	$6.00	1.50%	$3,603,600	$12.00	3.00%	$7,207,200	$18.00	4.50%	$10,810,800
Type 3B	93	3	$3.00	1.00%	$4,613,400	$4.50	1.50%	$6,920,100	$9.00	3.00%	$13,840,200	$13.50	4.50%	$20,760,300
Type 4	112	-	$0.50		$420,000	$0.50		$420,000	$1.50		$1,260,000	$1.50		$1,260,000
Totals	**626**				**$15,259,044**			**$21,357,816**			**$45,777,132**			**$64,073,448**

Applying the $1, $3, and $4 rates for outdoor, mixed-light and indoor cultivation would potentially generate over $15 million in this scenario. Adding in tiers with a 25% increase for each larger cultivation class would increase that figure to over $21 million.

Applying the higher base rates of $3, $9 and $12 per square foot to this scenario would theoretically generate over $44 million. Adding in tiers for the larger classes would increase this potential revenue to over $64 million.

Figure 15:

Scenario 5 - CDFA Survey														
License Type	# of Licenses	Cycles /Year	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax	Tax per s/f	% Tax Rate	Total Annual Tax
Type 1	24	1	$1.00	1.00%	$90,000	$1.00	1.00%	$90,000	$3.00	3.00%	$270,000	$3.00	3.00%	$270,000
Type 1A	19	4	$4.00	1.00%	$285,000	$4.00	1.00%	$285,000	$12.00	3.00%	$855,000	$12.00	3.00%	$855,000
Type 1B	20	3	$3.00	1.00%	$225,000	$3.00	1.00%	$225,000	$9.00	3.00%	$675,000	$9.00	3.00%	$675,000
Type 2	20	1	$1.00	1.00%	$150,000	$1.25	1.25%	$187,500	$3.00	3.00%	$450,000	$3.75	3.75%	$562,500
Type 2A	16	4	$4.00	1.00%	$480,000	$5.00	1.25%	$600,000	$12.00	3.00%	$1,440,000	$15.00	3.75%	$1,800,000
Type 2B	17	3	$3.00	1.00%	$382,500	$3.75	1.25%	$478,125	$9.00	3.00%	$1,147,500	$11.25	3.75%	$1,434,375
Type 3	28	1	$1.00	1.00%	$914,760	$1.50	1.50%	$1,372,140	$3.00	3.00%	$2,744,280	$4.50	4.50%	$4,116,420
Type 3A	13	4	$4.00	1.00%	$858,000	$6.00	1.50%	$1,287,000	$12.00	3.00%	$2,574,000	$18.00	4.50%	$3,861,000
Type 3B	23	3	$3.00	1.00%	$1,138,500	$4.50	1.50%	$1,707,750	$9.00	3.00%	$3,415,500	$13.50	4.50%	$5,123,250
Type 4	20	-	$0.50		$75,000	$0.50		$75,000	$1.50		$225,000	$1.50		$225,000
Totals	**200**				**$4,598,760**			**$6,307,515**			**$13,796,280**			**$18,922,545**

Lastly, Scenario 5 shows the revenue potential from applying these tax rates to the 200 licenses found in the CDFA survey. The $1/$3/$4 rates would generate around $4.6 million. Adding in the tiers would increase that figure to $6.3 million.

Applying the higher $3/$9/$12 rates would potentially generate almost $13.8 million, while adding in the tiers to these higher rates would bump that up to almost $19 million.

It's important to note that these are all mathematical projections based upon the assumptions above. These projections consider the amount of revenue that could be generated by each of these scenarios as an "if/then" equation with a number of variables; as in "IF there are N number of growers cultivating S square footage at R tax rate, THEN the County could see X amount of revenue." However, these projections do not consider the likelihood of any of these scenarios coming to pass, as they are each affected by a number of forces that are difficult to quantify.

As discussed in the section on attrition, these projections do not consider the impact that higher tax rates are likely to have on local growers' ability to successfully compete in a statewide market with growers from other jurisdictions with much lower tax rates.

