WHITNEY ECONOMICS

AUGUST 2026

WHITNEY ECONOMICS 2026 U.S. HEMP CANNABINOID REPORT

BEAU R. WHITNEY
Chief Economist

CONTENTS

EXECUTIVE SUMMARY

The U.S. hemp industry (Fiber, grain, seeds and cannabinoids) has a Total Addressable Market (TAM) of over $175 billion. This is twice the size of the poultry market and is 600% larger than the legal U.S. cannabis market ($29.1 billion). The hemp-derived cannabinoid market represents 22% of the entire hemp market. Despite this relatively small amount of market share, hemp-derived cannabinoids have been the subject of policy discussions throughout the United States.

The U.S. hemp market opened up in 2018 after being decoupled from marijuana upon the passage of the 2018 Farm Bill. This decoupling led to a surge in demand for non-intoxicating cannabinoids, mainly in the form of CBD. This surge included the increased acreage cultivated by farmers. Farmers had hope to cash in on the high prices for biomass experienced prior to the passage of the 2018 Farm Bill. Acreage licensed for hemp in all forms, increased by 568%, from 78k acres in 2018 to over 522k acres in 2019. The resulting surge in supply overwhelmed the post harvest infrastructure and excess inventories ballooned.

With excess supply came a crash in pricing and soon farmers and processors alike were faced with market prices at or below the cost of production. Searching for ways to monetize the excess inventories led to innovations in many sectors of the hemp industry, from construction and plastics as well as cannabinoids. Processors began converting non-intoxicating compounds into intoxicating products. With many different products and form factors available for the consumer, demand for hemp derived cannabinoids skyrocketed.

In a national survey conducted by Whitney Economics in 2023, the total addressable market for cannabinoids was estimated to be $28.4 billion. This far exceeded prior estimates made in 2019 and 2020. To support the industry business and job creation ensued.

Employment in the hemp cannabinoid sectors was estimated to be 328,000 workers earning $13.2 billion in wages.

As the industry continued to expand, federal efforts to regulate the industry stalled. Hemp operators advocated for some form of sensible regulation and standards development. They felt minimum standards related to age gating sales to restrict access by minors, product testing to ensure product safety and truth in labeling would address many of the concerns the general public had about potential harms to consumers. The hemp industry also requested that products be regulated based on intended use, so that the fiber and grain industry, and even the non-intoxicating cannabinoid industry would be regulated differently than the intoxicating side of the hemp-derived cannabinoid product sector. Despite these efforts federal regulations did not evolve and were limited to the USDA and farmers.

With the lack of federal stewardship, states began intervening, and started placing restrictions on the hemp-derived cannabinoid market. This was met with limited success as each state deployed different rules from state to state and supply simply shifted from one market to the next. Demand was being met either directly or via online sales. This led to the perception that the industry was unregulated and threatened public safety. However, in reality 74.5% of the total sales in the U.S. in 2026, come from states with some form of regulation and an additional 23.5% of total sales are derived in states that have imposed heavy restrictions. In 2026, the hemp-derived cannabinoid industry is far from being unregulated.

In 2025, the U.S. Congress attempted to address the lack of federal cannabinoid regulation by passing laws that redefined hemp more strictly than its original definition in 2018 (*https://www.congress.gov/crs-product/IN12620*). The legislation also set strict limits on amount of THC per container and set limits on intermediary product THC content. The laws also mandated that the FDA provide a list of potentially intoxicating compounds so that operators and state regulators could better understand the potential impacts of the many compounds present in the hemp plants and products.

However, when the federal legislation was passed, operators realized that the laws were so strict that they threatened to negatively impact a major portion of the industry. Laws as they were written threatened to produce negative externalities in the fiber, grains and seed industries as well. While there was a lot of speculation, there was very little data available to assess the impact.

Whitney Economics was asked to refresh the 2023 industry analysis and to conduct an economic impact analysis related to the changes to state and federal policies on the hemp cannabinoid industry. The results of the survey, conducted in June and July 2026, are summarized in this report. With 496 survey responses, the projections in this report are representative of the U.S. hemp-derived cannabinoid industry. The national survey received inputs from operators in 35 states and indicated that the hemp-derived cannabinoid industry TAM has grown 36% to $38.7 billion since 2023, has increased employment by 23,000 works to over 350,000 paying in excess of $13.8 billion in wages.

The self-reported survey data also indicates that if Federal legislation passed in 2025 remains in place, over 70% of businesses will either close or be forced to relocated out of the country, with employment declining by 225,861 workers, with $8.9 billion in lost wages. The total negative impact on the U.S. economy is a reduction of $59.6 billion in lost economic output with an additional an additional $27.1 billion in lost economic activity from the manufacturing and distribution sectors. **Based on the analysis, improved federal regulatory stewardship is required in order to balance public safety with continued economic growth.**

Key Highlights Contained in this Report.

Overall, when compared to the results from the 2023 survey and report, the hemp-derived cannabinoid industry has increased in total market potential, total jobs, wages and potential sales tax revenue. Average revenues have increased at the retail level from $815k per year to $859k per year. Given the recent federal and state legislative changes, the risks identified by the industry are substantially higher than in 2023. These changes are impacting growth, employment and tax revenue opportunities

Revenue, Jobs and Taxes

- **The total addressable market for hemp-derived cannabinoid industry is $30.2 – $38.7 billion**
- **The supply chain generates an additional $18.8 billion in business revenues, not including cultivation.**
- **From a business creation perspective, there are 44.0k – 76.0k hemp-related businesses total, including cultivation, with a midpoint of 53.9k businesses.**
- **At its midpoint, hemp employs 351,855 workers earning $13.9 billion in wages.**
- **Based on the total addressable market value, states have the potential to generate $1.7 - $2.1 billion in sales tax revenues from hemp-derived cannabinoid products.**

Business Sentiment

- **Based on the national survey results, 82.9% of hemp companies responded that they are profitable businesses, with an additional 9.1% breaking even. 8.1% responded that they are not profitable.**
- **Hemp has a national and international supply chain. The average firm sources hemp supply from 4.54 states.**
- **Overall, California, Oregon, Florida, North Carolina and Texas are the top five states that are cited as supplying their company.**
- **In the previous 6 months, 53.6% of responses stated that hemp sales have either increased or stayed the same**
- **Over the next 6 months, 50% of businesses feel that sales will decline.**
- **8.2% of businesses have a positive outlook over the next 12 months, with 51.7% stating that they doubt they will be in business and 40.1% responding their outlook is a toss-up.**

Business and Product Market Share

- Nearly all respondents indicated that they sell a variety of cannabinoids in a variety of form factors and could not survive on only CBD or other minor cannabinoids
- The top cannabinoids being sold by hemp operators are CBD (87.5%), THC Delta-9 (84.3%) and THCA (81.7%)
- CBD represents 29.2% of sales by operators, some in raw form, some in consumer products
- Flower, edibles, and vapes are the top selling formfactors, but beverage market share has increased from 3% to 9.7% since 2024.
- Online sales are significant, with respondents estimating up to 35% of all sales are supported online.

Policy Concerns

- Businesses stated the greatest risk to their business comes from state and federal legislation as well as the current federal regulatory ambiguity
- Regulatory and legal uncertainty is impacting future outlook for revenues and viability
- Much of this pessimism is associated with the uncertainty related to policies at the state and federal levels. This is impacting product development, infrastructural development, investment and even banking services.
- The industry feels that limiting policy to the farmgate (Policy that is only related to farm operations) is not working
- Operators would prefer common sense regulation, either by regulating a product based on its intended use (40.0%) or to regulate hemp as an ordinary commodity like corn or wheat (44.0%)
- Only 8.8% felt hemp should be regulated like marijuana

Impacts of Proposed Policies on the Hemp Industry and State Tax Revenues

- If current state and federal policies remain in place and are enacted in November 2026, survey responses indicated that up to 72% of all U.S. hemp-derived businesses will either cease operations or move to another country.
- Only 8.5% of the survey respondents indicated that they could survive only from CBD or other federally compliant cannabinoids.
- If current policies remain in place at the state and federal level, respondents indicated that an average of 83.1% of the total revenue will be deemed illegal.
- 95.6% of all respondents indicated that if current policy remains intact, their business will have to implement some form of staffing reduction.
- Among firms expected to close, the average lay off will be 19.1 workers.

Overall Impact

Given the high levels of potential business failures and relocations, the economic impact of the current hemp laws, if enacted is rather profound, a reduction of post harvest cannabinoid based revenues by $35.1 billion - $41.3 billion, of which $22.2 billion - $28.3 billion is taxable retail sales, 29,523 – 36,744 fewer employers (not including cultivation), along with 188,961 – 225,861 displaced workers, earning between $7.5 - $8.9 billion in wages.

State tax revenue potential declines by $1.2 - $1.5 billion, with an overall reduction of $46.6 - $59.6 billion in lost economic potential at the retail level.

Sector	Percent Move or Close	Revenue Decline	Lost Businesses	Lost Jobs	Lost Wages	Lost Taxes	Total Negative Impact Per Sector
Retail - Baseline	73.3%	($22,173,716,140)	(25,818)	(131,929)	($4,993,416,386)	($1,219,362,184)	($46,564,803,894)
Manufacturing	68.1%	($10,806,648,062)	(2,216)	(34,791)	($1,494,327,752)	$0	($22,693,960,931)
Wholesale	70.3%	($2,077,664,517)	(1,490)	(22,242)	($1,002,043,550)	$0	($4,363,095,486)
Total		($35,058,028,719)	(29,523)	(188,961)	($7,489,787,687)	($1,219,362,184)	($73,621,860,310)

Sector	Percent Move or Close	Revenue Decline	Lost Businesses	Lost Jobs	Lost Wages	Lost Taxes	Total Negative Impact Per Sector
Retail - Midpoint	73.3%	($28,375,779,763)	(33,039)	(168,829)	($6,390,056,421)	($1,541,562,413)	($59,589,137,502)
Manufacturing	68.1%	($10,806,648,062)	(2,216)	(34,791)	($1,494,327,752)	$0	($22,693,960,931)
Wholesale	70.3%	($2,077,664,517)	(1,490)	(22,242)	($1,002,043,550)	$0	($4,363,095,486)
Total		($41,260,092,342)	(36,744)	(225,861)	($8,886,427,722)	($1,541,562,413)	($86,646,193,918)

DISCLAIMER

Whitney Economics does not take a position on the legalization of cannabis or hemp nor does it take positions on proposed legislation; however, it does derive revenue from cannabis and hemp related companies and stakeholders. The views, opinions, and positions expressed in this paper are those of its author Beau Whitney, and do not necessarily reflect the views, opinions, or official positions of any of our affiliated organizations, groups or clients.

Note: While this survey and analysis was financed by a group of hemp-oriented businesses, the underwriters of this report did not have access to the data or findings and did not attempt in any way to influence or bias the outcome of this analysis. In addition, this report and its methodology has been peer reviewed by independent economists.

ABOUT THE REPORT

Publisher
Whitney Economics

Lead Author
Beau Whitney, *Chief Economist, Whitney Economics*

Report Design Team
Miguel Aldana, *Slow Fast Go*

Communications and PR
John McIsaac, *McIsaac PR*

Website Support
Jeff Wyborny, *Key Holder Media*
Kjell Ostlund, *The Other Room*

Peer Reviewers
Magnus Thorsson, *Johnson and Wales University*
David Gang, *Washington State University*
Tyler Mark, *University of Kentucky*
Rahul Arora, *Principal at Tennessee-based Astral Consulting Company*

PEER REVIEWERS

On behalf of all of us at Whitney Economics, we would like to recognize and thank our peer reviewers on this report.

Magnus Thorson, Johnson & Wales University

Magnus Thorsson, Ph.D. is a Professor at Johnson & Wales University in Providence, RI, His academic work examines consumer decision-making, innovation adoption, choice architecture, and emerging markets, with recent research focused on cannabis consumer knowledge and informed market participation.

Financial Disclosure: Dr. Thorsson has no financial relationship with the hemp industry or Whitney Economics and received no compensation for this review.

Dr. Tyler B. Mark, University of Kentucky

Dr. Tyler B. Mark is a Professor of Agricultural Economics at the University of Kentucky's Martin-Gatton College of Agriculture, Food and Environment. A central focus of his research and Extension program is the economics of industrial hemp. Since hemp's reintroduction as a commercial crop, he has examined its economic viability, production costs, profitability, financial risk, market development, and regulatory environment. His work has provided producers, agribusinesses, and policymakers with practical information for evaluating hemp as an emerging agricultural enterprise, including interactive enterprise budgets and analyses of production contracts, market conditions, and risk-management strategies. Through multidisciplinary and USDA-supported projects, he works to identify commercially viable markets and translate economic research into actionable guidance that supports farmers, processors, rural communities, and the continued development of the U.S. hemp industry.

Financial Disclosure: Dr. Mark has no financial relationship with Whitney Economics, but was compensated for this review.

David R. Gang, Washington State University

David R. Gang, Ph.D. is a Professor, Institute of Biological Chemistry and Director, Tissue Imaging, Metabolomics and Proteomics Laboratory (TIMPL) at Washington State University.

He is a plant biochemist and agricultural scientist whose research includes industrial hemp production, genetics, plant chemistry, metabolomics, crop utilization, and hemp-related research and policy issues. Gang has led and participated in multi-state and interdisciplinary hemp research programs addressing grain, fiber, essential-oil/cannabinoid production, crop rotations, product development, and agricultural applications.

Financial Disclosure: Gang has no personal financial interest in the hemp industry and no financial relationship with Whitney Economics; his relationships with hemp producers, companies, and industry organizations arise through university research, outreach, and stakeholder engagement.

Rahul Arora

Bachelor's in Economics and Political Science from the University of Alabama, with extensive study in international economics and politics at Wadham College, Oxford University, and executive education in leadership and management at Harvard Business School. He is a practitioner rather than an academic economist. A serial operator across manufacturing, technology, and hospitality, formerly leading Arora Technologies, Inc. to the top global position in its market, and currently Principal of Astral Consulting Company, providing CFO advisory and M&A diligence. His work in hemp centers on the three-tier Tennessee distribution system and the TABC/TDA regulatory transition, and he serves as Senior Advisor to the Tennessee Healthy Alternatives Association.

Financial disclosure: Arora holds no equity in any hemp business. He is engaged as an independent contractor providing financial and strategic services to licensed Tennessee hemp operations whose economics are affected by the market this report examines, and serves in an advisory capacity with the Tennessee Healthy Alternatives Association. He has no financial relationship with Whitney Economics and received no compensation for this review.

OBJECTIVE

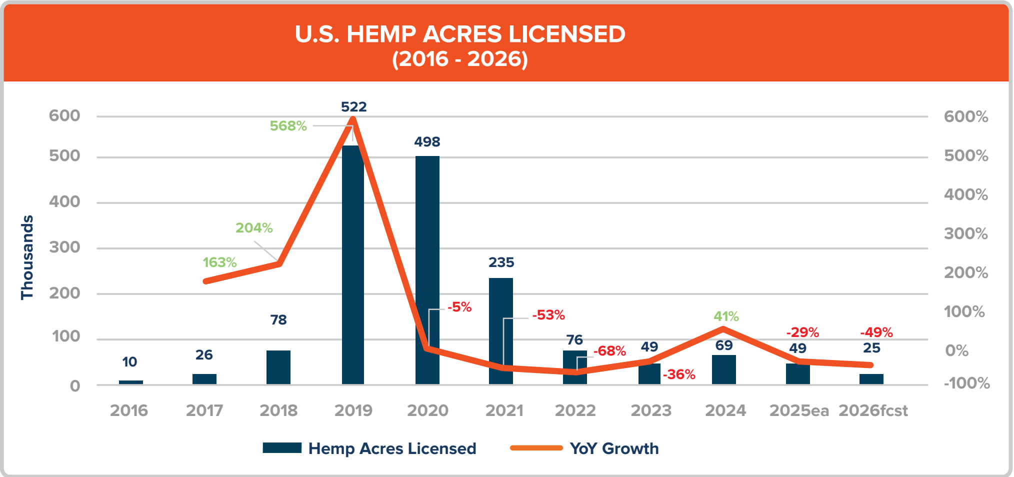
The objective of this report is to provide a quantitative and qualitative analysis of the U.S. hemp-derived cannabinoid industry, based on a national survey deployed in June and July 2026. It is intended to estimate the total addressable market for hemp-derived cannabinoid products, broken down by state, provide employment, wage and tax revenue estimates and to compare the 2026 results to the results of a similar survey conducted in 2023. It will also provide an analysis of the potential impacts that proposed state and federal legislation would have on the hemp industry.

INTRODUCTION

With its diversity of uses, hemp is a major agricultural crop that supports multiple industries. Globally, hemp is conservatively estimated to have a Total Addressable Market (TAM) value of $575 billion[1]. This includes opportunities in automotive industry, construction, plastics, semiconductors, pulp and paper, textiles, beverages, seeds, animal feed, and food for human consumption. The U.S. TAM for hemp (Fiber, Grain and Cannabinoids) is estimated at over $175 billion. This is 600% larger that the legal U.S. marijuana market. Once enabled and supported legislatively, the hemp industry could become a major contributor in multiple traditional industries and provide sustainable solutions across the globe.

As recent as 2019, the U.S. ranked 1st globally in total hemp acres licensed. At that time, the total number of acres licensed for hemp in the U.S. (522,193 acres) was nearly as much as the entire rest of the world combined (652,819 acres). With recent federal regulatory ambiguity and uncertainty at the state levels, the number of acres has declined significantly (88%). The U.S. ranked 4th global with 63k acres licensed in 2025 and at 25,000 acres is projected to slip further to 10th place behind such countries as Russia, Pakistan, Afghanistan and Kyrgyzstan.

Acres licensed for hemp has fallen below pre-2018 farm bill levels, to levels not seen since 2016 as farming interest is low given the political and business risks, mainly due to the lack of a federal regulatory structure.



Source: Vote Hemp (2016 – 2018), Whitney Economics (2019 – 2026)

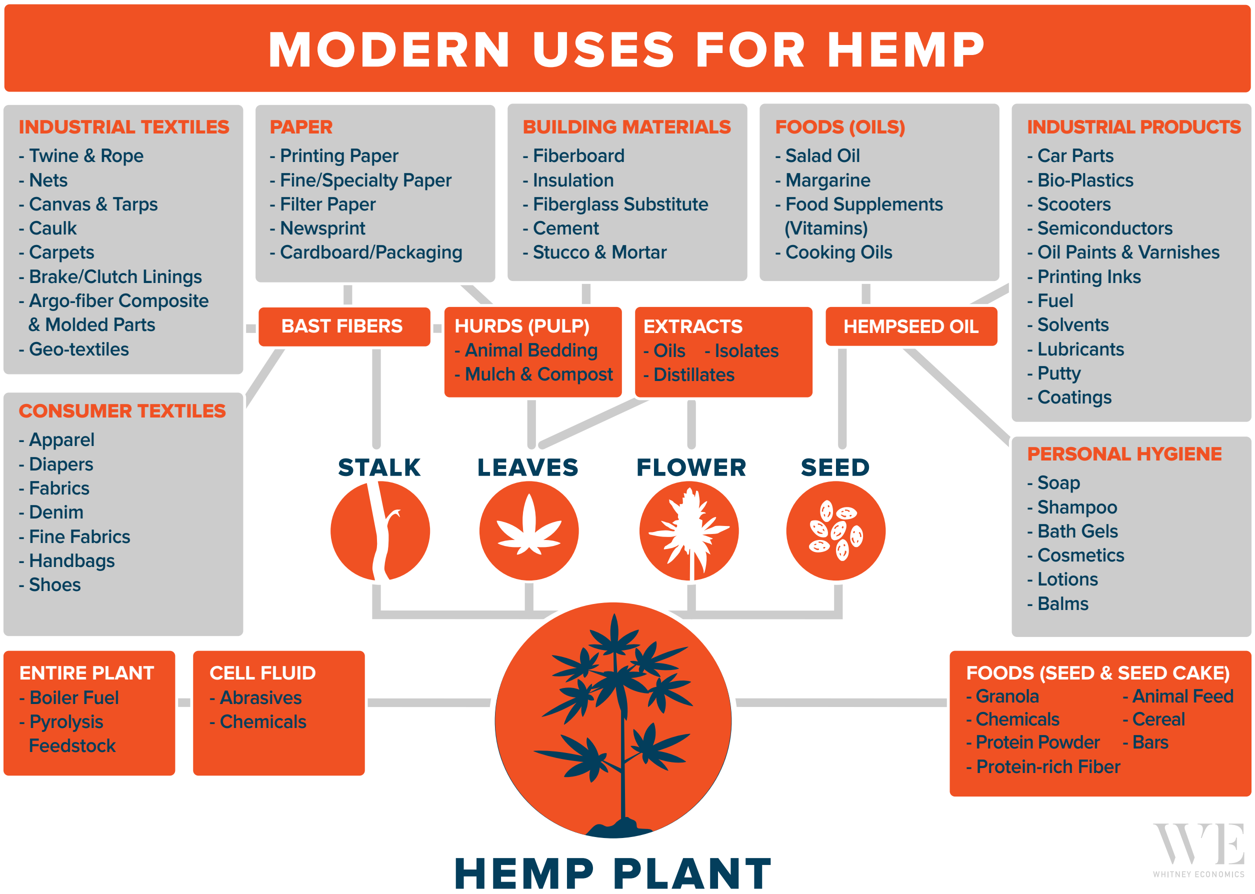
While the fiber, grain and seed industries have mostly flown under the regulatory radar, hemp-derived cannabinoids have been in the spotlight and under a microscope. Even though the hemp-derived cannabinoid industry has been advocating for greater state and federal regulations throughout this decade, both the state and federal legislative bodies have, for the most part, not supported these requests.

Meanwhile, throughout this decade, the hemp-derived cannabinoid industry has evolved from a niche market into a major force in the U.S. economy. It has established a national and international supply chain, has employed hundreds of thousands of workers and has been viewed as a disruptive force in multiple industries. This transformation has largely taken place in an environment with little regulatory oversight other than via the USDA.

The evolution via self-regulation has not gone without issues. Intoxicating hemp products have been widely distributed. Age verification has been lacking, resulting in intoxicating products being acquired by minors. Irresponsible actors have created branding that are also attractive to minors. Potency levels and the lack of homogeneity of cannabinoids in products have led to over consumption. Similar to marijuana, testing inconsistencies and even fraud have led to potential consumer safety issues. The lack of labeling and education has limited the ability for consumers to understand the effects products will have on them. All of these issues could be addressed through sensible regulations, however in the absence of such regulations, the potential of public safety and consumer related issues is at an all-time high.

Opponents to the hemp-derived cannabinoid industry have raised concerns about the safety of hemp products and have advocated strongly for the recriminalization of hemp and to again make it a schedule 1 drug. While some of these concerns are valid, there is also some opposition that is commercially motivated.

With so much activity related to a relatively nascent industry, policy makers are struggling to find an appropriate regulatory path that balances public safety and the growth and development of an emerging industry. What makes hemp policy so complex is the diversity of uses. While corn or soybeans may be used in a variety of ways, there are considerably more uses for hemp than most realize.



Source: credit to "www.torontohemp.com / Toronto Hemp Company (THC) and Jack Herer"

Most policy makers are more familiar with public safety frameworks or regulating the marijuana industry than supporting the growth of such a diverse industry. There is no other comparable industry to hemp in the US. As a result, they are inclined to default to structures they know such as public safety and strict regulation, However, with the growth and development of the hemp-derived cannabinoid industry outpacing the ability to regulate it, policies that are out of balance, skewing more towards prohibition and public safety. Development of policy for this nascent industry and its future develop depends on implementing policies that support future growth, minimize uncertainty, and protect consumers. As public policy is developed, if not disciplined in their deployment, these policies may end up doing more harm than good.

This is the conundrum and the reason for this report.

How did we get here: The Evolution of Hemp in the U.S.

The growth of the hemp-derived cannabinoid industry has accelerated significantly since the passage of the 2018 Farm Act. Also known as the 2018 Farm Bill, the legislation passed by congress essentially decoupled hemp from marijuana, particularly when it came to the drug designation under the Controlled Substances Act (CSA). The decoupling, in effect, designated hemp as an agricultural crop and opened the door for the expansion and commercialization of hemp products, allowed for interstate commerce, created opportunities in multiple sectors including agriculture, automotive, construction, semiconductors, textiles, animal feed, food for human consumption and nutraceutical types of products. This new opportunity also opened the door to investment.

2018 Farm Bill Opened Up Opportunities for Hemp in the U.S.

Given the 2018 Farm Bill was an agricultural piece of legislation, the regulatory focus began and ended at the farm gate. Jurisdiction for agricultural output was bestowed upon the USDA, with the intention that the FDA would provide guidance on food, drugs and supplements. However, the FDA did not provide such guidance, only stating that since a marijuana product containing CBD was designated as a drug, then any product derived from hemp would also be considered a drug.[2] This remains a legal debate, but this lack of deployment at the hemp product level of a federal regulatory structure created significant economic impacts as well. With the lack of a federal framework, states have stepped in to establish their own set of rules and regulations.

State by State Policy Differences Increased Risk and Uncertainty

It is notable that prior to 2018, previous legislation in the form of the 2014 Farm Bill established state pilot programs to examine opportunities in hemp. Each state developed their own individual framework for their program. It too enabled the opportunity for interstate commerce, however with each state having its own set of rules, including the definition of hemp, it created problems for companies wishing to conduct interstate commerce. With different rules and definitions from state to state these policies also introduced legal risks and uncertainty. In some cases, a trucker transporting legal hemp in one state to another state would be arrested in a third state for drug trafficking because of these rule differences. This issue was supposed to be permanently fixed in the 2018 version of the Farm Bill.

