

**The Green Rush: Regulating A Growing Industry**

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## **Executive Summary**

Throughout California a massive marijuana industry has developed generating an estimated \$14 billion a year.<sup>1</sup> Marijuana prohibition has pushed law enforcement and any sort of effective regulation aside, increasing law enforcement costs on the taxpayers and losing potential revenues for the state to drug cartels. This paper identifies the main problems with the marijuana industry that are affecting the California residents: environmental damages (pollution, improper land and water use), crime, and lost state tax revenues. I put together a comprehensive literature review and case studies in particular regions where the marijuana industry has its roots. My case studies were in two of the highest producing marijuana regions in California: Humboldt and Mendocino Counties, as well as the two largest areas of consumption: Los Angeles and San Francisco Bay Area. I also conducted interviews with members of the marijuana community in California, California policy makers, professors of agriculture, and members of the judicial system to collaborate a set of effective laws and regulations that could possibly correct the main problems with the industry.

This paper concluded that legalizing marijuana and creating a comprehensive regulatory structure focusing on cultivation/production, distribution, consumption, and an excise tax similar to cigarettes and alcohol will effectively give the state substantially more control over the industry. These policies must be phased in to successfully curtail the black market and keep the industry strong enough to attract the legitimate growers and generate substantial revenues to add to the California budget as well as weaken the

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<sup>1</sup> Waltz, Debra, and Ronil Dwarka. "STATE BOARD OF EQUALIZATION STAFF LEGISLATIVE BILL ANALYSIS." Rev. of Assembly Bill 390 (Ammiano): Marijuana Fee. 23 Feb. 2009: 1-6. Print.

Mexican Drug Cartels. These policies will be subject to regular review and adjustment to fit the needs of the California residents. I recommend further research must be done regarding marijuana tourism, driving under the influence, further affects of marijuana on the California agriculture industry and advertising restrictions regarding marijuana.

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## Chapter 1: Introduction

For the past few decades, newspapers have covered the same story every year many times over and in many different ways, but the story is becoming a reality: “There’s a modern gold rush in the hills of California... the new gold is green and it’s called sinsemilla.”<sup>2</sup> Sinsemilla, commonly known as marijuana, has become the new promising industry in California with one very important difference; it can be grown. People have been migrating from all over to reap the benefits of this lucrative industry that is exclusive to California. It is legal to an extent, but more importantly it is highly profitable and fairly easy to find. Anyone can walk down the streets of Arcata and smell the skunk-like aroma throughout the streets, but what they don’t see is hidden behind “The Redwood Curtain.”

Marijuana has become so popular and profitable that entire drug cartels send people wielding heavy technology and artillery to grow marijuana in the North Coast region of California and capitalize on the massive market. Hikers now must watch for land mines or hanging fishhooks when they walk through the once isolated and remote forests and parkland in Northern California. There is money to be made and this very lucrative industry is regulated poorly causing an increase in crime, pollution and violence that is negatively affecting the agriculture and communities throughout Northern California.

The marijuana industry in California is not to be ignored or taken lightly. Growing up in Sonoma County our community was built on a strong agriculture industry,

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<sup>2</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print.

a healthy environment, and a harmonious social scene. I understood that the North Coast region was known for the mass amounts of wine produced here every year. This was only partially true, and as I grew older and gained a better understanding of the community I discovered that there was another underground crop that is also bringing profits to farmers in the region, Marijuana. I first encountered it in 5<sup>th</sup> grade while walking home from school one day; a boy had taken some from his father and asked if I would like to try it. I had never seen marijuana and had very little interest in trying it because I could tell it was “against the rules.” Nevertheless, this peaked my curiosity as to why this drug was so fascinating to kids. I could not help but notice how abundant marijuana was in my school and community. Sheltered in the Northern Californian coast, I thought marijuana was normal and it was something that was at every school, but as I grew up I realized that this region was unique. Pot, weed, dank, grass, bud, cannabis, marijuana, herb, whatever they called it; it was everywhere. On the other hand, alcohol was very scarce in our schools and there was very little access for kids. With the high regulations and control, the law enforcement had no trouble keeping youth from consuming alcohol, but they didn’t even know where to begin with marijuana regulation. In middle school, teachers would do what they could to enforce anti-drug policies by expelling students and searching lockers, but there was no way to slow this industry and if kids wanted pot there was no way to stop it, and this was only middle school. As a 7<sup>th</sup> grader, I knew more about the marijuana industry than any law enforcement official and I had never even tried it.

As I got into high school the situation became clear: in Northern California pot can be grown nearly anywhere with sun and water. From my personal experience

growing up, many parents had been raised as a transplanted generation of hippies from Haight Street (flower children) that migrated north for the beauty, safety, and relaxed atmosphere that were not against the personal use of marijuana. These parents created a new generation where marijuana was tolerated and socially accepted. It was not uncommon to see a couple marijuana plants next to the tomato garden in any backyard and I never even considered how massive the industry truly was. My horizons eventually expanded and I quickly learned throughout high school that marijuana was not like this in most places and was entirely illegal, yet there seemed to be nobody stopping it. When I moved to Los Angeles, the problem seemed to have erupted. There are six cannabis clubs within a couple blocks of Occidental College. The city currently has no hope of efficiently regulating these clubs and the problem is growing.

This paper will examine and analyze the problems of the marijuana industry in California, specifically looking at regional policies that can correct for the market failures as well as generate substantial revenues for the state of California. I look specifically at the negative environmental impacts of marijuana cultivation and give policy recommendations to create a safer, cleaner, and more efficient market that benefits the California residents. I also examine the crime associated with California's marijuana industry and its effects on the criminal justice system.

First I will present an overview of the marijuana industry in California followed by a more detailed discussion of two main regions in the "Emerald Triangle," Humboldt and Mendocino Counties. I then lay out the current situation with marijuana in California regarding the many levels of regulation and the expanding medical marijuana industry. Through conducting face to face and over the phone interviews I gathered information



from policymakers, marijuana activists, professors, and a member of the California judicial system to gain insight into the problems with marijuana legislature and how California can effectively correct for these issues. Finally, I lay out policy recommendations for a new regulatory structure for the marijuana industry in California focusing on cultivation/production, distribution, consumption, and an excise tax that will effectively decrease consumption and generate new tax revenues for the state.

### **The Green Rush in California**

As machete wielding county sheriffs and officers from the U.S Department of Forestry cut down fields of cannabis in Humboldt and Mendocino County they are amazed every year that no matter how much the law enforcement increases, they simply cannot seem to slow the boom in marijuana cultivation in California. They have increased law enforcement efforts consistently over the past six years with increased training and strategy, but their efforts have been overshadowed by the rapid and massive expansion of the marijuana industry.<sup>3</sup> With an estimated \$14 billion industry in California, this boom in the marijuana industry is no coincidence.<sup>4</sup> In the past few decades marijuana cultivation and sales in California has spiked and made it a very lucrative industry, which has led to the California “Green Rush”.<sup>5</sup> While cultivation of marijuana on a large scale is still mostly illegal, many Californians have been able to find loopholes and taken the liberty to grow this medicinal plant wherever possible. Many marijuana growers have legitimate legal operations that abide by the laws and grow

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<sup>3</sup> Wholsen, Marcus, and Lisa Leff. "California Sprouts 'Green Rush' From Marijuana." *Hufington Post* (2009). Print.

<sup>4</sup> Lyden, Jacki. “Bill To Legalize Pot Gains Traction In California.” *Weekend All Things Considered (NPR)*: EBSCOhost. Web. 24 Sep 2009.

<sup>5</sup> Wholsen, Marcus. (2009)

cannabis strictly for medicinal purposes for themselves and other patients, as far as most law enforcement officials are concerned. However, these very same laws that do not apply to most people have created access into a farming industry that has been booming in recent years. It is not the laws specifically that make marijuana cultivation increasingly appealing, but rather the relaxed attitude that everyone's doing it and people are making some serious money.

California is blessed with abundant natural resources and thus a prospering agriculture industry. With one of few Mediterranean climates in the world, California's wine country and coastal agriculture allow for nearly any plant to grow and flourish. This holds true for marijuana, which is why small agricultural based regions in Northern California have experienced the marijuana industrial boom more than other regions of the state. Further, the lenient policies and regulations in these regions have made it a destination for marijuana growers throughout the nation, and in many cases throughout the continent. Mendocino and Humboldt Counties are home to the largest marijuana growing operations in the state and have experienced significant increases in seasonal immigration and growing operations within their regions. People come from all over looking for work as a "bud trimmer" or hoping to start their own growing operation in order to reap some of the monetary benefits of the lucrative industry.<sup>6</sup> However, the once small lumber and agriculture communities that have had prominent marijuana communities for decades are now threatened by increased crime, pollution and improper land/water use caused by the "Green Rush." These negative affects are seen among

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<sup>6</sup> Wholsen, Marcus. (2009)

different people within these agricultural communities and in order to understand the full scope of these problems it is necessary to look at each separately.

## Chapter 2: Marijuana in California

Today, the average price for one pound of marijuana in California is around \$2,500 to \$3,000 depending on the quality of the product.<sup>7</sup> This is nearly fifteen times the price in the 1960s and has created a much more profitable industry.<sup>8</sup> As marijuana remains mostly illegal, the industry remains underground. Anyone looking to make another buck could simply grow a couple plants of marijuana if they are not intimidated by the legal consequences. Aside from the price of marijuana, the largest change over the past few decades has been the rapidly increasing demand. Despite its legal status, marijuana seems to be available in nearly every city in the country.<sup>9</sup>

The cultivation of marijuana increased parallel to its demand and developed many new practices and methods along the way. Instead of outdoor crops with a few plants in the backyard, growers began to grow in greenhouses, large fields, and most notably indoors. Hydroponics allowed for marijuana farmers to grow indoors in basements, spare rooms, or separate houses any time of year despite the growing season.<sup>10</sup> Growers could now create their own sunlight through halogen lamps and grow marijuana in the privacy of their own homes. Further, by using a hydroponics system growers are able to monitor and manipulate their crops more aggressively to make a stronger or higher producing crop. The marijuana today is much more potent than ever before and commanding higher

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<sup>7</sup> Regan, Trish. "Pot Growers Thrive in Northern California." CSNBC (2009): 1-3. Print.

<sup>8</sup> Harvey, Mike. "California Dreaming of Full Marijuana Legalization." The Times (2008). Print.

<sup>9</sup> Cohen, Harold. "A close look at Marijuana." Drug Topics. Advanstar Communications, Inc. 8 Dec 2003. V147 i23 p16.

<sup>10</sup> Kaste, Martin. "Pot 'Grow Houses' Flourish in Pacific Northwest". NPR News. National Public Radio. <http://www.npr.org/templates/story/story.php?>

prices. Today, marijuana cultivation in California is an estimated \$14 billion industry and has two markets: medical and illegal.

### *History*

When marijuana was first grown in California, it was not to get rich but to have a good time. In fact, only in the past few decades has marijuana production become a serious industry and lucrative economic opportunity within California. Originally, California was the land of dreams where people could go for new beginnings and ambitious futures. This dream transformed from the gold rush to Hollywood's lucrative film industry and booming urban areas in Los Angeles and San Francisco. But, all of the glamour, fortune and fame surrounding California masked the rural, backcountry, disjointed coastal hills and forests that had no large concentrations of human beings in any single space.<sup>11</sup> These were places like Humboldt and Mendocino Counties that were home to some farmers and lumberjacks, but people were few and far between. These few people in the remote and then isolated regions of Northern California started the marijuana industry that is worth over \$14 billion today.<sup>12</sup>

The supply of marijuana was restricted because of the illegality, and the scarcity raised the price, but in the remote hills of Humboldt and Mendocino Counties the locals could grow marijuana for free. These people would grow marijuana for recreational use among local families and friends. They were rarely arrested for growing pot and usually

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<sup>11</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print. Pg. 7.

<sup>12</sup> JACKI LYDEN. "Bill To Legalize Pot Gains Traction In California." *Weekend All Things Considered (NPR)*: EBSCOhost. Web. 24 Sep 2009.

never even caught.<sup>13</sup> Thus, the culture in these communities grew to be very tolerant of marijuana as it grew into a larger industry. It was not uncommon to find people with a couple of plants in their backyard for personal consumption.

As California grew, so did the marijuana industry. It remained illegal, so people began to see the economic benefits of the restricted supply and growing demand. The underground market for marijuana developed in as early as the late 1950s or early 1960s and marijuana fetched a high price of \$200 a pound for the top notch bud.<sup>14</sup> Through selective breeding and seedless cultivation, the quality of marijuana in California increased steadily over the years. Recreational marijuana use was popular throughout California in places such as Golden Gate Park or “hippie hill” at the northern end of San Francisco’s Haight Street. People could smoke marijuana among themselves with little concern for the law, but eventually the marijuana industry presented problems for the California residents, especially those who were not part of the marijuana community.<sup>15</sup>

The main problem was that marijuana was and still is illegal. It was against the law to grow, smoke or sell marijuana, yet people all around California were still doing it. Eventually, the law enforcement surrounding marijuana was tightened in the late 1960’s and the marijuana community was forced underground. No specific law changed, marijuana was always illegal, but the amount of regulation and law enforcement regarding marijuana increased along with a growing population and level of use in California. This caused many unsuspected changes in the marijuana industry,

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<sup>13</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print. Pg. 46.

