

The background of the entire page is a photograph of a beverage canning factory. A long, curved conveyor belt is filled with rows of aluminum cans, stretching from the foreground into the distance. The scene is brightly lit, and the blue structural elements of the factory are visible in the background.

WE

WHITNEY ECONOMICS

SEPTEMBER 2025

THE U.S. THC BEVERAGE REPORT

BEAU R. WHITNEY
Chief Economist

CONTENTS

Executive Summary	2
About the U.S. THC Beverage Report.....	3
Introduction.....	4
Why Examine the THC Beverage Market?.....	5
The History of THC Beverages	5
THC Beverages Had a Confluence of Events That Drove Significant Expansion	6
Public Policy - How did we get here – A regulatory overview (Background).....	8
State Approaches to Legalized Consumer Access: From Full Legalization to Total Illegality	11
Key Issues Facing the Marijuana Regulators	13
How are THC Beverages Made?	13
Who are the Suppliers? The Emergence of THC Beverage Brands.....	15
Top Brands	16
Special Topic: Cycling Frog.....	17
How are THC Beverages Sold?.....	19
Consumer Behaviors, Trends and Target Consumers	21
Getting to the Numbers: How to Assess the Total and Legal THC Beverage Market.....	22
Total Market Value.....	23
Total Legal Estimates	24
Forward Looking Legal Sales Forecast:.....	25
Key issues facing the THC beverage industry.....	26
Outlook for the future	27
Conclusion.....	28
Appendix: A note of Appreciation and Acknowledgement to the Contributors of this Report	30
Appendix: Charts and Graphs	31
Total Addressable Market by State based on Alcohol Cannibalization Rates.....	31
Legalization Status of THC Beverage by State	32
Breakdown of Potential Sales by Channel (Restaurants, Bars and Off Premise)	33
Sales Tax Potential by State	34
How are THC Beverages Made?	35
Appendix: About the Author / Statement of Conflicts	37
Appendix: References and Data Sources.	38

EXECUTIVE SUMMARY

A confluence of factors from shifting consumer behavior, economic softening and federal regulatory changes combined to open the doors to a rapid expansion of THC beverages across the United States. With post-covid shifts to a healthier lifestyle accelerating declines in alcohol sales, the beer, wine and distilled spirits industry outlook seemed bleak. However, an emerging THC beverage was a welcomed solution that helped backfill lost revenues across multiple industries.

Beverages containing THC were considered a niche market when they were initially sold through state regulated cannabis dispensaries. Accounting for roughly 1% of total U.S. cannabis sales, the THC beverage industry was not taken seriously until changes in federal law, via the 2018 farm bill, allowed for the proliferation of THC beverages across the U.S. The federal decoupling of hemp from marijuana enabled ingredients derived from hemp processing to be productized and sold directly to consumers with significantly less regulation and oversight.

As a result, the THC beverage industry experienced rapid expansion through multiple channels including; traditional marijuana retail dispensaries, direct to business sales, leveraging traditional alcohol distributors and even online via direct-to-consumer sales. This led to significant sales leveraging growth that have exceeded \$1 billion in 2024, and is forecasted to expand exponentially in the near and medium terms.

Questions are emerging about the total potential market for THC beverages - how much was already being sold, which states allowed THC beverage sales, and how this industry would be regulated moving forward. At one point, bold claims were made that THC beverage sales had the potential to exceed energy drink sales. With little data available to assess the THC beverage market, Whitney Economics set out to perform an in-depth market examination and provide the data through rigorous analysis. This effort involved interviewing beverage makers, ingredient suppliers,

distributors, regulators and retail operators across the U.S. The detailed findings of this effort are contained in this report.

Here are several examples of the high-level results:

- The total potential market is valued, conservatively, at between \$9.9 billion and \$14.9 billion.
- Legal sales in the U.S. were between \$1.0 billion and \$1.3 billion, meaning that there is still huge upside potential in this market.
- There are roughly 500 – 750 brands in this space nationally, roughly 200 of which were selling via marijuana dispensaries.
- Most brands average \$2.0 million per year while top brands can easily exceed \$10 million or more in annual sales.
- At the time of the report, THC beverages are legal in 28 states, legal but restricted in another 9, can only be sold in marijuana stores in 7 and completely illegal in 6 states.
- With the lack of a federal regulatory framework, state regulators are struggling with how to establish effective policies that protect consumers while allowing for the growth and expansion of the market.
- THC beverage production involves an extended supply chain and testing at multiple stages of production. Much more so than traditional marijuana testing.
- THC beverage growth will be sustained over the next decade, but the near terms forecast will be influenced by policy changes at both the state and federal levels.