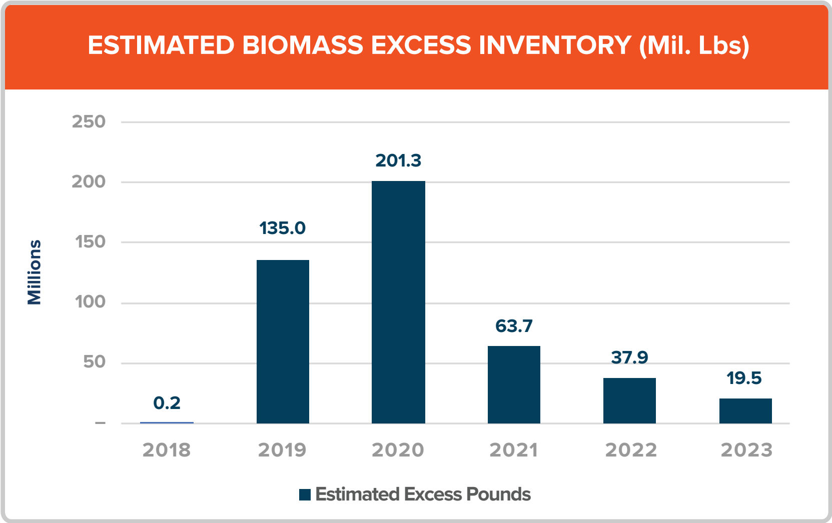
Farm Bill Reform Drove a Surge in Acres Licensed

During the period from 2014 – 2018, prices for CBD, a non-intoxicating compound derived from hemp and other plants, was in excess of $40,000 per kilo. Demand was greater than the supply coming from the state pilot programs. When the market opened up nationally, there was a surge in acres licensed. The surge increased acreage licensed by 568% from 2018 to 2019. This increased acreage from 78k acres to over 522k acres. Unfortunately, there was not enough infrastructure to support both the consumer demand and the manufacturing supply.[3]

After the initial surge in acres in 2019, that surge was again replicated by other states in 2020. Then beginning in 2021, licensed and planted acreage began to decline, especially after the increase in supply resulted in sharp declines in pricing for cultivated output.

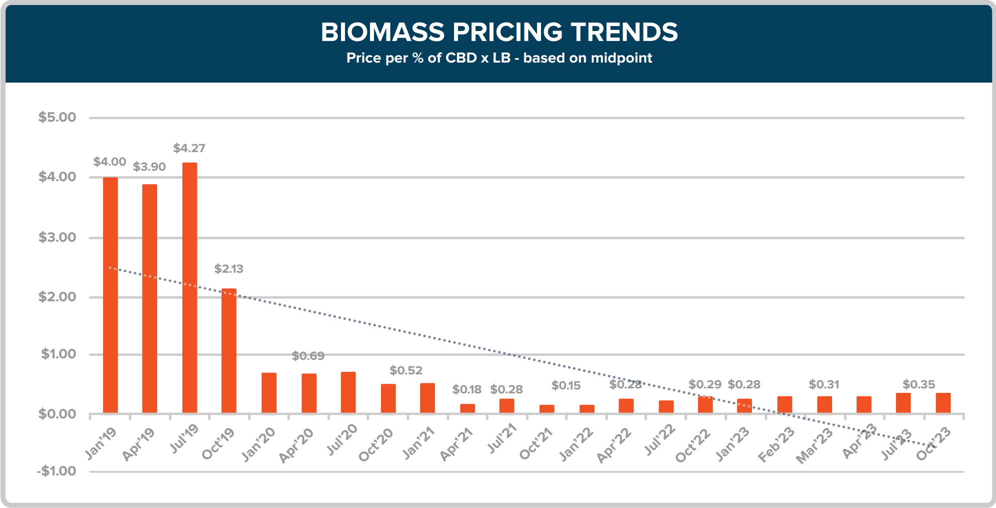
Surge in Supply Drove Excesses, Forced Innovations

For perspective, the surge in acreage resulted in more supply than capacity to process it. The demand was in place, but it could not be met due to the lack of infrastructure. With the lack of infrastructure, excess inventories accumulated and actually grew in 2019 and again in 2020. The below chart examines the raw biomass. Excess CBD was also an issue and an estimated 1.6 million kg of excess inventory accumulated by 2021.



Source: Whitney Economics Hemp Cultivation Surveys (2019, 2020, 2021, 2022)

The result of this excessive inventory position was a significant price decline for both biomass and processed oil. In some instances, prices fell below the cost of cultivation production. Given hemp is federally legal, farmers exited the market and pivoted to other commercial crops like corn, soy or wheat. This option would not be available to farmers if hemp is put back on the CSA scheduling or prohibited altogether.



Source: PanXchange

With so many hemp operators underwater financially and holding excessive inventory positions, farmers, processors and product manufacturers all had to find a way to monetize their inventory. Even if they sold the inventories at a loss, at least there would be some revenue. This led to a period of increased innovation. Starting in 2020 and 2021, there was a surge in innovative products. From gummies to vapes, tinctures to flower, products began to hit the market. As a result, the demand for hemp-derived products increased.

Innovations Drive Product Deployments, Increased Market Demand

One of the innovations that occurred and accelerated during this period was the conversion of CBD, a non-intoxicating compound, into various forms of THC, an intoxicating compound. By definition in 2018, The term 'hemp' means the plant Cannabis sativa L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis. Given that court rulings at the time concluded that anything derived from hemp is considered hemp throughout the value-chain, intoxicating hemp-derived products soon proliferated across the country.[4]

Data Limited on Early Revenues, no Baseline Prior to 2023

With the lack of North American Industry Classification System codes (NAICS) associated with the hemp industry, tracking the flow of goods and services related to hemp cannot be done through traditional national databases like using the U.S. Census or the Bureau of Labor Statistics (BLS). As a result, very little data exists related to the growth of the hemp-derived consumer products market. A national survey was conducted in 2023 by Whitney Economics and this report established a baseline for the total addressable market for hemp-derived products.

Results from 2023 Survey Indicate a $28.4 Billion Total Addressable Market (TAM)

In 2023, Whitney Economics conducted a national survey of hemp operators and published its findings in a report.[5] (*whitneyeconomics.com/reports*) The 2023 survey received responses from operators in 45 states. It tracked total revenues, the number of operators, jobs, wages and potential state tax revenues. It also noted that uncertainty remained in the market due to the lack of a federal regulatory structure. Based on survey responses the Total Addressable Market (TAM) of the U.S. hemp derived cannabinoids market was estimated to be $28.4 billion and employed 328,000 workers, generating $13.2 billion in wages. This report has served as a baseline for policy makers and operators both at the state and federal levels.

2026 Survey Findings Show an Increase in the Value of the U.S. Hemp Market

A follow up survey was conducted in 2026. The survey results from the 2026 national survey indicates that the U.S. Hemp TAM has increased from $28.4 billion to between $30.2 and $38.7 billion. This was mainly due to an increase in hemp-oriented businesses and an increase in the average revenue to retailer. While revenues have increased, employment and wages have remained consistent to the 2023 results (301k – 352k workers, $12.0 - $13.9 billion in wages).

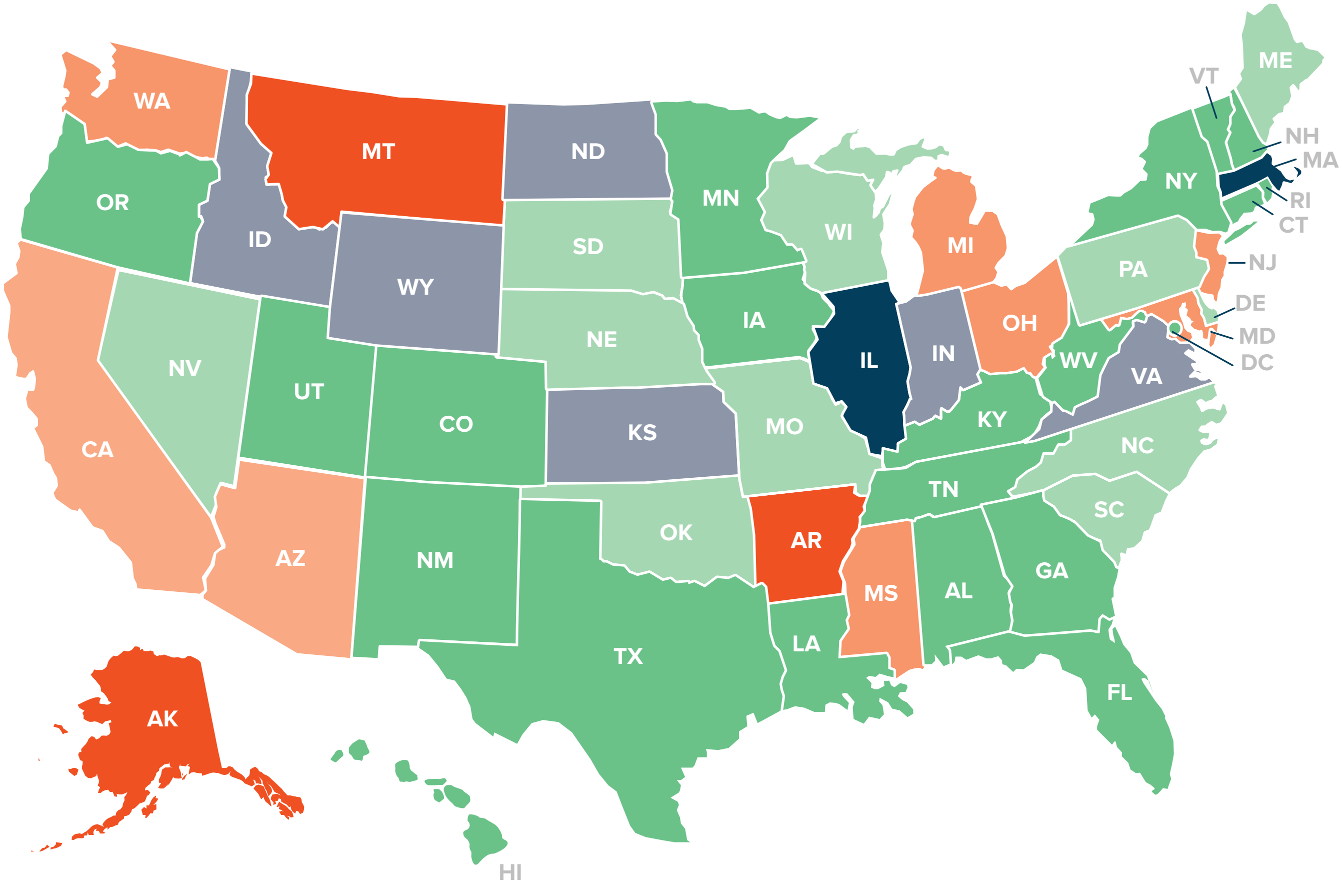
WHERE IS HEMP LEGAL, ILLEGAL OR RESTRICTED?

The legality of hemp-derived cannabinoids has been an extremely dynamic issue throughout 2026, particularly after the passage of the appropriations bill in the U.S. Congress in November 2025. The federal legislation, in part, redefined hemp as being 0.3% TOTAL THC, versus the previous 0.3% THC Delta-9 by dry weight. The appropriations bill also imposed a 0.4mg cap on THC per container as well as a cap on THC content for intermediary products. If enacted in November 2026, the limits will effectively render a majority of existing products illegal.

Although negotiations are under way to extend the enactment of these laws or to modify the hemp legislation, states have begun to enact legislation on their own. Several states have banned hemp-derived cannabinoids entirely, while others have imposed similar restrictions at the state level that aligns with the future federal rules. Other states have imposed other restrictions based on a variety of conditions such as THC content, cannabinoids that have been converted from CBD, or based on form factor. Other states have simply established basic regulations related to age gating, product testing and labeling.

Given how each state is so different in their approach, we have categorized the legal status into six very broad terms. A more detailed definition is provided in the appendix. Later on in this report we will bucket TAM, revenues, jobs and taxes into only three buckets; legal, restricted and prohibited. Overall, there are 27 states that give consumers legal access as hemp. Two other states have imposed prohibitions with some exceptions, mainly on non-intoxicating products. Eight states have prohibited hemp products from sales outside of cannabis dispensaries, while three have prohibited all hemp cannabinoid products.

The degree of legal status will fundamentally change federally in November 2026, unless legislation is signed into law that changes either the definitions, limited or date these new laws take effect.



State Legality Variances

20 Legal & highly regulated

11 Legal with light touch regulations

3 Prohibited

2 Prohibited with some exceptions

6 Legal but heavily restricted

8 Prohibited unless treated like marijuana

** Please see **Appendix 2** for definitions of all six categories.*

A NOTE ABOUT THE IMPORTANCE OF SUSTAINABLE STEWARDSHIP

Legality is all over the Map (Literally)

As one can see there is a significant difference in the levels of legality from state to state.[6] This is impacting the ability for businesses to build sustainable businesses or conduct interstate commerce. It is also making it difficult for ancillary businesses such as banks to offer their services as well. Ancillary businesses are reluctant to offer services if the legal and regulatory landscape is frequently changing or if there are high degrees of uncertainty and risk.

The Importance of a Regulatory Framework that Extends Beyond Cultivation

The lack of the deployment of a federal regulatory structure for states to follow is is viewed as poor regulatory stewardship. For example, the FDA, an agency responsible for consumer safety, is choosing to ignore federal law to simply publish a list of compounds related to hemp-derived cannabinoids. The lack of an overarching federal framework is creating unnecessary risks not only to the operators, but to public safety as well. Not only is it inhibiting the adoption of national standards, but it also enabling the introduction of potentially harmful products. The lack of a federal regulatory framework also jeopardizes the long termed viability of the industry.

Regulatory Stewardship is a Federal Responsibility

Given the size and scope of the cannabinoid industry, sustainable stewardship is the responsibility of the federal government. It would ensure that consumers are protected while allowing businesses to grow, flourish and contribute to the economy. A successful regulatory stewardship structure allows for growth while minimizing the negative impacts on communities. Viability, without negative impacts.

The Current Federal Regulatory Policies are not Achieving Public Policy Objectives

Current federal and state policies are not effective for sustainable stewardship and are negatively impacting the communities they are charged with protecting. It will only be through proper federal stewardship that public policy objectives will be met. Based on the input from the survey respondents, this is what they have been advocating for all along. However, bans and prohibitive policies run contrary to sustainable regulatory stewardship.

DATA AND ANALYSIS

Basic facts about compiling and publishing data on the U.S. hemp cannabinoid industry

Data on the U.S. hemp market, particularly data related to the industry that extends beyond the farmgate (data related to operations outside of cultivation), is particularly challenging to access and compile. The regulatory oversight is bifurcated between different state and federal agencies. The farther away from the farm one gets, the more difficult it is to obtain data. Data is not uniform from state to state and must be compiled manually. There are differences from state to state on which agency regulates the various parts of the industry. In addition, there are gaps in terms of what is regulated at the state level and what is reported. In multiple instances, despite the fact that data on hemp was being compiled in a given state, the general population was not provided access to the data unless a public records request was submitted. This created delays in the data gathering and policy analysis processes.[7] A uniform formatted dashboard for each state would help provide basic facts about the industry, enable economic, legal and regulatory analysis and help facilitate the educational process for consumers and policy makers alike.

Despite the challenges, Whitney Economics compiled data broken down by several key sectors; cultivation, wholesale/distribution, product manufacturing/processing and retail. For states that did not report retail licensure, data related to hemp retailers was purchased from a third-party source. While not promoted as being 100% accurate, the below data is what was able to be compiled via regulatory dashboards across the country. A summary of these data sources is compiled and provided in Appendix 16.

Overall, there are between 44k and 76k total businesses related to the hemp cannabinoid industry, of which over 80% are retailers. Some states that require permitting for hemp cannabinoid retail businesses include businesses such as convenience stores and gas stations while other states do not track data related to hemp-oriented retail businesses. Thus, the estimated total number of businesses can range significantly. In terms of this analysis though, Whitney Economics chose to utilize regulatory data on cultivation, manufacturing and distribution, while leveraging a combination of regulatory and private data on retail. As such, we believe the total estimated number of hemp related businesses to be conservative and understated.

Total number of hemp related businesses in U.S.

Whitney Economics was able to validate manufacturing, wholesale and cultivation permit and license volumes from state regulators; however, we were forced to use a range of retail estimated businesses from both regulators and third-party data providers to complete the supply chain. Even with the higher estimate for retail, we think the upper bound for retail is conservative as there are many grocery and convenience stores, wellness centers, hotels and spas that could technically be classified as hemp-oriented retailers. We used the low and midpoint estimates in our revenue analysis for this report. For perspective, the 2023 midpoint estimates were based on a total of 33,607 total retailers.

Estimate	Retail	Product Mfg / Processor	Wholesale / Distribution	Cultivation	Total
Retail - Low	35,198	3,252	2,119	3,466	44,035
Retail - Mid	45,043	3,252	2,119	3,466	53,880
Retail - High	67,474	3,252	2,119	3,466	76,311

HEMP CANNABINOID SUPPLY CHAIN REACH

Given the fact that hemp is defined as a legal agricultural commodity, hemp previously was sourced by businesses from all 50 states. With state level restrictions being recently legislatively imposed, there are fewer and fewer states to source from. Regardless, with hemp being federally legal, businesses can conduct interstate commerce, which allows companies to source raw materials from around the country. It also allows for companies to create economies of scale and develop a national market. Not only are companies sourcing raw plant materials at the state level, but also raw material ingredients derived from hemp. In this sense, there is still a significant national supply chain associated with the hemp industry. Based on the results from the survey, the average number of states that each company sources supply from is 4.54 states, with a minimum value of 1 state and a maximum of 38 states.

The key point is that hemp has not only a local and regional impact but a national impact. Not only are hemp cannabinoids influencing the local state economy, but they are influencing adjacent state economies as well. Therefore, any state related legislation that restricts trade in a state will also have a negative economic impact on adjacent states as well.

> *Unlike adult-use and medical cannabis, hemp-based products can be sold in all traditional distribution channels and retail outlets.*

WE

TOP STATES FOR THE HEMP SUPPLY CHAIN

The survey asked about the top three states that cannabinoid operators sourced product from. The intention of this question was to assess the level of interstate trade that was occurring from one state to another. The fact that respondents indicated that they sourced product from 4.54 states on the average was telling, but Whitney Economics wanted to dig more into the details about which states were supplying a majority of the national hemp supply.

Based on the responses, there were a number of states that were listed as one of the top three states that supplied products for retail and distribution. Despite being very restrictive states, California and Oregon topped the list of states that help supply the national hemp cannabinoid market. Hemp friendly states like Florida and North Carolina also were included in the top five states while Texas rounded out the top five. States that have helped promote the hemp supply chain such as Colorado, Tennessee, Wisconsin and Kentucky were also in the top ten. Illinois at number 10, was listed as a result of the state being a major distribution hub for the Midwest region.

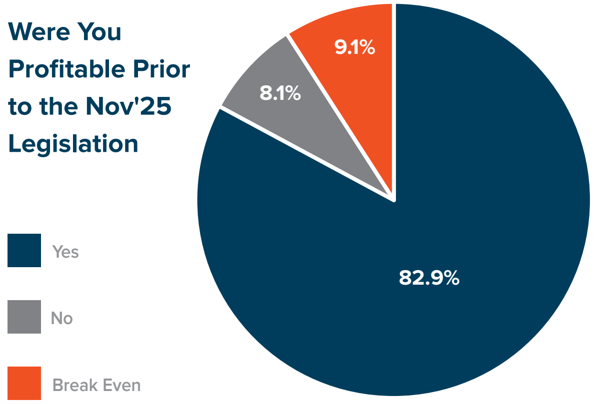
State	Percent of Respondents
California	19.2%
Oregon	12.5%
Florida	12.3%
North Carolina	10.6%
Texas	9.7%
Colorado	9.3%
Tennessee	3.5%
Wisconsin	2.6%
Kentucky	2.1%
Illinois	2.0%

The fact that the top ten list includes states from the east coast, west coast and the Midwest indicate that the hemp industry is a geographically diverse industry.

HEMP BUSINESS SENTIMENT AND PROFITABILITY

When it comes to business acumen, hemp operators are some of the most profitable businesses. Whilst small businesses on the average are 66% profitable according to the SBA[8], over 82% of hemp businesses are profitable along with an additional 9.1% that are breaking even. The fact that 92% of respondents indicate that they are profitable or breaking even is an indicator that hemp-derived businesses are thriving and surviving in an economy that is challenging due to macro-economic factors such as high labor costs, high input costs and macro level inflation.

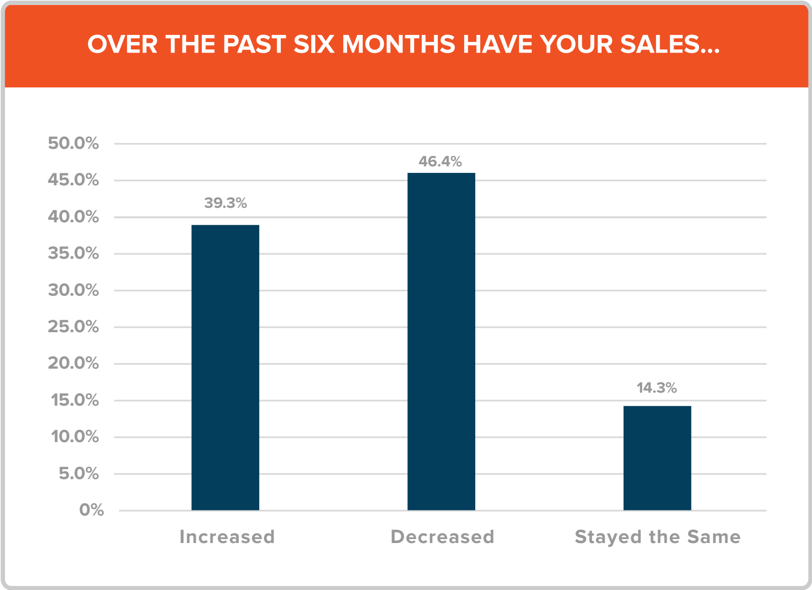
Were You Profitable Prior to the Nov'25 Legislation



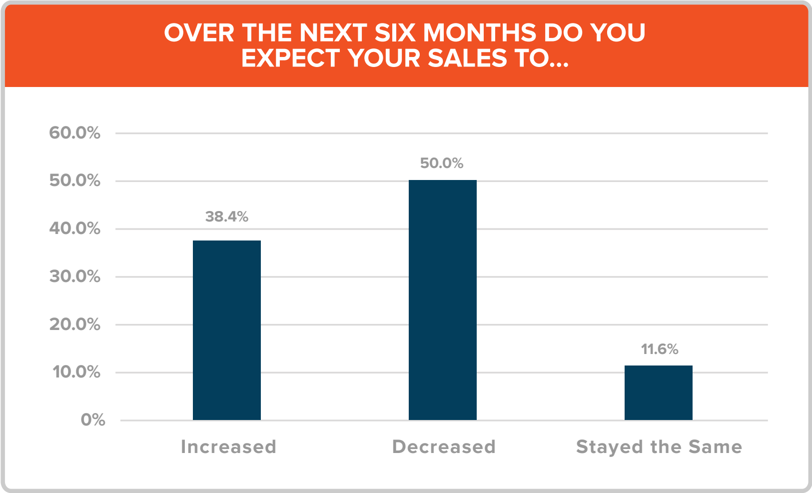
The fact that a large majority of hemp companies are profitable is often not considered from a policy perspective. Policy changes that could impact the profitability of the industry must be considered carefully.

SALES TRENDS: PAST & FUTURE 6 MONTHS

Business sentiment plays a major role across the entire U.S. macro economy. The U.S. legislation that was passed in November of 2025[9] had a suppressive effect on the hemp businesses. Roughly 46% of the responses indicated that sales have declined over time (November 2025 – June 2026)



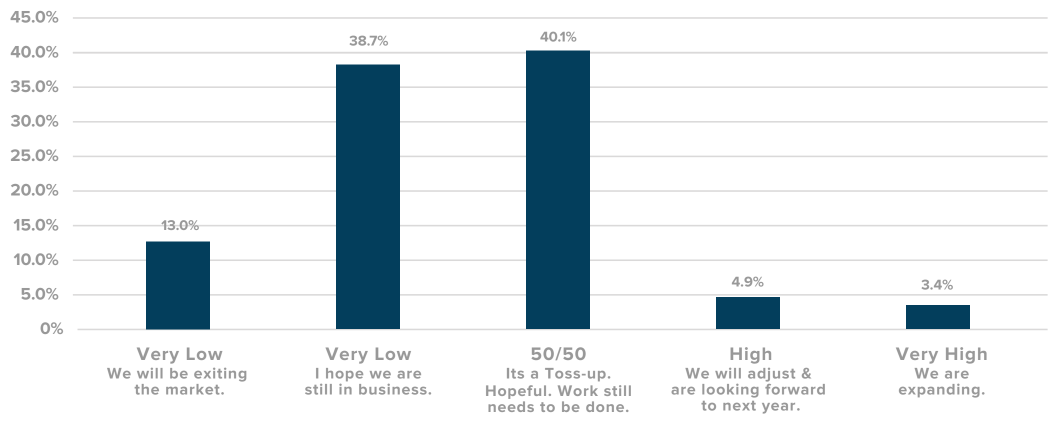
The outlook for the upcoming 6-month period indicated a decline in expectations. Half of the respondents indicated a forecast of decrease sales over the next 6-month period. This is a result of the uncertainty associated with state and federal changes in the definition of hemp and restrictions on THC amounts per container.



BUSINESS OUTLOOK: CONFIDENCE LEVELS FOR NEXT 12 MONTHS

Given the levels of uncertainty, it is no surprise that hemp-derived cannabinoid retailers and suppliers have a pessimistic view of the outlook over the next 12 months, with 8.2% viewing the outlook positively in the next 12 months.

WHAT IS YOUR CONFIDENCE LEVEL FOR YOUR BUSINESS IN THE NEXT 12 MONTHS?



Much of this pessimism is associated with the uncertainty related to policies at the state and federal levels. This is impacting product development, infrastructural development, investment and even banking services. **51.7% of respondents indicated that they had very low or low confidence for their business over the next twelve months.** With an additional 40.1% of respondents indicating that their confidence is a 50/50 toss-up.

REVENUES, JOBS, WAGES AND TAXES

Despite the level of pessimism in the future outlook, the hemp-derived cannabinoid industry has grown significantly since 2023. Increasing from a midpoint Total Addressable Market (TAM) of $28.4 billion, to a TAM ranging from $30.2 billion as a baseline to $38.7 billion at the midpoint. It is notable that the upper bound in 2023 was $35.8 billion, and the 2026 baseline and midpoint numbers hover near the 2023 upper bound. The consistency of the survey responses and revenue estimates provides confidence in both the 2023 and 2026 assessments.