<sup>14</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print. Pg. 46.

<sup>15</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print. Pg. 81.

particularly the price, which rose steadily over the years and reached nearly \$2,000 a pound in 1985.<sup>16</sup> The underground market became very lucrative and marijuana was seen increasingly as an industry rather than a recreational drug. Through the years government officials have been walking the fine line between stricter regulations and a larger underground market. Arguments have been made to legalize marijuana in order be able to enforce stricter regulations, but these stances have been discarded for the most part. It has been observed that stricter regulations and border control influence more illegal growing operations on public land.<sup>17</sup> In 1996, California became the first state in the U.S. to legalize the medical use of marijuana (to be discussed further).<sup>18</sup> This created a whole new buzz in the marijuana industry and, in part, led us to the problems we now have today.

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<sup>16</sup> Raphael, Ray. *Cash crop an American dream*. Mendocino, Calif: Ridge Times, Available from Real Books], 1985. Print. Pg. 46.

<sup>17</sup> Kirkwood, Scott. 2005.

<sup>18</sup> JACKI LYDEN. "Bill To Legalize Pot Gains Traction In California." *Weekend All Things Considered (NPR)*: EBSCOhost. Web. 24 Sep 2009.

### Chapter 3: A Brief Economic Analysis of Marijuana Prohibition

The main objective of keeping marijuana illegal in the U.S. is to decrease the overall consumption of marijuana. Mark Kleiman shows the results of marijuana enforcement when he wrote,

“Marijuana enforcement is designed to reduce consumption. By adding to the costs of trafficking in marijuana, enforcement increases its price. Some users will continue to buy as much marijuana as before, but others will cut back on their consumption in the face of higher prices, or even stop smoking entirely.”<sup>19</sup>

Marijuana users can be economically classified into two types, one with an inelastic demand, and one with elastic demand. The users with an inelastic demand are the heavy habitual users and will be much less affected by the increase in prices, because they have a nearly vertical demand curve and will simply spend more to keep up their habits. However, the users with an elastic demand curve will change their habits with an increase in prices, by either buying less or none at all. These people represent the change in the market for marijuana consumption once enforcement is implemented. So, by keeping marijuana illegal and enforcing a decrease in consumption, the government is really affecting the light marijuana users, who consume a very small amount of the total marijuana consumed. This is inefficient, because the people changing their habits because of the law are the people who are least likely to sell, cultivate, or operate a motor vehicle while under the influence of marijuana. Rather, the prohibition of marijuana targets the average curious individual who tries marijuana for recreational use and poses very little threat to society. By making marijuana legal and creating a proper regulatory

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<sup>19</sup> Kleiman, Mark. Marijuana costs of abuse, costs of control. New York: Greenwood P, 1989.



structure, the government can stop wasting time and money by penalizing light users and target the organized crime that generates profits from marijuana sales. Further, the government could take control and tax the money generated from the marijuana industry to generate additional revenue for the state, taking power from a black market and adding more money to solve the state's budget woes.

Keeping marijuana illegal will also lead to the increased use of other, cheaper alternative drugs. By government officials increasing the costs of cultivating and selling marijuana, they also increase the price, which makes marijuana too expensive for poorer potential users and makes alternative cheaper substitutes more appealing.<sup>20</sup> With an increased price for marijuana, habitual drug users without the money to afford the price increase will substitute away from the good. Therefore, the substitution effect where people buy alternative drugs at lower cost, such as inhalants known as PCP or crack. This means that keeping marijuana illegal could increase the use of other, more dangerous drugs, and therefore increase the social costs associated with those drugs. With more people using heavy drugs, there will be more negative side effects caused by those drugs, such as chronic addiction and overdose. So, by keeping marijuana illegal, the government is increasing the potential demand for "substitute" drugs, which almost always have more associated negative externalities, especially chronic addiction and erratic behavior caused by "harder" drugs.

Marijuana users cover a wide range of demographics, but the enforcement of marijuana law negatively affects poor people more causing it to be a regressive law.<sup>21</sup>

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<sup>20</sup> Miron, Jeffrey A. *Drug War Crimes The Consequences of Prohibition*. Annapolis: Independent Institute, 2004. Print.

<sup>21</sup> Kleiman, Mark. (1989).

With the increased prices caused by marijuana prohibition, poor people have more incentive to move to a cheaper drug or stop use, but affluent users will be relatively unaffected by the increase in prices. The substitution effect will be much stronger in the poor communities and therefore increase the presence of alternative drugs that are considered much worse. Making marijuana legal may also increase the price due to an increased demand caused by the lower costs (no threat of incarceration). However, it will also reduce the substitution effect because marijuana will have less social costs, such as incarceration, and other drugs will seem less appealing.<sup>22</sup> After researching the effects of prohibiting a marijuana industry in California, the benefits of legalization and policy alternatives become much more clear; an effective regulatory structure and taxation model will create a new facet of California's massive agriculture economy.

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<sup>22</sup> Kleiman, Mark. (1989).

## Chapter 4: The California Agriculture Industry

California has some of the most ample natural resources of any state in the U.S. It was blessed with abundant parks and forests along with a perfect climate to grow nearly anything and remains the nation's most agriculturally productive state.<sup>23</sup> Thus, California's agriculture industry has become a strong facet within the California economy. Last year, California's agriculture industry produced \$36.6 billion of revenues for the state.<sup>24</sup> The California Department of Food and Agriculture has worked for 90 years to preserve and expand the agriculture industry within California by encouraging farming and agribusiness, while protecting consumers and the environment. However, with the current threats of pollution, invasive species, drought and improper land use, California has had to work harder than ever before to maintain its agricultural market share and high quality products.

Many crops simply grow better in California, which has made California the sole producer (99% market share or more) in the nation for a large variety of agricultural commodities such as almonds, figs, artichokes, pomegranates, and a number of specialty crops.<sup>25</sup> California's agricultural abundance includes over 400 different commodities and now the state produces nearly half of the fruits, nuts, and vegetables grown in the U.S. Further, California remains the nations top milk producer and supplies 22% of the

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<sup>23</sup> California Department of Food and Agriculture. California Agricultural Highlights: 2008-2009. By A. G. Kawamura. 1st ed. Sacramento: CDFA, 2009. Print.

<sup>24</sup> California Department of Food and Agriculture. Web. 14 Dec. 2009.  
<<http://www.cdfa.ca.gov/>>.

<sup>25</sup> U.S. California Department of Food and Agriculture. California Agricultural Highlights: 2008-2009. By A. G. Kawamura. 1st ed. Sacramento: CDFA, 2009. Print.

nation's milk.<sup>26</sup> Consequently, Californian consumers and the rest of the nation rely on California's strong agricultural production.

California's strong agriculture industry attracts farmers to come and farm where they can diversify their crops and work in a profitable market. Yet, crops still vary depending on the region in California because of different climates and niches. Farmers tend to end up growing the top commodities in their area. For instance, grapes and wine are the top agricultural commodities for Mendocino County because of the cool coastal climate where grapes flourish, and almonds and walnuts are the top commodities in Tehama County where the weather is better for nuts.<sup>27</sup> For these reasons farmers tend to migrate towards where their crops flourish and it is no coincidence that a large amount of marijuana in California is grown in Mendocino and Humboldt Counties.

### ***The Green Triangle: A Closer look at Humboldt and Mendocino Counties***

The farmers in Mendocino County are typical farmers that hold weekly farmer's markets and work very hard to provide high quality local produce throughout the state. With the ample vineyards and orchards, Mendocino is known for the beautiful farming land and amazing scenery. As a coastal county that extends Northern California's reputable wine country, Mendocino has developed a thriving wine industry. In fact, grapes and wine compose about two thirds (66.67%) of the entire agriculture production in Mendocino County; pears hold a distant second place.<sup>28</sup> However, these statistics do not take into account the very prosperous and lucrative marijuana industry in Mendocino

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<sup>26</sup> California Department of Food and Agriculture. California Agricultural Highlights: 2008-2009. By A. G. Kawamura. 1st ed. Sacramento: CDFA, 2009. Print.

<sup>27</sup> California Department of Food and Agriculture. California Agricultural Highlights: 2008-2009. By A. G. Kawamura. 1st ed. Sacramento: CDFA, 2009. Print.

<sup>28</sup> California Department of Food and Agriculture. California Agricultural Resource Directory 2008-2009. Sacramento: CDFA, 2009. Print.

County. Marijuana thrives in climates similar to grapes and with the loose regulation and laws surrounding marijuana cultivation in Mendocino County; the marijuana industry is very much alive.

The current recession and drought has caused farmers in Mendocino County to find themselves in a period of financial instability. The policies and views surrounding marijuana have always been relaxed and almost promoted personal use, which sprouted a now booming marijuana industry. As a response to the worsening economy, the rising marijuana industry has generated some much-needed revenue for the local residents. Some people refer to Mendocino County as the ground zero for marijuana because few places could claim to match the quantity or quality being produced there.<sup>29</sup> In fact, today marijuana as a cash crop accounts for nearly two-thirds of Mendocino County's entire economy.<sup>30</sup> With the very noticeable impact on the economy, even law enforcement officials are beginning to see the benefits of such a lucrative industry in their community. Mendocino is now increasingly becoming a haven for people looking to earn a living growing marijuana. Matched only by Humboldt County, Mendocino County is at the source of the marijuana boom in California.

Across county lines from Mendocino is Humboldt County where the agriculture industry is dominated by timber production. According to the California Department of Food and Agriculture, timber production accounts for 54.4% of Humboldt County's agricultural value. Humboldt's ample forests and parkland made it a logger's destination

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<sup>29</sup> Regan, Trish. "Pot Growers Thrive in Northern California." CSNBC (2009): 1-3. Print.

<sup>30</sup> Regan, Trish. "Pot Growers Thrive in Northern California." CSNBC (2009): 1-3. Print.

over a century ago leading it to become the top timber producer in the state.<sup>31</sup> Other top agricultural commodities in the county are nursery products and livestock products. Similar to Mendocino County, the farmers hold farmer's markets and work their best to provide local produce and dairy, but the slow economy is also having negative effects on Humboldt. In California, Mendocino and Humboldt counties are ranked 35 and 36 in agricultural production by county; Humboldt gets bumped up to 27 if timber is included.<sup>32</sup> With an economy that is heavily reliant on their agricultural production, the slow economy has led to Humboldt residents looking for other sources of revenue.

The story is the same for Humboldt as it is for Mendocino; the booming marijuana industry has filled the gap and then some in the slowing economy. The relaxed laws and plentiful public land have always created a marijuana friendly environment in Humboldt, but in the past decade or so the marijuana industry has expanded exponentially. The abundant and somewhat isolated forests and parks have also made Humboldt a destination of Drug Trafficking Operations (DTOs) and illegal outdoor growing operations where they are hard to find. The agriculture industry was never a dominating portion of Humboldt's economy, with the exception of timber. Yet, marijuana cultivation is bringing the county many millions of dollars each year to bring up the economy. Many farmers or other residents in Humboldt are now growing marijuana in order to supplement their income or in some cases to make a living.

### ***The New Growing Demand for Marijuana in California***

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<sup>31</sup> U.S. California Department of Food and Agriculture. California Agricultural Highlights: 2008-2009. By A. G. Kawamura. 1st ed. Sacramento: CDFA, 2009. Print.

<sup>32</sup> California Department of Food and Agriculture. California Agricultural Resource Directory 2008-2009. Sacramento: CDFA, 2009. Print.

As marijuana became more legal and socially acceptable in California, the demand increased and rapidly developed the marijuana industry. People no longer need to go through drug dealers illegally; instead residents of California could obtain a prescription and go to a dispensary, which is more or less a legal marijuana store. These stores carry a variety of cannabis products ranging from different strains of marijuana buds and cannabis concentrates to cannabis infused edibles from brownies to olive oil.<sup>33</sup> It is now not only convenient, but also far easier and faster to get marijuana than before medical cannabis. Apparently, it is very easy to obtain a marijuana prescription if you are willing to pay around \$100 for a yearlong prescription by simply claiming to have sleep deprivation, back pains, or even asthma.<sup>34</sup> Essentially, anyone who is a resident of California and over the age of 18 can pay \$100 for their prescription to use and/or grow personal marijuana, and gain access to this new medical cannabis business that will even deliver to your front door.<sup>35</sup> This has created a whole new breed of marijuana users that are legitimate and open about smoking pot to medicate.

As the medicinal marijuana industry in California has grown, the government officials are doing what they can to control the industry while allowing for safe medical access. However, this has proven to be a very difficult task because many dispensaries or growing operations that went through the proper procedures and seem legitimate can be funded through illegal growing procedures or selling to non-medical patients. Further, it has become fairly easy to navigate through the law to open a dispensary, thus in 2008 there were over 2,100 dispensaries and such in California, which is more than all of the

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<sup>33</sup> Harvey, Mike. (2008).

