Marijuana Legalization & Taxation: Positive Revenue Implications for New Jersey

How responsible regulation of marijuana could boost tax revenues by over $300 million

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Executive Summary

New Jersey has long needed to reform its marijuana laws. Our current system of prohibition has failed our state by wasting precious state and local resources, furthering injustice and funding an illegal market that will sell to any buyer. Legalizing, taxing, and regulating marijuana will increase public safety, improve our criminal justice system, enhance racial justice, protect young people, save resources, bolster public health, and generate revenue.

Estimating tax revenue based upon a future transition from an illegal, unregulated market to a legal, regulated, and taxed system has intrinsic challenges. This report relies on available data, conservative assumptions, and the demonstrated experiences of other states as helpful guideposts in predicting the revenue implications of adult legalization for New Jersey.

Key findings:

A fully implemented regulated marijuana marketplace for adults in New Jersey could generate at least $300 million in annual direct tax revenue.¹
That figure is the estimate of the revenue generated solely from a 25-percent tax on retail marijuana sold only to adults. Once fully scaled, New Jersey could take in up to $305 million in direct revenue per year.

When factoring in other economic benefits of legalizing and regulating marijuana – including job creation, additional income and business tax revenue, tax revenue from the sale of marijuana-related accessories, property and agricultural taxes, new research and development related to a burgeoning industry, and the enhanced economic activity resulting from far fewer New Jerseyans wrapped up in our state’s criminal justice system – it’s clear the overall economic impact to the Garden State would be far greater than this conservative estimate.

An estimated 365,900 New Jerseyans aged 21 and over – approximately 4 percent of the state’s population – use marijuana on a monthly basis. New Jerseyans consume an estimated 2.5 million ounces of marijuana per year.

Despite our prohibition laws, New Jerseyans have regular to access marijuana. Federal government surveys that track how often Americans consume marijuana and how much marijuana they consume reveal the estimated amount consumed in New Jersey each year.

New Jerseyans currently spend up to an estimated $869 million on marijuana in the illegal marketplace every year.

The estimated average price of marijuana in the illegal market in New Jersey is $343 per ounce. But because New Jersey has not legalized marijuana for adult use, New Jersey residents contribute more than $850 million each year to the underground marijuana economy.

In a legalized and regulated system, direct sales of marijuana in New Jersey would total approximately $1.2 billion each year.

Though a small number of New Jerseyans would likely continue to participate in the illegal marketplace and others would grow marijuana for personal use at home, a legalized, taxed, and regulated system could amount to more than $1 billion in direct sales of marijuana to adults in New Jersey each year. This analysis also estimates conservatively that a small number of New York and Pennsylvania residents – one out of ten marijuana consumers in counties that border New Jersey – would participate in New Jersey’s legal marijuana system, adding to the scope of participation in a legal marketplace in New Jersey. Higher out-of-state participation is much more likely to be realized if New Jersey implements a legalized system for adults before its neighbors.

Based on those findings, this report issues the following recommendations for New Jersey regarding the legalization, taxation, and regulation of marijuana use for adults:

- Introduce a marijuana retail tax that starts low and includes graduated increases over three years
• Build flexibility into the marijuana tax rate, allowing for adjustments to maximize revenue while still offering pricing competitive enough to degrade the illegal marketplace

• Use tax revenue for critical state needs, such as drug education and treatment and justice reinvestment

Analysis & Methodology

The method of tax revenue projection for New Jersey adult consumers used in this analysis was informed by a similar analysis conducted by the RAND Corporation for Vermont. To estimate how much revenue to expect, we used five key factors:

• How much marijuana is currently consumed in New Jersey

• How much money is currently spent on that marijuana

• How many people from outside the state will participate in New Jersey’s legal market

• How many people inside the state will continue to participate in the illegal market

• What tax rate, and for whom or on what, to levy

Determining Current Marijuana Consumption

In order to determine how many marijuana consumers exist in New Jersey, we used data in the annual National Survey on Drug Use and Health (NSDUH), published by the U.S. Department of Health and Human Services. The survey, which details marijuana use in every state, allowed us to estimate the amount of marijuana that is consumed, on average, each month.