These projections also do not consider the likelihood of local cannabis growers being able to successfully compete in a legal market that is already overly-saturated. With far more growers statewide seeking to produce far more product than California consumes, there is no guarantee that even a small number of growers from Santa Barbara County will succeed in claiming market share, regardless of local tax rates. With so much over-supply, the ability to compete and succeed in a highly competitive marketplace will likely depend more on business savvy, marketing and financing than on local regulations.

These are all important considerations which are discussed elsewhere in this report. As with the discussion of attrition, our inability to meaningfully quantify these effects does not mean they do not exist, or that their impact is not significant.

Cannabis Retailers

While cannabis cultivation is typically taxed on a per-square-foot basis, the most common approach for taxing other commercial cannabis activities is a tax on the gross receipts of the business. HdL has reviewed confidential data for over 1,400 sales tax accounts for cannabis-related businesses. This data suggests that gross receipts for dispensaries commonly range from $1,000,000 to $4,000,000, with a midpoint around $2,500,000.

The CDFA survey shows 33 people registering their interest in seeking licenses for cannabis retailers in Santa Barbara County. The County's registry lists 141, which is many times what might reasonably be expected. This would equal 31 retailers for every 100,000 people, or one per every 2,183 adults, which is highly unlikely.

The number of cannabis retailers that a city or county can support can be based upon population and neighboring communities. Santa Barbara has an estimated population of 446,000 people, of which around 150,000 live in the unincorporated area. A 2015 survey by the Humboldt Institute for Interdisciplinary Marijuana Studies[xiii] found an average of 4-6 retailers (or dispensaries) for every 100,000 people statewide, and likely more in communities with higher social acceptance and use. This would allow for between 18 and 27 retailers countywide, with a proportional share of 6 to 9 in the unincorporated area.

For purposes of this fiscal analysis, we shall use four scenarios for the number of retailers in the unincorporated area: two scenarios at 6 and 9 each, as indicated above, with a lower scenario of 3 and a higher scenario of 12. We have run each of these scenarios using hypothetical gross receipts tax rates of 4%, 6% and 10%.

Figure 16:

Cannabis Dispensaries/Retailers						
License Type	# of Licenses	Avg Gross Receipts	Total Gross Receipts	Revenue @ 4.0% Tax Rate	Revenue @ 6.0% Tax Rate	Revenue @ 10.0% Tax Rate
Retailers	3	$2,500,000	$7,500,000	$300,000	$450,000	$750,000
Retailers	6	$2,500,000	$15,000,000	$600,000	$900,000	$1,500,000
Retailers	9	$2,500,000	$22,500,000	$900,000	$1,350,000	$2,250,000
Retailers	12	$2,500,000	$30,000,000	$1,200,000	$1,800,000	$3,000,000

Figure 16 shows the estimated tax revenue that could be generated under these four scenarios, with 3 possible tax rates for each. The revenues range from a low of $300,000 (assuming just 3 retailers taxed at 4.0% of gross receipts) up to a high of $3,000,000 (assuming 12 retailers taxed at 10.0%).

The gross receipts for dispensaries is variable depending upon the number of dispensaries serving a given size population. Dispensaries are the only cannabis business that specifically serves the local community, rather than feeding into the statewide market, and so the number of dispensaries can be assumed to be somewhat proportional to the local population. Consumer demand for cannabis is assumed to generally be a constant, regardless of its legal status or the availability of dispensaries, and so it's reasonable to expect that more dispensaries will mean fewer customers for each and, thus, lower gross receipts.

However, there will always be an upper limit. We anticipate that providing greater access to dispensaries or retailers would initially facilitate a shift in cannabis purchases happening through legal, regulated means rather than through the black market, especially for non-medical cannabis. Eventually, though, the local cannabis market will reach saturation, at which point new cannabis retailers will simply

cannibalize sales from existing retailers. The taxable amount of gross sales will likely plateau at some point, regardless of the number of retailers.