<sup>34</sup> Lopez, Steve. "A visit to the medical marijuana doctor." Los Angeles Times 28 Oct. 2009, Local sec.: 1-3. Print.

<sup>35</sup> Lopez, Steve. (2009).

Starbucks, McDonald's and 7-Elevens combined.<sup>36</sup> However, Starbucks has expanded since and this statistic is no longer true. Every major city in California has a marijuana dispensary, which means that every medical marijuana patient has access to marijuana almost anywhere in the state. This new medical market combined with the illegal cultivation and still thriving underground market for marijuana compose the booming marijuana industry in California that is worth over \$14 billion and could generate up to \$1.3 billion in tax revenues if the state were to legalize and tax the drug.<sup>37</sup> This market is massive and eclipses any other agriculture industry in the state, additionally, without proper regulation the majority of the revenues from the marijuana industry are going to drug cartels, growers and dispensary owners, not the state of California.

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<sup>36</sup> Harvey, Mike. (2008).

<sup>37</sup> Ammiano, Tom. Assembly Bill No. 390. California Legislature 2009-10 regular session. 23 Feb 2009.



## Chapter 5: A Growing Problem in California

Mendocino and Humboldt counties have similar regulations for marijuana, but very different agriculture industries. The recession has caused a dwindling budget and lower income for most farmers in the state, especially regions like Humboldt and Mendocino whose economies rely largely on their agriculture industries. Thus, it has become evident that the combination of relaxed regulations and perfect climate has made marijuana cultivation a popular and lucrative solution to anyone's financial problems in these counties. These growing operations tend to be minor and command little attention from law enforcement, but reflect the results of a region whose economy is suffering and is remedied through funds obtained by growing marijuana. This is especially true for farmers that are losing money from drought or lower demand caused by the recession.

When one begins to interpret the meaning of an estimated \$14 billion industry it begs the question: where is it all coming from?<sup>38</sup> Driving through the Humboldt and Mendocino Counties there is not marijuana growing in open fields on the side of the road, as some may believe, in fact the largest task for any marijuana grower is maintaining secrecy. Further, the venues for marijuana operation can range from an underground basement in the middle of Ukiah to a hillside several miles from any drivable road. In fact, the method and place that marijuana is grown often indicates whether or not it is a legitimate legal operation or not. The local families that have been growing marijuana for generations would never go through the trouble of hiking several miles every day, but when people really do not want to be caught this trip seems minor. Marijuana cultivation

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<sup>38</sup> Waltz, Debra, and Ronil Dwarka. "STATE BOARD OF EQUALIZATION STAFF LEGISLATIVE BILL ANALYSIS." Rev. of Assembly Bill 390 (Ammiano): Marijuana Fee. 23 Feb. 2009: 1-6. Print.

comes in a variety of forms depending on the grower, but the illegal and large-scale operations seem to cause most of the problems in the small communities, particularly regarding land use.

Legal cultivation of marijuana is usually an insignificant problem compared to the massive illegal cultivation that obviously does not meet regulations. In fact, law enforcement officials such as Mendocino County Sheriff Tom Allman said, “If you’re living in the boundaries (legitimate under state law), I’m not going to mess with you.”<sup>39</sup> Police and law enforcement agencies have been finding massive amount of marijuana growing on state-owned land, specifically parks and forests owned by the State of California.<sup>40</sup> Nonetheless, people are hiking into parks and diverting water to grow their plants using pesticides and depleting the land that is protected by our state. This has created the new task of finding and removing marijuana grown on public land and taken a significant portion of the CA law enforcement budget. There must be better policies in place to make public land in Northern California a less attractive to these illegal procedures.

Another popular venue for growing marijuana is to use a house and set up an indoor growing facility using methods such as hydroponics. Hydroponics is a form of growing plants using nutrient solutions, in water, and lighting equipment in a controlled environment.<sup>41</sup> This allows for growers to use any house or basement as a “grow house.” “Grow houses” can be found anywhere in suburban neighborhoods where they look like every other house on the street, except they are housing millions of dollars of

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<sup>39</sup> Wholsen, Marcus. Pg. 4 (2009)

<sup>40</sup> Cutler, Michael. "Marijuana Found in Another National Park." Buzz Up! (2009). Print.

<sup>41</sup> Douglas, James S. Hydroponics. 5th ed. Bombay: Oxford UP, 1975. 1-3.

marijuana.<sup>42</sup> These houses lead to increased crime and are a new target for law enforcement officials. Also, these houses tend to put a heavy strain on the local grid and require substantial amounts of energy. This is a popular form of investment that is common for immigrants or people from out of state because they can produce millions of dollars annually and even if they get raided, the houses can be turned for a profit. Martin Kaste of NPR highlighted this problem when he said, “it's hard to argue with the marijuana growers' investment instincts. Typically raising three crops a year in bedrooms and basements of their suburban greenhouses, they rarely have trouble meeting their mortgage payments. And the houses, once they're raided, usually sell for more than the growers paid for them — one even went for twice the price.”<sup>43</sup> In economic terms, the benefits simply outweigh the costs and thus there is a new-targeted area for marijuana cultivation, suburban homes. As one can imagine, this only increases the law enforcement efforts necessary to combat this “growing” problem and changes the land use of residential homes for industrial purposes. Today, law enforcement officials have the massive task of finding the illegitimate and illegal operations and leaving the medically legal ones alone.

### ***Environmental Impacts***

Marijuana cultivation requires a consistent and reliable source of water and this plays a key role in the cultivation of marijuana. Every marijuana growing operation needs access to water whether it's a river, stream, lake, the city's water source, or a

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<sup>42</sup> Martin Kaste. "Pot 'Grow Houses' Flourish in Pacific Northwest". NPR News. National Public Radio. <http://www.npr.org/templates/story/story.php?storyId=16628918>. Retrieved 2007-11-26.

<sup>43</sup> Martin Kaste. "Pot 'Grow Houses' Flourish in Pacific Northwest". NPR News. National Public Radio. <http://www.npr.org/templates/story/story.php?storyId=16628918>. Retrieved 2007-11-26.

reservoir. This has caused further problems for the local communities because these illegal growing operations tend to use contaminating chemicals that pollute and almost always obtain water illegally. However, perhaps the most concerning element of water use is the implications for the worsening California drought. With California entering its fourth consecutive year with severe drought, these agriculture communities are alarmed to see the rivers and creeks drained by large-scale drug operations.<sup>44</sup> The problem is getting worse every year and Lt. Rusty Noe of the Mendocino County Sheriff's Department noted, "It's really affecting our water supply."<sup>45</sup> Hydrologists and US Forest Service agents are finding more than the pollution and erosion of soil and underbrush, they are now noticing other environmental costs caused by these growing operations, such as two steelhead trout streams that are now dead due to water diversion from illegal marijuana farming.<sup>46</sup> These massive implications are usually not caused by the local residents that grow a few plants in their yard, but rather the large-scale illegal operations that are completely unsustainable and destroying the local water and environment.

Many private water sources are often tapped into by illegal cultivation practices. This is especially true in Mendocino County where the wine industry is prominent and vintners need steady water supplies for their vineyards, which have a very similar growing season to marijuana. Some law enforcement officials find hoses or pipes stretching across miles that tap into local reservoirs and bring the water to feed the marijuana plants. In fact, law enforcement officers often strategize to look for hoses or

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<sup>44</sup> O'Carroll, Eoin. "Marijuana growers worsening California drought." Web blog post. Bright Green Blog. The Christian Science Monitor, 10 Oct. 2009.

<sup>45</sup> O'Carroll, Eoin. "Marijuana growers worsening California drought." Web blog post. Bright Green Blog. The Christian Science Monitor, 10 Oct. 2009.

<sup>46</sup> O'Carroll, Eoin, 2009.

pipes loosely buried as a “trail of breadcrumbs” to the growing operation.<sup>47</sup> There are plenty of instances among local residents where water is competitive and neighbors will divert each other’s water supplies for their own personal use. Judge Jim Grey reflected on this issue when he said,

One of the big things during the water debates is water diversion. Some of the vintners in wine country have been overusing and moving water around, sometimes illegally. So have the marijuana farms! These farms have problems accessing water; vintners often blame marijuana farms or visa versa. Water is a big issue!<sup>48</sup>

Water is a dwindling resource and the cause of many problems for marijuana cultivation. It is the key necessity for any marijuana grower and has caused ample environmental and economic costs to both Mendocino and Humboldt Counties. There must be more thorough and sensible regulations in order to control environmentally friendly water use and stop worsening the California drought.

With economies that heavily rely on agriculture, the environment, and the ample natural resources available in Humboldt and Mendocino Counties, one of the most devastating results of the rapidly expanding marijuana industry is the environmental pollution that occurs from irresponsible cultivation. This pollution occurs almost entirely in illegal growing operations outdoors, and in many cases on state land. For the most part, local growers rarely go through the hassle of hiking miles from roads and tapping into public water when they can grow their small operations in their backyard or house. As Ron Pugh from the U.S Forest Service put it, “The gardener, who lives locally, hikes

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<sup>47</sup> Regan, Trish. "Pot Growers Thrive in Northern California." CSNBC (2009): 1-3. Print

<sup>48</sup> Grey, Jim. "Interview with Judge Jim Grey." Telephone interview. 5 Jan. 2009.

in every other day or so, carrying water for his plants. Firearms are uncommon, and locations are predictable. They're within a quarter mile of the road, and they're rarely uphill."<sup>49</sup> The locals do not want to disrupt the environment or cause any problems within their community, so it is quite uncommon to see locals diverting water or performing "environmental crimes." It is the growers coming from out of town that set up large-scale operations that most commonly pollute and damage the environment.

By diverting water from natural streams and rivers to places that were naturally dry and using toxic chemicals, the illegal grow sites have been substantial sources of pollution in the North Coast Region. It is nearly impossible to force a marijuana grower to practice sound conservation, especially when they are there illegally.<sup>50</sup> Illegal growing operations tend to use unsafe chemicals on their plants, which have been found to pollute the local watershed and soil. Further, after the season is over, the growers tend to leave massive piles of trash from their nearly 5-month stay with the plants.<sup>51</sup> These people usually used open fires to cook their meals and have created a few forest fires from irresponsible fire safety.<sup>52</sup> The California Water Resources Control Board noted in the new Nonpoint Source Program, "The North Coast Region is also home to a substantial amount of illegal, unregulated marijuana farming."<sup>53</sup> Yet, there is no direct response with regulation other than adding more law enforcement officials to stunt the expansion of the

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<sup>49</sup> O'Carroll, Eoin. "Marijuana growers worsening California drought." Web blog post. Bright Green Blog. The Christian Science Monitor, 10 Oct. 2009.

<sup>50</sup> Evanoff, Mark. "Marijuana Growers: The National Forests' Illegal Entrepreneurs." *Not Man Apart* 14.1 (1984): 13. Print.

<sup>51</sup> O'Carroll, 2009.

<sup>52</sup> Kirkwood, Scott. "A Growing Problem.." *National Parks* 79.3 (2005): 8-196. EBSCOhost. Web.

<sup>53</sup> USA. California Water Resources Control Board. CA Water Board. Appendix B: Nonpoint Source Program. Vol. 1. Sacramento, 2009. Print. Pg. 2

DTOs. It is difficult to come up with an effective policy or law when the source of pollution is illegal in the first place. However, this does not address the solution for a growing problem that is worsening and slowly destroying the environment in Humboldt and Mendocino Counties. In this comprehensive project I will analyze the current regulation and suggest new or improved policies to protect the local and public land and water from these devastating effects.

### ***Drug Trafficking Operations***

The most damaging practices have been found in drug trafficking operations (DTOs).<sup>54</sup> Most commonly fueled by the very dangerous and aggressive Mexican Drug Cartels, DTOs have been set up all over the North Coast Region in order to take advantage of the perfect climate and relaxed regulations surrounding marijuana cultivation.<sup>55</sup> These cartels will send people into Northern California, often against their will, and force them to grow as much marijuana as possible on state land. The growing operations are much harder to find than the typical locals growing operation and far more dangerous. With an average of 6,600 plants and around 7 growers, these DTOs can be very lucrative and profitable for the drug cartels.<sup>56</sup> The growers at the DTOs are often aided with scanners, radios, night vision, arsenals of weapons and plastic pipes to divert water to their plants.<sup>57</sup> This kind of equipment and preparation is far beyond anything that has been done by the local residents and imposes a serious threat on the environment and community. These once peaceful forests are now looming with armed men guarding their drug operations and how can they tell the difference between a random hiker and a

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<sup>54</sup> O'Carroll, 2009.

<sup>55</sup> Cutler, Michael. "Marijuana Found in Another National Park." Buzz Up! (2009). Print.

<sup>56</sup> O'Carroll, 2009.