TOTAL ADDRESSABLE MARKET (RETAIL)

The retail TAM is calculated by multiplying the total estimated retailers by the average revenue per store of $859k. For perspective, the 2023 average revenue per store was $815k. **Given that the total number of stores has increased from 33,607 in 2023, to a midpoint of 45,043 in 2026, and the average revenue per store has increased from $815k to $859k, it should be no surprise that the value of the entire retail sector has increased. This very positive economic trend is now on the verge of reversing.**

Retail TAM Revenue Estimates	Low	Mid	High
TAM from 2023 Report	$21,306,596,155	$28,425,525,322	$35,831,748,581
2026 Baseline	$20,713,257,826	$30,230,166,337	$39,772,812,516
2026 Midpoint	$26,506,826,304	$38,685,646,410	$50,897,403,096

PROJECTED SUPPLY CHAIN REVENUES
(Manufacturing, Processing, Wholesale and Distribution)

Based on survey responses, Whitney Economics was able to calculate the average revenue broken down by sector. By taking the average revenue and multiplying by the number of licenses in each sector, one can determine the total revenue for the supply chain, broken down by state (See appendix). By extending the revenues throughout the supply chain, the total hemp-derived cannabinoid revenues (post cultivation) are between $49.0 billion and $57.5 billion, of which $18.8 billion derived from the processing, manufacturing, wholesale and distribution sectors.

Total Hemp Revenue (excl Cultivation)	Retail	Manufacturing / Processor	Wholesale / Disti	Total
Baseline	$30,230,166,337	$15,859,106,897	$2,955,298,667	**$49,044,571,901**
Midpoint	$38,685,646,410	$15,859,106,897	$2,955,298,667	**$57,500,051,973**

The value of the supply chain may vary depending upon each local market as each state was calculated by using national averages versus local revenues. With the volume and diversity of survey responses, the national averages were used in lieu of state averages, as some states had limited numbers of responses.

EMPLOYMENT AND WAGE ANALYSIS

JOBS:

Overall, the hemp industry is a large driver of business creation and employment in the U.S. With a baseline of 44k and a midpoint of 54k businesses that are directly associated with hemp-derived consumer products, the employment is sizable. Based on data from the survey and applying the national averages to each state and hemp sector, there are approximately 301,548 – 351,855 jobs generated by the industry.

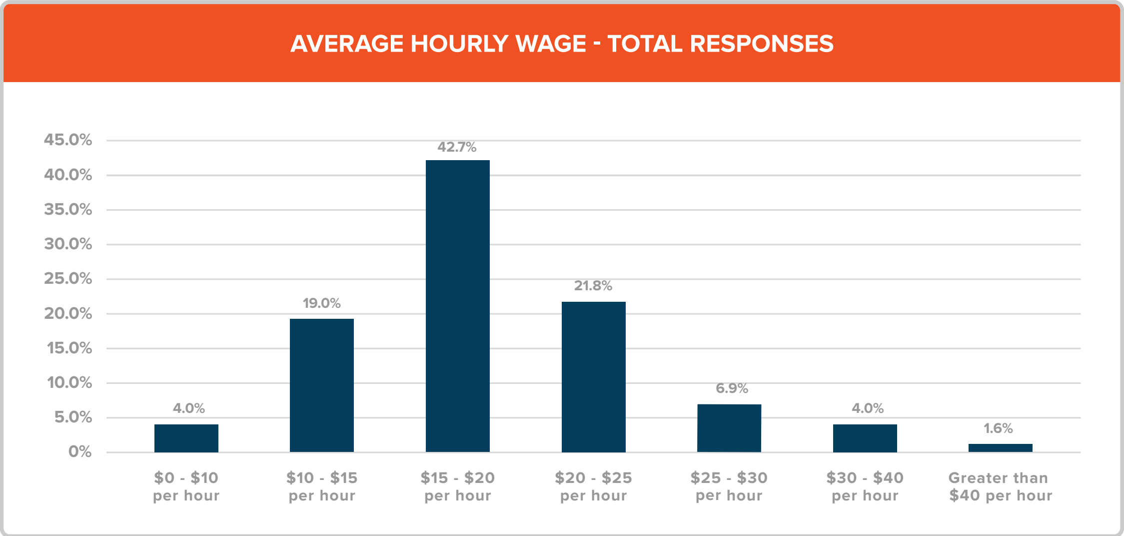
Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Baseline	179,863	51,056	31,637	38,993	**301,548**
Midpoint	230,170	51,056	31,637	38,993	**351,855**

The 300k – 350k estimate is in line with the 2023 projections of 328,000 jobs. Even though the number of firms has increased in the industry nationally, the operators have learned to become much leaner. This is particularly so at the retail level, but is also becoming the norm in the manufacturing and distribution sectors.

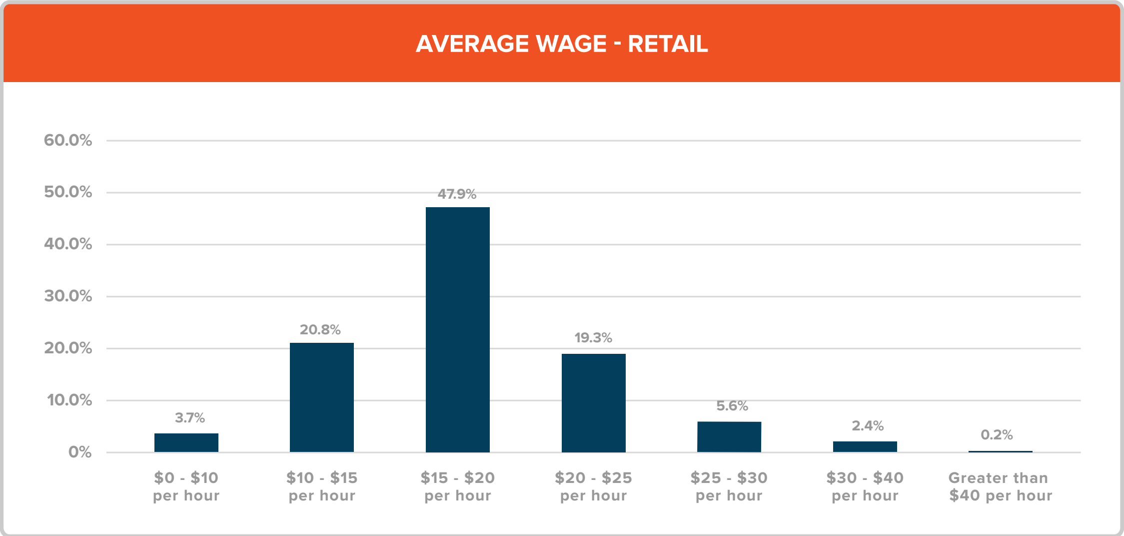
U.S. Hemp Sector	Ave Jobs per Firm
Retail	5.1
Manufacturing / Processor	15.7
Wholesale / Disti	14.9
Cultivation	11.3

WAGES:

When all survey respondents are combined into one dataset, the average wage for a worker in the U.S. hemp industry is $19.09 per hour or just under $40,000 per year. Whitney Economics was also able to calculate the average of the wages by sector. There was enough of a distribution across the country and by wage category to determine average wages. We took a weighted average approach. The wages were then applied to the number of businesses in each sector. Whitney Economics used the average wages of manufacturers and processors combined as they were similar. We took the same approach for the average wages associated with wholesalers and distributors.

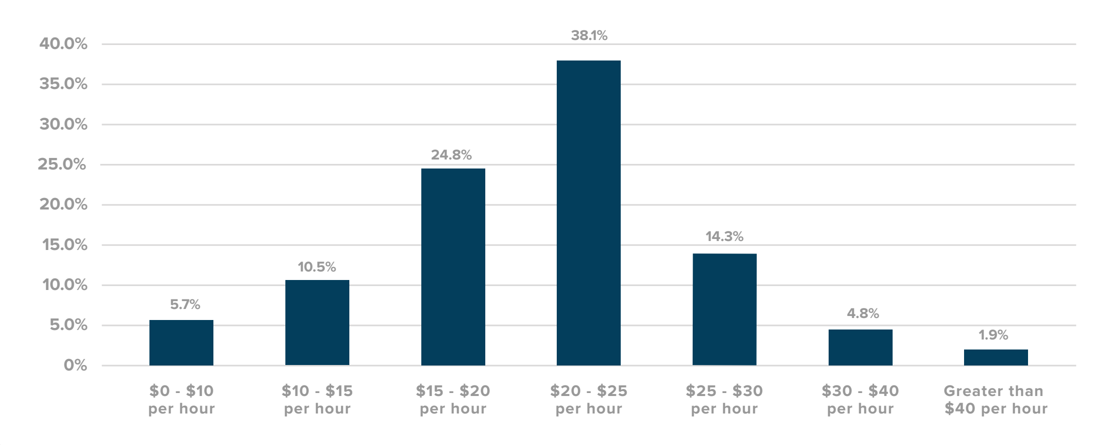


Overall, the blended average wage for the industry is $19.09. This was based on the distribution of wages in the survey. We feel this is representative of the overall industry based on the volume of survey respondents. It is also in line with previous studies and survey conducted in 2025 on a state by state basis.



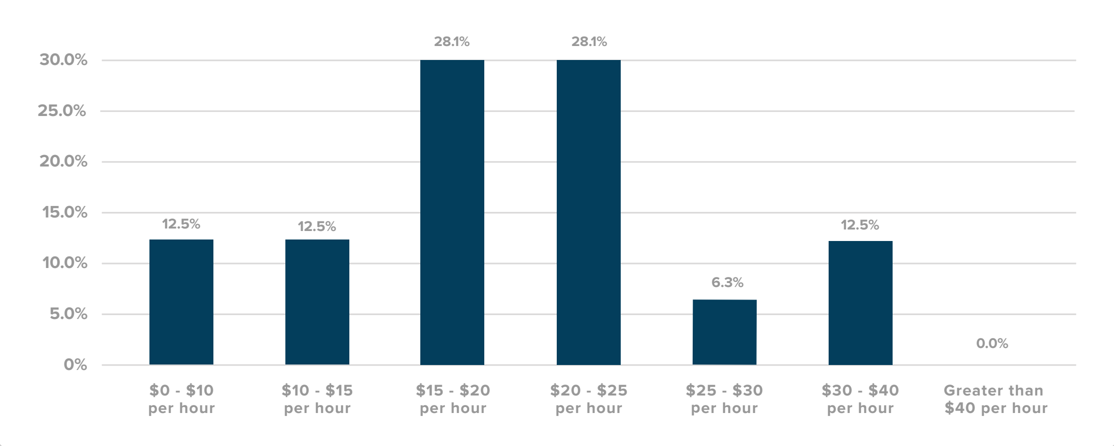
The national retail average wages are $18.20 per hour. There is an average of 5.11 employees per retailer and 2,080 hours per year, the average retailer pays $193,411 per year in wages.

AVERAGE WAGES - PRODUCT MFG

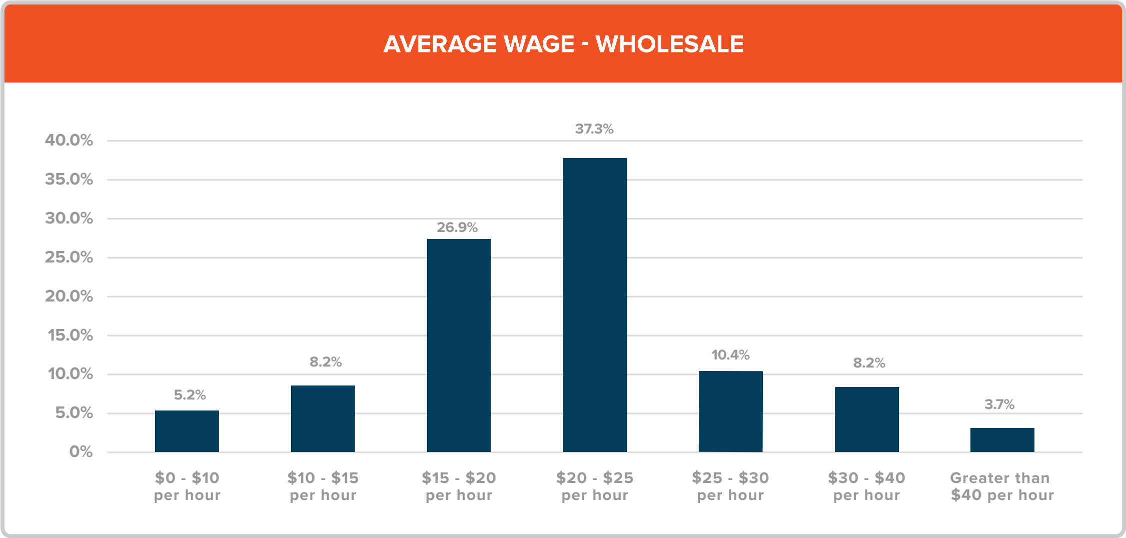


The product manufacturing sector (Maker of edibles, vapes, beverages, textiles, feed, bedding) tends to employ the most employees, especially if the manufacturing is not automated. The average wages in the product manufacturing sector are $21.14 and employs on the average 21.9 workers. Each firm pays, on the average $963,408 in wages per year.

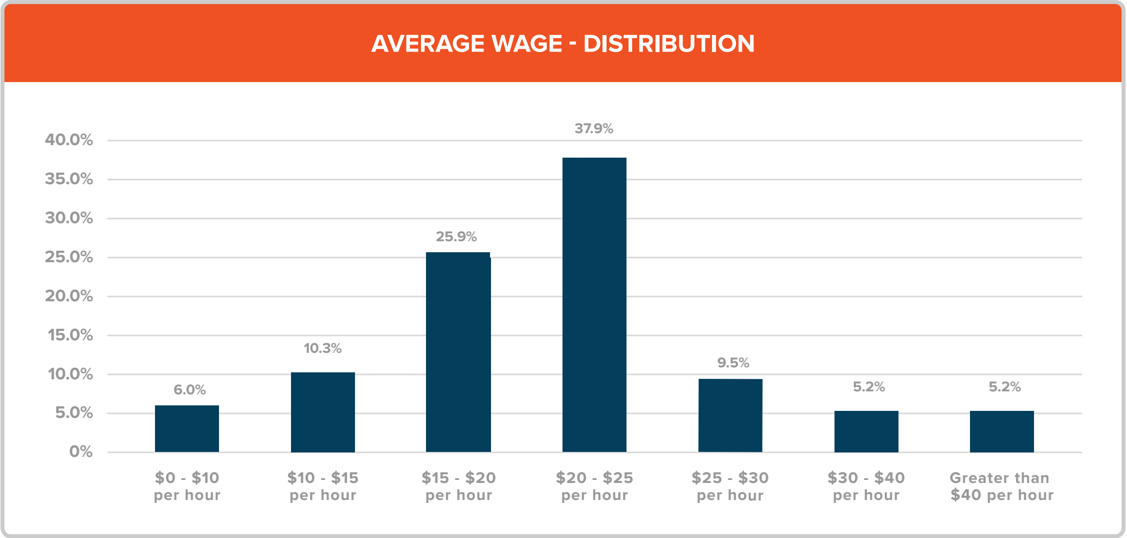
AVERAGE WAGES - PROCESSING



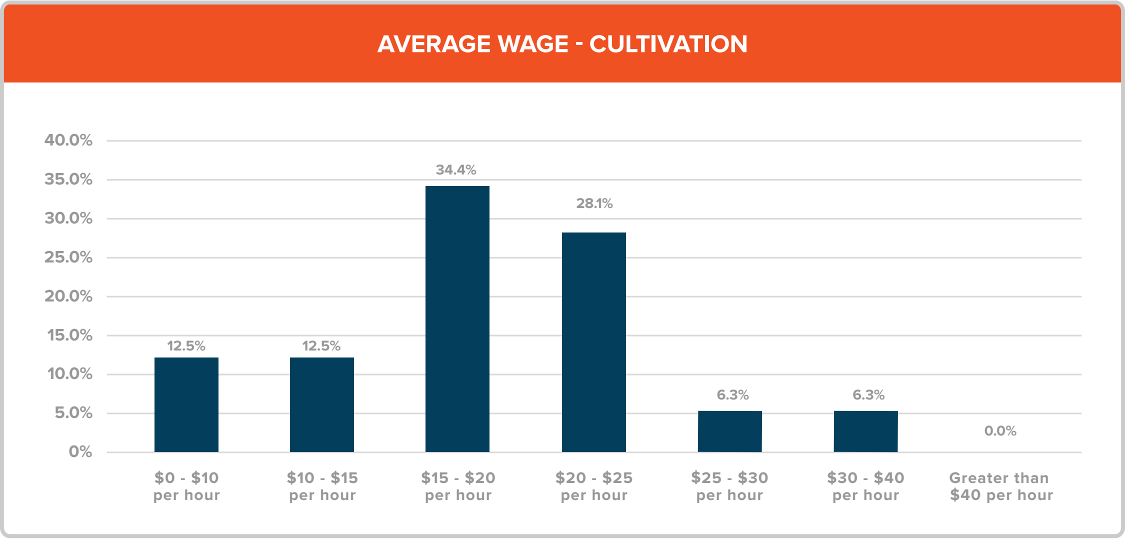
The processing sector (Drying, extraction, concentration, isolate generation, etc.) employs fewer workers than the product manufacturing sector, mainly by definition. Processors in some states are working closer to the farm than a product manufacturer to perform many of the harvesting and drying functions. When it comes to each state's labor demand for this sector, it depends upon the types rules and regulations are deployed at the farm. Some farms do not require as much labor, while some may be forced to deploy workers to manually weed or harvest the farm. The amount of labor required to process a harvest has declined since 2018, due to the fact that there are fewer farms cultivating hemp and the average acreage has declined as well. Based on the survey responses, in 2026, processors average 9.5 workers per firm and pays $20.16 per hour.



The wholesale sector connects many of the suppliers with the retailers. The average wholesaler employs 9.5 workers and pays $21.88 per hour.



In many instances distributors and wholesalers perform the same function. Regulators in some states define them differently. The distribution sector connects many of the suppliers with the retailers. The average distributor pays $21.44 per hour. It is interesting to note that there is a large difference between the number of employees at a wholesaler (9.5) versus the number of employees at a distribution company (20.4). Part of this may be attributed to the fact that distributors may be affiliated with a product manufacturer who also employs over 20 workers, thus commingling the employees.



Cultivation numbers are also tough to come by. Many of the cultivators in this survey also had more than one business or function. USDA published data often understates the value of the output and output volumes as the USDA data is self-reported and seemingly not validated against each state departments of agriculture data. The USDA data is often dated at the time it is published. Labor demand is also dependent upon the level of cultivator participation in the market. Farmers with high levels of excess inventory may choose not to plant in a given year. As a result, demand for labor is not only seasonal, but market and pricing driven. Based on survey respondents that indicated cultivation operations, the average pay was $19.06 per hour, which is in line with the overall industry average. Interestingly, this is also the sector that has the lowest margins.

In sum, when taken together and applied to the number of known licenses and permits, the total wages paid by the U.S. hemp industry ranges between $12.0 billion and $13.9 billion. This is roughly 20% - 25% of total revenues.

Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Baseline	$6,807,691,006	$2,192,974,493	$1,425,320,566	$1,545,849,864	**$11,971,835,929**
Midpoint	$8,711,776,921	$2,192,974,493	$1,425,320,566	$1,545,849,864	**$13,875,921,843**

STATE SALES TAX REVENUE POTENTIAL

Overall, if all states allowed for the sale of hemp-derived consumer products, there would be a significant contribution to each states' sales tax revenues. Combined it would represent between $1.7 billion - $2.1 billion to the states. (See appendix for state breakdowns).

Retail TAM by State	TAM	Total Sales Tax Potential
TAM - Baseline	$30,230,166,337	$1,662,397,110
TAM - Midpoint	$38,685,431,695	$2,101,663,423

Note: ***This tax revenue estimate of the potential is based only on state sales tax rates and does not include local taxes, business taxes, special excise taxes or wage or income taxes.***

TOTAL ECONOMIC IMPACT

In economics there is a term called the "Multiplier Effect". Basically, it states that for every dollar spent, there is ripple effect throughout the broader economy. This is the case with the hemp industry as well. Whitney Economics has taken a more conservative approach and has calculated the cannabinoid multiple to be 2.1x, the lower end of our published range of 2.1x to 2.4x.

For perspective, the construction industry in the U.S. has a 6.1x multiplier[10] from an employment perspective (induced jobs). The National Park system has a 10x multiplier[11], as every dollar invested in the national park system generates 10 dollars in the local economies.

Based upon our 2026 total potential retail revenue forecast of ***$30.2 billion - $38.7 billion*** *in retail sales, the total economic impact nationally is between* ***$63.5 billion and $81.2 billion.***

Whitney Economics has calculated the economic impact based on retail revenue, rather than employment or total supply chain sales.

Total Economic Impact	TAM	Multiplier	Total Economic Output
TAM - Baseline	$30,230,166,337	2.1	$63,483,349,308
TAM - Midpoint	$38,685,431,695	2.1	$81,239,406,559

TAM, Jobs, Wages and Tax Potential by Legality

Whilst we have examined the total addressable market, there are some nuances that must be called out in this analysis. There are different gradations of legality at the state level. Even if there is reform at the federal level, there are still some states that will enable legal sales, while other states maintain restrictions that may or may not put the state hemp industry at risk. Other states have already implemented bans on hemp and have thus defaulted the consumer support to grey market or online sales.

Of the $30.2 - $38.7 billion in total revenues, 74.5% of the market is supported by states that allow legal sales with a light regulatory touch or allow legal sales with heavy regulatory oversight. 23.5% of the state enable sales that face severe restrictions. The restrictions include limiting sales of cannabinoids to marijuana dispensaries, or only allowing certain form factors or specific cannabinoids to be sold in the market place. Less that 2% of all hemp-derived cannabinoid sales some from states where sales are strictly prohibited.

It is notable that of the 496 survey respondents, the perception is that 35% of all sales in their state is supported via on line sales. It is assumed that the percentage of online sales are highest in states where there are prohibitions.

Legality	TAM Baseline	TAM - Midpoint
Legal	18,651,011,199	28,836,021,286
Restricted	10,815,628,294	9,105,637,352
Prohibited	763,526,845	743,773,057
Total	**30,230,166,337**	**38,685,431,695**
Legal	61.7%	74.5%
Restricted	35.8%	23.5%
Prohibited	2.5%	1.9%

Hemp employment broken down by legality

Depending upon how federal policy unfolds, there are between 84k and 247k jobs at risk in legal and restricted states. Survey responses indicate that over 70% of all businesses in the U.S. hemp cannabinoid market are at risk of closure if federal policies remain in place, however, the risk to businesses and employment remains if restrictive state policies that align to federal policies are promulgated.

Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Midpoint
Legal	171,568	37,994	21,798	31,725	263,085
Restricted	54,176	12,937	9,839	7,099	84,051
Prohibited	4,425	126	0	169	4,720
Total	**230,170**	**51,056**	**31,637**	**38,993**	**351,855**

A breakdown of what defines legal, restricted and prohibited in listed in the appendix.

There is over 13 billion in wages paid in states that allow for sales of cannabinoid products or impose some form of restrictions on sales.

Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Legal	$6,493,736,110	$1,631,918,288	$982,051,924	$1,257,731,280	$10,365,437,602
Restricted	$2,050,546,623	$555,661,434	$443,268,642	$281,428,524	$3,330,905,223
Prohibited	$167,494,187	$5,394,771	$0	$6,690,060	$179,579,019
Total	**$8,711,776,921**	**$2,192,974,493**	**$1,425,320,566**	**$1,545,849,864**	**$13,875,921,843**

A NOTE ABOUT HEMP FROM TRIBAL NATIONS

Data on the level of Native American participation in the hemp industry is often difficult to come by. As sovereign nations, they do not always show up in federal databases. Despite this, Tribal Nations are playing a major role in the hemp industry.

The hemp plant has much more than a commercial significance to native communities. There is a long history with the plant and it is a part of native culture. As hemp policies have reformed since 2018, Native American tribes have begun developing a significant regional supply chains and are entering into agreements in other countries. The hemp plant is being viewed as a major tool for economic development.

The level of sophistication goes well beyond simply grown the plant for its biomass. Tribes are hubs for innovation; they are expanding their research into regenerative farming and are also applying it in industrial applications in such areas as textiles, bio-plastics and manufacturing. The Native American innovation centers are helping to support hemp operators across the country, even outside of Native American communities. Hemp is also being used as a tool to address many chronic issues in Native American communities by providing low-cost housing solutions, cannabinoids for healing and addressing what has become generational unemployment. While Native American communities have engaged with the U.S. hemp industry, they are also leveraging their independence to create opportunities that benefit their community and provide greater benefits to the industry at large. Native American hemp is an emerging part of the hemp industry that requires further study and analysis.

MARKET SHARE ANALYSIS: CANNABINOIDS & PRODUCT FORM FACTORS

Much of the policy discussion in the U.S. is centered around cannabinoids in general. However, very little market data is available related to the percentage of market share associated with certain specific cannabinoids. Some products are non-intoxicating while others are. It is the intoxicating products that have public policy makers concerned, particularly due to the limited federal regulations related to these products. Some opponents of hemp-derived cannabinoid products containing intoxicating compounds have claimed that these products are creating a public safety crisis, particularly when it comes to youth access and truth in labeling.[12] In ongoing policy discussions, all cannabinoids get lumped into the same bucket. Whitney Economics has begun tracking the market share of several hemp-derived compounds. It is important to understand the market demand for these products in order to assess what appropriate policy and regulations should be.

Based on the survey responses from operators in 35 states, we have calculated the total potential market for specific cannabinoids in the U.S. in 2026. Over the past three years, Whitney Economics has been tracking the market share of specific cannabinoids to help educate policy makers about the percentage of sales of the cannabinoids as well as the level of economic activity associated with specific form factors (flower, vapes, gummies, beverages, tinctures etc.) Market share related to cannabinoids as well as form factors is based on the weighted averages from survey responses. The weighted average percentages are then applied to the total sales in a given market. Market shares were then compared to previous analysis on individual states conducted by Whitney Economics.