MAUCRSA provides a single license type for cannabis retailers (Type 10), though it is available in both M (Medical) or A (Adult Use) versions. Local jurisdictions have the authority to allow either or both types of retailers. Under California's regulatory program, it is anticipated that consumers will have little reason to purchase cannabis in the medical segment rather than buying in the adult use segment. Both medical and adult use cannabis will pay the State cultivation tax and excise tax, with the only advantage being an exemption from regular sales tax for qualifying patients with a state-issued identification card. Currently there are only about 7,000 such cardholders in California. Eligibility for this limited sales tax exemption will cost consumers approximately $100 per year, plus time and inconvenience, for a savings of 7.75% in Santa Barbara County. It's anticipated that this will provide no price advantage for the vast majority of cannabis consumers[xiv].

The Bureau of Cannabis Control projects that more than half of the adult use purchases currently in the black market will transition to the legal market to avoid the inconvenience, stigma and risks of buying unknown product through an unlicensed seller[xv]. Essentially, the easier, cheaper and more reliable it is for consumers to access quality cannabis legally, the less reason they will have to purchase it through the black market. That same study projects that 60% of those currently in the legal, medical cannabis market will shift to the adult use market, for the reasons noted above. The availability of legal adult use cannabis is also anticipated to produce a small 9.4% increase in consumer demand.

Given these figures, Santa Barbara should expect to see some increase in retail sales as these shifts occur in the market. More significantly, the existence of legally permitted cannabis retailers will allow a far greater portion of existing cannabis sales to be captured by legal (and tax-paying) retailers.

The shift from medical to adult use sales is not expected to change the overall volume of sales, only the category into which they fall. Once the legal, adult use market is properly functioning, it is anticipated to capture about 61.5% of the overall cannabis market in California. The legal medical cannabis market is projected to decline to just 9% of the overall market. The other 29.5% is expected to remain in the black market[xvi].

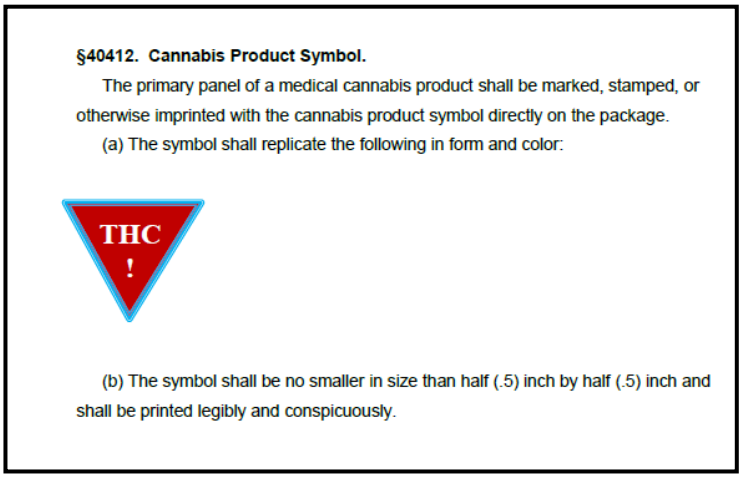
Manufacturers

While MCRSA originally divided manufacturers into two categories for volatile and non-volatile extraction, it's anticipated that implementation of MAUCRSA will expand this to 4 categories to more accurately provide for the breadth and complexity of this sector. Type 6 licenses for extraction using mechanical methods such as pressing, tumbling or dry sifting, or using nonvolatile solvents such as CO2, will remain, as will Type 7 licenses for extraction using volatile solvents such as butane or propane. Both of these license types also allow the licensee to sell the extract as a product such as Butane Hash Oil or CO2 oil, or to infuse the extract into tinctures, edibles or topical products. They can also conduct packaging or labeling of their cannabis products.

The new license types that are expected to emerge from the current rule-making process are Type P and Type N. Type P will allow for businesses that only package or repackage, or label or relabel, cannabis products. Type N will allow for manufacturers that produce edible or topical products using only infusion processes, and that do not conduct any extractions.