Whitney Economics would like to thank the nearly 100 individuals and businesses that provided inputs into this report, including Cycling Frog, one of the report sponsors. We appreciate the trust that businesses bestowed in our team by sharing detailed and confidential information that we were able to aggregate and generate unbiased insights into this new and emerging market.

We invite you to read the report and to contact us directly if you have questions or comments about its findings. This is anticipated to be the first in a series of THC and cannabinoid beverage reports that we plan to publish as the market evolves.

Thank you,

Beau Whitney / Chief Economist
Whitney Economics

ABOUT THE U.S. THC BEVERAGE REPORT

Publisher

Whitney Economics

Lead Author

Beau Whitney, *Chief Economist*, Whitney Economics

Researchers and Analysts

Tyler Edwards, *Research Assistant*, Macalester College

Emma Nguyen, *Research Assistant*, Macalester College

Nancy Gauvreau, *Research Assistant*, Whitney Economics

Report Design Team

Miguel Aldana, Slow Fast Go

Communications & PR

John Mclsaac, Mclsaac PR

Website Support

Jeff Wyborny, KeyHolder Media

Kjell Ostlund, The Other Room

Peer Reviewers

Art Massolo, Cycling Frog

Danielle Bernstein, LaurelCrest

Chris Fontes, High Spirits

INTRODUCTION



Alcohol beverage sales, including beer, wine and distilled spirits have been on the decline globally for multiple years. Consumer demand has waned in part due to perceived health risks and in part due to demographics and the desire to lead a healthier lifestyle. The decline of alcohol sales has been notable. This decline in sales does not necessarily imply that consumers do not want to drink intoxicating beverages. In fact, many countries like the U.S. remain a very strong drinking culture. Given the strong drinking culture, there is one sector of the U.S. that has experienced significant gains in the past 5 years. THC beverages.

This report will examine the emerging THC beverage industry from a demand, policy and regulatory perspective. It will provide the total addressable demand by state (TAM or total potential sales) and will also provide a rough estimate of the current legal sales by state. It will also compare and contrast the level of THC beverage sales at the marijuana dispensary level and then will combine both forecasts into an integrated ingredient forecast of for THC beverages.

Why Examine the THC Beverage Market?

The original inspiration of this report was based on a comment that said THC beverages were going to be larger than the entire energy drink sector. As a researcher, I wanted to examine whether or not THC beverages could in fact be larger than the energy drinks market and thus began my research. There are similarities between the two industries, however, one fundamental difference is that caffeine receives much less scrutiny than does THC. This seemingly lack of regulatory concern enabled the energy drink sector to

scale rapidly, while THC, even that derived from hemp is constantly under a microscope. For the purpose of comparison, and based on estimates of the energy drink sector, the energy drink market in the U.S. is valued at \$25 billion to \$26 billion¹. The statements about the potential of THC beverages were rather bold and generated many questions such as was this simply another green rush type of statement or could the THC beverage market truly sell more than Red Bull and Monster?

The History of THC Beverages

As cannabis reform took hold from 1999 – 2014, there were several product innovations. Most product innovations centered around different delivery mechanisms other than smoking. Vaporizers, gummies, edibles all came on to the market, followed by tinctures, balms, transdermal patches. The focus was mainly on providing relief to medical patients that could not smoke and needed an alternative solution to providing themselves with medicine.

Cannabis beverages first started with teas and then expanded, as things do in cannabis, into other mainstream areas such as seltzers and other drinks. Mainly these drinks were offered in regulated

dispensaries and were very concentrated, usually containing 50mg – 100mg or more of THC. Cannabis beverages were more of an afterthought in marijuana dispensaries that generally had a small footprint. Operators did not want to dedicate the amount of floor space required to service what was at most 2% or 3% of their overall sales. Given the high levels of potency, cannabis THC beverages did not have wide spread appeal within the dispensary system and most prototypical consumers of THC beverages did not want to set foot into a dispensary. As a result, cannabis THC beverages did not obtain widespread appeal with the general consumer.

¹. <https://www.custommarketinsights.com/report/us-energy-drinks-market/>
<https://www.grandviewresearch.com/industry-analysis/us-energy-drinks-market>

THC Beverages Had a Confluence of Events that Drove Significant Expansion

The THC beverage industry has experienced significant growth over the past 3 – 5 years and this is forecasted to continue unabated unless states intervene by

deploying restrictions on these beverages. There are a number of reasons for this growth. Here are a few of the major drivers:

There were a number of reasons that led to the perfect timing of cannabis beverages entering the market and experiencing significant growth.

