

By Bruce Barcott and Beau Whitney
With Max Savage Levenson and Chris Kudialis

How many jobs are in America's legal marijuana industry?

The 2022 Leafly Jobs Report found 428,059 full-time equivalent jobs supported by legal cannabis as of January 2022.

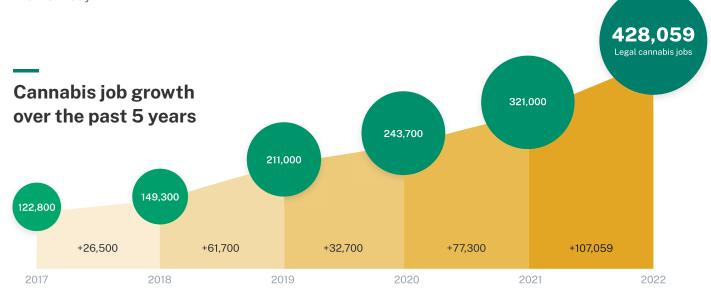
In the second year of the Covid-19 pandemic, America's cannabis industry sold nearly \$25 billion in products and created more than 107,000 new jobs — enough to fill the Rose Bowl and then some.

That's a 33% increase in jobs in a single year. And it marks the fifth year in a row of annual job growth greater than 27%.

No other industry in America can match that.

Last year, America's legal cannabis industry created more than 280 new jobs every day. In 2021, someone was hired for a cannabissupported job about every 2 minutes of the work day.







America's cornerstone cannabis employment report

The annual Leafly Jobs Report, produced in partnership with Whitney Economics, is the nation's most comprehensive cannabis employment study. Federal prohibition prevents the US Department of Labor's Bureau of Labor Statistics from counting state-legal marijuana jobs. Since 2017, Leafly's news and data teams have filled that gap with a yearly analysis of employment in the legal cannabis sector. Whitney Economics, a global leader in cannabis and hemp business consulting, data, and economic research, has partnered with Leafly on the project since 2019.

Those 428,059 jobs include direct cannabis jobs like cultivation and retail sales — what are often called "plant-touching jobs" — as well as indirect ancillary jobs that serve licensed companies or depend on legal cannabis sales. Ancillary jobs include work in accounting, human resources, legal affairs, regulatory compliance, security, maintenance, and construction. Also included are indirect jobs in cannabis media, technology platforms, public relations, lobbying, non-cannabis product suppliers, and industry associations.

The Leafly Jobs Report does not include employment in America's hemp industry, and does not include induced jobs — that is, jobs created through the spending of cannabis workers in stores, services, and others businesses throughout the economy.





Now a \$25 billion annual market

America's 11 operating adult-use markets and 27 medical-only states combined to sell \$24.6 billion worth of cannabis products in 2021.

Last year also marked the first year that cannabis job creation hit triple figures. After adding 32,700 jobs in 2019 and 77,300 jobs in 2020, the industry added 107,059 new jobs in 2021.

To put that in perspective, America's entire financial sector added 145,000 jobs last year. The construction industry, coast to coast, added 165,000 jobs.

Those industries are massive: Finance employs 9 million workers, while total construction payroll topped 7.5 million at the end of 2021. The fact that the cannabis industry, with 428,059 workers, rivals those industries in annual job creation speaks to the incredible pace of the cannabis industry's growth.

America now has three times as many cannabis workers as dentists. Cannabis workers outnumber insurance salespeople. There are more people employed in the cannabis industry than there are hair stylists, barbers, and cosmetologists - combined.

Total jobs per industry in the US

There are now more American cannabis workers than firefighters.