The manufacturing sector is still evolving and expanding, which presents significant opportunities for innovation, business development and job growth. The range of products being produced includes an ever-increasing variety of edibles such as candies, cookies, dressings, and infused drinks such as beer, wine and sodas. Manufacturers may produce their own extract on site, or they may buy extract from other Type 6 or Type 7 licensees. Much like any other industry, cannabis manufacturers often depend upon other businesses to supply them with the various materials or components that go into their final product. These suppliers do not have to be located in or even near the same jurisdiction as the final manufacturer, and may be located anywhere throughout the state.

California's draft regulations for manufactured cannabis currently require that all edible cannabis products be sold in child-proof, tamper-evident packaging. The regulations limit the amount of THC per serving (10mg) and allow no more than 10 servings per package (100mg total). Packaging that includes more than one serving must be resealable so that child-resistance is maintained. The regulations further prohibit any labeling that is designed to be attractive to children, including cartoon characters, imitation candy logos, and any images, characters or phrases that are commonly used to advertise to children and all manufactured cannabis products must be clearly marked with a new universal warning symbol denoting that the product contains THC.



§40412. Cannabis Product Symbol.

The primary panel of a medical cannabis product shall be marked, stamped, or otherwise imprinted with the cannabis product symbol directly on the package.

(a) The symbol shall replicate the following in form and color:

(b) The symbol shall be no smaller in size than half (.5) inch by half (.5) inch and shall be printed legibly and conspicuously.

Butane Hash Oil (BHO) and CO2 Oil are both sold in either raw form or mixed with glycol to enhance viscosity for use in vapor cartridges. Some manufacturers may handle all steps from extraction to packaging the end product in the form of vape pens or other such devices. Others may handle only discreet steps, such as making the raw BHO, which is then sold either directly to retailers or to a Type N manufacturer who will package it into vapor cartridges or other end consumer products. Manufacturers also produce a wide variety of tinctures, as well as topicals such as cannabis infused lotions, salves, sprays, balms, and oils.

Gathering data on the size of the cannabis manufacturing sector is more difficult than for either cultivation or retail dispensaries. Because manufacturers generally do not sell retail, they do not produce sales tax data for us to analyze. The CDFA survey had 35 respondents who registered their interest in seeking either Type 6 or Type 7 manufacturing licenses in the County. The County's registry lists 188 individuals seeking Type 6 licenses and 140 seeking Type 7 licenses, for a total of 328 manufacturers. As with the number of cultivation licenses in the registry, this figure is likely far higher than what the County might actually see.

The Standardized Regulatory Impact Assessment (SRIA) conducted for the Office of Manufactured Cannabis Safety (OMCS) estimates California's total medical cannabis market at $2.6 billion, of which they estimate manufactured cannabis products to amount to $650,562,058. Assuming a 65% dispensary markup, the wholesale value of manufactured product sold to dispensaries would be $227,696,721[xvii].

The SRIA noted the difficulty in finding good data for this sector, stating *"There is no direct count of the number of medical cannabis manufacturers in the state, and estimating this number is difficult".* The assessment noted that the 2016 CDFA survey found 1,971 people who said they were interested in applying for manufacturing licenses at the time, but that this figure is not reliable.

They then looked to compare California's manufacturing sector to Colorado which had a total of 248 licensed cannabis manufacturers in 2015, each with an average of $1,646,575 in sales. This same metric applied to California would indicate 1,317 cannabis manufacturers. After further discussion with cannabis business owners and industry insiders, the SRIA comes up with an estimate of 1,000 cannabis manufacturing businesses in California, employing 4,140 people. This is an average of 4 new jobs per manufacturer.

Attempting to apportion these 1,000 manufacturers across California on a county by county basis is difficult. Compared with either cultivators or dispensaries, manufacturers are much less tethered to either population centers or abundant land, so there is no rational basis to apportion them either by county, by land base or by population. Both their raw materials and their products are high value and easy to ship, so proximity to either their supply or their market provides little benefit. Given this, manufacturers have greater flexibility than either cultivators or dispensaries to seek out a favorable regulatory and tax climate.