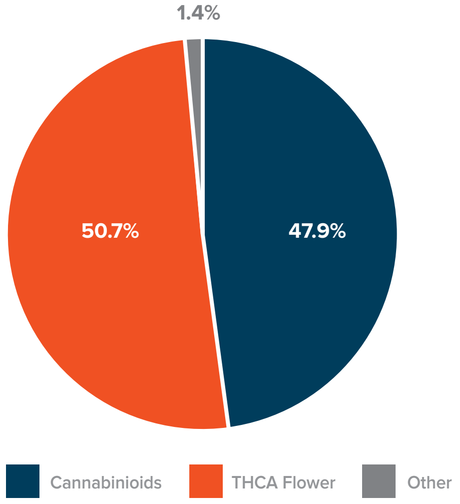
PRIMARY FOCUS OF HEMP-DERIVED CONSUMER PRODUCTS

Over the past five years, the market for THCA flower has increased significantly both in terms or market share and total dollars. For example, in 2025, THCA Flower in Texas accounted for 25.3% of the total sales. In 2026, the percentage share has increased to over 46%. Nearly 48% of survey respondents indicated that they are primarily focused on THCA flower. Another 51% indicated that they are focused more on cannabinoids more so than flower. Less than 1% of respondents indicated that their primary focus was fiber or grain, but we suspect this was due to the distribution of the survey more so than the make up of the market for grain or fiber.

The data related to cultivation intention, particularly THCA flower, is not reported accurately by the USDA. In fact, based on an internal analysis of the cultivation market, roughly 66% of acres were focused on cannabinoid products, whereas the other 34% were focused on fiber and grain. The market split analysis was conducted independent of the USDA surveys by compiling data from state departments of agriculture.

The data runs contrary to the USDA reporting as the USDA data showed a majority of acres were dedicated to fiber and grain and not cannabinoids. Part of this USDA discrepancy may be due to self-reporting and part of it may be due to underreporting due to crop failures.

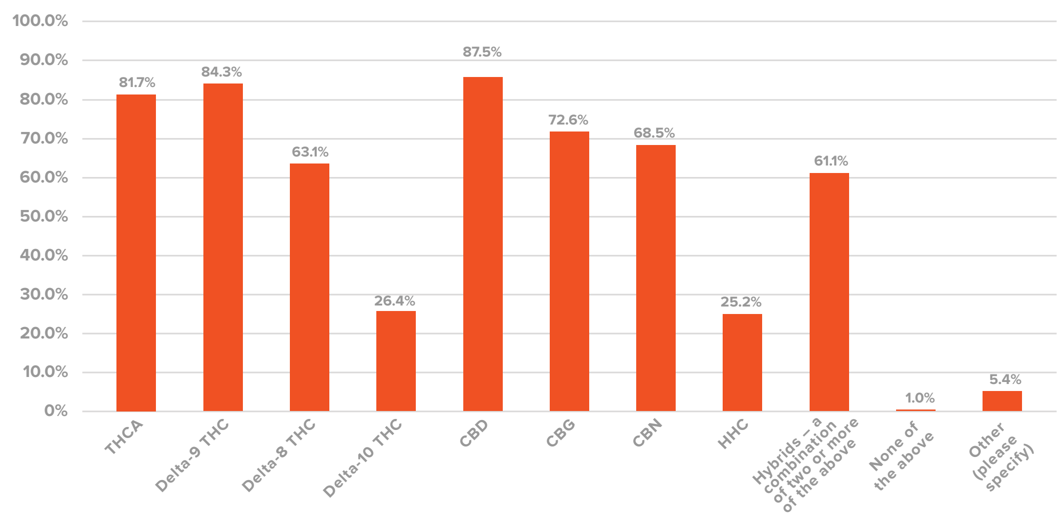
Primary Focus of the Business



TYPE OF PRODUCTS SOLD: WHAT ARE BUSINESSES SELLING?

Survey respondents indicated that they sell a variety of products and product types. This would indicate that a ban on one part of the market would have a significant impact on the rest of the market both in the retail sector as well as within the supply chain.

TYPES OF PRODUCTS SOLD



MARKET BREAKDOWN BY CANNABINOID

Based on the share of market, THCA flower is dominant along with delta-9 THC. The non-flower cannabinoids could be considered ingredients in products. Non-intoxicating cannabinoid products represent over $6 billion at the retail level, but drive significant revenues within the supply chain as it is a main ingredient in the conversion to the various THC compounds. Delta-9 THC is a main ingredient in beverages, gummies and vapes. Delta-8, delta-10 and HHC are declining in market share when compared to state results from 2025. The declines are likely attributed to bans or restrictions on the products at the state levels due to consumer safety concerns.

Cannabinoid - Share of Market	Baseline - 2026	Midpoint - 2026
THCA	$13,351,061,349	$17,085,303,669
Delta-9 THC	$6,366,428,117	$8,147,094,439
Delta-8 THC	$2,117,464,167	$2,709,711,037
Delta-10 THC	$304,317,688	$389,434,217
CBD	$2,334,378,242	$2,987,295,175
CBG	$1,011,202,381	$1,294,031,936
CBN	$865,104,372	$1,107,070,855
HHC	$362,374,103	$463,728,795
Hybrids	$3,517,835,919	$4,501,761,573
Total	**$30,230,166,337**	**$38,685,431,695**

Note: *For clarification purposes, hybrids are defined as products containing two or more cannabinoids and are considered a separate category from other specific individual cannabinoids. This breakdown was self-reported by the survey respondents and left up to each respondent to define.*

MARKET BREAKDOWN BY FORM FACTOR

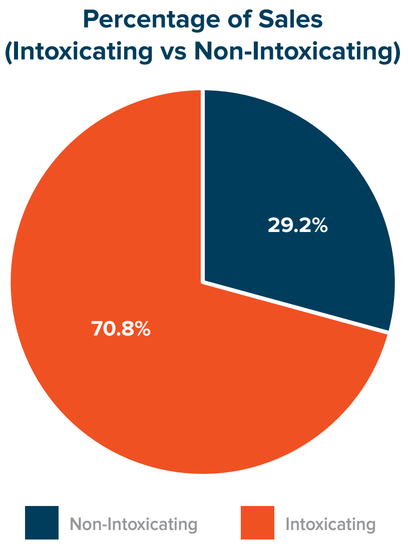
In terms of overall market share, THCA Flower is a leading form factor, while edibles drive the second most revenue. Beverages have continued to increase in sales. Sales of THC beverages in 2024, for example was estimated to be in the $1.0 - $1.3 billion range[13] representing a roughly 250% increase in revenues for this product in just the past two years. This beverage increase represents a quarter of the total increase in total market value from the 2023 report to this one.

Form Factors	Baseline - 2026	Midpoint - 2026
THCA Flower	$11,435,179,028	$14,633,556,173
Concentrates	$2,107,249,380	$2,696,639,213
Edibles	$7,184,468,869	$9,193,938,154
Vapes	$4,640,141,535	$5,937,971,905
Beverages	$2,944,558,600	$3,768,140,715
Topicals (Oils, creams, etc)	$1,324,574,904	$1,695,053,590
None of the above	$89,575,569	$114,629,523
Other	$504,418,453	$645,502,422
Total	**$30,230,166,337**	**$38,685,431,695**

PERCENTAGE OF NON-INTOXICATING SALES

Survey participants were asked the following question, ***"What percentage of your revenue comes from non-intoxicating hemp-derived cannabinoid products?"***

Some responses were as high as 100%, while other responses were zero. The average of the 496 responses to this question was 29.2%.



In sum, the retailers and suppliers in the hemp-derived industry rely on product and ingredient diversity in order to satisfy the demand. Non intoxicating compounds are a significant contributor to the market as they are in a large number of consumer products at the retail level, but also serve as a base ingredient. Given the diversity of products and the reliance of these products throughout the supply chain, policies focused on one part of the industry must be considered closely for the potential impact on other sectors.

POLICY

Despite the legal reform experienced via both the 2014 and 2018 Farm Bills, discussions related to hemp policy have been constant since the de-coupling of hemp and marijuana in 2018. The rapid ascension of the hemp-derived cannabinoid industry has only amplified the discussion.

The main crux of the policy discussion has been where regulatory jurisdictions begin and end, and how can policy makers balance public safety with supporting the growth and development of a nascent industry.

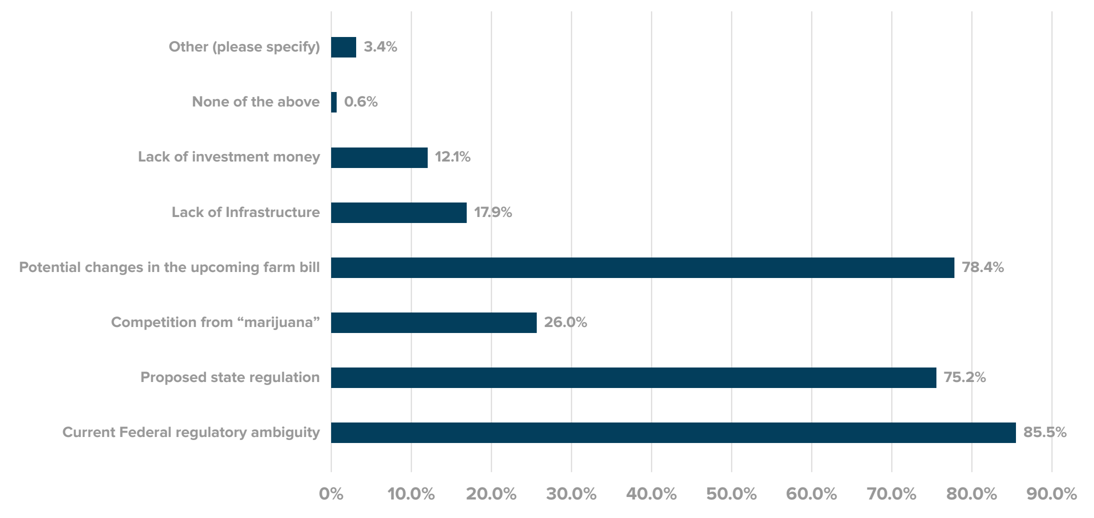
Ever since the 2018 Farm Bill was passed, the definition of hemp begins and ends at the farm gate. By not regulating at the product intention level (also referred to as the intended use), entrepreneurs and innovators have used this definition to develop a hemp-derived cannabinoid market worth tens of billions of dollars. While the federal government has, until November 2025, maintained the status quo, states have stepped in and intervened. This resulted in a patchwork of state rules and regulations (ex. New Jersey, Missouri) that are reminiscent of state policies from 2014 to 2018. With each state having different rules and rules changing often, there has been an increasing level of uncertainty present in the industry.

With increasing uncertainty, businesses have had difficulty planning for the future and developing strategic plans for product and business development. Investment has dried up, even for the fiber and grain sectors and banks have even pulled back from lending and opening hemp-based accounts. With greater uncertainty comes greater risks and that increased risk is a negative draw on the industry.

GREATEST RISKS TO HEMP-DERIVED BUSINESSES

Given the level of uncertainty in the industry, hemp-operators were asked how they view risks. A clear majority cited the current federal regulatory ambiguity. State and federal policy are also top concerns associated with business risks.

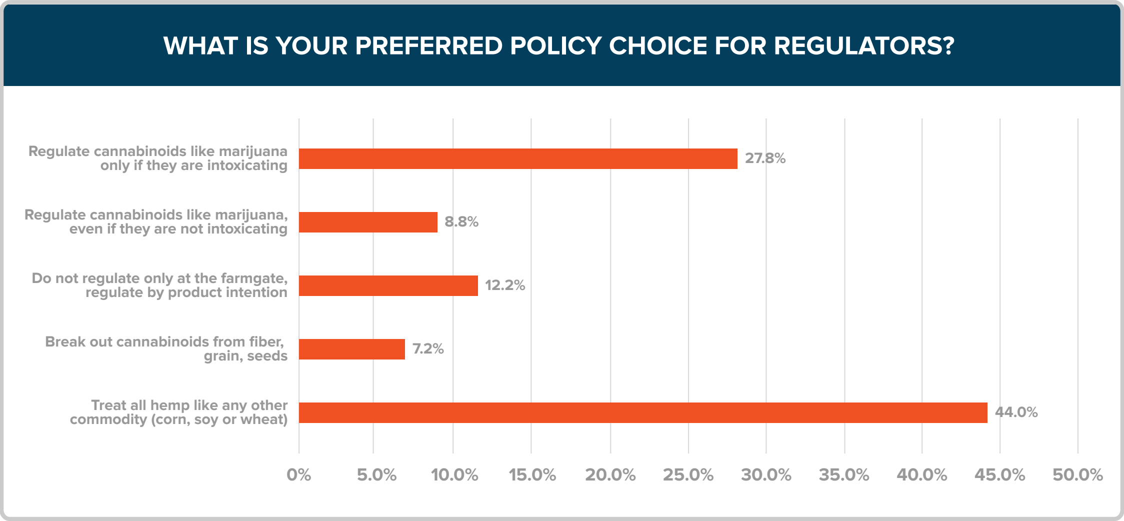
WHAT ARE THE GREATEST RISKS TO YOUR BUSINESS? (Check all that apply)



It is notable that in a national survey deployed immediately after the passage of federal legislation in 2025, when asked how businesses would respond to an extension of the implementation of the hemp laws, many said that an extension did little to address risk. Over 50% of cultivators for example mentioned that even if there was an extension of 1 or 2 years, they would not plant hemp. This not only threatens the supply of raw materials for the industry to process and productize, but also threatens the seed supply required to sustain and grow the industry. It takes multiple years or as much as a decade to develop a viable and sustainable commercial seed operation, and uncertainty at the farm level could threaten existing operators, but also impact the fiber and grain industries as well. State and Federal policy clarity is essential from an economic perspective to be in place so that the industry can move forward.

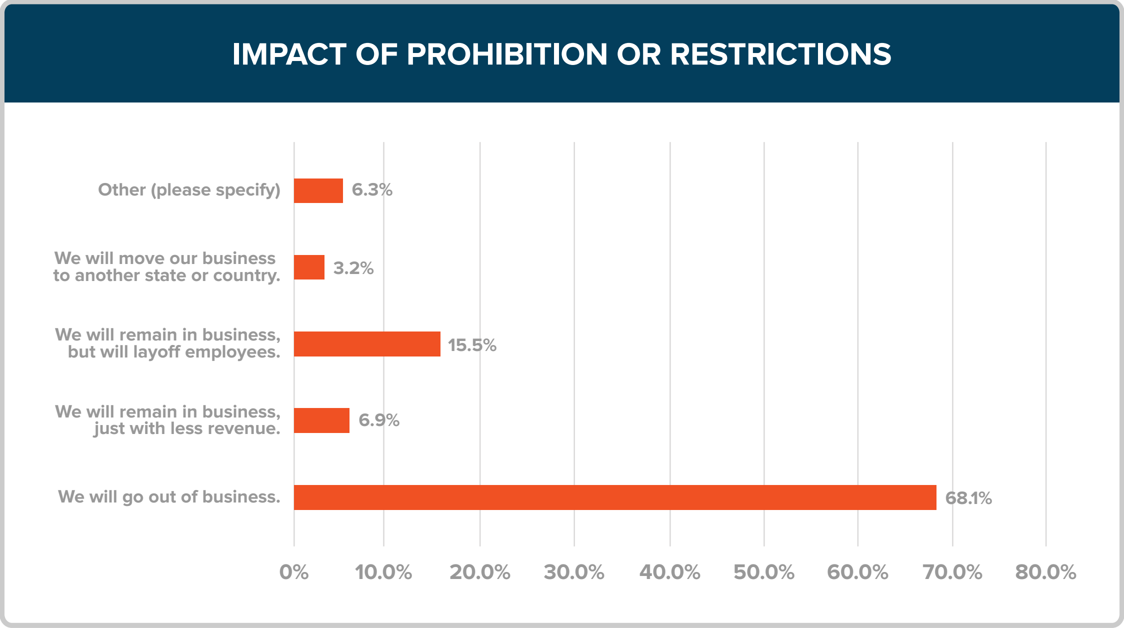
PREFERRED POLICY

The industry feels that limiting policy to the farmgate and defining policy based only on the test results of the plants is not working. The hemp industry needs a more structured regulatory framework and much of this rests outside of the USDA. While the FDA has authority over food, drugs and supplements, the federal agency has refused to step in and take any kind of leadership or participatory role in the hemp industry. The FDA has actually violated federal laws related to hemp.[14] These laws were passed in Congress and signed into law at the same time the new hemp definitions were established. Congress passed laws that required the FDA to publish a list of intoxicating cannabinoids or compounds with similar effect.[15] As of the publication of this report, the FDA still is in violation of this law. By violating federal law, the FDA is further contributing to the regulatory uncertainty that is impacting states and operators alike. Operators would prefer common sense regulation, either by regulating a product based on its intended use (40.0%) or to regulate hemp as an ordinary commodity like corn or wheat (44.0%). Only 8.8% felt hemp should be regulated like marijuana, which is a direction where most states are comfortable pursuing.



EXPLORING POTENTIAL IMPACTS OF PROHIBITIONS BASED ON SURVEY RESPONSES

When asked about the potential impacts of prohibitions or restrictions, the outlook for the industry was disconcerting. The impacts are severe and the economic impacts are significant.



POLICY IMPACT ANALYSIS

If the current legislative policies and regulations remain in place and survey responses are indicative of the national impact, there will be significant loss of state tax revenue potential, a major displacement of jobs and, assuming these losses come to fruition, a significant increase in state-based expenditures such as health care and unemployment insurance. The economic impact is not simply the lost jobs, wages and taxes, there are also increased burdens on each state. With displaced workers, there is an increase in state unemployment expenditures, with business closures, there is less business, health care and workers compensation revenues, and the loss of health care by displaced workers will increase health care expenditures for each state.

These potential results are not simply a matter of speculation. A before and after analysis related to hemp restrictions and bans in the state of Virginia[16] in 2023, showed that predictions made related to business closures and job losses were highly accurate at 99.2%.[17] (18.6% of businesses were predicted to survive the policy changes and 18.75% actually did). These results were based on follow up survey after the laws were implemented. A similar methodology was used in this report assessing the total business closures and job loss projections.

IMPACT OF BANS AND RESTRICTIONS

In November 2025, Congress enacted Public Law 119-37, which amended the federal definition of hemp. Under Section 781, the amended definition becomes effective 365 days after enactment, on November 12, 2026. When asked how businesses would respond to the implementation of the current hemp laws that were passed, most responded that they would either close, move or reduce staff. A smaller subset indicated that they would survive, just on lower revenues. Based on responses to other questions related to layoffs, even with lower revenues, some firms would be forced to reduce headcount.

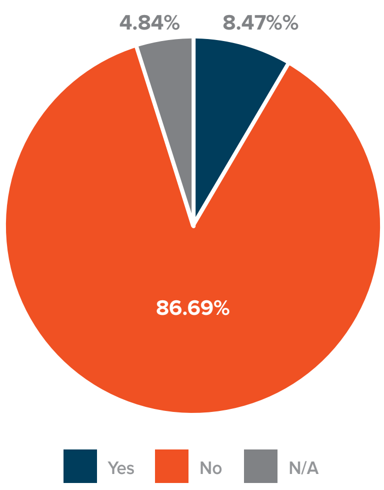
Q. If current federal laws are enacted in November that restrict or prohibit sales of THCA or other cannabinoid products, what will you do?

Sector	We will go out of business.	We will remain in business, just with less revenue.	We will remain in business, but will layoff employees.	We will move our business to another state or country.	Other (please specify)
Retail	69.9%	7.1%	14.4%	3.4%	5.1%
Manufacturing	61.9%	5.3%	18.6%	6.2%	8.0%
Wholesale	64.2%	5.5%	17.6%	6.1%	6.7%

SURVIVABILITY

Overall, only 8.5% of the survey respondents indicated that they could survive only from CBD or other federally compliant cannabinoids. This is a notable improvement from the 5% previously published by Whitney Economics.

Could your business survive only from CBD or federally compliant cannabinoids?



When broken down by sector, the manufacturing and processing sector is hit the hardest, while the retail sector is more malleable. Distributors and wholesales also have flexibility beyond the cannabinoid sector.

Q. Could your business survive only from CBD or federally compliant cannabanoids?

Sector	Survive - N/A	Survive - Yes	% of Products impacted
Retail	4.4%	7.8%	87.8%
Manufacturing	5.3%	5.3%	89.4%
Wholesale	5.5%	9.7%	84.8%

LAYOFFS

When asked specifically “If current federal laws are enacted in November and result in your company reducing headcount, how many layoffs do you expect to make?” 95.6% of respondents indicated that they would have some layoffs (474 out of 496). The average number of layoffs for those who responded that they would go out of business was 19.1 workers. The respondents indicated that the impact of the change in federal law will result in either the closure of the business entirely (68.1%), move locations (3.2%) or result in staff reductions (15.5%). An additional 6.9% indicated that they would remain in business, just with lower revenues while 6.3% chose to make qualitative comments in response to this question.

TOTAL ECONOMIC IMPACT

Assuming that the current federal legislation is enacted in November 2026, there is projected to be a negative economic impact. The economic impact of changes in federal policy is calculated by examining the total industry revenue and employment and reducing it by the percentage of operators that will no longer be in business after the policies take effect.

Given the high levels of potential business failures and relocations, the economic impact of the current hemp laws, if enacted is rather profound, a reduction of total industry wide revenues by $35.1 - $41.3 billion, 29,523 – 36,744 fewer employers and 188,961 – 225,861 displaced workers, earning between $7.5 - $8.9 billion in wages.

State tax revenue potential declines by $1.2 - $1.5 billion, with an overall reduction of $46.6 - $59.6 billion in lost economic potential at the retail level.

Sector	Percent Move or Close	Revenue Decline	Lost Businesses	Lost Jobs	Lost Wages	Lost Taxes	Total Negative Impact Per Sector
Retail - Baseline	73.3%	($22,173,716,140)	(25,818)	(131,929)	($4,993,416,386)	($1,219,362,184)	($46,564,803,894)
Manufacturing	68.1%	($10,806,648,062)	(2,216)	(34,791)	($1,494,327,752)	$0	($22,693,960,931)
Wholesale	70.3%	($2,077,664,517)	(1,490)	(22,242)	($1,002,043,550)	$0	($4,363,095,486)
Total		($35,058,028,719)	(29,523)	(188,961)	($7,489,787,687)	($1,219,362,184)	($73,621,860,310)

Sector	Percent Move or Close	Revenue Decline	Lost Businesses	Lost Jobs	Lost Wages	Lost Taxes	Total Negative Impact Per Sector
Retail - Midpoint	73.3%	($28,375,779,763)	(33,039)	(168,829)	($6,390,056,421)	($1,541,562,413)	($59,589,137,502)
Manufacturing	68.1%	($10,806,648,062)	(2,216)	(34,791)	($1,494,327,752)	$0	($22,693,960,931)
Wholesale	70.3%	($2,077,664,517)	(1,490)	(22,242)	($1,002,043,550)	$0	($4,363,095,486)
Total		($41,260,092,342)	(36,744)	(225,861)	($8,886,427,722)	($1,541,562,413)	($86,646,193,918)

In sum, at a time where states are struggling with tax revenues and looking to reduce expenditures, this federal and state policy will, in effect, lower tax revenues and increase state expenditures. It will also displace workers at a time, when employment, quality of life and affordability is ever present in the minds of the voters.

CONCLUSION

The hemp-derived cannabinoid industry emerged after the passage of the 2018 Farm Bill. The allure of high market prices and a constrained supply prior to 2018 saw a large influx of suppliers in 2019 and 2020. Although there was plenty of supply, the lack of processing infrastructure led to excess inventories of raw material and CBD oils and ultimately a collapse in prices. Attempts to monetize excess inventories led to innovations in the cannabinoid industry, particularly in the conversion of non-intoxicating compounds into intoxicating products.

The introduction of intoxicating and non-intoxicating cannabinoid products to consumers lead to a significant market expansion. This expansion outpaced the ability to regulate it. Federal inaction in terms of federal regulation related to intended use, left the USDA as the only federal regulator. This lack of stewardship at the federal level led to states intervening on behalf of public concerns of product safety and youth access. This intervention was met with mixed results.

Data on the hemp-derived market remained limited during this period of growth until 2023, when a national survey resulted in the market TAM being estimated at $28.4 billion supported by 328,000 employees making $13.2 billion in wages. Hemp retail sales also let to sales tax revenues in excess of $2 billion nationally.

Continued inaction by the federal regulators resulted in the additional state interventions. States dealt with the expansion differently; with some states allowing for sales with moderate regulations, some states imposing significant restrictions while other states prohibited sales of hemp-derived cannabinoids entirely. This patchwork of laws had become untennable to the point where in November of 2025, the U.S. Congress passed legislation that redefined hemp much differently that previously, imposed severe restrictions on intoxicating content and limited the ability for hemp cannabinoid farmers, manufacturers and retailers to bring products to market or support consumer demand.

A refresh of the 2023 national survey indicated that, despite state interventions, the market for hemp-derived cannabinoids has continued to expand. Based on results from the 2026 national survey, the U.S. cannabinoid TAM has increased 36% since 2023, while employing roughly 350,000 employees and paying $13.9 billion in wages.

Despite the perception that the industry is largely unregulated, 74.5% of the total hemp-derived revenue is derived from states that allow legal but regulated sales, with an additional 23.5% coming from state with tight restrictions. This has led to the question of whether or not the newly passed congressional legislation will do more harm than good.

An analysis of the potential impacts of the federal legislation indicates many respondents claimed that they will not be able to survive the implementation of the new laws. If this comes to fruition, there will be a reduction in manufacturing, wholesale and retail revenues by $41.3 billion ($28.3 billion in retail sales). This is forecasted to eliminate 225,861 jobs that would earn $8.9 billion in wages. This would have a net economic impact of $56.6 billion in lost economic output based on a 2.1x retail revenue multiplier.

The hemp industry has long advocated for sensible legislation that includes regulation of products based on their intended use, reduced access to minors through age-gating, product testing and truth in labeling. These types of standards can only be successful if regulated at the federal level. Sensible federal regulations will lead to the successful and sustainable stewardship of an industry and balance public policy objectives with sustained economic growth.

Beau Whitney
WHITNEY ECONOMICS
503.274.3084

APPENDICES

APPENDIX 1
Methodology

A National Hemp Cannabinoid Survey conducted in June and July 2026

Whitney Economics conducted a national survey of hemp cultivators, processors, manufacturers, processors, wholesalers, distributors and retailers across the United States. The objective was to assess the impacts that the hemp cannabinoid industry has had on the U.S. economy as well as to assess the potential impacts of the current and proposed policy changes at the state and federal levels. The national survey received 496 responses from 35 states from the period between June 24th – July 22nd, 2026.