<sup>57</sup> O'Carroll, 2009.

thief? The cartel's priorities are to grow as much marijuana as possible over the growing season and then sell it to illegally run medical dispensaries and drug dealers throughout the country; the environment is completely disregarded. In fact, law enforcement officials and government agencies have cited DTOs as some of the worst sources of pollution in the North Coast Region.<sup>58</sup>

The recent boom in the marijuana industry hugely amplifies the crime associated with the marijuana industry. With such a lucrative industry people begin to compete for market share as in any industry, but this had led to an increase in illegal marijuana cultivation in Humboldt and Mendocino Counties. In recent years the booming marijuana industry has posed several new issues for the law enforcement officials to deal with. The DTOs are definitely the most dangerous group in these areas, with their heavy weaponry and dire consequences for failure. However, even non-DTOs are causing an increase in crime, particularly among people from out of state. It is not uncommon for someone to set up a marijuana grow house or outdoor site by stealing equipment or plants. Further, many people will try to steal a grower's plants just before harvest.<sup>59</sup> These situations can often end up in shootings or violence and have increased the crime rates in Humboldt and Mendocino Counties, stirring concern among the locals.<sup>60</sup>

Local growers who have been growing marijuana for decades before this recent boom in the industry, are now frightened by these people from "out of town" that have come to the North Coast Region with guns and aggressive actions to take over the

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<sup>58</sup> USA. California Water Resources Control Board. CA Water Board. Appendix B: Nonpoint Source Program. Vol. 1. Sacramento, 2009. Print. Pg. 2

<sup>59</sup> Carolyn Lochhead. "Mexico's drug war stirs fear in U.S." *San Francisco Chronicle* (10/1/2007 to present) (2009): A1. EBSCOhost. Web.

<sup>60</sup> Cutler, Michael. "Marijuana Found in Another National Park." *Buzz Up!* (2009). Print.



industry. Along with the negative environmental impacts noted above, US DEA agent Jeffrey Sweetin noted, “The public's safety is also at risk for those who recreate on our public lands due to these trafficking groups operating there.”<sup>61</sup> The local communities in Humboldt and Mendocino Counties have a newfound fear to hike in their local parks and forests because of the chances that they may run into an illegal growing operation and be shot. These increased crime rates have had negative effects on the tourism industry and vacationers that usually come to the North Coast to see the amazing redwood trees and taste the local wines. People now tend to shy away from a region that is no longer secluded and peaceful, and has become a destination for drug trafficking.

Based on information obtained through investigations and arrests, it has become apparent to the Park Services that most of the people involved with large-scale operations found on public land have links to Mexican Crime families.<sup>62</sup> These families that fuel the war on drugs between the United States and Mexico, will send people up into the U.S. to grow marijuana and bring it back to Mexico, often against the individual’s will. These people are brought into do the dirty work of these crime families and often have threats of being killed or having family members killed if they do not cooperate.<sup>63</sup> This makes it even more dangerous for locals or government officials because the illegal aliens will often have their lives or the lives of their family at risk if the growing operation is not successful.

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<sup>61</sup> Conery, Ben. "Marijuana Found in another National Park." *The Washington Times* (2009): 1-2. Print.

<sup>62</sup> Kirkwood, Scott. “A Growing Problem.” *National Parks* 79.3 (2005): 8-196. EBSCOhost. Web.

<sup>63</sup> Kirkwood, Scott. 2005.

The regulations and laws in place around the Mexican border and marijuana cultivation have spurred an increase in marijuana grown illegally in the U.S. Bill Tweed, chief park naturalist at Sequoia National Park said,

Today the Mexican border is tighter than it has been in ages, so it's harder to bring large bulk crops into the country. Ironically, that brings an increased incentive to [grow marijuana] within the U.S. And, further, because our drug laws are written to allow for confiscation of private lands used to grow drugs, it just makes more sense to use public land.<sup>64</sup>

After 9/11, increased focus on national security caused the U.S. to tighten regulations on immigration over the border, but never considered tightening regulations much for the illegal drug operations, specifically in national and state parks. The FBI and DEA will give their aid as much as possible, but they are often too busy to offer their manpower and expertise. Instead, the California State Park Rangers are now given training in military tactics on how to respond to hostile fire with automatic weapons.<sup>65</sup> This is far from the original role of park rangers where they would host hikes and give campfire safety demonstrations. It is creating a transformation for the California law enforcement agencies to work towards combating a drug war that should be more of a federal responsibility. However, as mentioned above, the federal agencies are stretched thin, and with California's diminishing budget during the recession the CA Parks Services Rangers and county sheriffs are being stretched thin as well.<sup>66</sup> The poor regulations surrounding the marijuana industry and drug trafficking are taking a toll on California taxpayers

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<sup>64</sup> Kirkwood, Scott. (2005).

<sup>65</sup> Kirkwood, Scott. (2005).

<sup>66</sup> Kirkwood, Scott. (2005).

whose money is lost in illegitimate attempts to slow the Mexican Drug Cartel and poor federal aid. By removing money for the parks from the state budget, Governor Schwarzenegger is giving further incentives to grow marijuana on public land with less threat of punitive consequences.

### **The Bay Area Marijuana Market (focus San Francisco and Oakland)**

San Francisco and Oakland have always had fairly relaxed policies regarding marijuana use within the city. San Francisco has approximately 40-50 marijuana dispensaries or “cannabis clubs” throughout the city.<sup>67</sup> That is approximately 1 club for every 20,000 people within the city. Oakland has a much smaller population, but still has about 1 club for every 25,000 people in the city.<sup>68</sup> These dispensaries are very noticeable and in some cases across the street from one another. There are websites that display awards for the best cannabis clubs and directories for the closest ones to any individual patient. With the ease of obtaining a prescription, marijuana is far more accessible than ever before, especially in cities. The cities in California all have different regulations for the cannabis clubs designating how far they must be from schools and churches and how many can open in the same neighborhood, but many clubs that have been around for more than 5 years get *grandfathered* in for changing legislation.<sup>69</sup> The huge access has created a large demand within these cities for marijuana and therefore each club must supply and efficient amount.

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<sup>67</sup> San Francisco Cannabis Clubs. Web. 14 Dec. 2009.  
<<http://www.sanfranciscocannabisclubs.com/>>.

<sup>68</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>69</sup> “Local Medical Marijuana Guidelines.” (2009).

The cannabis clubs in the Bay Area are mostly supplied from marijuana cultivation that takes place in the North Coast region from the “Green triangle,” which is composed of Mendocino, Humboldt, and Trinity Counties.<sup>70</sup> San Francisco and Oakland cannabis clubs each sell pounds of marijuana every day and must find suppliers for many different strains and products. The massive growth in demand along with the fully integrated cannabis club network has created a consistent market for marijuana that is causing the suppliers/growers to increase their efforts. The healthy tax revenues generated from these marijuana dispensaries makes a stronger argument for legalization, but one thing is certain: these cannabis clubs are not going anywhere in the near future and legalization is closer than it has ever been.

### **Los Angeles Marijuana Market**

Los Angeles is a much larger and sprawled out urban area compared to the Bay Area and has the most marijuana dispensaries of anywhere in the state. With approximately 186 medical marijuana dispensary licenses issued, and 800 applications for exemption, there are likely over 1,000 dispensaries in the city of Los Angeles and about 1 cannabis club for every 6,000 people.<sup>71</sup> This is due to poorly written policies and loopholes in the legislature that have allowed for over 800 clubs and dispensaries to open up in the past 5 years. Los Angeles has the largest concentration of medical marijuana users and therefore one of the largest markets for marijuana in the state. Many of these clubs do not operate under the correct laws, and city officials are constantly working to

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<sup>70</sup> Regan, Trish. "Pot Growers Thrive in Northern California." CSNBC (2009): 1-3. Print.

<sup>71</sup> "Wheres the weed? -- latimes.com." Los Angeles Times - California, L.A., Entertainment and World news - latimes.com. Web. 14 Dec. 2009.  
<<http://www.latimes.com/news/local/la-me-dispensaries-i,0,5658093.htmlstory>>.

correct the policy and law enforcement with heavy opposition from the local marijuana community.<sup>72</sup>

The government officials see numerous problems with the current regulations for medical marijuana in Los Angeles and some noted that most dispensaries in Los Angeles are operating or dealing marijuana illegally.<sup>73</sup> This claim has not been proven and came against heavy scrutiny from the marijuana policy activists. Regardless, there is a massive market for marijuana in Los Angeles that is operating every day whether it is legal or not. The demand is huge and many people believe that more marijuana is used in Los Angeles than the Bay Area. This could be true and creates a whole separate market for the growers in the “green triangle” to supply.

Marijuana cultivation regulations are stricter in Los Angeles than in Northern California, but there is still some indoors grow houses.<sup>74</sup> Still, the majority of the marijuana supplies to Los Angeles come from the North Coast Region. Los Angeles is a main component in the marijuana boom, and with the poor regulations in place it has become a marijuana dispensary haven where pretty much anyone with the right connections could start a dispensary with the risk that regulations will be fixed and they could be raided. However, it does not seem likely that the government officials will be able to stunt the growth of the marijuana industry. If they try to tighten the policies while keeping marijuana a prohibited substance, then more illegal operations will open up and the local law enforcement has other priorities than investigating every club in the region.

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<sup>72</sup> Hoeffel, John. "Los Angeles County D.A. prepares to crack down on pot outlets." Los Angeles Times 9 Oct. 2009, Local sec. Print.

<sup>73</sup> Hoeffel, John. LA Times. 9 Oct. 2009.

<sup>74</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

The policymaking officials need to review the policy and look at the marijuana industry within the entire state of California to see that they are a consumer market fueled by the marijuana cultivation from the northern end of the state. Policies should be comprehensive and statewide, it is inefficient to try and regulate each region separately without considering the entire scope of the industry and where it is headed.

### **Medical Marijuana**

Marijuana has been used for medical purposes since its discovery about 4,000 years ago in China, India and the Middle East.<sup>75</sup> However, it was not until the around the mid 19<sup>th</sup> century that medicinal marijuana was used in the west. Marijuana contains a number of cannabinoids that produce feelings of euphoria when the drug is consumed. The most active of these cannabinoids is Tetrahydrocannabinol (THC), which is a sticky crystal-like substance that is likely produced for the plant's self-defense against herbivores.<sup>76</sup> THC is the main component for the medicinal use of marijuana and is known to relieve numerous diseases from cancer to glaucoma as well as psychological issues such as depression and anxiety.<sup>77</sup> Originally marijuana was commonly used to cure nausea and menstruation pains, but marijuana was phased out as other drugs like aspirin became popular.<sup>78</sup>

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<sup>75</sup> "History of Cannabis". BBC News.  
<http://news.bbc.co.uk/1/hi/programmes/panorama/1632726.stm>. Retrieved August 10, 2009.

<sup>76</sup> "Workshop on the Medical Utility of Marijuana". National Institutes of Health. February 1997. <http://www.nih.gov/news/medmarijuana/MedicalMarijuana.htm>. Retrieved April 26, 2009.

<sup>77</sup> "Workshop on the Medical Utility of Marijuana". National Institutes of Health. February 1997.

<sup>78</sup> "History of Cannabis". BBC News.

Today, studies have revealed that medicinal marijuana can be used for a large number of ailments, but is still most commonly used for nausea, glaucoma, psychological relief for the terminally ill, menstruation pains and eating disorders.<sup>79</sup> While many of these ailments are not cured by marijuana, patients do experience symptom relief. This is especially true for cancer patients that use marijuana for both psychological purposes and to relieve nausea caused by chemotherapy. Marijuana has been used by doctors and hospitals for years, but has always remained controversial. This is most likely due to the fact that marijuana is most commonly consumed through smoking the plant, which releases many harmful toxins to the lungs. However, in 1964 THC was isolated and used in a prescription drug available to the U.S. and Canada called Marinol.<sup>80</sup> Marinol is prescribed for nausea and pain relief, however many marijuana users claim that Marinol does not give the user the full effects of smoking marijuana. Nonetheless, Marinol was a breakthrough in the medical industry as the first pharmaceutical drug to use THC for medicinal purposes. The US Food and Drug Administration released a statement that "marijuana has a high potential for abuse, has no currently accepted medical use in treatment in the United States, and has a lack of accepted safety for use under medical supervision".<sup>81</sup> However, there are countless doctors and patients that claim marijuana has very beneficial medical effects and does in fact treat their symptoms.<sup>82</sup>

In the United States medical marijuana is available in several states, but it is important to differentiate between the federal and state level. At the federal level

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<sup>79</sup> "Workshop on the Medical Utility of Marijuana". National Institutes of Health. February 1997.

<sup>80</sup> "'Medical' Marijuana - The Facts". Drug Enforcement Administration.  
<http://www.usdoj.gov/dea/ongoing/marinol.html>.

<sup>81</sup> Food and Drug Administration (April 20, 2006).