An estimated 365,900 New Jerseyans aged 21 and over – approximately 4 percent of the population – use marijuana on a monthly basis.
To determine how much marijuana is consumed each year in New Jersey, we used data from the NSUDH identifying how often marijuana users consume on a monthly basis and the percentage of total users who consume at that frequency. This was combined with other data from the NSUDH that reveal the estimated amount of marijuana consumed by individuals according to how often they use marijuana each month. That was multiplied by the number of estimated consumers in New Jersey for each category of monthly use frequency (see table below) to reach an estimated total amount of marijuana consumed per year: 2.53 million ounces.

<table>
<thead>
<tr>
<th>User Frequency</th>
<th>Average Grams Per Month</th>
<th>Total Number of Users</th>
<th>Total Ounces Consumed Per Year</th>
</tr>
</thead>
<tbody>
<tr>
<td>1-5 days/month</td>
<td>1.2</td>
<td>135,017</td>
<td>68,581.3</td>
</tr>
<tr>
<td>6-10 days/month</td>
<td>5.6</td>
<td>49,031</td>
<td>116,222.7</td>
</tr>
<tr>
<td>11-15 days/month</td>
<td>11.7</td>
<td>32,931</td>
<td>163,089.7</td>
</tr>
<tr>
<td>16-20 days/month</td>
<td>18</td>
<td>38,419</td>
<td>292,725.1</td>
</tr>
<tr>
<td>21-25 days/month</td>
<td>29.9</td>
<td>33,297</td>
<td>421,415.7</td>
</tr>
<tr>
<td>26-30 days/month</td>
<td>44.8</td>
<td>77,571</td>
<td>1,470,997.7</td>
</tr>
<tr>
<td><strong>TOTAL:</strong></td>
<td></td>
<td><strong>2,533,032.1</strong></td>
<td></td>
</tr>
</tbody>
</table>

Determining Size of Illegal Market Marijuana Expenditure

To determine how much money New Jerseyans spend on marijuana in the illegal market every year, we multiplied the estimated 2.53 million estimated ounces of marijuana consumed each year by the estimated price per ounce of marijuana in New Jersey ($343 per ounce as of September 4, 2015), resulting in an estimate of $868.8 million.

Determining Scope of Post-Legalization Marijuana Demand

Estimating the amount of marijuana to be consumed after legalization, regulation, and taxation is challenging. It remains to be seen how long it would take New Jersey consumers in the illegal market to transfer into the legal, regulated market. Because marijuana possession is currently unlawful, we expect there is significant underreporting of the public’s marijuana use in national public health surveys.
Further, eliminating criminal sanctions for use by adults may result in a relatively small increase in the quantity of marijuana consumed. However, the deterioration of the illegal marketplace may reduce access for consumers and thereby decrease the frequency of illegal purchases or the amount consumed outside the regulated market. We must also take into account that a percentage of the market will remain untaxed, including the medical marijuana sector, individuals who will grow marijuana in their homes for personal use instead of participating in the taxable marketplace, and still others who will insist on remaining in the illegal marketplace.

Beginning with an estimated 365,900 New Jersey marijuana consumers who currently illegally purchase an estimated 2.53 million ounces per year, we anticipate that legalization will result in a relatively small increase in the reported quantity consumed by adults as consumers integrate into the legalized market, resulting in an estimated increase in the quantity consumed to 3.38 million ounces per year. To be clear, we project a potential increase in the amount of marijuana consumed—not necessarily an increase or decrease in the number of consumers.

Estimating Non-New Jersey Participants in Legal, Regulated Marijuana Marketplace

In addition to the New Jerseyans who will participate in the state’s regulated market, we also anticipate that a small number of consumers from neighboring states—particularly where a legal marketplace is not yet in operation—will participate in the system. (Note: this analysis does not encourage any out-of-state resident to violate the laws of their home state).