Our assumption is that these businesses will seek out those communities that offer the best mix of amenities, including access to suppliers and the market, related support industries, a welcoming business and social climate and favorable taxes and regulations. Given the wide range of approaches to cannabis by jurisdictions around the State, we assume that 50% (500) of these 1,000 business will be centered in 12 supportive counties, with the other 50% being spread among the remaining 46. This gives an average of around 40 cannabis manufacturers for each of the 12 supportive counties.

The number of these businesses that ultimately locate in Santa Barbara County will be directly related to the message the County sends through its policies. The County could seek to develop cannabis manufacturing as an industry cluster by setting attractive regulatory and taxation policies, or it could establish policies that discourage this sector. The likelihood of these or any outcomes is dependent upon policy decisions.

We believe that Santa Barbara is reasonably positioned to be a hub for cannabis manufacturing, due to its proximity to Southern California's population base, and the high level of interest in the industry demonstrated by the registry. However, the 328 manufacturers listed in the registry is far above any reasonable share of the statewide industry. As such and as explained above, the county as a whole could accommodate perhaps around 40 cannabis manufacturing businesses. How these are apportioned between the County and the cities is uncertain, but with favorable regulatory policies and available

industrial spaces, the County could potentially attract a larger share of these businesses. For this analysis we will use four scenarios, with 5, 10, 15 or 20 manufacturers, and run them at hypothetical tax rates of 3%, 5% and 7% of gross receipts.

HdL has reviewed pro-formas for numerous cannabis manufacturers seeking permits in counties and cities throughout California. From this review we have seen a range of gross receipts from around $1 million to over $5 million, with an average in the range of $2 million to $3 million. We shall use an average of $2.5 million for purposes of this analysis.

Figure 17:

Commercial Manufacturers						
Type 6/7/N/P Manufacturer	# of Licenses	Avg Gross Receipts	Total Gross Receipts	Revenue @ 4.0% Tax Rate	Revenue @ 6.0% Tax Rate	Revenue @ 10.0% Tax Rate
Manufacturers	5	$2,500,000	$12,500,000	$500,000	$750,000	$1,250,000
Manufacturers	10	$2,500,000	$25,000,000	$1,000,000	$1,500,000	$2,500,000
Manufacturers	15	$2,500,000	$37,500,000	$1,500,000	$2,250,000	$3,750,000
Manufacturers	20	$2,500,000	$50,000,000	$2,000,000	$3,000,000	$5,000,000

Depending upon the number of businesses and the tax rate applied, a tax on commercial cannabis manufacturers could potentially generate $375,000 and $3,500,000 in annual tax revenue under this scenario. However, the numbers for this model are based on the assumption that these businesses will locate in jurisdictions that offer favorable regulatory and tax rates. Given this, the higher the tax applied, the less likely that the numbers of businesses will materialize.

When considering taxes for the manufacturing sector, it is important to recognize that manufacturing is not necessarily a singular step involving a single manufacturer. Manufacturing can include volatile extraction of cannabis oil, or using that oil in making edibles or salves, or loading it into cartridges for vape pens, or assembling the loaded cartridges into fully-finished, ready-to-smoke products, or simply handing any of these products for labeling or repackaging. It is very conceivable that the materials for a manufactured cannabis product might pass through the hands of multiple manufacturers on their way to becoming a finished product that is ready to be sold to the consumer, and these various manufacturers or suppliers may be located anywhere in the State.

When manufacturing is taxed, that tax may be applied to multiple separate businesses that may or may not be located in the same jurisdiction. Multiple taxes may be applied, by multiple jurisdictions, at multiple rates and at multiple steps in the product supply chain. This makes it virtually impossible to come up with a generic model of how these cumulative taxes may build on each other.