<sup>82</sup> Lopez, Steve. (2009).

marijuana is illegal (discussed more below), however, the use of medical marijuana has been legalized in 13 states where marijuana can be used legally with a prescription from a medical doctor.<sup>83</sup> These doctors must meet with their patients and determine whether or not marijuana is a legitimate solution to their ailment and then sign a prescription to allow for the consumption of medical marijuana. The patient can then take the prescription to a medical marijuana dispensary, co-operative, wellness clinic, or taxi delivery service where they can purchase medical marijuana.<sup>84</sup> In California there is an estimated 2,100 dispensaries, co-operatives, wellness clinics, and delivery services that comprise the growing medical “cannabusiness” in California which brought in around \$100 million in sales tax revenues for the state of California in 2008.<sup>85</sup> California has arguably the largest medical marijuana industry in the country and began in 1996 when proposition 215, the Compassionate Use Act, passed allowing resident of California to use medical marijuana with a doctor’s prescription under the state regulations.<sup>86</sup> This created a whole new marijuana industry within California of approximately 400,000 medical marijuana patients separating the illegal marijuana industry from the medical marijuana industry.<sup>87</sup>

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<sup>83</sup> "'Medical' Marijuana - The Facts". Drug Enforcement Administration.

<sup>84</sup> Harvey, Mike. "California Dreaming of Full Marijuana Legalization." The Times (2008). Print.

<sup>85</sup> Harvey, Mike. 2008.

<sup>86</sup> "Medical Marijuana Program". California Department of Public Health.  
<http://www.cdph.ca.gov/programs/mmp/Pages/Medical%20Marijuana%20Program.aspx>. Retrieved 2009-10-08.

<sup>87</sup> Harvey, Mike. (2008).



## ***Chapter 6: Marijuana Regulation***

### ***Production/Cultivation***

Marijuana in the U.S. is regulated on many different levels depending on region. The federal government regulates marijuana through the Controlled Substances Act (CSA), which was written into law in 1970.<sup>88</sup> It is federally illegal to possess, cultivate, or distribute large quantities of marijuana. Federal law does not differentiate between medical and recreational use of marijuana. Under federal law marijuana is treated like any other controlled substance, such as cocaine and heroin. Each substance is placed under a schedule based upon the relative potential for abuse and medicinal values; marijuana is a schedule 1 drug.<sup>89</sup> Doctors cannot prescribe marijuana for medical use under federal law, but they can recommend it through the First Amendment (freedom of speech).<sup>90</sup> The Drug Enforcement Agency (DEA) is in charge of enforcing federal drug laws and has recently taken a substantial interest in medical marijuana patients and caregivers.

The DEA is able to choose how it will allocate its funds and resources to enforce federal law and over the past decade they have been seizing marijuana and making arrests on medical marijuana patients and caregivers. The fact that medical marijuana is not recognized by federal law allows the DEA to make arrests for its use and in some cases have used exaggerated numbers to give steep sentences that would not happen under state government, such as up to 10 years in prison.<sup>91</sup> There have been many cases where

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<sup>88</sup> "ASA." ASA. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.org/article.php?id=2638>>.

<sup>89</sup> "ASA." ASA. Web. 14 Dec. 2009.

<sup>90</sup> "ASA." ASA. Web. 14 Dec. 2009.

<sup>91</sup> "ASA." ASA. Web. 14 Dec. 2009.

medical marijuana users are punished under federal law and not allowed to use medical marijuana as a defense. This has created a conflict between federal and state law because they have completely opposite views on medical marijuana. However, under the federalist system of the government, the states, not the federal government, are entrusted to exercise general police power for the benefit of their citizens.<sup>92</sup> It is due to this constitutional division, the state governments are allowed to decriminalize and allow access for medical marijuana patients. So, under California's laws, medical marijuana use is legal, notwithstanding contrary federal law. Medical marijuana is legal according to state officials and illegal according to federal officials.

Each region must abide by the laws and regulations that are set for each county and city. The state officials are not allowed to charge citizens with federal law, so the argument for medical marijuana use is entirely acceptable in court. The California Department of Public Health created the Medical Marijuana Program (MMP), which was established to provide medical marijuana identification cards to qualified individuals so they can possess, grow, and transport medical marijuana within California.<sup>93</sup> However, after Proposition 215 (the Compassionate Use Act) passed in 1996, medical marijuana became legal after obtaining a recommendation from a physician for use. It is proposition 215 that has allowed for the massive expansion of the marijuana industry because there are many doctors in California that support the use of medical marijuana and give prescriptions. In 2003, Senate Bill 420 was passed to set minimum statewide guideline for marijuana cultivation and consumption. SB420 states that the statewide

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<sup>92</sup> "ASA." ASA. Web. 14 Dec. 2009.

<<http://www.safeaccessnow.org/article.php?id=2638>>.

<sup>93</sup> "Medical Marijuana Program." California Department of Public Health. Web. 14 Dec. 2009.

minimum allowed is 6 mature plants or 12 immature plants and 8 ounces of dried bud.<sup>94</sup> Now, with an estimated 400,000 patients, California medical marijuana is thriving.<sup>95</sup>

Oakland's indoor ordinance allows for up to 72 plants with up to 32 square feet of canopy garden space and 3 pounds of dried bud, and the outdoor ordinance allows for up to 20 plants at any stage of development and 3 pounds of dried bud. Caregiver amounts are calculated based on the number of patients served.<sup>96</sup> These laws are much looser than the county regulations and reflect the progressive and ambitious marijuana community in Oakland. With some of the largest (# of patients) dispensaries and even a school to teach patients about medical marijuana (Oaksterdam), the city of Oakland is ahead of the state in forming a marijuana policy to fit the needs of their medical marijuana community.<sup>97</sup> As noted above, the production and cultivation of marijuana in California is largely regulated based on region and has thus created an area where the industry flourished, the green triangle.

Each county within California has its own individual laws to regulate the medical use of marijuana. As mentioned above, there is a minimum requirement statewide to allow the medical use of up to 6 plants or 12 immature plants and 8 ounces of dried bud. However, in order to fully understand how marijuana is regulated it is necessary to observe the separate county laws. Humboldt County residents' original DA policy allowed up to 99 plants with up to 100 square feet of canopy and up to 3 pounds of bud;

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<sup>94</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>95</sup> Harvey, Mike. "California Dreaming of Full Marijuana Legalization." The Times (2008). Print.

<sup>96</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>97</sup> Oaksterdam University - Quality Training for the Cannabis Industry. Web. 14 Dec. 2009. <<http://www.oaksterdamuniversity.com/>>.

only 1500 watts could be used to grow marijuana indoors. But, this was recently changed so that a patient can still have up to 3 pounds of dried bud and up to 100 square feet of garden canopy, but there is no set limit for the amount of plants or wattage.<sup>98</sup> Instead, the caregiver is given specific amounts based on the amount of patients they serve or grow for. This is a very loose policy compared to the minimal 6 plants and is a large cause for the massive amounts of cultivation stemming from Humboldt County. The laws allow for patients to work their way through loopholes to maximize the amount of plants they are able to have.

In August of 2004, the Mendocino County DA announced that there will be no longer be a limit to the amount of plants a caregiver may have, only square footage. However, after a massive surge in marijuana farming, the county voters passed Measure B to revert to the statewide minimum guidelines of 6 mature plants or 12 immature plants and 8 ounces of bud.<sup>99</sup> This law was suspended for several months and still remains controversial because a few marijuana farmers have cases in the State Supreme Court to change the law. However, these new limitations are loosely enforced and seem to have a minor impact on the marijuana industry in Mendocino. The distribution of marijuana to consumers in the medical market is almost entirely through the use of dispensaries.

### ***Distribution***

San Francisco City and County laws are identical. For medical marijuana users, each patient can have up to 24 plants plus 8 ounces of bud, with only 25 square feet of

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<sup>98</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>99</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009. <<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

canopy space used to cultivate marijuana; each collective can have up to 99 plants.<sup>100</sup> The city has fairly relaxed laws for non-medical user too, if a marijuana user is not a patient and is caught with less than an ounce than he/she receives the equivalent of a \$100 parking ticket.<sup>101</sup> These policies seem to match the progressive view of San Francisco that condones the use of medical marijuana and has a prominent marijuana community. San Francisco has a very strong marijuana community and is the headquarters for many progressive marijuana organizations such as the Marijuana Policy Project (MPP) who are at the front of the battle for marijuana legalization. Medical marijuana patients within Arcata are allowed to have up to 10 mature plants and 2 pounds of dried bud.<sup>102</sup> This is the main city in Humboldt County and has a very pot-friendly community where the personal consumption of marijuana is very common.

Los Angeles County also enforces the minimum statewide guidelines for medical marijuana users of 6 mature plants or 12 immature plants and 8 ounces of bud.<sup>103</sup> However, their policies for marijuana dispensaries have many loopholes and have lead to a massive medical marijuana market within the city of Los Angeles and the county. Los Angeles has the most marijuana dispensaries in the state and holds a large share of the marijuana industry.

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<sup>100</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>101</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>102</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

<sup>103</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

### ***Consumption***

Marijuana consumption laws are a grey area in policy where it is often left up to law enforcement officials to decide whom to bust. Any medically prescribed patient has the right to consume marijuana in the privacy of a home, but cannot consume marijuana in public settings such as parks, schools and the street. However, in some places such as West Hollywood and Oakland where marijuana consumption is common, police officers have marijuana as the lowest priority and can issue a citation similar to a parking ticket where the user pays a minor fine.<sup>104</sup> This displays a very troubling issue with current marijuana regulation in that enforcement decisions are often left to law enforcement officer's discretion, which has lead to many unjust outcomes. These criminal justice issues will be discussed later in this paper. For the majority of the state, marijuana consumption is illegal without a prescription, but it is only enforced when consumption is obvious, very few consumers face harsh penalties compared to marijuana growers.

### **Fragmented Policy Landscape**

Across each of these four regions they all face a fragmented policy landscape, low budgets, and very little knowledge and understanding of the marijuana industry in California. Each region faces differing levels of these problems, but in order to correct the market failures that are negatively affecting California's landscape and voting population a comprehensive regulatory structure must be enacted. This sort of policy

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<sup>104</sup> "Local Medical Marijuana Guidelines." Safe Access Now: Patients Presumed Innocent. Web. 14 Dec. 2009.  
<<http://www.safeaccessnow.net/countyguidelines.htm#420>>.

initiative will be the first of its kind and magnitude. There are similarities in the Netherlands with their relaxed policies regarding marijuana, but legalizing marijuana in California will be far different due to the social climate regarding marijuana, the state's large economy, and the reaction of the other states in the U.S. In order to create a proper regulatory structure, policymakers must gear policies to correct for the following:

- Cultivation and Production (Supply)
- Manufacture and Distribution
- Taxation
- Consumption

In this report I will give policy recommendations and approaches to create a new climate for a legal marijuana industry in California that will effectively regulate and tax the industry to benefit the taxpayers.

There must be defined guidelines and structure to the regulations before any legalization is implemented so that the regulatory structure is developed as intended by the voters. California's voters and residents have separate views on how they would like to see marijuana regulated in their region and these views must be taken into consideration. Each county should have their own set of laws and policies that reflects their needs and benefits the state. There will be a fragmented policy landscape throughout California so that the legislature benefits the entire state as much as possible. This is why stakeholders in the marijuana industry will play an integral role to ensure the policies fit their needs as well. The marijuana producers that are already cultivating marijuana legally and getting taxed must be accommodated into the new laws so that the illegal producers are eventually phased out of the market. Policy makers must always

keep in mind that these stakeholders will provide the foundation of the marijuana industry and their knowledge, experience and accommodation is integral to a successful regulatory structure.

### ***Fiscal Deficit***

The United States has been going through a recession since December 2007 and California's economy has suffered. California has a record high budget deficit of -\$19.9 billion and has cut public funding to maintain state parks, forests, scholarships such as the "Cal-Grant," inmate rehabilitation programs, and the California Work Opportunity and Responsibility to Kids (CalWORKS).<sup>105</sup> With such a need for state revenue, a tax on the massive marijuana industry arguably could not be called for at a better time. Matt Bunch, legislative aide to California State Assembly member Tom Ammiano (D, San Francisco) mentioned the affect of the budget deficit,

This [statewide budget cuts] has made everyone receptive to creative thinking. People now see the need for a new marijuana tax. It is not necessarily true that they would not vote for legalization if not in budget deficit. People are tired of schools and hospitals budgets getting cut. There is seemingly nothing we could do at legislature. A marijuana tax would ease problems, but not solve them. At least \$100 millions of dollars could be thrown into the California budget.<sup>106</sup>

This budget crisis has poised the Californian voting population to be more open to sources of revenue, in this case marijuana. Each year a form of marijuana reform policy

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<sup>105</sup> "Governor's Budget Summary 2010-2011: Introduction." Governor's Proposed Budget 2010-2011 (2010): 1-9. California Budget 2010-2011. California Department of Finance. Print. 13 Apr. 2010. Pg. 7.

<sup>106</sup> Bunch, Matthew. "Assemblyman Tom Ammiano's Legislative Aid." Telephone interview. 10 Feb. 2010.



has been put on the ballot and they are getting increasingly positive results.<sup>107</sup> As cities like Los Angeles are forced to layoff thousands of teachers, nurses and firemen, people are more inclined to create a legal and taxable market for marijuana. Further, the increased costs to law enforcement caused by the illicit marijuana market will be greatly reduced once marijuana becomes a legal substance with an efficient regulatory structure. California will greatly benefit fiscally through legalizing marijuana and effectively taxing the market.