New Jersey, unlike the other states that have developed regulated markets for marijuana, sits between two major population centers, New York City and Philadelphia, as well as other nearby communities in New York and Pennsylvania.

In order to accurately anticipate the consumer demand for marijuana in New Jersey following legalization, it is necessary to account for the fact that some of these non-New Jersey residents will likely participate in the New Jersey marketplace. In this analysis, the New York counties we include are: Bronx, Kings, Nassau, New York (Manhattan), Orange, Putnam, Queens, Richmond, Rockland, Sullivan, and Westchester. The Pennsylvania counties we include are: Bucks, Chester, Delaware, Lehigh, Monroe, Montgomery, Northampton, Philadelphia, and Pike. We conservatively estimate that 10 percent of marijuana consumers in those counties—only one out of every 10 people—will become participants in the New Jersey marketplace. New Jersey should also expect participation by additional out-of-state tourists.

It’s worth noting that we do not project any post-legalization increase in the amount of marijuana consumed by Pennsylvania and New York users, because it is unknown what the effect that changes in New Jersey’s laws will have on non-New Jersey consumers.

Assuming consumption behavior similar to that in New Jersey, we estimate there are 1,035,665 total New York and Pennsylvania residents within the coverage area aged 21 and over who consume marijuana on a monthly basis. Of that total, we assume that one out of ten—or 103,566 of them—will become participants in the New Jersey marketplace.
Determining Percentage of Consumers Who Will Not Participate in Taxable Marketplace

There is no way to accurately determine how many potential consumers will not participate in the legal marketplace due to participation in the medical marijuana system, home-grown marijuana, or continued participation in the illegal marketplace. The illegal market, while damaged, has remained stubbornly in place in some jurisdictions that have moved to a legalized system for adults. This phenomenon is influenced by various immeasurable cultural factors, as well as tax policy in setting prices that can undercut the illegal market. If the legal price of marijuana successfully undercut prices in the illegal marketplace, the number of individuals remaining in the illegal market should ultimately drop and remain low. We estimate that once the regulated, taxed system is fully implemented, 6 percent of consumers would remain outside of the regulated, taxable marketplace.\textsuperscript{13}

Determining Total Consumer Expenditure in Legal, Regulated Marijuana Market

To determine the total consumer expenditure on marijuana in the post-legalization market in New Jersey, we calculated the estimated size of the marketplace by the anticipated price per ounce of marijuana.

We estimate that New Jersey residents will consume 3.38 million ounces of marijuana annually in New Jersey’s legal marketplace. This figure reflects a post-legalization increase in the amount of marijuana consumed, not necessarily an increase in the number of consumers. In our projection, we account for 6 percent of consumers that will not participate in a regulated marketplace (due to participation in the medical marijuana system, growing at home for personal use, and continued participation in the illegal marketplace).

Based on the estimated current price of marijuana in New Jersey at $343 per ounce and the importance of competitive pricing to undercut the unregulated market, after an initial price

### Table: Estimated Number of Consumers in Legal Marijuana Market

<table>
<thead>
<tr>
<th>Locale</th>
<th>Total Marijuana Consumers</th>
<th>Assumed Participation Rate</th>
<th>Number of Estimated Consumers</th>
</tr>
</thead>
<tbody>
<tr>
<td>New Jersey</td>
<td>365,900</td>
<td>94%</td>
<td>343,100</td>
</tr>
<tr>
<td>Surrounding NY counties</td>
<td>785,723</td>
<td>10%</td>
<td>78,572</td>
</tr>
<tr>
<td>Surrounding PA counties</td>
<td>249,942</td>
<td>10%</td>
<td>24,994</td>
</tr>
<tr>
<td><strong>TOTAL</strong></td>
<td><strong>1,401,565</strong></td>
<td></td>
<td><strong>446,666</strong></td>
</tr>
</tbody>
</table>

Source: NJPP analysis of American Community Survey (2013) and Substance Abuse and Mental Health Services Administration, National Survey on Drug Use and Health (2012-2013)
decrease, an ounce of marijuana in a regulated market in New Jersey could reach roughly the same price resulting in an estimate of $350 per ounce.\textsuperscript{14}

Assuming an average price of $350 per ounce once the illegal market is degraded and the legal system is fully implemented and scaled, we expect to reach $1.1 billion in New Jerseys’ consumer expenditure. Again, these figures apply only to the New Jersey consumers who will participate in the marketplace.