The Survey Was Distributed by Members of the Hemp Industry

Whitney Economics sent links to the survey via its own MailChimp contacts list and a list of known hemp businesses that was purchased. Multiple hemp organizations and individuals also supported the distribution of the survey. Respondents were incentivized to take the survey with an offer of a gift card in exchange for a completed survey. The distribution of the gift cards will commence upon the publication of this report.

Samples Size, Confidence Level and Margin of Error

With an identified population of between 21k and 56k businesses nationwide, the total of 496 responses is a very strong volume of responses and what experts would consider a successful survey.[18]

Determining Total Revenues, Employment, Wages, and Tax Potential.

In order to make projections related to the total hemp market, it was critical to compile the total number of businesses that were operating in this space.

With the lack of established NAICS (North American Industrial Classification System) codes that are typically used to track business activities in the U.S. and North America, Whitney Economics researched all 50 states for data related to hemp businesses, regulatory licenses and permits.

Basic Formulas:

We used the number of businesses as a basis to then calculate jobs, revenues, wages and taxes

- **Total Revenue Potential: Number of businesses x average revenue**
- **Total Jobs: Number of businesses x average workers per business type (Retail, manufacturing, distribution)**
- **Total Wages: Number of businesses x workers x average hourly wage x 2080 hours per year per worker**
- **Total Potential Tax Revenue: Total number of business x average revenues x state sales tax rate**
- **Total Economic Impact: This calculation is based off of total revenues and then multiplied by 2.1x**

Different Data Access Depending on Each State

Similar to how all 50 states treat hemp differently from a legal and regulatory perspective, so too are the state's reporting capabilities related to hemp businesses. There are also different regulatory agencies in charge. For example, the USDA compiles state data on cultivation licenses, however some states issue manufacturing licenses or permits, some issue processing or handling permits, some states combine two licenses into one, while others license all groups differently, including retail. Without a common data reporting infrastructure from state to state, Whitney Economics manually compiled data on all 50 states based on what is offered by the various regulatory groups.

Data on the Number of Retailers is Not Commonly Reported by the States

Many states do not license retailers while others license all retailers selling hemp-derived products. Some states have also started to license convenience stores in a similar way to smoke shops and vape stores. In an effort to determine the number of retailers, Whitney Economics purchased a list of known and verified smoke shops, vape stores, CBD stores and marijuana dispensaries, broken down by state. Each store offered some form of hemp-derived cannabinoid. From this, Whitney Economics established a base line for retail operators (a minimum number of retailers for which to project sales).

From a Retail Perspective We Had Three Categories: Baseline, Midpoint and Upper Bound.

- Baseline Retail: Number of hemp-based retailers based on purchase list, broken down by state
- Upper Bound: The number of retailers based on data from the regulatory bodies in each state. In several states
  - In Florida, Texas, Georgia, and North Carolina for example, retail permits or licenses were very high due to the permitting of convenience stores
- Midpoint: To determine the midpoint of retail operators, Whitney Economics judged down the upper bound, to be roughly the average between the lower bound and the upper bound (only in cases where the numbers were skewed higher due to convenience store permits.
  - Some judgement was made to account for the differences between revenues from a retail business focused on hemp-derived cannabinoids (Such as a vape store or smoke shop) versus a convenience type store that has a diversity of products beyond hemp-derived products.

From a manufacturing, processing, wholesale and distribution perspective, Whitney Economics relied on state regulatory data only.

- There were no judgements made on the data and no trifurcations between lower, midpoint or upper bounds.

Estimates on the Numbers of Businesses and Related Indicators are Conservative

In terms of this analysis, Whitney Economics chose to utilize regulatory data on cultivation, manufacturing and distribution, while leveraging a combination of regulatory and private data on retail. As such, we feel the total estimated number of hemp related business is conservative and understated.

Note: ***The value of the supply chain may vary depending upon each local market as each state was calculated by using national averages versus local revenues. The national averages were used in lieu of state averages, as some states had limited numbers of responses.***

Calculating the Average Revenues

Survey participants were asked questions on their revenue per location. Each answer was given a range. (ex. $100k - $250k per year). The answers were then recorded by each range. The answers were then filtered by sector (Retail, manufacturing, wholesale, etc). Each response represented a value. The values for all responses for each sector were added up and divided by the total number of responses for that sector. The result was the average revenue for the sector.

***Note:** based on the range in revenue (Ex. $50k - $100k/year), Whitney Economics broke that range into three values, low ($50k), mid ($75k) or High ($100k). The middle value was the average between the low and the high value in the range. When calculating the value for each response, the middle value was used.*

Retail Midpoint									
Revenue Range	Low	Mid	High	Count of Revenue Range	Sum of How many locations do you have in operation?	Retail Midpoint Estimate	Retail Revenue Low	Retail Revenue Mid	Retail Revenue High
$0 - $50,000	$15,000	$25,000	$50,000	20	37		$32,936,581	$54,894,302	$109,788,603
$50,001 - $100,000	$50,000	$75,000	$100,000	20	41		$121,657,642	$182,486,462	$243,315,283
$100,001 - $250,000	$100,000	$175,000	$250,000	48	73		$433,219,895	$758,134,816	$1,083,049,736
$250,001 - $350,000	$250,000	$300,000	$350,000	32	67		$994,031,950	$1,192,838,340	$1,391,644,730
$350,001 - $500,000	$350,000	$425,000	$500,000	32	80		$1,661,665,349	$2,017,736,495	$2,373,807,642
$500,001 - $750,000	$500,000	$625,000	$750,000	54	174		$5,163,031,621	$6,453,789,526	$7,744,547,431
$750,001 - $1,000,000	$750,000	$875,000	$1,000,000	31	102		$4,539,907,115	$5,296,558,300	$6,053,209,486
$1,000,001 - $2,500,000	$1,000,000	$1,750,000	$2,500,000	35	161		$9,554,575,758	$16,720,507,576	$23,886,439,394
$2,500,001 - $5,000,000	$2,500,000	$3,750,000	$5,000,000	9	21		$3,115,622,530	$4,673,433,794	$6,231,245,059
$5,000,001 - $10,000,000	$5,000,000	$7,500,000	$10,000,000	1	3		$890,177,866	$1,335,266,798	$1,780,355,731
$10,000,000	$10,000,000	$10,000,000	$10,000,000	0	0		$0	$0	$0
Grand Total				282	759	45,043	$26,506,826,304	$38,685,646,410	$50,897,403,096

A note about potential regional bias: *Given the fact that there were several states that had a large number of responses, there is a potential that this may inflate or deflate the national average revenue figure. To address this, we took the weighted average of ranges for revenues. If a group of responses represented lower revenues, it was assumed that would potentially offset a group of responses that had higher revenues. This strategy was meant to address the influence of regional responses and maintain a conservative estimate related to average revenues.*

Calculating the Total Revenues for Manufacturing, Processing, Wholesale, and Retail

Based on survey responses, Whitney Economics was able to calculate the average revenue broken down by sector. By taking the average revenue and multiplying by the number of licenses in each sector, one can determine the total revenue for the supply chain, broken down by state and sector.

A note about calculating the average revenue for the supply chain by sector: *Based on the survey questions, respondents were asked which sectors they derived revenue from (Retail, manufacturing, wholesale, etc). Most respondents indicated that they derived revenue from multiple sectors. When calculating the average revenue, we simply filtered on that specific sector, knowing that in some instances it may inflate the average revenues, while in some instances it would reduce the average. For example, manufacturers and wholesalers have greater revenues that retailers. If a respondent indicated that they had both wholesale and retail operations, the result of the filtering may lower the average for wholesaler or increase the average for retailers. This is why we used the weighted average approach so as to potentially mitigate this effect.*

> *Refining the average revenues based on those respondents only operating in a single sector.*

Once the average revenue was calculated based on data from all respondents in a given sector, we then compared the average revenue to those that only operated in that single sector. We then chose to use the average revenues from those operating only in a single sector as we felt that more accurately reflected the revenues associated with the sector. As a result, the average revenues for retail were lowered from $965k per year to $859k per year. This lowered the overall retail TAM as well. The average revenue for manufacturers increased to $4.9 million per year. This is in line with other surveys. Wholesalers and distributor averages were not materially impacted but were adjusted down to $1.4 million from $1.5 million.

Calculating Retail TAM

The retail TAM is calculated by multiplying the total estimated retailers by the average revenue per store of $859k. Example, $859k x 45,043 retailers (midpoint) = $38.7 billion

Calculating Total Manufacturing and Processing Revenues

The total potential revenues for the manufacturing and processing sector is calculated by multiplying the total estimated operators (Based on data from regulators) 3,252 by the average revenue of $4.9 million.

Calculating Total Wholesale and Distribution Revenues

The total potential revenues for the wholesale and distribution sector is calculated by multiplying the total estimated operators (Based on data from regulators) 2,119 by the average revenue of $1.4 million.

Calculating the Total Economic Impact of the Hemp-derived Cannabinoid Industry

The multiplier effect is the amount of economic activity that is derived from each dollar of revenue gleaned from the sale of hemp-derived cannabinoids. A standard cannabis multiplier is 2.1x and this multiplier is also used for hemp derived cannabinoids.

To calculate the total economic impact of the industry, we multiplied the total retail revenue by the multiplier of 2.1x. The average multiplier for the hemp and cannabis industry is between 2.1x and 2.4x. For the sake of conservatism, we used the lower number

Note about the multiplier effect: *To illustrate potential broader economic activity, the report applies an assumed output multiplier of 2.1 to retail revenue. There is limited research on the multiplier effect of cannabis and hemp and Whitney Economics is considered an authority on this subject. Economic impacts would vary according to geography, industry structure, sourcing patterns and the degree to which intermediate purchases are already included in reported revenues. In economics there is a term called the "Multiplier Effect". Basically, it states that for every dollar spent, there is ripple effect throughout the broader economy. This is the case with hemp products as well. Different industries have different influences on the economy from a multiplier effect. Whitney Economics has taken a more conservative approach and has calculated the cannabinoid multiple to be 2.1x. For perspective, the construction industry in the U.S. has a 6.1x multiplier[19] from an employment perspective (induced jobs). The National Park system has a 10x multiplier[20], as every dollar invested in the national park system generates 10 dollars in the local economies. Whitney Economics has calculated the economic impact based on retail revenue, rather than employment or total supply chain sales.*

Commingling of Workers

Because state regulatory records generally count licenses or permits rather than unique enterprises, vertically integrated firms may appear in more than one sector. Employment, business and supply-chain revenue estimates may therefore include some duplication. The results should be interpreted as estimates of licensed operating activity rather than counts of unique firms or workers.

Calculating the Total Number of Employees by Sector

Survey respondents provided data on the total number of employees per site at their firm. To determine the average number of employees per sector, we filtered survey responses by sector, summed up the total number of employees and divided the total employees by the number of respondents in that sector. To calculate the total number of employees in a sector, we multiplied the total number of businesses by the average number of employees.

To Calculate the Average Wages by Sector

Survey respondents provide data on the average wages paid per employee. It was listed in a range of wages (ex. $10 - $15/hour). We summed up the total number of responses in each pay range. We then took the midpoint of each range and multiplied the total responses for each pay range. After summing up all of the wages together, we took the average of all of the wages based on the count of responses for that sector.

Wage Range	Count	Percent	Earnings/hr	Total Wages
$0 - $10 per hour	20	4.0%	$10	$200
$10 - $15 per hour	94	19.0%	$12.50	$1,175
$15 - $20 per hour	212	42.7%	$17.50	$3,710
$20 - $25 per hour	108	21.8%	$22.50	$2,430
$25 - $30 per hour	34	6.9%	$27.50	$935
$30 - $40 per hour	20	4.0%	$35	$700
Greater than $40 per hour	8	1.6%	$40	$320
	496	100.0%	$19.09	$9,470

Calculating Market Share for Specific Cannabinoids or Form Factors

Based on survey responses on questions related to the percentage of revenue that is derived from specific cannabinoids or form factors, an average percentage of revenue is calculated for each form factor or cannabinoid. The total percentages are then added together to ensure the total sum is 100%. In some instances, responses did not add up to 100%, so once the averages are determined, each average is calculated as a percentage of total. This percentage is then applied to the total potential revenue.

Note: ***Given the percentage of the total revenue is a national average, the market share for a given state will differ when compared to the national market share. This is due to the fact that different states may prohibited specific cannabinoids or specific form factors. While specific form factors may be prohibited in a given market, the ability to regulate online sales is still in its infancy and prohibited products are still entering into prohibited markets.***

Total Negative Economic Impact of the Proposed Federal Policy Change Taking Effect in November.

The economic impact of changes in federal policy is calculated by examining the total industry revenue and employment and reducing it by the percentage of operators that will no longer be in business after the policies take effect.

APPENDIX 2

Definitions and Gradations of Legality

Legal With Light Touch Regulation

- Hemp/hemp products are implicitly permitted and/or the state lacks an adopted hemp regulatory framework

Legal but Heavily Regulated

- Hemp/hemp products are expressly permitted and highly regulated with specific packaging, potency/serving, size/ratio requirements

Legal but Heavily Restricted

- Hemp/hemp products are expressly permitted and highly regulated with restrictive requirements associated with what type of cannabinoids are allowable, limits on the ratio of CBD to THC, or what type of form factor a product may be sold in
- Products must contain 0 mg or 0% THC

Prohibited with Some Exceptions

- Cannabinoids are prohibited with the exception of minor non-intoxicating cannabinoids like CBG or CBN
- Cannabinoids in some non-food items

Prohibited Unless Regulated Like Marijuana

- Products must be sold through the licensed cannabis market or licensed by a cannabis regulator

Prohibited

- THC and other intoxicating cannabinoids are expressly prohibited
- Non-Intoxicating cannabinoid products that have any detectable levels of THC are prohibited

APPENDIX 3
About the Survey

The survey consisted of 30 questions. The survey was built in Survey Monkey and deployed usings links that were sent via email. Respondents were incentivized by offering survey takers eligibility for a gift card. No monetary amount of the gift card was disclosed. The survey took approximately 6 – 8 minutes to complete.

Here is a list of the survey questions:

- What is the primary focus of your business?
- Do you sell hemp-derived cannabinoid products?
- What sectors to you operate in?
- How many locations do you have in operation?
- Please enter the five digit zip code for your main office.
- What percentage of your corporation's revenue comes from each sector (That you directly operate) - If zero leave blank
- What is the average revenue per location PER YEAR?
- Were you profitable prior to the passage of legislation that changed the definition of hemp and limited the per container amounts of THC?
- Tax Contribution - For each state, what is your average annual tax remittance?
- How many employees do you have at each location?
- What is the average hourly wage per employee?
- Which cannabinoid products do you sell? (List all that apply)
- What percentage of your revenue comes from non-intoxicating hemp-derived cannabinoid products?
- Could your business survive only from CBD or federally compliant cannabinoids?
- What percentage of your revenue comes from the following hemp-derived cannabinoid products? List the percentage of sales for each category, if zero leave blank
- What percentage of your cannabinoid products are sold in the following formfactors? (If zero leave blank)
- If federal changes are enacted, what percentage of revenue from your products will become non-compliant due to total-THC or 0.4mg-per-container rule?

- Over the past six months have your sales...
- Over the next six months do you expect your sales to...
- If current federal laws are enacted in November that restrict or prohibit sales of THCA or other cannabinoid products, what will you do?
- If current federal laws are enacted in November and result in your company reducing headcount, how many layoffs do you expect to make.
- What is your preferred policy choice for regulators?
- In terms of the overall market for hemp-derived cannabinoids in your state, what percentage do you estimate are sold online?
- How many states do you receive your products / raw materials from?
- What are the top three states you get product from?
- What are the greatest risks to your business? (Check all that apply)
- What is your confidence level for your business in the next 12 months?
- Any comments you would like to add about this industry or regulatory environment?
- What help do you need as a business operator?
- Please provide your contact information (Name, Email, Phone)

APPENDIX 4
About the Author

Beau Whitney, Cannabis Economics, Operations and Supply Chain Expert

Beau Whitney is the founder and Chief Economist at Whitney Economics, a global leader in cannabis and hemp business consulting, data, and economic research. Whitney Economics is based in Portland, Oregon.

Serving an international clientele, Beau is considered one of the leading cannabis economists in the U.S. and globally. His applications of economic principles to create actionable operational and policy recommendations has been recognized by governments, and throughout the economic, investment, and business communities. In 2022, Beau presented data and insights about cannabis and hemp economics at the United Nations.

His white papers analyzing the adult-use, medical and industrial cannabis markets have been referenced in the Wall Street Journal, Washington Post, New York Times, USA Today, the Associated Press, as well as in leading cannabis industry publications.

Beau Whitney is a member of the American Economic Association, the Oregon chapter president of the National Association for Business Economics, is a member of multiple regulatory advisory committees throughout the U.S. and participates on the Oregon Governor's Council of Economic Advisors.

Beau has provided policy recommendations at the state, national and international levels and is considered an authority on cannabis economics and the supply chain. Whitney Economics does not take a position on the issue of cannabis legalization or on pending legislation.

Beau Whitney
WHITNEY ECONOMICS

Statement Of Conflicts

Whitney Economics does not take a position on this issue of cannabis legalization, however there are potential conflicts while presenting economic and market analysis.

- Whitney Economics receives compensation for business and economic analysis of the cannabis industry.
- Mr. Whitney has previously held positions and licenses within the legal regulated cannabis industry.
- Mr. Whitney is a director for the Cannabis Advisory Group (CAG) in New Jersey, a non-profit policy think tank.
- Whitney Economics is a member of the European Industrial Hemp Association (EIHA).
- Beau Whitney is serving a volunteer role as the Chief Economist for the Federation of Industrial Hemp Organizations (FIHO).
- Mr. Whitney is a founder of Every Day Hemp Company, an Oregon-based manufacturer of hemp based plastic products.

APPENDIX 5
Total Hemp Derived Retail Businesses

State	Retail - Baseline	Retail - Midpoint	Retail Upper
Alabama	330	1,000	1,800
Alaska	191	168	168
Arizona	741	500	500
Arkansas	260	260	260
California	3,271	1,400	1,400
Colorado	1,010	1,010	1,010
Connecticut	389	1,250	2,128
Delaware	81	320	320
District of Columbia	98	98	98
Florida	3,253	4,680	9,360
Georgia	993	1,899	7,597
Hawaii	88	88	88
Idaho	80	80	80
Illinois	1,222	1,222	1,222
Indiana	562	562	562
Iowa	163	500	1,263
Kansas	227	227	227
Kentucky	350	350	350
Louisiana	291	291	291
Maine	505	505	505
Maryland	477	598	598
Massachusetts	647	647	647
Michigan	1,408	1,408	1,408
Minnesota	421	1,350	2,340
Mississippi	387	387	387
Missouri	665	667	667
Montana	438	438	438
Nebraska	189	300	300
Nevada	413	413	413
New Hampshire	102	102	102
New Jersey	877	877	877
New Mexico	640	640	640
New York	1,586	2,687	2,687
North Carolina	1,380	1,750	2,197
North Dakota	43	43	43
Ohio	1,056	1,056	1,056
Oklahoma	1,391	1,391	1,391
Oregon	767	967	967
Pennsylvania	1,059	1,059	1,059
Rhode Island	58	113	113
South Carolina	482	482	482
South Dakota	108	108	108
Tennessee	748	1,350	1,979
Texas	3,433	7,103	14,205
Utah	143	122	122
Vermont	101	101	101
Virginia	838	838	838
Washington	622	622	622
West Virginia	200	600	1,044
Wisconsin	377	377	377
Wyoming	37	37	37
United States	35,198	45,043	67,474

APPENDIX 6
Retail TAM by State

Retail TAM by State	TAM Baseline	TAM - Midpoint
Alabama	$283,423,913	$858,860,343
Alaska	$164,042,325	$144,288,538
Arizona	$636,415,514	$429,430,171
Arkansas	$223,303,689	$223,303,689
California	$2,809,332,181	$1,202,404,480
Colorado	$867,448,946	$867,448,946
Connecticut	$334,096,673	$1,073,575,428
Delaware	$69,567,688	$274,835,310
District of Columbia	$84,168,314	$84,168,314
Florida	$2,793,872,694	$4,019,466,403
Georgia	$852,848,320	$1,631,190,506
Hawaii	$75,579,710	$75,579,710
Idaho	$68,708,827	$68,708,827
Illinois	$1,049,527,339	$1,049,527,339
Indiana	$482,679,513	$482,679,513
Iowa	$139,994,236	$429,430,171
Kansas	$194,961,298	$194,961,298
Kentucky	$300,601,120	$300,601,120
Louisiana	$249,928,360	$249,928,360
Maine	$433,724,473	$433,724,473
Maryland	$409,676,383	$513,598,485
Massachusetts	$555,682,642	$555,682,642
Michigan	$1,209,275,362	$1,209,275,362
Minnesota	$361,580,204	$1,159,461,462
Mississippi	$332,378,953	$332,378,953
Missouri	$571,142,128	$572,859,848
Montana	$376,180,830	$376,180,830
Nebraska	$162,324,605	$257,658,103
Nevada	$354,709,321	$354,709,321
New Hampshire	$87,603,755	$87,603,755
New Jersey	$753,220,520	$753,220,520
New Mexico	$549,670,619	$549,670,619
New York	$1,362,152,503	$2,307,757,740
North Carolina	$1,185,227,273	$1,503,005,599
North Dakota	$36,930,995	$36,930,995
Ohio	$906,956,522	$906,956,522
Oklahoma	$1,194,674,736	$1,194,674,736
Oregon	$658,745,883	$830,517,951
Pennsylvania	$909,533,103	$909,533,103
Rhode Island	$49,813,900	$97,051,219
South Carolina	$413,970,685	$413,970,685
South Dakota	$92,756,917	$92,756,917
Tennessee	$642,427,536	$1,159,461,462
Texas	$2,948,467,556	$6,100,055,583
Utah	$122,817,029	$104,780,962
Vermont	$86,744,895	$86,744,895
Virginia	$719,724,967	$719,724,967
Washington	$534,211,133	$534,211,133
West Virginia	$171,772,069	$515,316,206
Wisconsin	$323,790,349	$323,790,349
Wyoming	$31,777,833	$31,777,833
United States	$30,230,166,337	$38,685,431,695

APPENDIX 7
Total Number of Businesses (Baseline)

Hemp Related Businesses	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Baseline
Alabama	330	26		38	394
Alaska	191	1		1	193
Arizona	741	16		26	783
Arkansas	260	4		9	273
California	3,271	89		68	3,428
Colorado	1,010	600		132	1,742
Connecticut	389	49		57	495
Delaware	81	7		15	103
District of Columbia	98				98
Florida	3,253	323	351	431	4,358
Georgia	993	15	247	99	1,354
Hawaii	88	4	16	59	167
Idaho	80	2	2	8	92
Illinois	1,222	250	300	57	1,829
Indiana	562	22		21	605
Iowa	163	140		26	329
Kansas	227	34		85	346
Kentucky	350	19		123	492
Louisiana	291	1	4	26	322
Maine	505	3		12	520
Maryland	477	56	29	10	572
Massachusetts	647	20		6	673
Michigan	1,408	200	306	36	1,950
Minnesota	421	137	110	217	885
Mississippi	387	30		121	538
Missouri	665	12		112	789
Montana	438	3		5	446
Nebraska	189	7		43	239
Nevada	413	9		16	438
New Hampshire	102	2		21	125
New Jersey	877	7		9	893
New Mexico	640	29		10	679
New York	1,586	46	185	102	1,919
North Carolina	1,380	100	200	4	1,684
North Dakota	43	3		8	54
Ohio	1,056	44		26	1,126
Oklahoma	1,391	55		158	1,604
Oregon	767	141		101	1,009
Pennsylvania	1,059	32		159	1,250
Rhode Island	58	4	11	0	73
South Carolina	482	1	2	49	534
South Dakota	108	2		28	138
Tennessee	748	51	100	108	1,007
Texas	3,433	553	200	276	4,462
Utah	143	9		18	170
Vermont	101	2		50	153
Virginia	838	42	22	99	1,001
Washington	622	7		45	674
West Virginia	200	11	34	25	270
Wisconsin	377	30		305	712
Wyoming	37	2		6	45
United States	35,198	3,252	2,119	3,466	44,035

APPENDIX 8
Total number of businesses (Midpoint)

Hemp Related Businesses	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Midpoint
Alabama	1,000	26		38	1,064
Alaska	168	1		1	170
Arizona	500	16		26	542
Arkansas	260	4		9	273
California	1,400	89		68	1,557
Colorado	1,010	600		132	1,742
Connecticut	1,250	49		57	1,356
Delaware	320	7		15	342
District of Columbia	98				98
Florida	4,680	323	351	431	5,785
Georgia	1,899	15	247	99	2,260
Hawaii	88	4	16	59	167
Idaho	80	2	2	8	92
Illinois	1,222	250	300	57	1,829
Indiana	562	22		21	605
Iowa	500	140		26	666
Kansas	227	34		85	346
Kentucky	350	19		123	492
Louisiana	291	1	4	26	322
Maine	505	3		12	520
Maryland	598	56	29	10	693
Massachusetts	647	20		6	673
Michigan	1,408	200	306	36	1,950
Minnesota	1,350	137	110	217	1,814
Mississippi	387	30		121	538
Missouri	667	12		112	791
Montana	438	3		5	446
Nebraska	300	7		43	350
Nevada	413	9		16	438
New Hampshire	102	2		21	125
New Jersey	877	7		9	893
New Mexico	640	29		10	679
New York	2,687	46	185	102	3,020
North Carolina	1,750	100	200	4	2,054
North Dakota	43	3		8	54
Ohio	1,056	44		26	1,126
Oklahoma	1,391	55		158	1,604
Oregon	967	141		101	1,209
Pennsylvania	1,059	32		159	1,250
Rhode Island	113	4	11	0	128
South Carolina	482	1	2	49	534
South Dakota	108	2		28	138
Tennessee	1,350	51	100	108	1,609
Texas	7,103	553	200	276	8,132
Utah	122	9		18	149
Vermont	101	2		50	153
Virginia	838	42	22	99	1,001
Washington	622	7		45	674
West Virginia	600	11	34	25	670
Wisconsin	377	30		305	712
Wyoming	37	2		6	45
United States	45,043	3,252	2,119	3,466	53,880