- **Global Consumption of Alcohol is Declining**

Overall, global demand for beer, wine and distilled spirits has been on the decline for many years². In fact, U.S. per capita consumption is at its lowest levels since 1962. It has dropped approximately 10% since 2021. The consumption of alcohol has declined in all three major categories, beer, wine and distilled spirits. One of the reasons for this decline is that consumer's views about alcohol have shifted. Not only do consumers view alcohol as a harmful substance, they are also looking to lead a healthier lifestyle. Part of this lifestyle change was a result of the Covid pandemic and part of this is generational. This change in consumer behavior has continued and appears to have gained traction.

Although, there have been declining sales of alcohol, there is still demand for “beverages for effect”. These beverages include the energy drinks, Kombucha as well as THC beverages. Cannabis THC beverages help fill the gap created by the decline. There is also a certain level of substitutional effects associated with cannabinoid beverages when compared to alcoholic beverages.

- **Younger Generation Does Not Trust Alcohol, Prefer Cannabis Instead³**

Generation Z and younger demographics have a reduced propensity to consume alcohol. To a certain extent, younger consumers are more health conscious

and as a result tend to prefer cannabis over alcohol. Some studies show that gen-z'ers are 20% less likely to consume alcohol relative to millennials or baby boomers⁴. Other studies show that the generation focus on health and wellness is having an influence on alcohol consumption. This influence is showing up in other areas of the cannabis industry in such areas as canna and wellness tourism⁵.

- **THC Beverages Appeal Due to Lower Calories, Sugar and Lack of Hangover**

One of the perceived drawbacks of alcohol is that it has high amounts of sugars and calories. Health-conscious consumers are finding a low calorie, low sugar alternative beverage particularly appealing, especially in the female demographic. This has engaged a new segment of the consumer base that traditionally had no interest in high dose cannabis beverages. Consumers who still want to “take the edge off” after a tough day, are turning to THC beverages in lieu of alcohol now that it is available in the mainstream distribution channels such as grocery stores, bars and restaurants. They can generate the same effect without the calories, stigma or hangovers.

- **Still Wanting an Option, U.S. is Still a Drinking Society**

Although consumers want to have less alcohol intake, there is still a social aspect of drinking in the American culture. As a result, Americans would still like

2. <https://site.financialmodelingprep.com/market-news/declining-us-alcohol-consumption-structural-shift-or-economic-downturn>

3. <https://time.com/7203140/gen-z-drinking-less-alcohol/>

4. <https://time.com/7203140/gen-z-drinking-less-alcohol/>

[https://www.ohbev.com/blog/gen-z-alcohol-trends-consumption-and-marketing#:~:text=Generation%20Z%20\(roughly%20those%20born,to%20capture%20this%20growing%20segment.](https://www.ohbev.com/blog/gen-z-alcohol-trends-consumption-and-marketing#:~:text=Generation%20Z%20(roughly%20those%20born,to%20capture%20this%20growing%20segment.)

5. See Applegarth, Brian

something to drink, just not an alcoholic beverage. This has resulted in the explosion for beverages for effect, such as energy drinks, seltzers and the like. Overall, the energy drink market is estimated to be \$25.7 billion in 2024. However, with the explosion of THC beverages on to the market, THC beverages are looking to eat into the energy drink market share of non-alcohol related beverages. Given that THC beverage can provide an intoxicating effect, without it coming from alcohol, there is a strong pull from consumers in this space. Consumers can still participate socially and can still become intoxicated in the process.

- **The Minnesota Effect.**

During the waning days of the 2022 legislative session, Minnesota passed a bill (HF 3595⁶) that was intended to provide a regulatory framework for the production, distribution and sale of hemp-derived cannabinoids. The 2018 Farm Act had federally created a carve out for hemp which opened up the flood gates for intoxicating and non-intoxicating hemp derived products nationally. Minnesota wanted to create a regulatory framework to provide guardrails around this at the state level. The bill allowed for the sales of low

dose (5mg per serving) hemp derived products.

Whether intentional or not, Minnesota effectively legalized access to all hemp derived cannabinoids including THC-Delta 9. This enabled hemp derived cannabinoids in edible or beverage forms to enter into the marketplace. By allowing hemp THC beverages into licensed restaurants, bars, grocery stores as well as liquor stores, cannabis products containing THC became normalized throughout the Minnesotan society⁷. With widespread access, the market soon took off and by some reports, generated over \$200 million in sales from over 4,000 license operators. This fundamentally transformed the cannabinoid market, shifted the narrative regarding intoxicating hemp products and created a model for other companies and states to follow with regard to allowing for consumer access to hemp derived THC products.