Data: US Bureau of Labor Statistics, Leafly/Whitney Economics

Cannabis in the annual budget

Total annual spending by US consumers*

\$94B Beer

Wine \$78B

\$55B Nutritional supplements

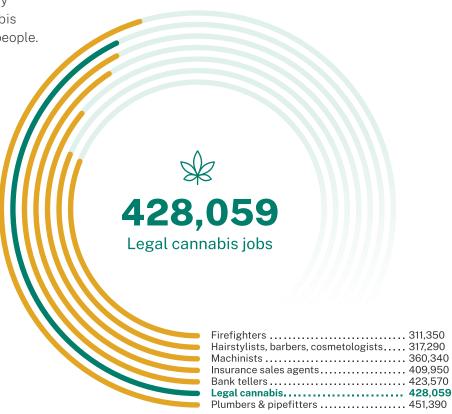
\$25B **Cannabis**

\$20B **Energy drinks**

\$16B Milk

Orange juice \$10B

* Using latest available data. Most figures are from 2020 or 2021.



Top states for cannabis jobs: California, Colorado

California remains America's #1 cannabis market and cannabis employer, with a \$5 billion annual market and more than 83,000 jobs. Colorado's cannabis jobs sector remained strong — \$2.2 billion in sales, 38,000 jobs — in the state's eighth year of adult-use sales.

Meanwhile, the nation's flourishing adult-use states — Massachusetts, Illinois, Michigan, and Arizona — continued to add jobs at doubledigit rates. Pennsylvania and Florida remain the nation's strongest medical-only employers, while mature adult-use states like Washington and Oregon continued to add jobs, but at a more modest rate.

California 83,607

America's top cannabis job markets

Total cannabis jobs per state, as of Jan. 2022

1	California	83,607	
2	Colorado	38,337	
3	Michigan	31,152	
4	Illinois	28,992	
5	Massachusetts	27,212	
6	Pennsylvania*	26,932	
7	Florida*	25,895	
8	Arizona	23,333	
9	Washington	22,516	
10	Oregon	19,938	
* Madical only			

^{*} Medical only

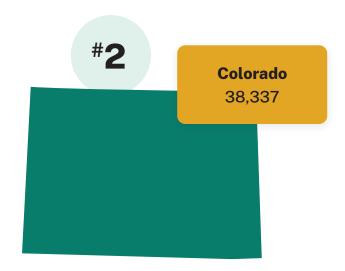




Photo courtesy of HeyLo

How much more job growth is possible?

In the eight years since the nation's first adult-use cannabis stores opened, the industry has created hundreds of thousands of new American jobs. And there are still plenty yet to be created.

Whitney Economics calculates that the 2021 total cannabis sales figure — just under \$25 billion — represents only about 25% of the total potential US cannabis market. In other words, 75% of the nation's true cannabis demand is still being met by illicit growers and sellers. Those numbers include illicit sales in all legal, medical, and prohibition states.

By 2025, we forecast America's total annual legal cannabis revenue to be closer to \$45 billion. That's still less than half the total potential national market.

With New Mexico, New Jersey, New York, and Connecticut expected to open their first adult-use cannabis stores within the next 18 months, America's cannabis job creation boom is expected to continue through at least 2025.

While legal cannabis now supports 428,059 jobs, the total employment potential in a mature US legal cannabis market is approximately 1.5 million to 1.75 million workers. The economic and employment potential for legal cannabis remains quite bright for many years to come.



Looking for work? Try these states in 2022

Job creation continues to be driven by new and emerging cannabis markets, where young companies are hiring for a wide range of positions — everything from growers to budtenders to bookkeepers.

Hiring has slowed in mature adult-use states like Colorado, Washington, and Oregon, where we're seeing annual employment growth in the single digits.

Illinois is expected to triple the number of retail stores operating in the state —

if only the licensing process can escape the legal tangle that's currently holding up nearly 200 new stores.

In 2022, we expect hiring to be brisk in New Jersey, where existing medical dispensaries are expected to welcome adult-use customers — anyone 21 or older — by early summer. New Mexico, New York, and Connecticut are also expected to start issuing new adult-use licenses, which should nurture thousands of new companies and tens of thousands of new jobs.