### ***Proposed Legislation***

San Francisco Assemblyman Tom Ammiano proposed Assembly Bill 390 to legalize the cultivation, personal use, and sale of marijuana within the state of California on February 9, 2009.<sup>108</sup> He estimated the marijuana industry to be worth \$14 billion annually and by legalizing, regulating, and taxing the industry AB390 could generate up to \$1.5 billion in tax revenues each year.<sup>109</sup> With the current multi-billion dollar budget deficit in the state of California, the battle for marijuana legalization is moving forward. Even Governor Arnold Schwarzenegger agrees to the benefits of legalizing and taxing marijuana to solve the budget crisis. However, even Assemblyman Ammiano recognizes that there is a very slim chance for marijuana to be legalized in the next year, but it is necessary to push forward with wishful policies to plant the seed in the voter's minds that

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<sup>107</sup> Bunch, Matthew. "Assemblyman Tom Ammiano's Legislative Aid." Telephone interview. 10 Feb. 2010.

<sup>108</sup> Ammiano, Tom. Assembly Bill No. 390. California Legislature 2009-10 regular session. 23 Feb 2009.

<sup>109</sup> JACKI LYDEN. "Bill To Legalize Pot Gains Traction In California." *Weekend All Things Considered (NPR)* : n. pg. EBSCOhost. Web. 24 Sep 2009.

legalization is a legitimate argument.<sup>110</sup> With the current medical institutions in place, the transformation into making marijuana a legal substance will be fairly minor.

In 2009, Assemblyman Ammiano reintroduced “The Regulate, Control and Tax Cannabis Act of 2010,” which will make the cultivation, possession, and use of marijuana legal under California State Law. This is an updated version of Assembly Bill 390 and is now called Assembly Bill 2254<sup>111</sup>. In January 2010, the Assembly Public Safety Committee approved the bill on a vote of 4 to 3 marking the first time in U.S. history that a bill legalizing marijuana passed a legislative committee<sup>112</sup>. The bill will be on the November 2010 ballot in California and Ammiano’s staff is excited to see progress in legislature. They are using *The Regulate, Control and Tax Cannabis Act of 2010* to acclimate the voting population of California and make the voter’s familiar with having a bill to legalize marijuana on the bill and gaining traction. Matt Bunch, Ammiano’s legislative aid who is working on *The Regulate, Control and Tax Cannabis Act of 2010*, explained the political strategy before the legislative committee passed the bill when he said,

AB390 is a bill that failed. The reintroduction will be given next week, the Marijuana Control, Regulation and Education Act of 2010. We fully believe that

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<sup>110</sup> JACKI LYDEN. “Bill To Legalize Pot Gains Traction In California.” *Weekend All Things Considered (NPR)* : n. pg. EBSCOhost. Web. 24 Sep 2009.

<sup>111</sup> Belville, Russ (2009-02-23). "Support California Assembly Bill 390 (the Marijuana Control, Regulation, and Education Act)". National Organization for the Reform of Marijuana Laws. <http://stash.norml.org/support-california-assembly-bill-390-the-marijuana-control-regulation-and-education-act>. Retrieved 2009-03-08.

<sup>112</sup> Belville, Russ (2009-02-23). "Support California Assembly Bill 390 (the Marijuana Control, Regulation, and Education Act)". National Organization for the Reform of Marijuana Laws. <http://stash.norml.org/support-california-assembly-bill-390-the-marijuana-control-regulation-and-education-act>. Retrieved 2009-03-08.

this bill will take some time. Analogous to the helmet bill, which took years to pass. Every year this bill gets reintroduced and gets further.<sup>113</sup>

Ammiano's staff is well aware that it will be an ongoing process of give and take between the voters and the policymakers until this policy is framed to fit the needs of California's residents. By getting this bill on the ballot repeatedly the voters of California will begin to get used to seeing the bill and gradually take it more seriously.

In order to effectively regulate such an industry, very specific criteria and requirements will need to be heavily enforced and monitored in order to address the current problems within the marijuana industry. However, it is difficult to regulate an industry that is mostly illegal. As Judge Jim Grey said,

As soon as you prohibit a substance, you give up any say in regulation. Today, all of the issues of age restrictions, quality, quantity, time and place are all left up to illegal dealers. Medical marijuana is still not at good prices and difficult to obtain; there is some say in who will receive it and it is at least taxed. Illegal marijuana is completely tax-free.<sup>114</sup>

How can we effectively regulate a market that is not in our control? Judge Grey makes a very strong point that not only are there no incentives for the illegal growing productions to operate in a sustainable way, but there are also incentives in place that encourage to grow marijuana illegally tax-free. California needs to take control of the marijuana industry in order to effectively slow and eventually stop such a massive underground

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<sup>113</sup> Bunch, Matthew. "Assemblyman Tom Ammiano's Legislative Aid." Telephone interview. 10 Feb. 2010.

<sup>114</sup> Grey, Jim. "Interview with Judge Jim Grey." Telephone interview. 5 Jan. 2009.

market. This can only be done through legalizing the cultivation, possession and use of marijuana in California. By creating a legal market for marijuana that incorporates the medical market and drives out the illegal market the state will be able to finally address the growing problems within California.

## **Chapter 7: Developing a comprehensive policy framework for California.**

### **Considerations for Policy Recommendations**

- As a prohibited substance, the marijuana industry is very difficult to control or regulate, therefore marijuana must be effectively legalized in order to move forward with a new regulatory structure.
- California is an exporting state for marijuana; without major policy changes at the federal level or in other states, California will have a black market for marijuana operating alongside a licit market due to excess supply.<sup>115</sup>
- The black market for marijuana in California will continue to compete with the licit market for both producers and consumers.
- Regulations must be phased in to allow an adjustment period for suppliers in the licit market.
- Production enforcement must be very strict so that there is maximum transparency in the licit market and illicit market becomes increasingly marginalized.

Legalizing marijuana in California would make it the first state in U.S. history to effectively legalize the cultivation, possession and use of marijuana since its prohibition. There is no policy framework or methods from similar policies to consider when shaping the new policy in California. Of course there are similarities with the prohibition of alcohol in the early 20<sup>th</sup> century, and one could also compare to the Netherlands where marijuana has been legal for years. However, the marijuana industry in California has

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<sup>115</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print. Pg. 15.

grown to a level that any major policy shift regarding marijuana could have drastic consequences for the state and the rest of the U.S. California has a unique climate both socially and environmentally that have made the legalization of marijuana a possibility in the foreseeable future. In order to create a successful set of policies and regulations to legalize marijuana in California, the policymakers and officials must shape the policy to meet the needs of the people living in California. Legalizing marijuana in California is no small task and will take careful, focused consideration and constant review before this policy will truly benefit the State of California and its residents. In this section I will lay out policy approaches and recommendations for how marijuana should be regulated in California after legalization.

### **Supplier Dynamics**

The regulatory structure of marijuana after its legalized will most likely be unique to each county with a few exceptions. Humboldt and Mendocino counties are two of the largest sources of the marijuana production in California. Therefore, these counties taxes and costs must be kept low so that the producers are able to keep high profits and produce within the regulated market. It is very important to create a lucrative regulated market to gradually eliminate the massive black market for marijuana and maintain high tax revenues for the state. All counties with high levels of production must have taxes phased in so that the licit market maintains relatively low barriers to entry compared to the black market. Without keeping the suppliers profits relatively stable and lucrative compared to the black market, legalization will have very little effect on the black market.

### **Marijuana Cultivation Permits (MCP's)**

In order for the State of California to effectively limit and control the marijuana supply I recommend implementing a tradable permit system where each permit will determine the amount of land that can be used for cultivating marijuana. These permits will be called “Marijuana Cultivation Permits” or MCP’s. Each permit will allow a quarter-acre of marijuana to be grown. These permits will be tradable and carefully distributed. The initial distribution of permits will be a gradual system where each grower will be screened for criminal history and held to very high environmental and security standards. It is very important that the cultivation of marijuana becomes a secure and controlled industry where theft and pollution are rare. Further, the state officials must be very careful to only distribute the permits to legitimate operations where the growers have absolutely no history of any criminal activity remotely related to drug trafficking or marijuana. Possibly the most critical aspect of this permit system is making sure that these permits do not end up in the wrong hands and misuse of the permits would lead to immediate loss of the permit and possible further litigation, depending on each situation. Further, each MCP will come with strict regulations as to how the marijuana can be grown and how safe the crop is from theft by underage users or cultivators in the black market.

As with any *cap and trade* permit policy, there must be careful planning to ensure that the permits do not fall into the hands of very few individuals. The MCP’s will come with a clause that does not allow more than two permits per grower unless they have authorized consent to grow for a large number of patients. However, to avoid people cutting corners with the policy, a board of review should be established to review each request for a MCP and approve all transactions among the growers. The MCP’s will be

effective for a period of 3 years and then must be reviewed and approved for renewal. This will help monitor the actions among the growers and give the law officials much more control and understanding of how much marijuana is being produced, who is producing it, and where it is being produced.

With the green economy elevating and the lack of sustainable marijuana production, there should be a set of requirements to move the marijuana industry toward sustainable and organic products. For instance, in setting up new growing requirements there should be criteria for which products are environmentally friendly and which products must be prohibited. Further, by making the standards for environmentally safe cultivation stricter in the black market we can create incentives for the black market to use sustainable products as well to match consumer demand for organic marijuana.

Becky LaDolce explains the theory behind these regulations in her paper when she wrote,

It may not be beyond reason for the state to at some (perhaps early) point mandate that the entire marijuana industry follow standards for organic cultivation and production. After all, the “marijuana lobby,” unlike the tobacco or agribusiness lobbies, is not likely to wield substantial political clout at the outset of a regulatory regime. Moreover, organic certification procedures could improve the health, safety, and environmental impact of black market cultivation practices, since illicit operations might be drawn to more closely resemble the licit market, both to avoid detection and to attract and keep clientele who may develop increasingly sophisticated consumer preferences. Regardless of general industry standards, a sizable market for organic marijuana is likely to develop and thereby provide



impetus for the design of organic certification standards.<sup>116</sup>

It is important to note the effect that LaDolce predicts on the black market when the standards and regulations are stricter in the licit market. Currently, the black market and legal markets create very similar products through similar methods, so it is logical to think that a change to improve the standards in the legal market will lead to the black market adjusting as well to maintain their market share.

### **Indoor Cultivation**

Indoor cultivation is a much different issue than outdoor cultivation. While careful planning is necessary for both forms of cultivation, MCPs will be adapted to account for indoor operations as well. One must understand the key differences between the two methods. Indoor cultivation does not pollute the natural environment nearly as much, but it requires a substantial amount of energy to run the grow lights, which can have negative effects on the regional grid. The energy used for indoor cultivation sometimes requires additional generators, which mostly run on diesel and pollute the local air. Once marijuana is legalized in California, policy makers will need to establish a set of laws restricting the venues for indoor marijuana cultivation. The policy should not allow indoor cultivation in any residential neighborhood to avoid the increase in crime associated with them, such as theft. Indoor growing operations must be restricted to areas zoned as industrial or commercial, and at least a quarter-mile from any schools, daycares, or preschools in order to keep a distance from areas with high populations of youth. Once

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<sup>116</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print. Pg. 43.

these guidelines are carefully put into place, each grower will still have to apply for an MCP and get the venue he or she plans to use approved for indoor cultivation. The approval will be based on location, the grower's plans (how much and how long), and the overall safety of the operation.

There will be some confusion with how to translate a quarter-acre of outdoor cultivation per MCP to an indoor operation. Indoor operations tend to have a variety of mature and recently sprouting plants separated by room, so a limit must be set based on amount (by weight) within each facility. According to a report by Becky LoDolce, "Based on the high and low yield figures, a half-acre can yield 3,267 – 8,276 ounces per year."<sup>117</sup> However, indoor cultivation practices do not rely on any seasons and can produce a new crop every 6-8 weeks, typically around 4 cycles a year. I recommend regulating indoor facilities based on the amount of allowed kilowatt requirements for each house. By setting an effective limit on each house we can reduce the dangers of using such high levels of energy and create incentives to move towards energy-saving and renewable practices for indoor cultivation. Further research must be done in order to determine the most effective level of kW to allow each indoor MCP and will need some adjustment as the industry evolves. Indoor growing operations are increasing in popularity for the ability to control the plant and its potency, therefore manufacturing and distribution laws must also be written into policy and will be discussed in the next few sections.

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<sup>117</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print. Pg 39.

Home cultivation for personal use one marijuana is legalized should be allowed for consumers without obtaining an MCP. Currently, medical marijuana regulations in most states and counties set a limit of 6–12 plants at a time, so the state should allow no more than 12 plants in each home for personal use without an MCP. Enforcement on home cultivation should be based on reasonable suspicion that a household is growing too many plants without a MCP. Home cultivation regulations will take some trial and error before an efficient limit is set and enforcement is effective. Proper regulation will come after years of constant evaluation and adjustment of the limits to find a limit that meets the consumers' needs and can be effectively controlled.