APPENDIX 9

Total labor potential (Baseline)

Hemp Related Jobs	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alabama	1,686	408	0	428	2,522
Alaska	976	16	0	11	1,003
Arizona	3,787	251	0	293	4,330
Arkansas	1,329	63	0	101	1,493
California	16,715	1,397	0	765	18,877
Colorado	5,161	9,420	0	1,485	16,066
Connecticut	1,988	769	0	641	3,398
Delaware	414	110	0	169	693
District of Columbia	501	0	0	0	501
Florida	16,623	5,071	5,240	4,849	31,783
Georgia	5,074	236	3,688	1,114	10,111
Hawaii	450	63	239	664	1,415
Idaho	409	31	30	90	560
Illinois	6,244	3,925	4,479	641	15,290
Indiana	2,872	345	0	236	3,453
Iowa	833	2,198	0	293	3,323
Kansas	1,160	534	0	956	2,650
Kentucky	1,789	298	0	1,384	3,471
Louisiana	1,487	16	60	293	1,855
Maine	2,581	47	0	135	2,763
Maryland	2,437	879	433	113	3,862
Massachusetts	3,306	314	0	68	3,688
Michigan	7,195	3,140	4,569	405	15,308
Minnesota	2,151	2,151	1,642	2,441	8,386
Mississippi	1,978	471	0	1,361	3,810
Missouri	3,398	188	0	1,260	4,847
Montana	2,238	47	0	56	2,342
Nebraska	966	110	0	484	1,559
Nevada	2,110	141	0	180	2,432
New Hampshire	521	31	0	236	789
New Jersey	4,481	110	0	101	4,693
New Mexico	3,270	455	0	113	3,838
New York	8,104	722	2,762	1,148	12,736
North Carolina	7,052	1,570	2,986	45	11,653
North Dakota	220	47	0	90	357
Ohio	5,396	691	0	293	6,379
Oklahoma	7,108	864	0	1,778	9,749
Oregon	3,919	2,214	0	1,136	7,269
Pennsylvania	5,412	502	0	1,789	7,703
Rhode Island	296	63	164	0	523
South Carolina	2,463	16	30	551	3,060
South Dakota	552	31	0	315	898
Tennessee	3,822	801	1,493	1,215	7,331
Texas	17,543	8,682	2,986	3,105	32,316
Utah	731	141	0	203	1,075
Vermont	516	31	0	563	1,110
Virginia	4,282	659	328	1,114	6,384
Washington	3,178	110	0	506	3,795
West Virginia	1,022	173	508	281	1,984
Wisconsin	1,926	471	0	3,431	5,829
Wyoming	189	31	0	68	288
United States	179,863	51,056	31,637	38,993	301,548

APPENDIX 10

Total labor potential (Midpoint)

Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alabama	5,110	408	0	428	5,946
Alaska	858	16	0	11	885
Arizona	2,555	251	0	293	3,099
Arkansas	1,329	63	0	101	1,493
California	7,154	1,397	0	765	9,316
Colorado	5,161	9,420	0	1,485	16,066
Connecticut	6,388	769	0	641	7,798
Delaware	1,635	110	0	169	1,914
District of Columbia	501	0	0	0	501
Florida	23,915	5,071	5,240	4,849	39,075
Georgia	9,705	236	3,688	1,114	14,742
Hawaii	450	63	239	664	1,415
Idaho	409	31	30	90	560
Illinois	6,244	3,925	4,479	641	15,290
Indiana	2,872	345	0	236	3,453
Iowa	2,555	2,198	0	293	5,046
Kansas	1,160	534	0	956	2,650
Kentucky	1,789	298	0	1,384	3,471
Louisiana	1,487	16	60	293	1,855
Maine	2,581	47	0	135	2,763
Maryland	3,056	879	433	113	4,480
Massachusetts	3,306	314	0	68	3,688
Michigan	7,195	3,140	4,569	405	15,308
Minnesota	6,899	2,151	1,642	2,441	13,133
Mississippi	1,978	471	0	1,361	3,810
Missouri	3,408	188	0	1,260	4,857
Montana	2,238	47	0	56	2,342
Nebraska	1,533	110	0	484	2,127
Nevada	2,110	141	0	180	2,432
New Hampshire	521	31	0	236	789
New Jersey	4,481	110	0	101	4,693
New Mexico	3,270	455	0	113	3,838
New York	13,731	722	2,762	1,148	18,362
North Carolina	8,943	1,570	2,986	45	13,544
North Dakota	220	47	0	90	357
Ohio	5,396	691	0	293	6,379
Oklahoma	7,108	864	0	1,778	9,749
Oregon	4,941	2,214	0	1,136	8,291
Pennsylvania	5,412	502	0	1,789	7,703
Rhode Island	577	63	164	0	804
South Carolina	2,463	16	30	551	3,060
South Dakota	552	31	0	315	898
Tennessee	6,899	801	1,493	1,215	10,407
Texas	36,294	8,682	2,986	3,105	51,067
Utah	623	141	0	203	967
Vermont	516	31	0	563	1,110
Virginia	4,282	659	328	1,114	6,384
Washington	3,178	110	0	506	3,795
West Virginia	3,066	173	508	281	4,028
Wisconsin	1,926	471	0	3,431	5,829
Wyoming	189	31	0	68	288
United States	230,170	51,056	31,637	38,993	351,855

APPENDIX 11

Total labor potential (Baseline)

Hemp Related Wages	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Alabama	$63,825,730	$17,533,006	$0	$16,948,152	$98,306,888
Alaska	$36,941,559	$674,346	$0	$446,004	$38,061,909
Arizona	$143,317,775	$10,789,542	$0	$11,596,104	$165,703,421
Arkansas	$50,286,939	$2,697,386	$0	$4,014,036	$56,998,360
California	$632,648,369	$60,016,830	$0	$30,328,272	$722,993,470
Colorado	$195,345,415	$404,607,840	$0	$58,872,528	$658,825,783
Connecticut	$75,236,996	$33,042,974	$0	$25,422,228	$133,702,198
Delaware	$15,666,315	$4,720,425	$0	$6,690,060	$27,076,800
District of Columbia	$18,954,308	$0	$0	$0	$18,954,308
Florida	$629,166,965	$217,813,887	$236,096,045	$192,227,724	$1,275,304,621
Georgia	$192,057,423	$10,115,196	$166,141,661	$44,154,396	$412,468,676
Hawaii	$17,020,195	$2,697,386	$10,762,213	$26,314,236	$56,794,029
Idaho	$15,472,904	$1,348,693	$1,345,277	$3,568,032	$21,734,906
Illinois	$236,348,611	$168,586,600	$201,791,491	$25,422,228	$632,148,930
Indiana	$108,697,152	$14,835,621	$0	$9,366,084	$132,898,856
Iowa	$31,526,042	$94,408,496	$0	$11,596,104	$137,530,642
Kansas	$43,904,366	$22,927,778	$0	$37,910,340	$104,742,483
Kentucky	$67,693,956	$12,812,582	$0	$54,858,492	$135,365,029
Louisiana	$56,282,689	$674,346	$2,690,553	$11,596,104	$71,243,692
Maine	$97,672,707	$2,023,039	$0	$5,352,048	$105,047,795
Maryland	$92,257,191	$37,763,398	$19,506,511	$4,460,040	$153,987,140
Massachusetts	$125,137,112	$13,486,928	$0	$2,676,024	$141,300,064
Michigan	$272,323,113	$134,869,280	$205,827,321	$16,056,144	$629,075,858
Minnesota	$81,426,158	$92,385,457	$73,990,213	$96,782,868	$344,584,696
Mississippi	$74,850,174	$20,230,392	$0	$53,966,484	$149,047,050
Missouri	$128,618,516	$8,092,157	$0	$49,952,448	$186,663,121
Montana	$84,714,150	$2,023,039	$0	$2,230,020	$88,967,209
Nebraska	$36,554,736	$4,720,425	$0	$19,178,172	$60,453,333
Nevada	$79,878,868	$6,069,118	$0	$7,136,064	$93,084,049
New Hampshire	$19,727,953	$1,348,693	$0	$9,366,084	$30,442,730
New Jersey	$169,621,712	$4,720,425	$0	$4,014,036	$178,356,173
New Mexico	$123,783,233	$19,556,046	$0	$4,460,040	$147,799,319
New York	$306,750,325	$31,019,934	$124,438,086	$45,492,408	$507,700,754
North Carolina	$266,907,597	$67,434,640	$134,527,661	$1,784,016	$470,653,913
North Dakota	$8,316,686	$2,023,039	$0	$3,568,032	$13,907,757
Ohio	$204,242,335	$29,671,242	$0	$11,596,104	$245,509,680
Oklahoma	$269,035,121	$37,089,052	$0	$70,468,632	$376,592,805
Oregon	$148,346,469	$95,082,842	$0	$45,046,404	$288,475,715
Pennsylvania	$204,822,569	$21,579,085	$0	$70,914,636	$297,316,290
Rhode Island	$11,217,856	$2,697,386	$7,399,021	$0	$21,314,262
South Carolina	$93,224,248	$674,346	$1,345,277	$21,854,196	$117,098,067
South Dakota	$20,888,421	$1,348,693	$0	$12,488,112	$34,725,225
Tennessee	$144,671,654	$34,391,666	$67,263,830	$48,168,432	$294,495,583
Texas	$663,981,000	$372,913,559	$134,527,661	$123,097,104	$1,294,519,324
Utah	$27,657,816	$6,069,118	$0	$8,028,072	$41,755,006
Vermont	$19,534,541	$1,348,693	$0	$22,300,200	$43,183,434
Virginia	$162,078,671	$28,322,549	$14,798,043	$44,154,396	$249,353,659
Washington	$120,301,830	$4,720,425	$0	$20,070,180	$145,092,435
West Virginia	$38,682,260	$7,417,810	$22,869,702	$11,150,100	$80,119,873
Wisconsin	$72,916,061	$20,230,392	$0	$136,031,220	$229,177,673
Wyoming	$7,156,218	$1,348,693	$0	$2,676,024	$11,180,935
United States	$6,807,691,006	$2,192,974,493	$1,425,320,566	$1,545,849,864	$11,971,835,929

APPENDIX 12

Total wage potential (Midpoint)

Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Alabama	$193,411,302	$17,533,006	$0	$16,948,152	$227,892,460
Alaska	$32,493,099	$674,346	$0	$446,004	$33,613,449
Arizona	$96,705,651	$10,789,542	$0	$11,596,104	$119,091,297
Arkansas	$50,286,939	$2,697,386	$0	$4,014,036	$56,998,360
California	$270,775,823	$60,016,830	$0	$30,328,272	$361,120,924
Colorado	$195,345,415	$404,607,840	$0	$58,872,528	$658,825,783
Connecticut	$241,764,127	$33,042,974	$0	$25,422,228	$300,229,329
Delaware	$61,891,617	$4,720,425	$0	$6,690,060	$73,302,101
District of Columbia	$18,954,308	$0	$0	$0	$18,954,308
Florida	$905,164,893	$217,813,887	$236,096,045	$192,227,724	$1,551,302,549
Georgia	$367,336,415	$10,115,196	$166,141,661	$44,154,396	$587,747,668
Hawaii	$17,020,195	$2,697,386	$10,762,213	$26,314,236	$56,794,029
Idaho	$15,472,904	$1,348,693	$1,345,277	$3,568,032	$21,734,906
Illinois	$236,348,611	$168,586,600	$201,791,491	$25,422,228	$632,148,930
Indiana	$108,697,152	$14,835,621	$0	$9,366,084	$132,898,856
Iowa	$96,705,651	$94,408,496	$0	$11,596,104	$202,710,251
Kansas	$43,904,366	$22,927,778	$0	$37,910,340	$104,742,483
Kentucky	$67,693,956	$12,812,582	$0	$54,858,492	$135,365,029
Louisiana	$56,282,689	$674,346	$2,690,553	$11,596,104	$71,243,692
Maine	$97,672,707	$2,023,039	$0	$5,352,048	$105,047,795
Maryland	$115,659,959	$37,763,398	$19,506,511	$4,460,040	$177,389,908
Massachusetts	$125,137,112	$13,486,928	$0	$2,676,024	$141,300,064
Michigan	$272,323,113	$134,869,280	$205,827,321	$16,056,144	$629,075,858
Minnesota	$261,105,258	$92,385,457	$73,990,213	$96,782,868	$524,263,796
Mississippi	$74,850,174	$20,230,392	$0	$53,966,484	$149,047,050
Missouri	$129,005,338	$8,092,157	$0	$49,952,448	$187,049,943
Montana	$84,714,150	$2,023,039	$0	$2,230,020	$88,967,209
Nebraska	$58,023,391	$4,720,425	$0	$19,178,172	$81,921,987
Nevada	$79,878,868	$6,069,118	$0	$7,136,064	$93,084,049
New Hampshire	$19,727,953	$1,348,693	$0	$9,366,084	$30,442,730
New Jersey	$169,621,712	$4,720,425	$0	$4,014,036	$178,356,173
New Mexico	$123,783,233	$19,556,046	$0	$4,460,040	$147,799,319
New York	$519,696,168	$31,019,934	$124,438,086	$45,492,408	$720,646,597
North Carolina	$338,469,778	$67,434,640	$134,527,661	$1,784,016	$542,216,095
North Dakota	$8,316,686	$2,023,039	$0	$3,568,032	$13,907,757
Ohio	$204,242,335	$29,671,242	$0	$11,596,104	$245,509,680
Oklahoma	$269,035,121	$37,089,052	$0	$70,468,632	$376,592,805
Oregon	$187,028,729	$95,082,842	$0	$45,046,404	$327,157,975
Pennsylvania	$204,822,569	$21,579,085	$0	$70,914,636	$297,316,290
Rhode Island	$21,855,477	$2,697,386	$7,399,021	$0	$31,951,884
South Carolina	$93,224,248	$674,346	$1,345,277	$21,854,196	$117,098,067
South Dakota	$20,888,421	$1,348,693	$0	$12,488,112	$34,725,225
Tennessee	$261,105,258	$34,391,666	$67,263,830	$48,168,432	$410,929,186
Texas	$1,373,703,772	$372,913,559	$134,527,661	$123,097,104	$2,004,242,096
Utah	$23,596,179	$6,069,118	$0	$8,028,072	$37,693,368
Vermont	$19,534,541	$1,348,693	$0	$22,300,200	$43,183,434
Virginia	$162,078,671	$28,322,549	$14,798,043	$44,154,396	$249,353,659
Washington	$120,301,830	$4,720,425	$0	$20,070,180	$145,092,435
West Virginia	$116,046,781	$7,417,810	$22,869,702	$11,150,100	$157,484,394
Wisconsin	$72,916,061	$20,230,392	$0	$136,031,220	$229,177,673
Wyoming	$7,156,218	$1,348,693	$0	$2,676,024	$11,180,935
United States	$8,711,776,921	$2,192,974,493	$1,425,320,566	$1,545,849,864	$13,875,921,843

WE

APPENDIX 13

Total sales tax revenue potential (Baseline)

Retail TAM by State	TAM Baseline	State Sales Tax Rate	Total Sales Tax Potential (Lower Bound)
Alabama	$283,423,913	4.00%	$11,336,956.52
Alaska	$164,042,325	0.00%	$0.00
Arizona	$636,415,514	5.60%	$35,639,268.77
Arkansas	$223,303,689	6.50%	$14,514,739.79
California	$2,809,332,181	7.25%	$203,676,583.09
Colorado	$867,448,946	2.90%	$25,156,019.43
Connecticut	$334,096,673	6.35%	$21,215,138.75
Delaware	$69,567,688	0.00%	$0.00
District of Columbia	$84,168,314	6.00%	$5,050,098.81
Florida	$2,793,872,694	6.00%	$167,632,361.66
Georgia	$852,848,320	4.00%	$34,113,932.81
Hawaii	$75,579,710	4.00%	$3,023,188.41
Idaho	$68,708,827	6.00%	$4,122,529.64
Illinois	$1,049,527,339	6.25%	$65,595,458.66
Indiana	$482,679,513	7.00%	$33,787,565.88
Iowa	$139,994,236	6.00%	$8,399,654.15
Kansas	$194,961,298	6.50%	$12,672,484.35
Kentucky	$300,601,120	6.00%	$18,036,067.19
Louisiana	$249,928,360	5.00%	$12,496,417.98
Maine	$433,724,473	5.50%	$23,854,846.01
Maryland	$409,676,383	6.00%	$24,580,583.00
Massachusetts	$555,682,642	6.25%	$34,730,165.10
Michigan	$1,209,275,362	6.00%	$72,556,521.74
Minnesota	$361,580,204	6.88%	$24,876,718.05
Mississippi	$332,378,953	7.00%	$23,266,526.68
Missouri	$571,142,128	4.23%	$24,159,312.01
Montana	$376,180,830	0.00%	$0.00
Nebraska	$162,324,605	5.50%	$8,927,853.26
Nevada	$354,709,321	6.85%	$24,297,588.52
New Hampshire	$87,603,755	0.00%	$0.00
New Jersey	$753,220,520	6.63%	$49,938,520.50
New Mexico	$549,670,619	4.88%	$26,823,926.22
New York	$1,362,152,503	4.00%	$54,486,100.13
North Carolina	$1,185,227,273	4.75%	$56,298,295.45
North Dakota	$36,930,995	5.00%	$1,846,549.74
Ohio	$906,956,522	5.75%	$52,150,000.00
Oklahoma	$1,194,674,736	4.50%	$53,760,363.14
Oregon	$658,745,883	0.00%	$0.00
Pennsylvania	$909,533,103	6.00%	$54,571,986.17
Rhode Island	$49,813,900	7.00%	$3,486,972.99
South Carolina	$413,970,685	6.00%	$24,838,241.11
South Dakota	$92,756,917	4.20%	$3,895,790.51
Tennessee	$642,427,536	7.00%	$44,969,927.54
Texas	$2,948,467,556	6.25%	$184,279,222.25
Utah	$122,817,029	6.10%	$7,491,838.77
Vermont	$86,744,895	6.00%	$5,204,693.68
Virginia	$719,724,967	5.30%	$38,145,423.25
Washington	$534,211,133	6.50%	$34,723,723.65
West Virginia	$171,772,069	6.00%	$10,306,324.11
Wisconsin	$323,790,349	5.00%	$16,189,517.46
Wyoming	$31,777,833	4.00%	$1,271,113.31
United States	$30,230,166,337		$1,662,397,110.26

APPENDIX 14

Total sales tax revenue potential (Midpoint)

Retail TAM by State	TAM - Midpoint	State Sales Tax Rate	Total Sales Tax Potential (Midpoints)
Alabama	$858,860,343	4.00%	$34,354,413.70
Alaska	$144,288,538	0.00%	$0.00
Arizona	$429,430,171	5.60%	$24,048,089.59
Arkansas	$223,303,689	6.50%	$14,514,739.79
California	$1,202,404,480	7.25%	$87,174,324.77
Colorado	$867,448,946	2.90%	$25,156,019.43
Connecticut	$1,073,575,428	6.35%	$68,172,039.69
Delaware	$274,835,310	0.00%	$0.00
District of Columbia	$84,168,314	6.00%	$5,050,098.81
Florida	$4,019,466,403	6.00%	$241,167,984.19
Georgia	$1,631,190,506	4.00%	$65,247,620.22
Hawaii	$75,579,710	4.00%	$3,023,188.41
Idaho	$68,708,827	6.00%	$4,122,529.64
Illinois	$1,049,527,339	6.25%	$65,595,458.66
Indiana	$482,679,513	7.00%	$33,787,565.88
Iowa	$429,430,171	6.00%	$25,765,810.28
Kansas	$194,961,298	6.50%	$12,672,484.35
Kentucky	$300,601,120	6.00%	$18,036,067.19
Louisiana	$249,928,360	5.00%	$12,496,417.98
Maine	$433,724,473	5.50%	$23,854,846.01
Maryland	$513,598,485	6.00%	$30,815,909.09
Massachusetts	$555,682,642	6.25%	$34,730,165.10
Michigan	$1,209,275,362	6.00%	$72,556,521.74
Minnesota	$1,159,461,462	6.88%	$79,770,948.62
Mississippi	$332,378,953	7.00%	$23,266,526.68
Missouri	$572,859,848	4.23%	$24,231,971.59
Montana	$376,180,830	0.00%	$0.00
Nebraska	$257,658,103	5.50%	$14,171,195.65
Nevada	$354,709,321	6.85%	$24,297,588.52
New Hampshire	$87,603,755	0.00%	$0.00
New Jersey	$753,220,520	6.63%	$49,938,520.50
New Mexico	$549,670,619	4.88%	$26,823,926.22
New York	$2,307,757,740	4.00%	$92,310,309.62
North Carolina	$1,503,005,599	4.75%	$71,392,765.97
North Dakota	$36,930,995	5.00%	$1,846,549.74
Ohio	$906,956,522	5.75%	$52,150,000.00
Oklahoma	$1,194,674,736	4.50%	$53,760,363.14
Oregon	$830,517,951	0.00%	$0.00
Pennsylvania	$909,533,103	6.00%	$54,571,986.17
Rhode Island	$97,051,219	7.00%	$6,793,585.31
South Carolina	$413,970,685	6.00%	$24,838,241.11
South Dakota	$92,756,917	4.20%	$3,895,790.51
Tennessee	$1,159,461,462	7.00%	$81,162,302.37
Texas	$6,100,055,583	6.25%	$381,253,473.94
Utah	$104,780,962	6.10%	$6,391,638.67
Vermont	$86,744,895	6.00%	$5,204,693.68
Virginia	$719,724,967	5.30%	$38,145,423.25
Washington	$534,211,133	6.50%	$34,723,723.65
West Virginia	$515,316,206	6.00%	$30,918,972.33
Wisconsin	$323,790,349	5.00%	$16,189,517.46
Wyoming	$31,777,833	4.00%	$1,271,113.31
United States	$38,685,431,695		$2,101,663,422.55

APPENDIX 15

Breakdown of revenues by legal, restricted & prohibited markets

Breakdown of revenues by legal, restricted and prohibited market

Summaries based on legality

Legality	TAM Baseline	TAM - Midpoint
Legal	18,651,011,199	28,836,021,286
Restricted	10,815,628,294	9,105,637,352
Prohibited	763,526,845	743,773,057
Total	30,230,166,337	38,685,431,695

Legality	Total Sales Tax Potential (Lower Bound)	Total Sales Tax Potential (Midpoints)
Legal	954,129,254	1,515,253,678
Restricted	693,753,116	571,895,005
Prohibited	14,514,740	14,514,740
Total	1,662,397,110	2,101,663,423

Hemp Related Businesses	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Baseline
Legal	21,716	2,420	1,460	2,820	28,416
Restricted	12,593	824	659	631	14,707
Prohibited	889	8	0	15	912
Total	35,198	3,252	2,119	3,466	44,035

Hemp Related Jobs	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Legal	110,969	37,994	21,798	31,725	202,486
Restricted	64,351	12,937	9,839	7,099	94,225
Prohibited	4,543	126	0	169	4,837
Total	179,863	51,056	31,637	38,993	301,548

Hemp Related Wages	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Baseline
Legal	$4,200,119,833	$1,631,918,288	$982,051,924	$1,257,731,280	$8,071,821,325
Restricted	$2,435,628,525	$555,661,434	$443,268,642	$281,428,524	$3,715,987,125
Prohibited	$171,942,647	$5,394,771	$0	$6,690,060	$184,027,479
Total	$6,807,691,006	$2,192,974,493	$1,425,320,566	$1,545,849,864	$11,971,835,929

Hemp Related Businesses	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Midpoint
Legal	33,575	2,420	1,460	2,820	40,275
Restricted	10,602	824	659	631	12,716
Prohibited	866	8	0	15	889
Total	45,043	3,252	2,119	3,466	53,880

Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Midpoint
Legal	171,568	37,994	21,798	31,725	263,085
Restricted	54,176	12,937	9,839	7,099	84,051
Prohibited	4,425	126	0	169	4,720
Total	230,170	51,056	31,637	38,993	351,855

Businesses (Baseline) - Legal

State	Legal Status	Hemp Related Businesses	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Baseline
Alabama	Legal and highly regulated	Alabama	330	26		38	394
Colorado	Legal and highly regulated	Colorado	1,010	600		132	1,742
Connecticut	Legal and highly regulated	Connecticut	389	49		57	495
Delaware	Legal with light touch regulations	Delaware	81	7		15	103
Florida	Legal and highly regulated	Florida	3,253	323	351	431	4,358
Georgia	Legal and highly regulated	Georgia	993	15	247	99	1,354
Hawaii	Legal and highly regulated	Hawaii	88	4	16	59	167
Iowa	Legal and highly regulated	Iowa	163	140		26	329
Kentucky	Legal and highly regulated	Kentucky	350	19		123	492
Louisiana	Legal and highly regulated	Louisiana	291	1	4	26	322
Maine	Legal with light touch regulations	Maine	505	3		12	520
Minnesota	Legal and highly regulated	Minnesota	421	137	110	217	885
Missouri	Legal with light touch regulations	Missouri	665	12		112	789
Nebraska	Legal with light touch regulations	Nebraska	189	7		43	239
Nevada	Legal with light touch regulations	Nevada	413	9		16	438
New Hampshire	Legal and highly regulated	New Hampshire	102	2		21	125
New Mexico	Legal and highly regulated	New Mexico	640	29		10	679
New York	Legal and highly regulated	New York	1,586	46	185	102	1,919
North Carolina	Legal with light touch regulations	North Carolina	1,380	100	200	4	1,684
Oklahoma	Legal with light touch regulations	Oklahoma	1,391	55		158	1,604
Oregon	Legal and highly regulated	Oregon	767	141		101	1,009
Pennsylvania	Legal with light touch regulations	Pennsylvania	1,059	32		159	1,250
Rhode Island	Legal and highly regulated	Rhode Island	58	4	11	0	73
South Carolina	Legal with light touch regulations	South Carolina	482	1	2	49	534
South Dakota	Legal with light touch regulations	South Dakota	108	2		28	138
Tennessee	Legal and highly regulated	Tennessee	748	51	100	108	1,007
Texas	Legal and highly regulated	Texas	3,433	553	200	276	4,462
Utah	Legal and highly regulated	Utah	143	9		18	170
Vermont	Legal and highly regulated	Vermont	101	2		50	153
West Virginia	Legal and highly regulated	West Virginia	200	11	34	25	270
Wisconsin	Legal with light touch regulations	Wisconsin	377	30		305	712
		Total	21,716	2,420	1,460	2,820	28,416