Who's hiring in 2022

State	What is driving new hiring
Arizona	New adult-use market growing into maturity
California	Much of illicit market still to be captured by legal operators
Connecticut	First adult-use stores expected to open in late 2022
Florida	Medical market still growing; 2024 vote on adult-use legalization
Illinois	185 new licenses in the pipeline, held up by legal challenge
New Jersey	Adult-use sales expected to begin by summer 2022
New Mexico	Adult-use sales start April 1, 2022
New York	Adult-use stores not open until early 2023, but hiring already underway





What's next: The 2022 cannabis jobs outlook

By Beau Whitney, Whitney Economics

Cannabis job growth and sales increases remained strong in 2021 due to Covid, but won't continue at the same pace in 2022

The cannabis industry experienced significant growth both in terms of revenue (+34%) and in job creation (+107K jobs) in 2021. The Covid boom that occurred in 2020 was sustained through most of 2021, although sales began to falter slightly toward the end of the year.

Can that growth be sustained at those elevated levels? Not likely. Whitney Economics and Leafly forecast cannabis revenue and job growth to return to pre-pandemic growth rates in 2022. Over the coming year, we expect the US legal cannabis market to grow at a rate of 18%, to \$29.2 billion.

State regulations constrict or encourage job growth

With each adult-use and medical state deploying different cannabis regulatory schemes, each will differ in its growth over the coming year.

In medical-only states, the limitations and strictures of a state's regulatory agency can vary wildly. Oklahoma's laissez-faire regulatory system has issued more than 13,000 licenses,

encouraged thousands of entrepreneurs to jump into the industry, and created nearly 20,000 jobs.

The constricted medical schemes in New York, New Jersey, and Minnesota, by contrast, have left patients with high-priced products, limited selection, and few dispensaries. That's left thousands of jobs uncreated and encouraged local illicit markets to thrive.

In adult-use states, mature markets like Washington and Colorado are experiencing significantly slower growth rates — 3% and 1.5%, respectively — when compared to emerging markets like Michigan and Massachusetts (each up over 80%).

These growth rates, when not in the middle of a pandemic, are predictable. Whitney Economics has developed a model to predict the ramps of newer markets while at the same time forecasting growth in the more mature markets.



Photo courtesy of HeyLo

Growth will come in specific markets, not evenly spread

A few select markets will drive a majority of the cannabis sales growth in the United States in 2022.

Much of this growth will come from the deployment of new regulatory programs, or will be a result of state-licensed markets capturing more of the consumer demand previously satisfied by the illicit market.

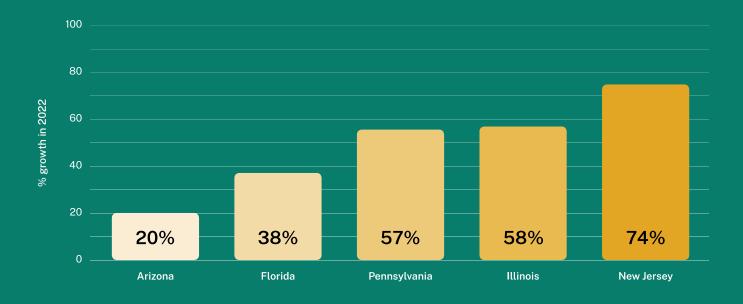
Converting the illicit consumer into a legal consumer is a key issue for both policymakers and industry operators. Incentivizing legal participation is a function of two factors: access to legal supply (more stores means easier access), and pricing that can compete with illicit channels (with reasonable tax rates and compliance costs).

Sales growth forecast for 2022

These states are expected to experience high growth in cannabis sales in the coming year.



Photo courtesy of HeyLo





Data deep dive:

Nine states that indicate market trends

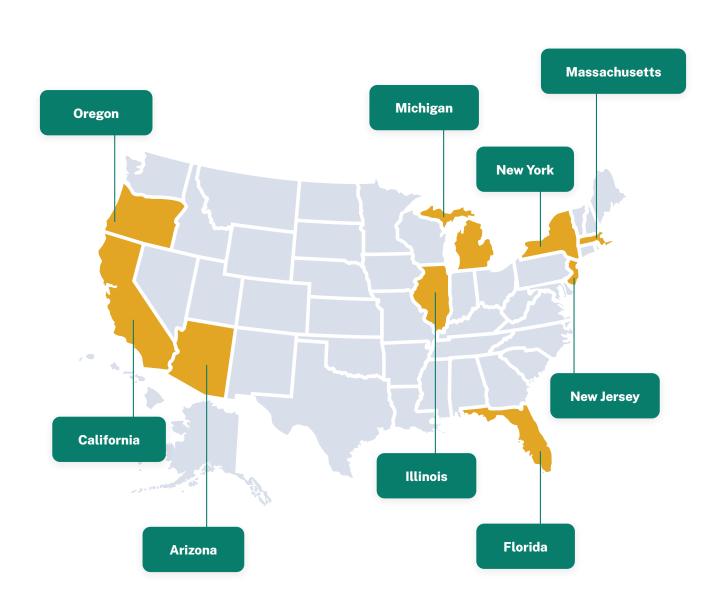
This year's Leafly Jobs Report takes an in-depth look at nine states we consider leading indicators of economic health in the cannabis industry.

Arizona offers a look at a recreational market still in its infancy, having been open a little more than one year.

Massachusetts, Illinois, and Michigan are experiencing the surges of growth we've come to expect two to five years after the opening of a state's adult-use stores.

Oregon offers insight into how much growth can be expected in a mature adult-use market. Florida's enormous medical marijuana market remains shrouded in murky data even as national cannabis operators jostle to gain footholds prior to the state's expected adult-use legalization vote in 2024.

New York and New Jersey limp along with severely constrained medical markets, and risk losing thousands of potential jobs due to local towns "opting out" of adult-use sales — a coded way of favoring illicit sellers over local entrepreneurs and tax-paying small businesses.





Arizona

The first year of adult-use sales resulted in Arizona's cannabis industry adding roughly 2,600 jobs, for a total of 23,333 jobs supported by legal cannabis.

This year's addition of adult-use sales gave the state's overall cannabis market a 31% boost over 2020. Arizona's licensed adultuse stores and medical dispensaries sold a total of \$1.35 billion in cannabis products in 2021, \$320 million more than the state's medical-only dispensaries sold in 2020.

Why the 31% increase in sales, but only a 13% increase in hiring? It's because we factored most of the state's adultuse hiring boom into last year's cannabis jobs calculation. In January 2021, many companies had already increased their payrolls in anticipation of recreational sales starting that month.

Arizona cannabis growth in 2021

23,333 full-time cannabis jobs

2,600 jobs added

\$1.35 billion in cannabis sales

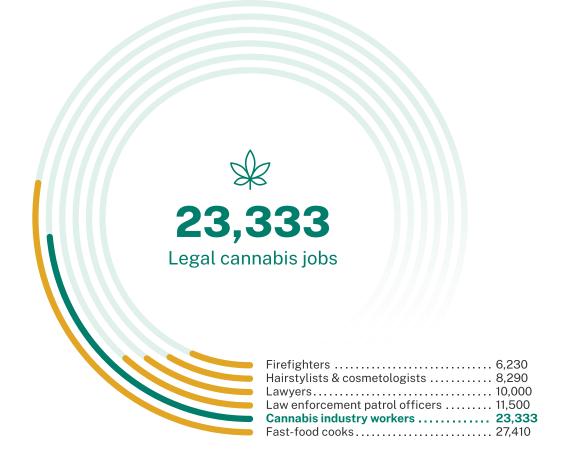
31% cannabis sales growth



Arizona job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**



California

California remains the nation's leading cannabis employer, with \$5.1 billion in 2021 sales supporting 83,607 jobs. After a 64% growth spurt in 2020, the state's cannabis market eased into a more moderate 15% revenue gain in 2021.

Job growth generally tracks with revenue, but not exactly. Headcount increases lagged in 2020 due to the constriction of investment capital and a greater reluctance to commit to new hiring amid the uncertainty of the coronavirus pandemic. Investment money and hiring confidence crept back into California in early 2021.

California's structural problems — sky-high cannabis taxes, suffocating red tape, and local cannabis store bans — continue to hold back the industry, however.

Five years after California voters passed Prop. 64, only 32% of the state's local jurisdictions allow the sale of regulated weed. Those local bans prop up the illicit market and have led to an oversupply of growers and an undersupply of licensed stores.