When adding in the 103,566 predicted annual New York and Pennsylvania consumers in nearby counties, with 3 ounces of marijuana purchased per year per consumer,\textsuperscript{15} we project an additional 310,698 ounces purchased annually. At an average of $350 per ounce, this projects out to an additional $108.7 million in expenditure.

When combining New Jersey consumers with nearby New York and Pennsylvania consumers, we reach a total of $1.2 billion in pre-tax spending in the legal New Jersey marketplace.

\textbf{Calculating Retail Tax Revenue for Legal, Regulated Marijuana Marketplace}

One of the difficult questions surrounding marijuana legalization in New Jersey centers on how adult consumption should be taxed. There are many different ways to structure a marijuana taxation system, but thanks to the early adoption of legal marijuana in a handful of states, we can make preliminary judgments about their successes – and learn from their mistakes – to create a safe and equitable legal marijuana market and tax structure.

When designing a tax structure for marijuana legalization, public safety concerns must be central to all policy considerations. In order to ensure that consumers abandon the illegal marketplace and enter the legal, regulated one, the tax rate must be set at a level that does not make entry to the legal marketplace cost-prohibitive.\textsuperscript{16}

It is useful to look at the tax rates of other states that have already taxed and regulated marijuana and apply them to New Jersey’s estimated demand in order to project tax revenue.

While the Washington model yields the highest tax revenue, a tax rate that high may keep too many people out of the legal marketplace, thereby preventing significant reduction of activity in the illegal marketplace. Colorado seems a more appropriate comparison for New Jersey – with an ultimate tax of 27.9 percent – that would yield $340.8 million in annual tax revenue in New Jersey.

\begin{table}[h]
\centering
\begin{tabular}{|l|l|}
\hline
\textbf{Tax Model} & \textbf{Projected Tax Revenue} \\
\hline
Alaska model ($50 excise tax) & $184.5 million \\
Colorado model (27.9\% tax) & $340.8 million \\
Oregon model (17\% tax) & $207.7 million \\
Washington model (37\% tax) & $452 million \\
\textit{New Jersey (proposed 25\% tax)} & \textit{$305.4 million} \\
\hline
\end{tabular}
\end{table}

Source: NJPP analysis of American Community Survey (2013) and Substance Abuse and Mental Health Services Administration: National Survey on Drug Use and Health (2012-2013)
Still, other states interested in regulating marijuana understand the importance of having as many people as possible participate in the legal market as to degrade and eliminate illegal market activity. A number of recent and proposed legalization initiatives – including those in Vermont, Maine, Arizona, Montana, and North Dakota – are suggesting tax rates between 10 and 25 percent in order to achieve this goal. In the interest of New Jersey joining these ranks, we propose an ultimate tax rate of 25 percent, which would yield $305.4 million in annual tax revenue.

**Recommendations**

An infusion of much-needed revenue in state coffers is *not* the reason to legalize marijuana in New Jersey. New Jersey police make more than 24,000 marijuana possession arrests per year,\(^{17}\) and marijuana enforcement drains significant resources from police, courts, and corrections. Just a single marijuana possession arrest can lead to up to six months in jail, $1,225 in fines and fees, a criminal record for at least three years, and loss of a job. And marijuana enforcement does not impact all communities alike: Black New Jerseyans are nearly three times more likely to be arrested for marijuana possession than White New Jerseyans, although both groups use marijuana at approximately the same rate.\(^{18}\)
But legalization has clear fiscal benefits for New Jersey. The revenue New Jersey could collect on sales of marijuana to adults could be allocated for critical, underfunded New Jersey programs, including drug abuse prevention and treatment, and reinvestment in New Jersey communities.