### **Consumer Dynamics**

California's unique landscape and relaxed attitude toward marijuana has created a very liberal climate surrounding marijuana in California, but with legalization must come comprehensive policies to ensure that the distribution and consumption is safe, secure and reliable. Each jurisdiction in California has its own view towards marijuana and marijuana regulation, so the retail outlets for marijuana will be different among regions and subject to change. Local governments should have the authority to decide where and how marijuana will be distributed so that each retail model is appropriate for the region. However, the state will need to establish a set of guidelines that each distributor must follow regardless of which jurisdiction he or she is in. In urban areas where medical marijuana is already prominent, local municipal governments will have authority to regulate the dispensaries as they see fit. Increasing the knowledge and understanding of the industry through creating a legal market will help cities like Los Angeles finally gain some control over the cannabis industry in their area.

Marijuana has already been legalized for medical use in California and consumption in Holland, so there are a few models of distribution that are possible. The effective models are:

- Marijuana exclusive retail store (similar to medicinal marijuana clubs in CA)
- Convenience Store (similar to cigarettes and alcohol)
- Dutch-style café (Amsterdam model)

The easiest transition in California will be the exclusive retail model because this already exists in California and could easily be adapted. Rather than asking for a doctor's referral, consumers will simply need to show identification to prove they are old enough (discussed in more detail later). A convenience store will also be an easy model, but might need to be phased in so that the transition is not too abrupt. However, eventually it makes sense to incorporate marijuana into the retail outlet models for alcohol and cigarettes because these items will be complementary goods. Nonetheless, liquor stores are too abundant to regulate effectively and the marijuana market will need to develop for a few years after legalization before marijuana can be safely and effectively distributed through liquor or convenience stores. The third model, a Dutch-style café, is a very safe, effective and pleasant model of marijuana distribution and consumption, and could be used eventually as a model for distribution and consumption of marijuana. Similar to a bar or pub atmosphere, these "cafés" will be a destination for tourism and socializing once the California residents have acclimated to a legal marijuana industry. But, the safest model for the first 5-10 years is the marijuana exclusive retail store because it can be easily regulated and monitored during the first years of the new regulatory structure. Local jurisdictions will have the authority to determine what model or models is

appropriate for their region. In some cases there will most likely be “dry counties” where marijuana is not sold at all because the regional voting population may not be in favor of having marijuana in their jurisdiction.

### **Incorporating the Medical Marijuana Market**

California’s medicinal marijuana market has spread throughout the state and provides a good model for the transition to legalization. Marijuana reform will drastically change the medicinal marijuana market, but these retail and manufacturing models will be easily incorporated into the licit market. Further, by legalizing marijuana, the patients with real chronic illnesses will be able to find marijuana products at pharmacies and hospitals. Legalizing marijuana will separate the medical users who are treating a serious illness or ailment from the medical users who consume marijuana as a sleep-aid. Policy makers will need to create a new 2-tier system to separate the medicinal users into 2 categories: Type 1: cancer patients, the terminally ill, and other serious diseases, Type 2: anxiety, sleep aid, other less serious conditions. The Type 1 patients will have access to tax free cultivation in their own home, or can have a “caregiver” that cultivates the marijuana for them, also tax free. Each Type 1 patient will be allowed 6 – 12 plants or 1 pound of dried bud at a time. Further, there will be sections in hospitals and pharmacies where marijuana capsules and other concentrates can be prescribed along with the dried plant for these patients, eventually health insurance should help to cover these costs. The Type 2 medicinal users will not have any of the same benefits as the Type 1 and will be able to purchase marijuana over-the-counter for their ailments.

Medical marijuana dispensaries provide a working model for the marijuana exclusive retail outlet in California after legalization. However, many medicinal

dispensaries have slipped through loopholes and opened up illegally, this is especially true in Los Angeles. So, I recommend that each dispensary must reapply for permits to dispense marijuana from a private location. These dispensaries will also be required to be no less than a quarter-mile from daycares and schools. Once the legitimate operations are sorted out, they can effectively convert into a marijuana retail outlet. Rather than checking for a doctor's note, they will now check IDs to make sure the customer is the correct age. This transition should be seamless for the dispensaries that already operate under the law legitimately and with constant monitoring and enforcement of the regulations, these outlets will provide a large source of tax revenues for the state while gradually gaining market share from the black market.

Consumption related regulations would involve a minimum age limit similar to alcohol and cigarettes, as well as quantity limits per customer to avoid resale of the products. California should also study the Dutch and medical models to determine the purchase quantity limit. The main objectives of a quantity-purchasing limit are to discourage any large-scale resale of the products and limit the heaviest users. In the Netherlands, each customer is limited to 5 grams of marijuana per coffee shop each day.<sup>118</sup> Limits in medicinal clubs are a grey area that usually differs between clubs but never exceeds 4 ounces. A good starting point would be to limit consumers to purchase no more than a quarter-pound (4 ounces) ounce at a time, but this could be subject to change and must be reviewed constantly in each jurisdiction until an effective limit is set.

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<sup>118</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print. Pg. 48.

The age limit is slightly less complicated because there are only two realistic age limits. There are valid arguments for both 18 and 21 year as the age requirement for marijuana consumption, but I believe that the California voters would prefer the limit to be set at 21, similar to alcohol. In counties that do approve the sale of marijuana in their jurisdiction, only persons over the age of 21 will be allowed to purchase, consume, sell or cultivate marijuana. Many parents in California argue that legalizing marijuana will create easier access and heavier use among children and their peers. This seems to be an uninformed opinion because recent studies have found that California students in 7<sup>th</sup>, 9<sup>th</sup> and 11<sup>th</sup> grade find marijuana easier to obtain and more prevalent on their campuses than alcohol or cigarettes.<sup>119</sup> These results suggest that marijuana prohibition is ineffective in regulating access and use if it is more readily available to youth than cigarettes and alcohol. This reflects a reoccurring theme in the debate for marijuana legalization: it is nearly impossible to prohibit an industry and attempt to regulate it effectively. Through legalizing marijuana and creating a proper regulatory structure, the state and law enforcement officials will have far more control over the distribution and use of marijuana.

### **Excise Taxation of Marijuana**

One of the most critical reasons to legalize and regulate the marijuana industry is to generate substantial tax revenues for the state. Capturing part of this \$14 billion dollar industry will significantly help the state's massive budget deficit. An excise tax, similar to cigarettes and alcohol will probably be the most effective way to tax the marijuana industry. The objectives of the excise tax should be to inhibit the black market, create

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<sup>119</sup> Austin, Gregory, and Rodney Skager. *12th Biennial California Student Survey Drug, Alcohol and Tobacco Use*. Rep. California Attorney General's Office, 2008. Print. Pg 19.

revenues for state and local use, and limit/discourage heavy marijuana usage. The tax must leave marijuana prices cheaper or comparable to the black market so that consumers are more attracted to the licit market. However, this can be tricky because the price cannot get too low so that heavy consumption becomes more attractive. However, given the relatively inelastic demand for most marijuana users within the state and the cheaper prices from legalizing marijuana, prices will not need to drop significantly. Based on the State Board of Equalization's Analysis of Assemblyman Ammiano's Bill AB390, legalization will cause the street price of Marijuana to decline by 50%, which would raise consumption by 40%, but a \$50 per ounce tax would decrease consumption by 11%.<sup>120</sup> The State Board of Equalization confirmed that an excise tax on marijuana of \$50 per ounce would generate an estimate \$1.4 billion in state revenues per year if the industry stayed the same size. According to Assemblyman Ammiano's bill, these revenues will be placed entirely into a "Drug Abuse Prevention Supplemental Funding Account," and be used for rehabilitation and drug prevention programs throughout the state.<sup>121</sup> Hopefully, these revenues will increase over time as the marijuana industry expands and can be used in other areas of the budget such as schools, prisons and hospitals.

Establishing an excise tax on marijuana is the logical and obvious tax structure for a legal marijuana industry so that it is treated similar to alcohol and cigarettes. The new regulatory structure should enact the same tax recommended in Assemblyman Ammiano's bill of \$50 per ounce in every retail marijuana outlet. Further, there should

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<sup>120</sup> Waltz, Debra, and Ronil Dwarka. "STATE BOARD OF EQUALIZATION STAFF LEGISLATIVE BILL ANALYSIS." Rev. of Assembly Bill 390 (Ammiano): Marijuana Fee. 23 Feb. 2009: 1-6. Print. Pg. 6.

<sup>121</sup> Waltz, Debra, and Ronil Dwarka. "STATE BOARD OF EQUALIZATION STAFF LEGISLATIVE BILL ANALYSIS." Rev. of Assembly Bill 390 (Ammiano): Marijuana Fee. 23 Feb. 2009: 1-6. Print. Pg. 3.



also be the normal sales tax of 9.75% per purchase from these outlets. The large producers of marijuana that distribute to the retail outlets will be taxed on their earnings, but the \$50 per ounce will be paid by the consumers to account for the tourism that will develop. Local jurisdictions will also have authority to set up any further guidelines for their retail outlets, but they must be approved by the state. Along with most of the regulatory and tax structures regarding the legal marijuana industry, this excise tax will be reviewed every year and adjusted to address the main objectives of the tax most effectively.

### **Regular Evaluation of the Policies**

The marijuana market in California is grossly underestimated and poorly understood and it will change drastically after legalization and a new regulatory structure is implemented. Even as an illegal industry, marijuana cultivation is going through rapid changes and improvements. Professor Paul Starrs noted, “When you look at marijuana cultivation, you can see unparalleled changes and advances in the industry. More advances, more quickly, and palpable results.”<sup>122</sup> With an industry as mysterious and lucrative as marijuana there are many unknowns and changes, this is why there must be a regular evaluation of the policies and regulatory structure to adjust as the industry develops. As with any major social change, the regulation and legalization of marijuana will be an ongoing process that must constantly be developed and improved to ensure that the state benefits as much as possible.

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<sup>122</sup> Starrs, Paul. "UNR Professor of Agriculture." Telephone interview. 10 Feb. 2010.

## **Chapter 8: Addressing the Specific Problems of Marijuana and Agriculture in California**

In order for a successful policy shift, the State of California and its voters must not be hesitant to engage in a conversation about a major shift in policy.<sup>123</sup> With a policy shift as massive as creating a legal market for marijuana for the first time in decades will take very careful planning because the magnitude of error will also be massive if the planning is poor. Further, the marijuana industry is growing rapidly and still very misunderstood by policymakers and planners, so as with most policies it will need to be adjusted and fixed overtime as the market responds to the new regulations. A main goal of the policy should be to undermine and phase out the black market for marijuana and lower the crime rates in California while simultaneously generating new tax revenues for the state. In order for new regulations to be successful, they must address marijuana as part of the agriculture industry, specifically regarding improved land use, responsible water access and usage, and less pollution. So, in order to address these problems collectively through policy, it is necessary to view each one individually.

### **Environmental Impacts**

Keeping marijuana illegal over time has removed the State of California's ability to regulate the now massive industry. When the entire industry is illegal, the cultivators have no incentives to maintain clean and sustainable practices or respect the environment. This is especially true for the DTO's that tend to be run by illegal immigrants who have little care for the land and vitality of the nature in California. Further, these lucrative

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<sup>123</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print.

operations have caused an increase in law enforcement and given the illegal growers need to purchase weapons and defend their land. This has created problems for not only law enforcement and the state, but the general public is more at risk because their public land that is funded by taxpayers is now a minor drug war zone. By establishing proper zoning laws and diminished DTOs, legalizing marijuana will lead to a marked improvement in the public safety of neighborhoods where marijuana is abundant, especially the Emerald Triangle.

Once marijuana is legalized and a permit system is established, the law enforcement costs will be drastically reduced because there will be records of who is cultivating marijuana, how much they are cultivating and where they are cultivating. The black market will still persist in the years following legalization, but once the legitimate operations are established it will be much easier for law enforcement officials to track down and remove any illegal cultivation. The public land will be the main focus of law enforcement because that is where the DTOs will try and keep up operations. The additional revenues generated by tax revenues could be used to increase law enforcement on public land such as state parks and forests. Policies should be framed to create harsher penalties for any growing operation on public land as a direct response to the DTOs so that public land becomes an unattractive place to grow marijuana.

Water usage will also be improved through legalization and a proper regulatory structure. Regulations and requirements will be set to establish responsible water use and create consequences for marijuana cultivators with operations that pollute the water or use water sources in a harmful way towards the environment. Once a permit system is established for cultivation, each operation will be approved by the state and monitored to

ensure sustainable and safe growing methods. Once the public land becomes more controlled by law enforcement, DTOs will be less abundant and therefore have less of a negative effect on the environment. By legalizing the marijuana industry, policy makers and state officials can create laws and restrictions within the market so that they protect water sources. Prohibiting marijuana further will most likely lead to more of the water pollution and drought caused by illegal and irresponsible growers with no guidelines to follow and no reason to consider the environmental impact of their operation.