California job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**

California cannabis growth in 2021

83,607 full-time cannabis jobs

21,613 jobs added

\$5.1 billion in cannabis sales

15% cannabis sales growth





Florida

Florida's medical marijuana boom continued in 2021, with sales of \$1.5 billion supporting 25,895 jobs.

The state's rising medical marijuana patient count drove the past year's growth, with 200,000 residents added to Florida's registered patient list. At 656,000, the state's medical marijuana patient population is nearly twice the size of other large medical-only markets like Pennsylvania and Oklahoma.

Florida also continued to improve access. with 399 dispensaries licensed as of early 2022. That's a 33% increase — nearly 100 new dispensaries — added over the past 12 months.

Florida's still-growing medical marijuana patient population represents only 3% of the state's 21 million residents. Legalizing and regulating the adult-use market could double the state's sales and jobs within one to two years.

Arizona, a state with one-third of Florida's population, recorded \$1.35 billion in sales in its first adult-use year.

A similar opening in Florida could yield a \$4 billion annual market supporting more than 70,000 jobs.

Florida job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**

Florida cannabis growth in 2021

25,895 full-time cannabis jobs

8,895 jobs added

\$1.5 billion in cannabis sales

22% cannabis sales growth





Firefighters 19,000 Hairstylists & cosmetologists 23,010 Cannabis industry workers 25,895

Illinois

The Illinois marijuana industry sold \$1.78 billion in products in 2021, supporting 28,992 legal cannabis jobs. Sales were up 73% over 2020. That's astonishing, because the state continues to lag in true revenue and jobcreation potential due to a dramatically constricted number of retail stores.

With 103 adult-use stores and 55 medical dispensaries, Illinois currently licenses only 12 stores per million residents. Compare that to states like Oregon (181 stores per million residents), Massachusetts (54 per million), or Michigan (51 per million), and Illinois' access problem becomes clear.

The good news: 185 more retail licenses most of them issued to social equity applicants — are in the pipeline. The bad news: They're being held up by lawsuits that threaten to put them on ice indefinitely, draining capital from startup companies and leaving thousands of new jobs uncreated.

Illinois job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**

Illinois cannabis growth in 2021

28,992 full-time cannabis jobs

12,155 jobs added

\$1.78 billion in cannabis sales

73% cannabis sales growth





Adult-use Medical





Physical therapists	0 070
•	
Firefighters	14,280
Bank tellers	18,640
Bartenders	21,850
Cannabis industry workers	28,992
Law enforcement patrol officers	29,190

Massachusetts

Massachusetts continues to operate a robust and well-regulated cannabis industry, with \$1.65 billion in total 2021 sales supporting 27,212 jobs.

That \$1.65 billion revenue figure represents an 81% increase over 2020 sales. Massachusetts continues to bring more licensed retail stores online, with 387 retail licenses approved as of early 2022, up from around 270 in late 2020.

That moderate expansion has allowed Massachusetts to continue migrating consumers away from the illicit market and has added to the state's job count in the legal regulated industry.

Massachusetts cannabis growth in 2021

27,212 full-time cannabis jobs

11,112 jobs added

\$1.65 billion in cannabis sales

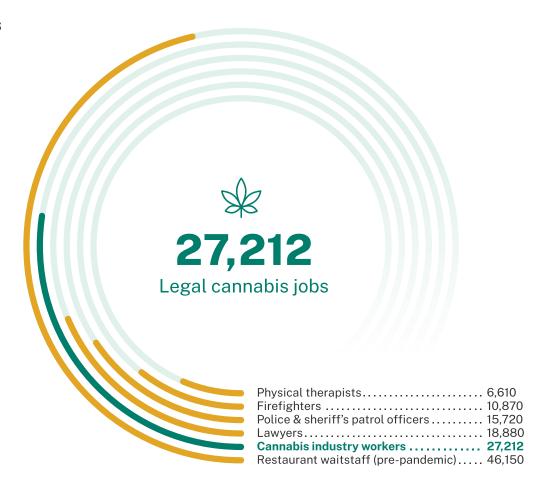
81% cannabis sales growth



Massachusetts job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**



Michigan

Cannabis sales in Michigan shot up 81% in 2021, reaching \$1.79 billion and supporting 31,152 jobs. That 72% annual growth in jobs puts Michigan behind only California and Colorado in terms of total state cannabis employment.