Jobs – Baseline – Legal

State	Legal Status	Hemp Related Jobs	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alabama	Legal and highly regulated	Alabama	1,686	408	0	428	2,522
Colorado	Legal and highly regulated	Colorado	5,161	9,420	0	1,485	16,066
Connecticut	Legal and highly regulated	Connecticut	1,988	769	0	641	3,398
Delaware	Legal with light touch regulations	Delaware	414	110	0	169	693
Florida	Legal and highly regulated	Florida	16,623	5,071	5,240	4,849	31,783
Georgia	Legal and highly regulated	Georgia	5,074	236	3,688	1,114	10,111
Hawaii	Legal and highly regulated	Hawaii	450	63	239	664	1,415
Iowa	Legal and highly regulated	Iowa	833	2,198	0	293	3,323
Kentucky	Legal and highly regulated	Kentucky	1,789	298	0	1,384	3,471
Louisiana	Legal and highly regulated	Louisiana	1,487	16	60	293	1,855
Maine	Legal with light touch regulations	Maine	2,581	47	0	135	2,763
Minnesota	Legal and highly regulated	Minnesota	2,151	2,151	1,642	2,441	8,386
Missouri	Legal with light touch regulations	Missouri	3,398	188	0	1,260	4,847
Nebraska	Legal with light touch regulations	Nebraska	966	110	0	484	1,559
Nevada	Legal with light touch regulations	Nevada	2,110	141	0	180	2,432
New Hampshire	Legal and highly regulated	New Hampshire	521	31	0	236	789
New Mexico	Legal and highly regulated	New Mexico	3,270	455	0	113	3,838
New York	Legal and highly regulated	New York	8,104	722	2,762	1,148	12,736
North Carolina	Legal with light touch regulations	North Carolina	7,052	1,570	2,986	45	11,653
Oklahoma	Legal with light touch regulations	Oklahoma	7,108	864	0	1,778	9,749
Oregon	Legal and highly regulated	Oregon	3,919	2,214	0	1,136	7,269
Pennsylvania	Legal with light touch regulations	Pennsylvania	5,412	502	0	1,789	7,703
Rhode Island	Legal and highly regulated	Rhode Island	296	63	164	0	523
South Carolina	Legal with light touch regulations	South Carolina	2,463	16	30	551	3,060
South Dakota	Legal with light touch regulations	South Dakota	552	31	0	315	898
Tennessee	Legal and highly regulated	Tennessee	3,822	801	1,493	1,215	7,331
Texas	Legal and highly regulated	Texas	17,543	8,682	2,986	3,105	32,316
Utah	Legal and highly regulated	Utah	731	141	0	203	1,075
Vermont	Legal and highly regulated	Vermont	516	31	0	563	1,110
West Virginia	Legal and highly regulated	West Virginia	1,022	173	508	281	1,984
Wisconsin	Legal with light touch regulations	Wisconsin	1,926	471	0	3,431	5,829
		Total	110,969	37,994	21,798	31,725	202,486

Wages – Baseline – Legal

State	Legal Status	Hemp Related Wages	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Baseline
Alabama	Legal and highly regulated	Alabama	$63,825,730	$17,533,006	$0	$16,948,152	$98,306,888
Colorado	Legal and highly regulated	Colorado	$195,345,415	$404,607,840	$0	$58,872,528	$658,825,783
Connecticut	Legal and highly regulated	Connecticut	$75,236,996	$33,042,974	$0	$25,422,228	$133,702,198
Delaware	Legal with light touch regulations	Delaware	$15,666,315	$4,720,425	$0	$6,690,060	$27,076,800
Florida	Legal and highly regulated	Florida	$629,166,965	$217,813,887	$236,096,045	$192,227,724	$1,275,304,621
Georgia	Legal and highly regulated	Georgia	$192,057,423	$10,115,196	$166,141,661	$44,154,396	$412,468,676
Hawaii	Legal and highly regulated	Hawaii	$17,020,195	$2,697,386	$10,762,213	$26,314,236	$56,794,029
Iowa	Legal and highly regulated	Iowa	$31,526,042	$94,408,496	$0	$11,596,104	$137,530,642
Kentucky	Legal and highly regulated	Kentucky	$67,693,956	$12,812,582	$0	$54,858,492	$135,365,029
Louisiana	Legal and highly regulated	Louisiana	$56,282,689	$674,346	$2,690,553	$11,596,104	$71,243,692
Maine	Legal with light touch regulations	Maine	$97,672,707	$2,023,039	$0	$5,352,048	$105,047,795
Minnesota	Legal and highly regulated	Minnesota	$81,426,158	$92,385,457	$73,990,213	$96,782,868	$344,584,696
Missouri	Legal with light touch regulations	Missouri	$128,618,516	$8,092,157	$0	$49,952,448	$186,663,121
Nebraska	Legal with light touch regulations	Nebraska	$36,554,736	$4,720,425	$0	$19,178,172	$60,453,333
Nevada	Legal with light touch regulations	Nevada	$79,878,868	$6,069,118	$0	$7,136,064	$93,084,049
New Hampshire	Legal and highly regulated	New Hampshire	$19,727,953	$1,348,693	$0	$9,366,084	$30,442,730
New Mexico	Legal and highly regulated	New Mexico	$123,783,233	$19,556,046	$0	$4,460,040	$147,799,319
New York	Legal and highly regulated	New York	$306,750,325	$31,019,934	$124,438,086	$45,492,408	$507,700,754
North Carolina	Legal with light touch regulations	North Carolina	$266,907,597	$67,434,640	$134,527,661	$1,784,016	$470,653,913
Oklahoma	Legal with light touch regulations	Oklahoma	$269,035,121	$37,089,052	$0	$70,468,632	$376,592,805
Oregon	Legal and highly regulated	Oregon	$148,346,469	$95,082,842	$0	$45,046,404	$288,475,715
Pennsylvania	Legal with light touch regulations	Pennsylvania	$204,822,569	$21,579,085	$0	$70,914,636	$297,316,290
Rhode Island	Legal and highly regulated	Rhode Island	$11,217,856	$2,697,386	$7,399,021	$0	$21,314,262
South Carolina	Legal with light touch regulations	South Carolina	$93,224,248	$674,346	$1,345,277	$21,854,196	$117,098,067
South Dakota	Legal with light touch regulations	South Dakota	$20,888,421	$1,348,693	$0	$12,488,112	$34,725,225
Tennessee	Legal and highly regulated	Tennessee	$144,671,654	$34,391,666	$67,263,830	$48,168,432	$294,495,583
Texas	Legal and highly regulated	Texas	$663,981,000	$372,913,559	$134,527,661	$123,097,104	$1,294,519,324
Utah	Legal and highly regulated	Utah	$27,657,816	$6,069,118	$0	$8,028,072	$41,755,006
Vermont	Legal and highly regulated	Vermont	$19,534,541	$1,348,693	$0	$22,300,200	$43,183,434
West Virginia	Legal and highly regulated	West Virginia	$38,682,260	$7,417,810	$22,869,702	$11,150,100	$80,119,873
Wisconsin	Legal with light touch regulations	Wisconsin	$72,916,061	$20,230,392	$0	$136,031,220	$229,177,673
		Total	$4,200,119,833	$1,631,918,288	$982,051,924	$1,257,731,280	$8,071,821,325

Businesses Midpoint - Legal

State	Legal Status	Hemp Related Businesses	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Midpoint
Alabama	Legal and highly regulated	Alabama	1,000	26		38	1,064
Colorado	Legal and highly regulated	Colorado	1,010	600		132	1,742
Connecticut	Legal and highly regulated	Connecticut	1,250	49		57	1,356
Delaware	Legal with light touch regulations	Delaware	320	7		15	342
Florida	Legal and highly regulated	Florida	4,680	323	351	431	5,785
Georgia	Legal and highly regulated	Georgia	1,899	15	247	99	2,260
Hawaii	Legal and highly regulated	Hawaii	88	4	16	59	167
Iowa	Legal and highly regulated	Iowa	500	140		26	666
Kentucky	Legal and highly regulated	Kentucky	350	19		123	492
Louisiana	Legal and highly regulated	Louisiana	291	1	4	26	322
Maine	Legal with light touch regulations	Maine	505	3		12	520
Minnesota	Legal and highly regulated	Minnesota	1,350	137	110	217	1,814
Missouri	Legal with light touch regulations	Missouri	667	12		112	791
Nebraska	Legal with light touch regulations	Nebraska	300	7		43	350
Nevada	Legal with light touch regulations	Nevada	413	9		16	438
New Hampshire	Legal and highly regulated	New Hampshire	102	2		21	125
New Mexico	Legal and highly regulated	New Mexico	640	29		10	679
New York	Legal and highly regulated	New York	2,687	46	185	102	3,020
North Carolina	Legal with light touch regulations	North Carolina	1,750	100	200	4	2,054
Oklahoma	Legal with light touch regulations	Oklahoma	1,391	55		158	1,604
Oregon	Legal and highly regulated	Oregon	967	141		101	1,209
Pennsylvania	Legal with light touch regulations	Pennsylvania	1,059	32		159	1,250
Rhode Island	Legal and highly regulated	Rhode Island	113	4	11	0	128
South Carolina	Legal with light touch regulations	South Carolina	482	1	2	49	534
South Dakota	Legal with light touch regulations	South Dakota	108	2		28	138
Tennessee	Legal and highly regulated	Tennessee	1,350	51	100	108	1,609
Texas	Legal and highly regulated	Texas	7,103	553	200	276	8,132
Utah	Legal and highly regulated	Utah	122	9		18	149
Vermont	Legal and highly regulated	Vermont	101	2		50	153
West Virginia	Legal and highly regulated	West Virginia	600	11	34	25	670
Wisconsin	Legal with light touch regulations	Wisconsin	377	30		305	712
		Total	33,575	2,420	1,460	2,820	40,275

Jobs – Midpoint – Legal

State	Legal Status	Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alabama	Legal and highly regulated	Alabama	5,110	408	0	428	5,946
Colorado	Legal and highly regulated	Colorado	5,161	9,420	0	1,485	16,066
Connecticut	Legal and highly regulated	Connecticut	6,388	769	0	641	7,798
Delaware	Legal with light touch regulations	Delaware	1,635	110	0	169	1,914
Florida	Legal and highly regulated	Florida	23,915	5,071	5,240	4,849	39,075
Georgia	Legal and highly regulated	Georgia	9,705	236	3,688	1,114	14,742
Hawaii	Legal and highly regulated	Hawaii	450	63	239	664	1,415
Iowa	Legal and highly regulated	Iowa	2,555	2,198	0	293	5,046
Kentucky	Legal and highly regulated	Kentucky	1,789	298	0	1,384	3,471
Louisiana	Legal and highly regulated	Louisiana	1,487	16	60	293	1,855
Maine	Legal with light touch regulations	Maine	2,581	47	0	135	2,763
Minnesota	Legal and highly regulated	Minnesota	6,899	2,151	1,642	2,441	13,133
Missouri	Legal with light touch regulations	Missouri	3,408	188	0	1,260	4,857
Nebraska	Legal with light touch regulations	Nebraska	1,533	110	0	484	2,127
Nevada	Legal with light touch regulations	Nevada	2,110	141	0	180	2,432
New Hampshire	Legal and highly regulated	New Hampshire	521	31	0	236	789
New Mexico	Legal and highly regulated	New Mexico	3,270	455	0	113	3,838
New York	Legal and highly regulated	New York	13,731	722	2,762	1,148	18,362
North Carolina	Legal with light touch regulations	North Carolina	8,943	1,570	2,986	45	13,544
Oklahoma	Legal with light touch regulations	Oklahoma	7,108	864	0	1,778	9,749
Oregon	Legal and highly regulated	Oregon	4,941	2,214	0	1,136	8,291
Pennsylvania	Legal with light touch regulations	Pennsylvania	5,412	502	0	1,789	7,703
Rhode Island	Legal and highly regulated	Rhode Island	577	63	164	0	804
South Carolina	Legal with light touch regulations	South Carolina	2,463	16	30	551	3,060
South Dakota	Legal with light touch regulations	South Dakota	552	31	0	315	898
Tennessee	Legal and highly regulated	Tennessee	6,899	801	1,493	1,215	10,407
Texas	Legal and highly regulated	Texas	36,294	8,682	2,986	3,105	51,067
Utah	Legal and highly regulated	Utah	623	141	0	203	967
Vermont	Legal and highly regulated	Vermont	516	31	0	563	1,110
West Virginia	Legal and highly regulated	West Virginia	3,066	173	508	281	4,028
Wisconsin	Legal with light touch regulations	Wisconsin	1,926	471	0	3,431	5,829
		Total	171,568	37,994	21,798	31,725	263,085

Wages – Midpoint – Legal

State	Legal Status	Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Alabama	Legal and highly regulated	Alabama	$193,411,302	$17,533,006	$0	$16,948,152	$227,892,460
Colorado	Legal and highly regulated	Colorado	$195,345,415	$404,607,840	$0	$58,872,528	$658,825,783
Connecticut	Legal and highly regulated	Connecticut	$241,764,127	$33,042,974	$0	$25,422,228	$300,229,329
Delaware	Legal with light touch regulations	Delaware	$61,891,617	$4,720,425	$0	$6,690,060	$73,302,101
Florida	Legal and highly regulated	Florida	$905,164,893	$217,813,887	$236,096,045	$192,227,724	$1,551,302,549
Georgia	Legal and highly regulated	Georgia	$367,336,415	$10,115,196	$166,141,661	$44,154,396	$587,747,668
Hawaii	Legal and highly regulated	Hawaii	$17,020,195	$2,697,386	$10,762,213	$26,314,236	$56,794,029
Iowa	Legal and highly regulated	Iowa	$96,705,651	$94,408,496	$0	$11,596,104	$202,710,251
Kentucky	Legal and highly regulated	Kentucky	$67,693,956	$12,812,582	$0	$54,858,492	$135,365,029
Louisiana	Legal and highly regulated	Louisiana	$56,282,689	$674,346	$2,690,553	$11,596,104	$71,243,692
Maine	Legal with light touch regulations	Maine	$97,672,707	$2,023,039	$0	$5,352,048	$105,047,795
Minnesota	Legal and highly regulated	Minnesota	$261,105,258	$92,385,457	$73,990,213	$96,782,868	$524,263,796
Missouri	Legal with light touch regulations	Missouri	$129,005,338	$8,092,157	$0	$49,952,448	$187,049,943
Nebraska	Legal with light touch regulations	Nebraska	$58,023,391	$4,720,425	$0	$19,178,172	$81,921,987
Nevada	Legal with light touch regulations	Nevada	$79,878,868	$6,069,118	$0	$7,136,064	$93,084,049
New Hampshire	Legal and highly regulated	New Hampshire	$19,727,953	$1,348,693	$0	$9,366,084	$30,442,730
New Mexico	Legal and highly regulated	New Mexico	$123,783,233	$19,556,046	$0	$4,460,040	$147,799,319
New York	Legal and highly regulated	New York	$519,696,168	$31,019,934	$124,438,086	$45,492,408	$720,646,597
North Carolina	Legal with light touch regulations	North Carolina	$338,469,778	$67,434,640	$134,527,661	$1,784,016	$542,216,095
Oklahoma	Legal with light touch regulations	Oklahoma	$269,035,121	$37,089,052	$0	$70,468,632	$376,592,805
Oregon	Legal and highly regulated	Oregon	$187,028,729	$95,082,842	$0	$45,046,404	$327,157,975
Pennsylvania	Legal with light touch regulations	Pennsylvania	$204,822,569	$21,579,085	$0	$70,914,636	$297,316,290
Rhode Island	Legal and highly regulated	Rhode Island	$21,855,477	$2,697,386	$7,399,021	$0	$31,951,884
South Carolina	Legal with light touch regulations	South Carolina	$93,224,248	$674,346	$1,345,277	$21,854,196	$117,098,067
South Dakota	Legal with light touch regulations	South Dakota	$20,888,421	$1,348,693	$0	$12,488,112	$34,725,225
Tennessee	Legal and highly regulated	Tennessee	$261,105,258	$34,391,666	$67,263,830	$48,168,432	$410,929,186
Texas	Legal and highly regulated	Texas	$1,373,703,772	$372,913,559	$134,527,661	$123,097,104	$2,004,242,096
Utah	Legal and highly regulated	Utah	$23,596,179	$6,069,118	$0	$8,028,072	$37,693,368
Vermont	Legal and highly regulated	Vermont	$19,534,541	$1,348,693	$0	$22,300,200	$43,183,434
West Virginia	Legal and highly regulated	West Virginia	$116,046,781	$7,417,810	$22,869,702	$11,150,100	$157,484,394
Wisconsin	Legal with light touch regulations	Wisconsin	$72,916,061	$20,230,392	$0	$136,031,220	$229,177,673
		Total	$6,493,736,110	$1,631,918,288	$982,051,924	$1,257,731,280	$10,365,437,602

TAM By Legal

State	Legal Status	Retail TAM by State	TAM Baseline	TAM - Midpoint
Alabama	Legal and highly regulated	Alabama	$283,423,913	$858,860,343
Colorado	Legal and highly regulated	Colorado	$867,448,946	$867,448,946
Connecticut	Legal and highly regulated	Connecticut	$334,096,673	$1,073,575,428
Delaware	Legal with light touch regulations	Delaware	$69,567,688	$274,835,310
Florida	Legal and highly regulated	Florida	$2,793,872,694	$4,019,466,403
Georgia	Legal and highly regulated	Georgia	$852,848,320	$1,631,190,506
Hawaii	Legal and highly regulated	Hawaii	$75,579,710	$75,579,710
Iowa	Legal and highly regulated	Iowa	$139,994,236	$429,430,171
Kentucky	Legal and highly regulated	Kentucky	$300,601,120	$300,601,120
Louisiana	Legal and highly regulated	Louisiana	$249,928,360	$249,928,360
Maine	Legal with light touch regulations	Maine	$433,724,473	$433,724,473
Minnesota	Legal and highly regulated	Minnesota	$361,580,204	$1,159,461,462
Missouri	Legal with light touch regulations	Missouri	$571,142,128	$572,859,848
Nebraska	Legal with light touch regulations	Nebraska	$162,324,605	$257,658,103
Nevada	Legal with light touch regulations	Nevada	$354,709,321	$354,709,321
New Hampshire	Legal and highly regulated	New Hampshire	$87,603,755	$87,603,755
New Mexico	Legal and highly regulated	New Mexico	$549,670,619	$549,670,619
New York	Legal and highly regulated	New York	$1,362,152,503	$2,307,757,740
North Carolina	Legal with light touch regulations	North Carolina	$1,185,227,273	$1,503,005,599
Oklahoma	Legal with light touch regulations	Oklahoma	$1,194,674,736	$1,194,674,736
Oregon	Legal and highly regulated	Oregon	$658,745,883	$830,517,951
Pennsylvania	Legal with light touch regulations	Pennsylvania	$909,533,103	$909,533,103
Rhode Island	Legal and highly regulated	Rhode Island	$49,813,900	$97,051,219
South Carolina	Legal with light touch regulations	South Carolina	$413,970,685	$413,970,685
South Dakota	Legal with light touch regulations	South Dakota	$92,756,917	$92,756,917
Tennessee	Legal and highly regulated	Tennessee	$642,427,536	$1,159,461,462
Texas	Legal and highly regulated	Texas	$2,948,467,556	$6,100,055,583
Utah	Legal and highly regulated	Utah	$122,817,029	$104,780,962
Vermont	Legal and highly regulated	Vermont	$86,744,895	$86,744,895
West Virginia	Legal and highly regulated	West Virginia	$171,772,069	$515,316,206
Wisconsin	Legal with light touch regulations	Wisconsin	$323,790,349	$323,790,349
		Total	$18,651,011,199	$28,836,021,286

Sales Tax – Legal

State	Legal Status	State Sales Tax Rate	Total Sales Tax Potential (Lower Bound)	Total Sales Tax Potential (Midpoints)
Alabama	Legal and highly regulated	4.00%	$11,336,957	$34,354,414
Colorado	Legal and highly regulated	2.90%	$25,156,019	$25,156,019
Connecticut	Legal and highly regulated	6.35%	$21,215,139	$68,172,040
Delaware	Legal with light touch regulations	0.00%	$0	$0
Florida	Legal and highly regulated	6.00%	$167,632,362	$241,167,984
Georgia	Legal and highly regulated	4.00%	$34,113,933	$65,247,620
Hawaii	Legal and highly regulated	4.00%	$3,023,188	$3,023,188
Iowa	Legal and highly regulated	6.00%	$8,399,654	$25,765,810
Kentucky	Legal and highly regulated	6.00%	$18,036,067	$18,036,067
Louisiana	Legal and highly regulated	5.00%	$12,496,418	$12,496,418
Maine	Legal with light touch regulations	5.50%	$23,854,846	$23,854,846
Minnesota	Legal and highly regulated	6.88%	$24,876,718	$79,770,949
Missouri	Legal with light touch regulations	4.23%	$24,159,312	$24,231,972
Nebraska	Legal with light touch regulations	5.50%	$8,927,853	$14,171,196
Nevada	Legal with light touch regulations	6.85%	$24,297,589	$24,297,589
New Hampshire	Legal and highly regulated	0.00%	$0	$0
New Mexico	Legal and highly regulated	4.88%	$26,823,926	$26,823,926
New York	Legal and highly regulated	4.00%	$54,486,100	$92,310,310
North Carolina	Legal with light touch regulations	4.75%	$56,298,295	$71,392,766
Oklahoma	Legal with light touch regulations	4.50%	$53,760,363	$53,760,363
Oregon	Legal and highly regulated	0.00%	$0	$0
Pennsylvania	Legal with light touch regulations	6.00%	$54,571,986	$54,571,986
Rhode Island	Legal and highly regulated	7.00%	$3,486,973	$6,793,585
South Carolina	Legal with light touch regulations	6.00%	$24,838,241	$24,838,241
South Dakota	Legal with light touch regulations	4.20%	$3,895,791	$3,895,791
Tennessee	Legal and highly regulated	7.00%	$44,969,928	$81,162,302
Texas	Legal and highly regulated	6.25%	$184,279,222	$381,253,474
Utah	Legal and highly regulated	6.10%	$7,491,839	$6,391,639
Vermont	Legal and highly regulated	6.00%	$5,204,694	$5,204,694
West Virginia	Legal and highly regulated	6.00%	$10,306,324	$30,918,972
Wisconsin	Legal with light touch regulations	5.00%	$16,189,517	$16,189,517
		Total	$954,129,254	$1,515,253,678

Restricted State Summaries

Hemp Businesses (Baseline) – Restricted

State	Legal Status	Hemp Related Businesses	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Baseline
Arizona	Prohibited unless treated like marijuana	Arizona	741	16		26	783
California	Prohibited unless treated like marijuana	California	3,271	89		68	3,428
D.C.	Prohibited with some exceptions	District of Columbia	98	0	0	0	98
Idaho	Legal but heavily restricted	Idaho	80	2	2	8	92
Illinois	Prohibited with some exceptions	Illinois	1,222	250	300	57	1,829
Indiana	Legal but heavily restricted	Indiana	562	22		21	605
Kansas	Legal but heavily restricted	Kansas	227	34		85	346
Maryland	Prohibited unless treated like marijuana	Maryland	477	56	29	10	572
Massachusetts	Prohibited with some exceptions	Massachusetts	647	20		6	673
Michigan	Prohibited unless treated like marijuana	Michigan	1,408	200	306	36	1,950
Mississippi	Prohibited unless treated like marijuana	Mississippi	387	30		121	538
New Jersey	Prohibited unless treated like marijuana	New Jersey	877	7		9	893
North Dakota	Legal but heavily restricted	North Dakota	43	3		8	54
Ohio	Prohibited unless treated like marijuana	Ohio	1,056	44		26	1,126
Virginia	Legal but heavily restricted	Virginia	838	42	22	99	1,001
Washington	Prohibited unless treated like marijuana	Washington	622	7		45	674
Wyoming	Legal but heavily restricted	Wyoming	37	2		6	45
		Total	12,593	824	659	631	14,707

Jobs – Baseline – Restricted

State	Legal Status	Hemp Related Jobs	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Arizona	Prohibited unless treated like marijuana	Arizona	3,787	251	0	293	4,330
California	Prohibited unless treated like marijuana	California	16,715	1,397	0	765	18,877
D.C.	Prohibited with some exceptions	District of Columbia	501	0	0	0	501
Idaho	Legal but heavily restricted	Idaho	409	31	30	90	560
Illinois	Prohibited with some exceptions	Illinois	6,244	3,925	4,479	641	15,290
Indiana	Legal but heavily restricted	Indiana	2,872	345	0	236	3,453
Kansas	Legal but heavily restricted	Kansas	1,160	534	0	956	2,650
Maryland	Prohibited unless treated like marijuana	Maryland	2,437	879	433	113	3,862
Massachusetts	Prohibited with some exceptions	Massachusetts	3,306	314	0	68	3,688
Michigan	Prohibited unless treated like marijuana	Michigan	7,195	3,140	4,569	405	15,308
Mississippi	Prohibited unless treated like marijuana	Mississippi	1,978	471	0	1,361	3,810
New Jersey	Prohibited unless treated like marijuana	New Jersey	4,481	110	0	101	4,693
North Dakota	Legal but heavily restricted	North Dakota	220	47	0	90	357
Ohio	Prohibited unless treated like marijuana	Ohio	5,396	691	0	293	6,379
Virginia	Legal but heavily restricted	Virginia	4,282	659	328	1,114	6,384
Washington	Prohibited unless treated like marijuana	Washington	3,178	110	0	506	3,795
Wyoming	Legal but heavily restricted	Wyoming	189	31	0	68	288
		Total	64,351	12,937	9,839	7,099	94,225