Following decades of failed marijuana prohibition, states are moving toward a commonsense regulatory approach. Legalization, regulation, and taxation of marijuana for adults’ use is advancing throughout the United States and becoming a reality for more Americans as voters and policymakers grow to understand the potential public safety, public health, social justice, and economic benefits of reform.

Twenty-four states, plus Washington, D.C., and Guam, have instituted medical marijuana programs; 17 states have decriminalized marijuana possession but not legalized it; and four states, plus Washington, D.C., have legalized marijuana for adults.19

Significantly, the importance of setting an appropriate marijuana tax rate is not limited to maximizing revenue generation. Identifying an appropriate rate initially is critical to degrading the illegal marketplace. Slowly scaling that rate upward from higher to lower will help put the underground market out of business and draw consumers to the legal market. In establishing the tax structure for a legal, regulated marijuana system in New Jersey, policymakers should consider the following recommendations to both enhance public safety and draw needed revenue from marijuana sales:

**Recommendation One: Introduce Graduated Increases in Tax Rate Over Three Years**

Lawmakers should set a tax rate that promotes public safety and keeps participation in the illegal market as low as possible after legalization. To accomplish this, we recommend graduated increases in the tax rate, with the final number reaching 25 percent after three years. The rate could begin at 5 percent in the first year, increase to 15 percent in the second year, and culminate at 25 percent in the third year and onward.

By beginning with a low tax and associated low price point, the illegal market will be degraded and existing adult marijuana consumers will be motivated to abandon it and enter the legal, regulated marketplace. A gradual increase over three years will keep consumers in the legal marketplace while increasing revenue.
Recommendation Two: Build in Flexibility to Marijuana Tax Rate

The tax rate consumers will face when purchasing marijuana in the legal, regulated system is critical to undermining the illegal market. While this estimate assumes an ultimate tax rate of 25 percent on retail sales, the New Jersey government should designate a state agency or special committee charged with making annual taxation recommendations to the Legislature. Especially during the early years of transition from an illegal, unregulated system to a legal, regulated, and taxed one, such a body with a focus on marijuana taxation would be essential.

The committee should be responsible for reviewing the impact of the tax rate on the marketplace and making recommendations to further the goals of:

- Preventing use by those under 21
- Degrading and undercutting the prices of the illegal market
- Maximizing revenue for the state

Recommendation Three: Use Tax Revenue for Critical State Needs

New Jersey policymakers will need to determine the appropriate uses of tax revenue from
marijuana sales. However, significant allocations should go to drug-abuse prevention and treatment, as well as to justice reinvestment.

The state should allocate revenue toward bolstering and expanding evidence-based programs that educate young people – and the public at large – about the risks and dangers of abusing drugs. Funding should also help boost New Jersey’s capacity for treating drug addiction, including heroin and opioid abuse, by expanding both inpatient and outpatient treatment capacity, according to best practices.

At the same time, revenue from a legal marijuana market should take into account the fact that not all communities have borne the brunt of marijuana enforcement practices in New Jersey alike. Black New Jerseyans, for example, are nearly three times more likely to be arrested for marijuana possession than Whites. Significant revenue from the sale of marijuana should be directed back into the communities most impacted by marijuana enforcement practices, including through funding for job training, re-entry programs, mental health services, and other initiatives to strengthen local communities.

With estimated annual revenue of approximately $305.4 million in direct tax revenue coming from a fully implemented legal, taxed, and regulated marijuana market for adults, New Jersey will have to engage in a challenging but important conversation about how to allocate the new revenue generated by taxation of marijuana. That $305 million in new revenue per year could translate into significant gains for New Jersey programs that need it.