Michigan maintains robust medical and adult-use markets, with 402 dual (adult-use and medical) retailers, 47 adult-use stores, and 63 standalone medical provisioning centers.

With no cap on the number of retail licenses. Michigan's regulatory system is making strong progress in moving the state's full cannabis demand into the licensed and regulated market.

Local municipal prohibitions against legal sales continue to prop up the illicit market, however. Of the state's 1,700 cities and townships, only about 160 allow licensed adult-use sales.

Whitney Economics estimates Michigan's full cannabis demand, for a state of 10 million residents, at around \$3.2 billion — which means the current legal system is fulfilling just over half the demand. There's still a lot of illicit-to-legal market migration to come.

Michigan job comparisons

Data: US Bureau of Labor Statistics,

Leafly/Whitney **Economics**

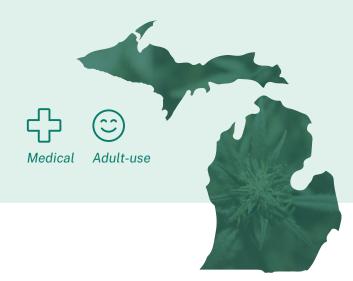
Michigan cannabis growth in 2021

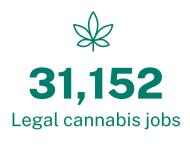
31,152 full-time cannabis jobs

13,074 jobs added

\$1.79 billion in cannabis sales

81% cannabis sales growth





Firefighters	6,570
Lawyers	13,790
Police & sheriff's patrol officers	
Electricians	20,450
Cannabis industry workers	31,152
Restaurant waitstaff	55,920



New Jersey

New Jersey's constricted and poorly regulated medical marijuana system sold roughly \$189 million in cannabis products last year, which supported 3,147 jobs.

New Jersey patients have long suffered under one of the nation's most overpriced and least accessible medical marijuana programs. The state closed out 2021 with 123,000 registered medical marijuana patients, served by only 23 operating dispensaries.

New Jersey's marijuana regulatory system is a mess. Nobody in state government tracks medical marijuana sales, so nobody knows how much was sold, or to whom. The state imposes a tax on medical cannabis — 4% during the first half of 2021, 2% for the second half — but officials with the New Jersey Division of Taxation could not tell us how much revenue those taxes brought in. In other words, the state tax department doesn't know where the cannabis tax money went.

New Jersey job comparisons

<u>Data: US Bureau of</u> <u>Labor Statistics,</u>

Leafly/Whitney Economics

New Jersey cannabis growth in 2021

3,147 full-time cannabis jobs

785 jobs added

\$189 million in cannabis sales

24% cannabis sales growth





Andical Adult-us





3,147

Legal cannabis jobs



Aerospace engineers	1,960
Dentists	2,390
Telemarketers	2,710
Cannabis industry workers	3,147
Printing press operators	3,550
Firefighters	
Police & sheriff's natrol officers	

New Jersey: The market gap

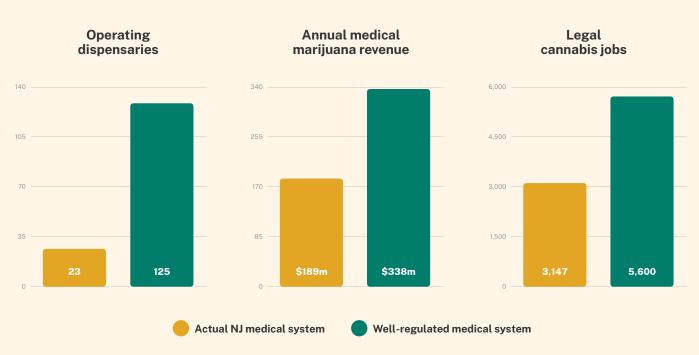
The chart below illustrates the gap between New Jersey's dysfunctional system and what a well-run, patient-focused system would look like. If New Jersey licensed as many dispensaries as Pennsylvania or Florida (roughly 14 per 1 million residents), there should be 125 operating today, not 23. Nationwide comparison data indicate that New Jersey patients sent \$149 million into the illicit market last year simply because they lacked reasonably priced medicine at a nearby dispensary.