As a very general example, manufacturing-grade cannabis may be purchased from a cultivator in a county that has a cultivation tax rate of 4.5% of value. Manufacturers may use premium cannabis flower, but they more commonly use lower-grade leaf or trim, which may sell for around $200 per pound. The concentrate oil for vaping may sell for $40 to $100 per gram retail, or around $9,000 per pound in wholesale quantities. Another manufacturer may purchase a variety of concentrates from various sources which they then blend together (much like blended wines or coffees) and add terpenes for flavoring before selling the product in vape cartridge form. Lastly, other manufacturers may purchase these pre-filled cartridges and load them into ready-to-use vape pens, or repackage the product as their own private label or house brand.

In this example, each of these manufacturers may be located in a different jurisdiction, with different tax rates being applied to the product at different stages of value. In addition, as the product moves toward the consumer, more of the sale price goes into associated non-cannabis product such as cartridges, vape pens or packaging. A gross-receipts tax on manufacturing or retail typically does not discriminate between the actual cannabis product and other products sold by the same business. Depending on how the tax is structured, a manufacturer or retailer could potentially be paying this additional tax even on non-cannabis marketing paraphernalia such as logo hats and t-shirts.

This potential for manufacturing taxes to be layered one on top of another creates a strong argument for being very conservative when taxing this sector. Even a small tax of 3.0% could potentially grow into a tax of 12% or more by the time the product moves through multiple manufacturers. Given the potential for new businesses and job growth in this sector, we would encourage jurisdictions to be cautious when considering what tax rates, if any, to apply.

Summary and Recommendations

The revenue projections in this analysis suggest that a tax on cannabis cultivation in Santa Barbara County could conceivably generate anywhere between roughly $4 million and $64 million dollars, depending upon the tax structure, the rates applied, the number of cultivation sites, the cultivation methods being used, and the general production rate of the County's growers. The County could potentially see an additional $1 million to $8 million from cannabis retailers and manufacturers. Of these factors, it would be too easy to focus on the type and the amount of any tax as the most important issues that will determine the level of revenue that might be generated for the County. We would encourage the County to look at the larger picture.

The County's registry lists 1,365 individuals who are interested in obtaining permits for cannabis cultivation, which would allow them to sell their product into California's legal cannabis market. These growers could theoretically produce over 3.7 million pounds of cannabis per year, which is more than double the amount the entire state of California consumes.

As with many counties in California, the number of growers in Santa Barbara seeking to become legally permitted has already reached its saturation point. There are numerous other counties like Santa Barbara that individually have enough growers seeking permits that they could provide more cannabis, perhaps even far more, than California's cannabis users consume. The limiting factor here is not regulation or taxes, but rather the limits of the market.

We believe that Santa Barbara County's cannabis cultivation industry is more likely to see contraction in coming years, rather than expansion. The market for legal cannabis in California is much smaller than the nationwide black market, so only a small percentage of those current growers seeking to become legal can be accommodated. Policies, regulations and taxes should be developed with an eye towards supporting existing growers in the face of a highly competitive market that has surpassed its saturation point. With cultivation taxes above the 6% range, it is hard to keep the cumulative rate below 30%. We would recommend that the County look at tax rates that are low enough to allow the existing industry to compete in the statewide marketplace.

While local taxes on cannabis production are increasingly common in California, there is not yet an established norm. HdL has commonly recommended cultivation taxes based on square footage, as they are simple, predictable and easy to administer. With vertically integrated cannabis businesses, however, it may be difficult to apply different tax mechanisms to different parts of the business. Allowing cannabis growers to process, manufacture and distribute their own product, should they so choose, will help them to be more competitive in the marketplace, thus decreasing the likelihood of failure. A single, all-encompassing tax on gross receipts may allow greater flexibility for cultivators to structure their business more competitively.

While we have endeavored to provide the best data possible to support the assumptions used here, it is really not yet possible to know what percentage of those prospective businesses in the County's registry will actually step forward or, of those, what percentage will actually succeed in this emerging industry. A cannabis tax structure is wholly dependent upon a regulatory program for legal, commercial cannabis, which doesn't currently exist for Santa Barbara County. That regulatory structure would have huge implications for the local industry and so it is not possible to make realistic projections for the industry or any revenues that might come from it without having some regulatory structure in place. Those policy discussions still lay ahead for the County.