To give a more concrete picture of the ways an influx of additional tax revenue could help New Jersey, we made some informal calculations to determine the positive impact $305 million could have. Indeed, $305 million could improve many New Jerseyans’ lives each year, especially as a reinvestment in communities to provide treatment for drug dependency and opportunities for young people.

To give just a few examples based on our rough estimates, $305 million each year would allow New Jersey to:

- Purchase 3 million textbooks for students per year
- Conduct job training for over 45,000 unemployed or underemployed New Jerseyans
- Create over 150,000 summer jobs for New Jersey youth
- Hire 2,800 school guidance counselors
- Pay for more than 12,000 inpatient drug treatment beds
Acknowledgments

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Research assistance was provided by Nora Ellmann and Elyla Huertas.

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Endnotes

1 This estimate assumes a 25% retail tax is limited to tax revenue generated from adult retail marijuana sales and does not include associated economic benefits of legalization, including job creation, tax revenue from the sale of marijuana-related accessories, property and agricultural taxes, and the enhanced economic activity resulting from far fewer New Jerseyans in our state’s criminal justice system.

2 See “Analysis & Methodology” section for a full explanation of how we arrived at this figure and others in the report.


5 Ibid 4.

6 Ibid 4. To estimate the 21-25 population, NJPP’s analysis applied a ratio to the grouped data for age ranges 15-19, 20-24 and 25-29 as reported in the American Community Survey.

7 For example, consumers who use marijuana 6-10 days per month use approximately 0.70 grams, or 0.025 ounces, of marijuana per day, while consumers who use marijuana 16-20 times per month use approximately 1 gram or 0.035 ounces per day.

8 Measurements in pounds have been converted to ounces.

9 The price of an ounce of marijuana in the illegal market in New Jersey is taken from an Internet-based source, Priceofweed.com. See https://www.priceofweed.com. Despite the academic informality of Priceofweed.com, the source has been cited as an authority on the price of an ounce of marijuana in the illegal market in many publications and studies (including the RAND Corporation’s analysis of Vermont cited in this paper).

10 This estimate anticipates a “price-induced change in consumption” due to the legal market undercutting the price of the illegal market, as well as non-price effects like reduced risk of arrest, lower risk of contaminants or mislabeling, and other considerations.


14 Based on comparison of NJPP analysis of marijuana prices in Colorado and Washington.

15 Data from the National Survey on Drug Use and Health (see Endnote 4) show that the average amount of marijuana consumed by each marijuana consumer each year is 6.9 ounces (though it is important to note that this number is significantly skewed, as consumers who consume marijuana more frequently also consume significantly larger amounts than those who consume less frequently). Considering this, we make a conservative estimate that consumers in Philadelphia and New York will, on average, purchase 3 ounces of marijuana in New Jersey establishments each year, less than half (43.5 percent) of the average yearly total of 6.9 ounces. This translates into an estimate that 4.3% of the marijuana purchased by all NYC and Philadelphia marijuana consumers will be purchased in New Jersey.
This lesson is drawn from the experience of the state of Washington, where the marijuana tax rate was recently lowered to 37 percent due to continued high participation in the illegal market. Concern remains that a tax level of 37 percent remains too high and the illegal market will continue to thrive. See KIRO Radio, *Black Market Weed is Legal Marijuana’s Biggest Road Block*, July 2015. http://mynorthwest.com/11/2782593/Black-market-weed-is-legal-marijuanas-biggest-road-block.

According to the National Survey on Drug Use and Health, blacks and whites use marijuana at similar rates. See [ICPSR](http://www.icpsr.umich.edu/quicktables/quicksetoptions.do?reportKey=35509-0001_all%3A7)


Although we used reliable, publicly available sources to obtain the most up-to-date cost estimates available, the alternate uses of revenue should be considered estimates, not exact figures.

This calculation assumes an approximate cost of $100 per textbook.


Based on estimated cost of $24,352 per bed per year, as reported in National Council of Alcoholism and Drug Dependency-New Jersey, *The Addiction Treatment Gap: The Benefits of Expanding Treatment Resources*.