With a strong rollout of state-licensed adultuse cannabis stores in 2022, New Jersey could effectively migrate much of today's illicit market into the legal regulated system. Within four years, the state could see \$1.7 billion in total (rec and medical) sales and support more than 25,000 jobs. For that to happen, though, those stores must actually exist — and New Jersey's cities and towns must welcome tax-paying entrepreneurs instead of opting out and thereby supporting local illicit sellers.



Photo courtesy of HeyLo

New Jersey: The market gap





New York

In 2021, New York's licensed dispensaries recorded \$149 million in sales in a medical market that now supports 2,358 jobs.

With only 40 licensed dispensaries to serve 20 million New Yorkers, the Empire State continues to be one of America's most constricted and underserved medical marijuana markets. That dysfunctional system drives patients — and jobs — to the illicit market.

In 2021, roughly 140,000 New Yorkers held medical marijuana cards. With reasonable access, that patient population would spend \$378 million per year, based on the national \$2,700 per year patient spending average. That would support more than 6,000 jobs. But it doesn't.

Instead, tax revenue data reveal that patients spend an average of \$1,130 per year at New York's state-licensed dispensaries. That's less than half the national average. New Yorkers aren't needing less medical marijuana, they're just obtaining it outside the legal system.

New York job comparisons

<u>Data: US Bureau of</u> <u>Labor Statistics,</u>

Leafly/Whitney Economics

New York cannabis growth in 2021

2,358 full-time cannabis jobs

604 jobs added

\$149 million in cannabis sales

35% cannabis sales growth





2,358

Legal cannabis jobs

Power plant operators Cannabis industry workers	
Baggage porters/bellhops	2,410
Chemists	
Dentists	6,270
Firefighters	. 14,200
Police & sheriff's patrol officers	. 55,590



New York: The market gap

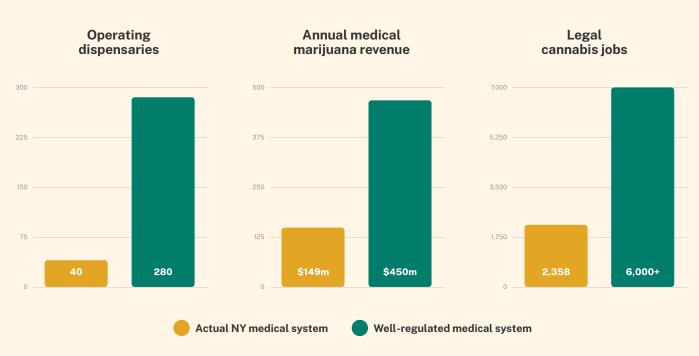
This chart illustrates what a well-regulated New York medical market would look like, compared to the state's actual market. If New York licensed as many dispensaries as Pennsylvania or Florida (roughly 14 per 1 million residents), there should be 280 operating today, not 40. Our data indicates that New York's registered patients send \$300 million into the illicit market every year because they lack access to a nearby dispensary.

As New York policymakers approach the opening of the state's adult-use market in 2023, it's critically important to recognize that consumers want to purchase legal, licensed, lab-tested products. Data from the state's medical market show that dramatically constricting supply doesn't lessen demand. Instead, it sends that demand into the illicit market, where patients are exposed to sketchy products, legal risk, and physical danger.



Photo by Justin McIvor

New York: The market gap





Oregon

Oregon consumers purchased \$1.18 billion in cannabis products in 2021, a 7% increase over the previous year. As of January 2022, Oregon's legal cannabis market supports 19,938 jobs.