Taxes can be used as an incentive to accomplish many things, and to shape this industry at the local level, but they can also be a disincentive that can undermine the higher goal of providing for a well-regulated,

legal industry that offers the industry attractive advantages over the black market. In considering whether to impose taxes, and at what rates, local decision makers must start with a candid assessment of their goals. What is their community's relationship with this industry currently? What would they like it to be in the future? How can they use a combination of land use, regulation, taxes and law enforcement to move this industry in the desired direction?

The County may also have other goals it wishes to achieve through a tax on cannabis cultivation. While the scenarios above are designed to balance differences between indoor and outdoor cultivation and between large and small-scale facilities, the County may determine that it wishes to specifically incentivize one or more categories over the others. When used in conjunction with the County's future land use regulations, a well-designed cannabis tax structure can be an important tool in shaping this industry in a way that best addresses the needs, concerns and values of Santa Barbara County.

References

[i] Duncan McEwan, et al (January 2017) *"Economic Impact Analysis of Medical Cannabis Cultivation Program Regulations"* California Department of Food and Agriculture

[ii] Denver Relief Consulting, et al (2017) "2017 California Cannabis Opportunity Report" https://www.cacannabisreport.com/

[iii] Hawken, Angela (2013) *"Economies of Scale in the Production of Cannabis"* BOTEC Analysis Corporation

[iv] Duncan McEwan, et al (January 2017) *"Economic Impact Analysis of Medical Cannabis Cultivation Program Regulations"* California Department of Food and Agriculture

[v] John P. Caulkins (2010) *"Estimated Cost of Production for Legalized Cannabis",* the Rand Drug Policy Research Center

[vi] Chris Roberts (November 2016) *"The Great Cannabis Price Crash"* High Times

[vii] Thomas H. Gray (2012) *"Reasonable Markup to Distributors"* http://www.tom-gray.com/2012/04/26/reasonable-markup-to-distributors/

[viii] Joseph Henchman (2016) *"Marijuana Legalization and Taxes: Lessons for Other States from Colorado and Washington"* the Tax Foundation

[ix] Patrick McGreevy (July 26, 2017) "*California has too much pot, and growers won't be able to export the surplus"* Los Angeles Times http://www.latimes.com/politics/essential/la-pol-ca-essential-politics-updates-california-producing-pot-surplus-1501101923-htmlstory.htm *I*

[x] Denver Relief Consulting, et al (2017) "2017 California Cannabis Opportunity Report" https://www.cacannabisreport.com/

[xi] *"Economic Costs and Benefits of Proposed Regulations for the Implementation of the Medical Cannabis Regulation and Safety Act (MCRSA)"* (February 23, 2017) University of California Agricultural Issues Center

[xii] *"Economic Costs and Benefits of Proposed Regulations for the Implementation of the Medical Cannabis Regulation and Safety Act (MCRSA)"* (February 23, 2017) University of California Agricultural Issues Center

[xiii] Eschker, Erick (2015) *"Active Medical Marijuana Dispensaries in California, 2015"* Humboldt Institute for Interdisciplinary Marijuana Research

[xiv] *"Economic Costs and Benefits of Proposed Regulations for the Implementation of the Medical Cannabis Regulation and Safety Act (MCRSA)"* (February 23, 2017) University of California Agricultural Issues Center

[xv] *"Economic Costs and Benefits of Proposed Regulations for the Implementation of the Medical Cannabis Regulation and Safety Act (MCRSA)"* (February 23, 2017) University of California Agricultural Issues Center

[xvi] *"Economic Costs and Benefits of Proposed Regulations for the Implementation of the Medical Cannabis Regulation and Safety Act (MCRSA)"* (February 23, 2017) University of California Agricultural Issues Center

[xvii] Erick Eschker, et al (February 1, 2017) *"Standardized Regulatory Impact Assessment (SRIA) Proposed Regulations for Manufacturers of Medical Cannabis"* Humboldt Institute for Interdisciplinary Marijuana Research