As noted throughout this report, it is very difficult and ineffective to try to regulate an illegal industry. Currently, there are no incentives to farm organically and not pollute which has led to marijuana growers leaving massive amounts of trash at grow sites, polluting water and soil with chemicals and destroying local habitats. The main source of pollution is the illegal growing operations on public land, especially DTOs, so creating a legal market that will diminish the black market and a regulatory structure to force them to not grow on public land or face severe punitive measures (compared to cultivation on private land) will improve California's environmental quality substantially. Creating a legal marijuana industry gives the state and law enforcement officials the ability to create requirements for the cultivation practices and monitor the cultivation methods. This is a tool that government officials have never had in California or the U.S. regarding marijuana cultivation. For the first time the state would be able to have some control over the marijuana industry, which will become cleaner and more transparent than ever before.

### **Crime**

The California marijuana industry is massive and indisputably thriving. California

is easily the largest exporting state for marijuana in the country. Legalization of marijuana will not solve all of the problems regarding crime associated with marijuana or successfully slow the exportation of marijuana immediately. As Becky LoDolce noted in her research on California's marijuana industry,

Without major policy changes at the federal level or in other states, California will have a black market for marijuana competing alongside a licit market due to excess supply. The licit market will compete with the black market for producers and consumers. The supply side of the licit market must be limited in order to minimize seepage between the licit and illicit markets and to sustain political legitimacy.<sup>124</sup>

There will still be a black market for marijuana after marijuana is legalized and an illicit market is formed, but by creating an effective policy structure that makes the licit market attractive to producers and makes the black market less of a lucrative option the marijuana market can be far more controlled than ever before. Further, the legal cultivators and distributors will have permits through the government so that they can separate themselves and make the illegal operations more obvious. It is very important to always keep supply costs low for producers so that the licit and illicit markets stay separate.

Communities in Humboldt and Mendocino will benefit significantly from a reduction of crime in their region. Once cultivation is phased out of residential neighborhoods and into a controlled setting, neighborhoods in Arcata and Mendocino will have far less theft and break-ins that are caused by the indoor growing houses. Also,

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<sup>124</sup> LoDolce, Becky. "Transforming Failed Prohibition to Response Regulation: Establishing a System For the Taxation and Regulation of Marijuana in California." *The Drug Policy Alliance* (2009): 1-159. Print. Pg. 8.

these communities will no longer be targets for immigrants and out of state individuals looking to capitalize on the marijuana market in California. With an effective permit system established and strict cultivation requirements, California can create high barriers to entry in the marijuana market and phase out the small producers looking to capitalize on the black market. Again, this depends on the effectiveness of the policies and their ability to successfully create a profitable legal industry that slowly shrinks the illicit market.

### **Criminal Justice**

The “War on Drugs” has been one of the largest reasons for racial tension in the criminal justice system, especially in California. Table 17 (Pg. 72) from the California Department of Justice Substance Abuse and Mental Health Services Administration shows the arrest rates related to marijuana by ethnicity and percentage of the population. This graph shows African Americans represent about 7% of the California population, but account for over 20% of the arrests.<sup>125</sup> Apparently, when the decision of who to bust is left to the law enforcement they have disproportionately focused on African Americans regarding marijuana laws. There are numerous reasons for this including the fact that there are usually more police and arrests in low-income communities and larger African American populations. This injustice has undoubtedly taken a social toll on these communities and left them with a constant feeling of mistrust toward state officials and law enforcement. Creating a comprehensive regulatory structure and a legal market for marijuana will definitely not solve the racial disparities in the criminal justice system, but

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<sup>125</sup> California Department of Justice. *Substance Abuse and Mental Health Services Administration National Survey on Drug Use and Health*. 2008.

hopefully can create enhanced public safety and trust within these communities by relieving them of this “gateway” into the criminal justice system.

### **Newly Generated State Tax Revenue (Fiscal Savings)**

Arguably the most beneficial facet of creating a new regulatory structure for the marijuana industry in California is the newly generating tax revenue that can be poured into the state budget. Assemblyman Ammiano’s bill will generate at least an estimated \$1.4 billion in tax revenue each year and this number will most likely grow as the tax structure gets adjusted and refined over time.<sup>126</sup> Ammiano recommends that this money is put into a fund for substance rehabilitation and education, but this money could be used for other aspects of the budget as well. I would recommend using around \$500 million (amount will be subject to review) towards the substance abuse and rehabilitation fund and applying additionally revenues to schools or local municipal governments so that the regions responsible for the marijuana industry can see direct improvements from the new taxes. This newly generated revenue could be used any number of ways to benefit the states dwindling budget and is a large reason that Californian voters are warming up to the idea of legalizing and taxing marijuana.

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<sup>126</sup> Waltz, Debra, and Ronil Dwarka. "STATE BOARD OF EQUALIZATION STAFF LEGISLATIVE BILL ANALYSIS." Rev. of Assembly Bill 390 (Ammiano): Marijuana Fee. 23 Feb. 2009: 1-6. Print. Pg. 6.

## **Chapter 9: Future Outlook on Marijuana in California**

A bold and groundbreaking policy and regulatory structure regarding a state's marijuana industry in the U.S. has never happened before and does not exist. Needless to say, California will be in a period of adjustment and transition during the first years of this structure. California's climate surrounding marijuana will change and usage will become more public. There are many instances where ending the marijuana prohibition will induce similar results to the end of alcohol prohibition, but the modern economy and market is much more developed. These laws will need to be adjusted, elaborated, and added to before they create a socially acceptable and economically suitable market for California. Many unpredicted changes will take place regarding the marijuana industry, but as long as there is a proper response from state officials and policymakers the marijuana industry could massively improve California's economy, environment and justice system.

### **Tourism**

A marijuana reform in California would create a whole new facet of the California tourist industry, *Cannabis Tourism*. Similar to the Netherlands, marijuana activists and connoisseurs will create an influx of tourism into the popular marijuana regions of California. This will generate even more excise tax revenues because consumption will be taxed, as well as increase revenues for other tourism related industries such as hotels and restaurants. With the price drop caused by legalization, it is reasonable to assume that marijuana demand in California will increase because of its cheap price relative to other states. This tourism can definitely benefit California's economy from the increased tax revenue, but could also create tension similar to the



Netherlands. Many European countries that have towns bordering the Netherlands have demonstrated concern for their residents crossing the border and bringing back marijuana. The California border may need to increase security for those trying to purchase marijuana in California and bring it across state lines. These issues should be addressed along with other policy framework by the state and will most likely need to be adjusted to fit the new market.

### **Health Impacts**

Creating a socially acceptable climate around the marijuana industry as well as detailed regulations regarding production and distribution will help protect marijuana consumers by creating safer, controlled products. Marijuana will become less of a secret so that users will now feel more comfortable to ask their doctors about marijuana. This will create more educated users and decrease irresponsible consumption. THC will also be used in many new ways so that marijuana can be consumed without inhaling the smoke. Smoking marijuana is bad for health, so by implementing new methods of consumption users can obtain the effects of cannabis without smoking the product. Marijuana will be used in tinctures, drinks, edibles, and many other forms that can be found in today's medical dispensaries, but with legalization will come an increased demand for smoking alternatives and new options will be explored. Legalizing and regulating marijuana will create more knowledge and understanding of the drug so that people can use it as safely and effectively as possible.

### **Separation of Drug Markets**

Currently marijuana is seen as a Schedule 1 drug federally and can be associated with much more dangerous drugs like heroin or cocaine. Creating a legal market for

marijuana will lead to a separation of drug markets as marijuana is drawn closer to alcohol and cigarettes and further away from heroin and cocaine. By effectively removing marijuana from the black market, California law enforcement can separate the people that are selling and trafficking the harder drugs so that precious budget money is not used towards busting less threatening marijuana sellers.

### **Recommendations for Further Research**

#### *Advertising*

Strengthening and legitimizing the marijuana industry will lead to an increase in marijuana marketing. There are many levels and forms of advertisement that could take place such as billboards, internet advertisements, television advertisements, print publications, window displays, etc. Marijuana use will not be popular with all Californians and many will oppose legalization so these advertisements may cause controversy among particular groups such as parents who do not want their children intrigued by marijuana ads. There will be many questions regard what advertising should be allowed and where it should be located. Will there be billboards by any schools or bus stops? Further research must be done in order to understand the idea of marijuana advertisements and resident's reactions.

#### *Driving Under the Influence*

There is very little literature researching the affects of marijuana on drivers. Very little is known about the dangers of driving or operating heavy machinery while under the influence of marijuana. Unlike alcohol, there is no blood level of THC and determining recent use of the drug can be very tricky and unreliable. Therefore, there is a grey area around regulating the affects of marijuana users on the road. More research must be done

to understand the impact of marijuana on a driver's abilities and whether or not that should be prohibited and what levels of THC are dangerous for driving. Further research should also be done on how law enforcement officials can effectively determine whether or not a driver is under the influence of marijuana.

#### *Further Affects of Tourism and Drug Control*

As mentioned briefly in the tourism section, there will be a need for increased border control within the U.S. as long as neighboring states keep marijuana as a prohibited substance. Research must be done to find how to effectively maintain California's borders if marijuana is legalized. It will be a large task for law enforcement to create a secure environment to control the marijuana industry and contain it within the state.

#### *Indoor Growing Requirements*

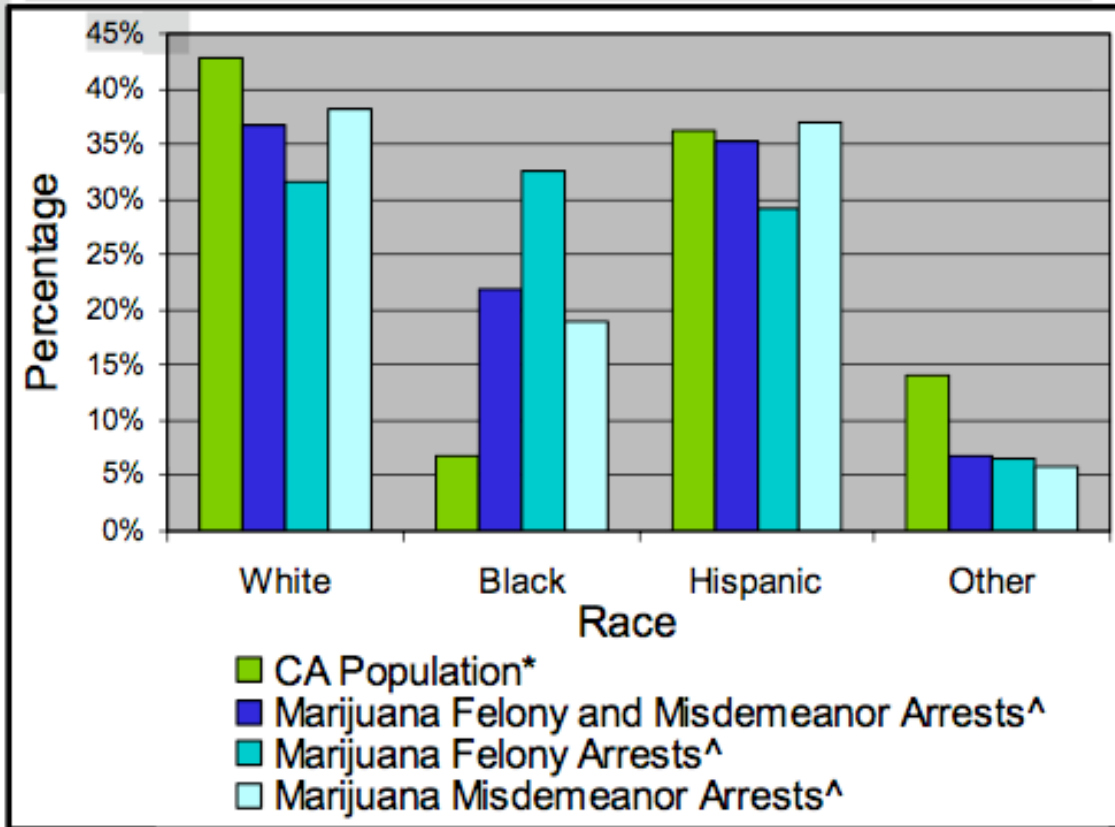
As noted in the Indoor Growing section, further research must be done to enforce an efficient limit of marijuana cultivation indoors for each MCP. Production yields, profitability, and energy costs associated with kW usage must all be taken into account.

#### *Agricultural Impacts*

Research must be done to interpret the impact of creating a new regulatory structure around legalizing marijuana on agricultural regions, especially in Northern California where marijuana is already prominent. There is little known about how this will affect other crops and exports in the state's agriculture industry, research should be done on how farmers and agricultural communities will respond to such new policies.

Appendix

**Table 17: California Marijuana Arrests by Race/Ethnicity**



\* California Department of Justice (2008)

^ Substance Abuse and Mental Health Services Administration  
 National Survey on Drug Use and Health, 2004-05  
 (<http://www.oas.samhsa.gov/nsduh/2k7nsduh/2k7Results.cfm#TOC>)

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