As one of the nation's most mature adultuse states, Oregon's relatively slow and steady growth conforms to a pattern we're seeing play out in Colorado, Washington, and other early rec-legal adopters. After experiencing enormous growth in annual revenue during the first five years of adultuse sales, those markets are reaching a point of natural maturation as most illicit market consumers complete the migration to the legal market.

Oregon cannabis growth in 2021

19,938 full-time cannabis jobs

1,957 jobs added

\$1.18 billion in cannabis sales

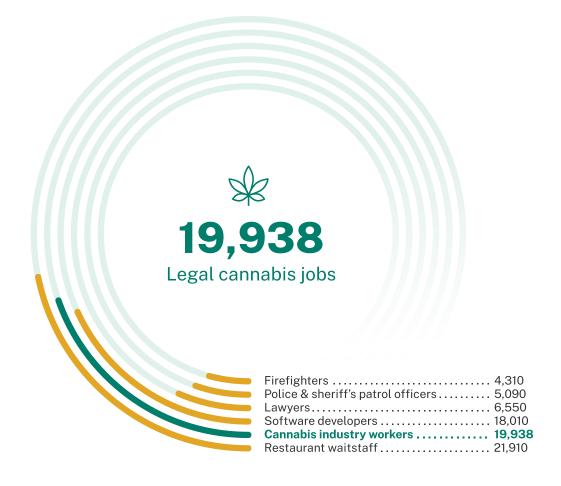
7% cannabis sales growth



Oregon job comparisons

<u>Data: US Bureau of</u> <u>Labor Statistics,</u>

Leafly/Whitney Economics



Methodology

The Leafly Jobs Report includes both direct plant-touching jobs and indirect jobs that support the industry or otherwise depend on the state-legal status of cannabis.

The Report does not include hemp or unregulated products made with hemp-derived cannabinoids like delta-8 THC.

Our report stands on the shoulders of economic studies of cannabis employment published in the adult-legal (post-2014) era. Those include the 2016 MPG Consulting report on Colorado, the 2017 Whitney

Economics survey of Oregon employment, the 2017 Washington State Institute for Public Policy report on Washington State, the 2019 Rockefeller Institute of Government report on New York, the 2020 WSU IMPACT Center report on Washington State, and the 2021 Oregon State Employment Department's study of Oregon's marijuana industry employment trends.

Those reports established a range of 15 to 17 jobs (direct plus indirect) created per \$1 million in retail revenue. That range sits comfortably within the national job creation average for all US industries.

With that as a starting point, the Leafly/
Whitney Economics team drilled down into
each state's specific regulatory environment,
investment climate, cannabis license data,
and past performance to shape employment
calculations. Macro events—like 2020's Covid
pandemic, investment scarcity, and hiring
pessimism—are factored in, as are other data
points like a state's number of active cannabis
worker cards. Added to that information are
spot-check interviews with cannabis business
owners and managers, as well as financial
statements published by publicly traded
cannabis companies.

Each year we update and improve our data inputs, and in some instances that new data results in minor adjustments to a previous year's calculation. This is one of the challenges of producing an annual report, and we acknowledge the emerging and iterative nature of our work. Job creation in the cannabis industry is a dynamic process, and every year we learn more about how regulatory mandates, financial markets, capital availability, vertical integration, tax rates, license caps, flower prohibitions, and industry consolidation affect payroll expansion and contraction.



About the authors

Bruce Barcott is a Leafly Senior Editor and the executive producer of Leafly Reports, an ongoing series of in-depth studies on cannabis legalization and the cannabis industry. He is the author of Weed the People: The Future of Marijuana Legalization in America and Time Magazine's special issue, "Marijuana Goes Main Street."

Beau Whitney is the founder and Chief Economist at Whitney Economics, a global leader in cannabis and hemp business consulting, data, and economic research. His work applying economic principles to create actionable operational and policy recommendations has been recognized by governments and throughout the economic, investment, and business communities.

Chris Kudialis is a Nevada-based journalist who covers politics, economics, and the cannabis industry in the American Southwest.

Max Savage Levenson is an editor, writer, and audio producer who has covered the cannabis industry for the better part of a decade.

He lives in Missoula, Montana.

Report designed by Sasha Beck



Jobs Report 2022

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