Wages – Baseline – Restricted

State	Legal Status	Hemp Related Wages	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Baseline
Arizona	Prohibited unless treated like marijuana	Arizona	$143,317,775	$10,789,542	$0	$11,596,104	$165,703,421
California	Prohibited unless treated like marijuana	California	$632,648,369	$60,016,830	$0	$30,328,272	$722,993,470
D.C.	Prohibited with some exceptions	District of Columbia	18,954,308	0	0	0	18,954,308
Idaho	Legal but heavily restricted	Idaho	$15,472,904	$1,348,693	$1,345,277	$3,568,032	$21,734,906
Illinois	Prohibited with some exceptions	Illinois	$236,348,611	$168,586,600	$201,791,491	$25,422,228	$632,148,930
Indiana	Legal but heavily restricted	Indiana	$108,697,152	$14,835,621	$0	$9,366,084	$132,898,856
Kansas	Legal but heavily restricted	Kansas	$43,904,366	$22,927,778	$0	$37,910,340	$104,742,483
Maryland	Prohibited unless treated like marijuana	Maryland	$92,257,191	$37,763,398	$19,506,511	$4,460,040	$153,987,140
Massachusetts	Prohibited with some exceptions	Massachusetts	$125,137,112	$13,486,928	$0	$2,676,024	$141,300,064
Michigan	Prohibited unless treated like marijuana	Michigan	$272,323,113	$134,869,280	$205,827,321	$16,056,144	$629,075,858
Mississippi	Prohibited unless treated like marijuana	Mississippi	$74,850,174	$20,230,392	$0	$53,966,484	$149,047,050
New Jersey	Prohibited unless treated like marijuana	New Jersey	$169,621,712	$4,720,425	$0	$4,014,036	$178,356,173
North Dakota	Legal but heavily restricted	North Dakota	$8,316,686	$2,023,039	$0	$3,568,032	$13,907,757
Ohio	Prohibited unless treated like marijuana	Ohio	$204,242,335	$29,671,242	$0	$11,596,104	$245,509,680
Virginia	Legal but heavily restricted	Virginia	$162,078,671	$28,322,549	$14,798,043	$44,154,396	$249,353,659
Washington	Prohibited unless treated like marijuana	Washington	$120,301,830	$4,720,425	$0	$20,070,180	$145,092,435
Wyoming	Legal but heavily restricted	Wyoming	$7,156,218	$1,348,693	$0	$2,676,024	$11,180,935
		Total	2,435,628,525	555,661,434	443,268,642	281,428,524	3,715,987,125

Total Businesses – Midpoint – Restricted

State	Legal Status	Hemp Related Businesses	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Midpoint
Arizona	Prohibited unless treated like marijuana	Arizona	500	16		26	542
California	Prohibited unless treated like marijuana	California	1,400	89		68	1,557
D.C.	Prohibited with some exceptions	District of Columbia	98	0	0	0	98
Idaho	Legal but heavily restricted	Idaho	80	2	2	8	92
Illinois	Prohibited with some exceptions	Illinois	1,222	250	300	57	1,829
Indiana	Legal but heavily restricted	Indiana	562	22		21	605
Kansas	Legal but heavily restricted	Kansas	227	34		85	346
Maryland	Prohibited unless treated like marijuana	Maryland	598	56	29	10	693
Massachusetts	Prohibited with some exceptions	Massachusetts	647	20		6	673
Michigan	Prohibited unless treated like marijuana	Michigan	1,408	200	306	36	1,950
Mississippi	Prohibited unless treated like marijuana	Mississippi	387	30		121	538
New Jersey	Prohibited unless treated like marijuana	New Jersey	877	7		9	893
North Dakota	Legal but heavily restricted	North Dakota	43	3		8	54
Ohio	Prohibited unless treated like marijuana	Ohio	1,056	44		26	1,126
Virginia	Legal but heavily restricted	Virginia	838	42	22	99	1,001
Washington	Prohibited unless treated like marijuana	Washington	622	7		45	674
Wyoming	Legal but heavily restricted	Wyoming	37	2		6	45
		Total	10,602	824	659	631	12,716

Total Jobs – Midpoint – Restricted

State	Legal Status	Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Arizona	Prohibited unless treated like marijuana	Arizona	2,555	251	0	293	3,099
California	Prohibited unless treated like marijuana	California	7,154	1,397	0	765	9,316
D.C.	Prohibited with some exceptions	District of Columbia	501	0	0	0	501
Idaho	Legal but heavily restricted	Idaho	409	31	30	90	560
Illinois	Prohibited with some exceptions	Illinois	6,244	3,925	4,479	641	15,290
Indiana	Legal but heavily restricted	Indiana	2,872	345	0	236	3,453
Kansas	Legal but heavily restricted	Kansas	1,160	534	0	956	2,650
Maryland	Prohibited unless treated like marijuana	Maryland	3,056	879	433	113	4,480
Massachusetts	Prohibited with some exceptions	Massachusetts	3,306	314	0	68	3,688
Michigan	Prohibited unless treated like marijuana	Michigan	7,195	3,140	4,569	405	15,308
Mississippi	Prohibited unless treated like marijuana	Mississippi	1,978	471	0	1,361	3,810
New Jersey	Prohibited unless treated like marijuana	New Jersey	4,481	110	0	101	4,693
North Dakota	Legal but heavily restricted	North Dakota	220	47	0	90	357
Ohio	Prohibited unless treated like marijuana	Ohio	5,396	691	0	293	6,379
Virginia	Legal but heavily restricted	Virginia	4,282	659	328	1,114	6,384
Washington	Prohibited unless treated like marijuana	Washington	3,178	110	0	506	3,795
Wyoming	Legal but heavily restricted	Wyoming	189	31	0	68	288
		Total	54,176	12,937	9,839	7,099	84,051

Total Wages – Midpoint – Restricted

State	Legal Status	Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Arizona	Prohibited unless treated like marijuana	Arizona	$96,705,651	$10,789,542	$0	$11,596,104	$119,091,297
California	Prohibited unless treated like marijuana	California	$270,775,823	$60,016,830	$0	$30,328,272	$361,120,924
D.C.	Prohibited with some exceptions	District of Columbia	18,954,308	0	0	0	18,954,308
Idaho	Legal but heavily restricted	Idaho	$15,472,904	$1,348,693	$1,345,277	$3,568,032	$21,734,906
Illinois	Prohibited with some exceptions	Illinois	$236,348,611	$168,586,600	$201,791,491	$25,422,228	$632,148,930
Indiana	Legal but heavily restricted	Indiana	$108,697,152	$14,835,621	$0	$9,366,084	$132,898,856
Kansas	Legal but heavily restricted	Kansas	$43,904,366	$22,927,778	$0	$37,910,340	$104,742,483
Maryland	Prohibited unless treated like marijuana	Maryland	$115,659,959	$37,763,398	$19,506,511	$4,460,040	$177,389,908
Massachusetts	Prohibited with some exceptions	Massachusetts	$125,137,112	$13,486,928	$0	$2,676,024	$141,300,064
Michigan	Prohibited unless treated like marijuana	Michigan	$272,323,113	$134,869,280	$205,827,321	$16,056,144	$629,075,858
Mississippi	Prohibited unless treated like marijuana	Mississippi	$74,850,174	$20,230,392	$0	$53,966,484	$149,047,050
New Jersey	Prohibited unless treated like marijuana	New Jersey	$169,621,712	$4,720,425	$0	$4,014,036	$178,356,173
North Dakota	Legal but heavily restricted	North Dakota	$8,316,686	$2,023,039	$0	$3,568,032	$13,907,757
Ohio	Prohibited unless treated like marijuana	Ohio	$204,242,335	$29,671,242	$0	$11,596,104	$245,509,680
Virginia	Legal but heavily restricted	Virginia	$162,078,671	$28,322,549	$14,798,043	$44,154,396	$249,353,659
Washington	Prohibited unless treated like marijuana	Washington	$120,301,830	$4,720,425	$0	$20,070,180	$145,092,435
Wyoming	Legal but heavily restricted	Wyoming	$7,156,218	$1,348,693	$0	$2,676,024	$11,180,935
		Total	2,050,546,623	555,661,434	443,268,642	281,428,524	3,330,905,223

TAM – Restricted

State	Legal Status	Retail TAM by State	TAM Baseline	TAM - Midpoint
Arizona	Prohibited unless treated like marijuana	Arizona	$636,415,514	$429,430,171
California	Prohibited unless treated like marijuana	California	$2,809,332,181	$1,202,404,480
D.C.	Prohibited with some exceptions	District of Columbia	$84,168,314	$84,168,314
Idaho	Legal but heavily restricted	Idaho	$68,708,827	$68,708,827
Illinois	Prohibited with some exceptions	Illinois	$1,049,527,339	$1,049,527,339
Indiana	Legal but heavily restricted	Indiana	$482,679,513	$482,679,513
Kansas	Legal but heavily restricted	Kansas	$194,961,298	$194,961,298
Maryland	Prohibited unless treated like marijuana	Maryland	$409,676,383	$513,598,485
Massachusetts	Prohibited with some exceptions	Massachusetts	$555,682,642	$555,682,642
Michigan	Prohibited unless treated like marijuana	Michigan	$1,209,275,362	$1,209,275,362
Mississippi	Prohibited unless treated like marijuana	Mississippi	$332,378,953	$332,378,953
New Jersey	Prohibited unless treated like marijuana	New Jersey	$753,220,520	$753,220,520
North Dakota	Legal but heavily restricted	North Dakota	$36,930,995	$36,930,995
Ohio	Prohibited unless treated like marijuana	Ohio	$906,956,522	$906,956,522
Virginia	Legal but heavily restricted	Virginia	$719,724,967	$719,724,967
Washington	Prohibited unless treated like marijuana	Washington	$534,211,133	$534,211,133
Wyoming	Legal but heavily restricted	Wyoming	$31,777,833	$31,777,833
		Total	10,815,628,294	9,105,637,352

Tax – Restricted

State	Legal Status	State Sales Tax Rate	Total Sales Tax Potential (Lower Bound)	Total Sales Tax Potential (Midpoints)
Arizona	Prohibited unless treated like marijuana	5.60%	$35,639,269	$24,048,090
California	Prohibited unless treated like marijuana	7.25%	$203,676,583	$87,174,325
D.C.	Prohibited with some exceptions	6.00%	$5,050,099	$5,050,099
Idaho	Legal but heavily restricted	6.00%	$4,122,530	$4,122,530
Illinois	Prohibited with some exceptions	6.25%	$65,595,459	$65,595,459
Indiana	Legal but heavily restricted	7.00%	$33,787,566	$33,787,566
Kansas	Legal but heavily restricted	6.50%	$12,672,484	$12,672,484
Maryland	Prohibited unless treated like marijuana	6.00%	$24,580,583	$30,815,909
Massachusetts	Prohibited with some exceptions	6.25%	$34,730,165	$34,730,165
Michigan	Prohibited unless treated like marijuana	6.00%	$72,556,522	$72,556,522
Mississippi	Prohibited unless treated like marijuana	7.00%	$23,266,527	$23,266,527
New Jersey	Prohibited unless treated like marijuana	6.63%	$49,938,521	$49,938,521
North Dakota	Legal but heavily restricted	5.00%	$1,846,550	$1,846,550
Ohio	Prohibited unless treated like marijuana	5.75%	$52,150,000	$52,150,000
Virginia	Legal but heavily restricted	5.30%	$38,145,423	$38,145,423
Washington	Prohibited unless treated like marijuana	6.50%	$34,723,724	$34,723,724
Wyoming	Legal but heavily restricted	4.00%	$1,271,113	$1,271,113
		Total	693,753,116	571,895,005

Prohibition State Summaries

Businesses – Baseline – Prohibited

State	Legal Status	Hemp Related Businesses	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Baseline
Alaska	Prohibited	Alaska	191	1		1	193
Arkansas	Prohibited	Arkansas	260	4		9	273
Montana	Prohibited	Montana	438	3		5	446
		Total	889	8	0	15	912

Jobs – Baseline – Prohibited

State	Legal Status	Hemp Related Jobs	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alaska	Prohibited	Alaska	976	16	0	11	1,003
Arkansas	Prohibited	Arkansas	1,329	63	0	101	1,493
Montana	Prohibited	Montana	2,238	47	0	56	2,342
		Total	4,543	126	0	169	4,837

Wages – Baseline – Prohibited

State	Legal Status	Hemp Related Wages	Retail - Baseline	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Baseline
Alaska	Prohibited	Alaska	$36,941,559	$674,346	$0	$446,004	$38,061,909
Arkansas	Prohibited	Arkansas	$50,286,939	$2,697,386	$0	$4,014,036	$56,998,360
Montana	Prohibited	Montana	$84,714,150	$2,023,039	$0	$2,230,020	$88,967,209
		Total	$171,942,647	$5,394,771	$0	$6,690,060	$184,027,479

Businesses – Baseline – Prohibited

State	Legal Status	Hemp Related Businesses	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Businesses - Midpoint
Alaska	Prohibited	Alaska	168	1		1	170
Arkansas	Prohibited	Arkansas	260	4		9	273
Montana	Prohibited	Montana	438	3		5	446
		Total	866	8	0	15	889

Jobs – Midpoint – Prohibited

State	Legal Status	Hemp Related Jobs	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Jobs - Baseline
Alaska	Prohibited	Alaska	858	16	0	11	885
Arkansas	Prohibited	Arkansas	1,329	63	0	101	1,493
Montana	Prohibited	Montana	2,238	47	0	56	2,342
		Total	4,425	126	0	169	4,720

Wages – Midpoint – Prohibited

State	Legal Status	Hemp Related Wages	Retail - Midpoint	Manufacturing / Processor	Wholesale / Disti	Cultivation	Total Hemp Related Wages - Midpoint
Alaska	Prohibited	Alaska	$32,493,099	$674,346	$0	$446,004	$33,613,449
Arkansas	Prohibited	Arkansas	$50,286,939	$2,697,386	$0	$4,014,036	$56,998,360
Montana	Prohibited	Montana	$84,714,150	$2,023,039	$0	$2,230,020	$88,967,209
		Total	$167,494,187	$5,394,771	$0	$6,690,060	$179,579,019

TAM – Prohibited

State	Legal Status	Retail TAM by State	TAM Baseline	TAM - Midpoint
Alaska	Prohibited	Alaska	$164,042,325	$144,288,538
Arkansas	Prohibited	Arkansas	$223,303,689	$223,303,689
Montana	Prohibited	Montana	$376,180,830	$376,180,830
		Total	$763,526,845	$743,773,057

Tax – Prohibited

State	Legal Status	State Sales Tax Rate	Total Sales Tax Potential (Lower Bound)	Total Sales Tax Potential (Midpoints)
Alaska	Prohibited	0.00%	$0	$0
Arkansas	Prohibited	6.50%	$14,514,740	$14,514,740
Montana	Prohibited	0.00%	$0	$0
		Total	$14,514,740	$14,514,740

APPENDIX 16
Sources and Citations

Source: Federation of Industrial Hemp Organizations (FIHO) Annual meeting (April 2026, Poznan, Poland)
www.whitneyeconomics.com/reports

Whitney Economics 2023 National Cannabinoid Report
(B. Whitney, B Wilberding, October 2023)
https://www.chamberofcommerce.org/small-business-statistics/

https://www.congress.gov/crs-product/IN12620

https://www.linkedin.com/pulse/hemps-multiplier-effect-why-one-crop-can-power-entire-hickey-sr-43elc/

Source Economic Policy Institute: https://files.epi.org/pdf/160282.pdf
https://obamawhitehouse.archives.gov/the-press-office/2016/06/17/fact-sheet-obama-administration-recognizes-100th-anniversary-and

Whitney Economics THE U.S.THC BEVERAGE REPORT (B. Whitney, September 2025)

Hemp Derived Cannabinoids: An Economics Impact Analysis of Cannabinoid Retail in Virginia. (B. Whitney, February 2023)

Virginia Hemp Ban: The Economic Impacts of SB 903, (B. Whitney, August 2023)
https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=4.4&pp=50&ps=100000&x=Calculate

https://www.linkedin.com/pulse/hemps-multiplier-effect-why-one-crop-can-power-entire-hickey-sr-43elc/

Source Economic Policy Institute: *https://files.epi.org/pdf/160282.pdf*

https://obamawhitehouse.archives.gov/the-press-office/2016/06/17/fact-sheet-obama-administration-recognizes-100th-anniversary-and

STATE REGULATORY PERMITTING AND LICENSING SOURCES

Alabama

https://hempsupporter.com/news/state-hemp-policy-update-alabama-connecticut-kentucky-louisiana-oklahoma-rhode-island-south-carolina/

https://alabcboard.gov/licensing-compliance/hemp

Smokable hemp products (flower, vapes, delta 8, delta 9, delta 10, THCa, HHC) are banned;

Alaska

https://plants.alaska.gov/industrialhemp.htm

Arizona

https://agriculture.az.gov/sites/default/files/AZ-HempLicenses-6-11-25.pdf

Colorado

https://ag.colorado.gov/plants/hemp/hemp-networking-directory

Connecticut

https://sativauniversity.com/cbd-stores/connecticut/

https://www.ctinsider.com/politics/article/ct-smoke-vape-shops-e-cigarette-dealers-cannabis-22215763.php

Delaware

https://hempsupporter.com/news/state-hemp-policy-update-delaware-illinois-nebraska-nevada-pennsylvania-philadelphia-and-virginia/

https://www.cannabisregulations.ai/cannabis-and-hemp-regulations-compliance-ai-blog/everything-you-need-to-know-about-delawares-cannabis-rollout-licensing-compliance-and-market-insights

https://whyy.org/articles/intoxicating-hemp-product-restrictions-delaware/

Florida

https://hempcbdbusinessplans.com/florida-hemp-industry/

https://healthyflorida.org/blogs/news/florida-hemp-economy-small-business-fair-regulations

https://cannabispromotions.com/stats/states/florida

https://www.wlrn.org/health/2023-04-21/changes-to-bill-allay-concerns-of-florida-hemp-businesses-while-keeping-a-focus-on-kids

Georgia

https://agr.georgia.gov/search-licenses

Hawaii

https://health.hawaii.gov/hempprogram/retailer-distributor-registry-faq/

https://acrobat.adobe.com/link/officefile?uri=urn%3Aaaid%3Asc%3AUS%3A1039faa5-84f2-4bc9-9219-577908b6f84a#/

Idaho
https://agri.idaho.gov/fsma-hemp-hops/hemp/idaho-hemp-license-holders/

Illinois
https://www.cannabisregulations.ai/cannabis-and-hemp-regulations-compliance-ai-blog/illinois-2025-hemp-retail-footprint-ordinances-forecast

Indiana
https://oisc.purdue.edu/hemp/pdf/2024_hemp_report.pdf

https://oisc.purdue.edu/hemp/faq.html

Iowa
https://acrobat.adobe.com/link/officefile?uri=urn%3Aaaid%3Asc%3AUS%3A2d8dfaab-5228-4357-931e-e837dbf639bd#/

Kansas
https://hemp.ams.usda.gov/s/PublicSearchTool

Kentucky
https://hemp.ams.usda.gov/s/PublicSearchTool

https://www.kyagr.com/marketing/documents/HEMP_OV_Processor_List.pdf

Louisiana
https://hemp.ams.usda.gov/s/PublicSearchTool

https://assets.ctfassets.net/pc5e1rlgfrov/3th6qHxDCGxZ3AtLR9rr5A/1001d3efbe240465b2bb67276f3fc2bf/Hemp_grower_List20260309.pdf

https://assets.ctfassets.net/pc5e1rlgfrov/6NTHc1nIWz0803HV9sSPI3/0f6f066f8263999c90441c72e3498a05/Hemp_Handler_List20260309.pdf

Maine
https://www.maine.gov/dacf/php/hemp/documents/05132026MaineLicensedHempGrowers.pdf

Maryland
https://hemp.ams.usda.gov/s/PublicSearchTool

https://cannabis.maryland.gov/Pages/Data-Dashboard.aspx

Massachusetts
https://www.mass.gov/info-details/massachusetts-hemp-licensee-list

https://hemp.ams.usda.gov/s/PublicSearchTool

Michigan
https://sfa.senate.michigan.gov/Publications/Notes/2026Notes/NotesWin26jm.pdf

https://www.google.com/search?q=how+many+hemp+licenses+in+michigan

Minnesota
https://mn.gov/ocm/data-reports/application-data/

https://hemp.ams.usda.gov/s/PublicSearchTool

https://mn.gov/ocm/data-reports/application-data/

Mississippi
https://hemp.ams.usda.gov/s/PublicSearchTool

https://highwireleah.com/hemp-processing-in-mississippi-an-in-depth-guide/

Missouri
https://agr.mt.gov/_docs/industrialhemp-docs/Hemp-Processor-List.pdf

Montana
https://hemp.ams.usda.gov/s/PublicSearchTool

Nebraska
https://hemp.ams.usda.gov/s/PublicSearchTool

https://nda.nebraska.gov/sites/default/files/hemp/2024%20NDA%20Hemp%20Program%20Annual%20Summary.pdf

https://nebraskaexaminer.com/2025/04/28/de-facto-ban-of-most-synthetic-consumable-hemp-products-in-nebraska-advances/

Nevada
https://agri.nv.gov/uploadedFiles/agrinvgov/Content/Plant/Seed_Certification/Industrial_Hemp/2019-2025%20Hemp%20Statistics.pdf

https://hemp.ams.usda.gov/s/PublicSearchTool

New Hampshire
https://hemp.ams.usda.gov/s/PublicSearchTool

https://ridgehemp.com/

New Jersey
https://hemp.ams.usda.gov/s/PublicSearchTool

https://www.nj.gov/agriculture/divisions/pi/prog/nj_hemp.shtml

New Mexico
https://www.env.nm.gov/cannabis-hemp/nm-approved-hemp-facilities/

New York
https://hemp.ams.usda.gov/s/PublicSearchTool

https://catalog.data.gov/dataset/current-cannabinoid-hemp-licenses

North Carolina

https://hemp.ams.usda.gov/s/PublicSearchTool

https://hempcbdbusinessplans.com/new-york-hemp-industry/

North Dakota

https://hemp.ams.usda.gov/s/PublicSearchTool

https://www.ndda.nd.gov/sites/www/files/documents/files/PROCESSOR%20REPORT%205-8-2023.pdf

Ohio

https://hemp.ams.usda.gov/s/PublicSearchTool

https://agri.ohio.gov/divisions/hemp-program

Oklahoma

https://accessodaff.ag.ok.gov/share/YQCkhPWhwK/company-search?program=Hemp%20Processors

Oregon

https://www.oregon.gov/oda/hemp/pages/hemp-contacts-data.aspx

Pennsylvania

https://www.pa.gov/agencies/pda/plants-land-water/hemp

Rhode Island

https://www.rilegislature.gov/Special/comdoc/House%20Corporations%202025/05-15-2025--H6270--Rhode%20Island%20Hemp%20Program_April%2025,%202025--cor.pdf

South Carolina

https://hemp.ams.usda.gov/s/PublicSearchTool

https://agriculture.sc.gov/wp-content/uploads/2026/04/SCHempFarmersList2026_4-13.pdf

https://agriculture.sc.gov/permits-and-inspections/hemp/permitted-hemp-farmers-handlers-processors/

https://cbhd.news/blogs/business/nc-hemp-retail-expansion-951-to-2197-stores

South Dakota

https://hemp.ams.usda.gov/s/PublicSearchTool

Tennessee

https://www.hemplawgroup.com/news/tennessee-hemp-week-one-under-tabc

Texas

https://www.dshs.texas.gov/consumable-hemp-program/current-licensees-and-registrants

Utah

https://hemp.ams.usda.gov/s/PublicSearchTool

https://agbusiness.utah.gov/s/publiclicense

Vermont
https://hemp.ams.usda.gov/s/PublicSearchTool

Virginia
https://hemp.ams.usda.gov/s/PublicSearchTool

Washington
https://hemp.ams.usda.gov/s/PublicSearchTool

https://agr.wa.gov/departments/agricultural-products/hemp

West Virginia
https://hemp.ams.usda.gov/s/PublicSearchTool

C:/Users/whitn/Documents/Hemp/wv%20-%20hemp-products-registered-retailer%2008-02-26.pdf

https://reimagineappalachia.org/wp-content/uploads/2025/05/Make-it-in-Appalachia-Grow-it-in-Appalachia_Industrial-Hemp-Production-Manufacturing.pdf

Wisconsin
https://hemp.ams.usda.gov/s/PublicSearchTool

Wyoming
https://hemp.ams.usda.gov/s/PublicSearchTool

Footnotes

1. Source: Federation of Industrial Hemp Organizations (FIHO) Annual meeting (April 2026, Poznan, Poland)

2. https://www.fda.gov/consumers/consumer-updates/what-you-need-know-and-what-were-working-find-out-about-products-containing-cannabis-or-cannabis

3. https://crops.extension.iastate.edu/cropnews/2020/03/opportunities-and-challenges-hemp

4. https://www.congress.gov/bill/115th-congress/house-bill/5485/text

5. Whitney Economics 2023 National Cannabinoid Report (B. Whitney, B Wilberding, October 2023)

6. https://www.ers.usda.gov/media/7570/eib-217-report-summary.pdf?v=41026

7. https://rdcu.be/fCx7M

8. https://www.chamberofcommerce.org/small-business-statistics/

9. https://www.congress.gov/crs-product/IN12620

10. Source Economic Policy Institute: https://files.epi.org/pdf/160282.pdf

11. https://files.constantcontact.com/48922045201/0aae986b-635d-4c97-985d-8a6eb701e7fb.pdf

12. https://obamawhitehouse.archives.gov/the-press-office/2016/06/17/fact-sheet-obama-administration-recognizes-100th-anniversary-and

13. https://www.govinfo.gov/app/details/PLAW-119publ37

14. Whitney Economics THE U.S.THC BEVERAGE REPORT (B. Whitney, September 2025)

15. Hemp Derived Cannabinoids: An Economics Impact Analysis of Cannabinoid Retail in Virginia. (B. Whitney, February 2023)

16. Virginia Hemp Ban: The Economic Impacts of SB 903, (B. Whitney, August 2023)

17. https://www.calculator.net/sample-size-calculator.html?type=1&cl=95&ci=4.4&pp=50&ps=100000&x=Calculate

18. https://www.linkedin.com/pulse/hemps-multiplier-effect-why-one-crop-can-power-entire-hickey-sr-43elc/

19. Source Economic Policy Institute: https://files.epi.org/pdf/160282.pdf

20. https://obamawhitehouse.archives.gov/the-press-office/2016/06/17/fact-sheet-obama-administration-recognizes-100th-anniversary-and