In Sum

Despite the reasons for the shift, the shift has occurred nonetheless and operators, investors and traditional alcohol companies are all wondering how to react to this extremely dynamic market development.



6. <https://www.revisor.mn.gov/bills/bill.php?b=House&f=HF3595&ssn=0&y=2022>

7. <https://www.politico.com/news/2024/07/10/minnesota-weed-drinks-00165375>

<https://minnesotareformer.com/2022/07/01/the-legislature-stumbles-into-legalizing-thc-for-better-or-worse-column/>

Public Policy - How Did We Get Here – A Regulatory Overview (Background)

For more than 80 years, cannabis has been federally illegal in the United States. This included cannabis for adult-use, medical or industrial purposes. Cannabis for industrial purposes (a.k.a. hemp), while coming from the same species of plant (*Cannabis sativa* L), has lower levels of psychotropic cannabinoids than do strains associated with adult-use and medical purposes. Operators in the industrial sector have long advocated for consideration at the federal level so that they could develop products for industrial purposes and take advantage of the multiple applications that the plant could have. Previously, hemp had been lumped into the same bucket as psychotropic cannabis and as a result were regulated as a narcotic. This limited the growth of the industrial markets for hemp such as automotive, construction, semiconductors, industrial lubricants, textiles and bioplastics. With a special carve out legislatively, the industrial potential could be realized while the intoxicating aspects could be further studied. This all changed with the 2014 and 2018 farm bills.

The 2014 farm bill allowed for pilot programs to occur at the state level that would allow states to study the potential of hemp. Operators were required to team up with state departments of agriculture as well as with universities and develop studies related to hemp. Over the next four years, the U.S. had a patchwork of states with different rules and regulations related to hemp. Despite this reform, each state had its own idea about how to regulate hemp and even what the definition of hemp was. This resulted in confusion throughout the supply chain and increased risks when trying to conduct interstate commerce. Without a common definition of hemp, what was legal in one state could be illegal in the next. That forced congress to revise the language in the 2018 Farm Bill.

The 2018 Farm Bill looked to provide policy clarity by removing hemp from the CSA schedule 1, and creating a nationally consistent definition of hemp.

Congress expanded the definition for hemp in the 2018 farm bill (amending the 2014 farm bill definition of industrial hemp), further distinguishing hemp and marijuana under U.S. law. Hemp is codified in Section 297A of the Agricultural Marketing Act of 1946 (AMA, 7 U.S.C. 1621 et seq.) as follows:⁸

“...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.”

8. [https://www.congress.gov/crs-product/R44742#:~:text=The%202014%20farm%20bill%20defined,5940\(b\)\(2\)](https://www.congress.gov/crs-product/R44742#:~:text=The%202014%20farm%20bill%20defined,5940(b)(2))

Whether or Not This Actually Provided Clarity is Debatable.

- The USDA who was designated as the federal regulator, developed rules to support the 2018 Farm Act. Within these rules, were how to determine the levels of THC delta-9 concentration on a dry weight basis. The testing was to occur on pre-harvested material. This left open the potential of having higher concentrations of THC post harvest.
- Another area that lacked clarity was the fact that the definition specifically called out delta-9 THC by dry weight. It may not have anticipated that when subjected to heat, other compounds within the plant could convert to THC delta-9. This included THCA.
- The USDA limited its authority up to the farm gate and did not extend its authority to the product level. This allowed products with intoxicating effects to be legally introduced to the U.S. marketplace
- The most controversial aspect of the definition was the fact that the definition of hemp extended to “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.” Some interpreted this to mean that derivatives and extracts made from hemp were also considered hemp, and therefore legal. Others claimed that this was not the intention of the definition and that hemp was intended for industrial purposes, not to be for adult-use or medical intoxicating effects. Marijuana operators objected to the fact that, once extracted and productized, hemp derived THC competed directly with marijuana derived THC and therefore should be regulated similarly to marijuana.

Once Hemp, Always Hemp

The concept of “Once Hemp, Always Hemp” had created a significant debate within the cannabis industry between hemp and marijuana operators. It has also created a wedge between regulators on how to address the intoxicating products issue at the policy level, since the current authority to federal regulate hemp ends at the farm gate. It has also driven a wedge between state legislatures and the federal government. Attempts to provide clarity on when hemp stops becoming hemp has fallen to the judicial system. Courts in multiple districts have affirmed the fact that hemp is hemp throughout the value chain. Marijuana stakeholders tend to disagree and there are additional law suits pending on this topic.

A Cannabinoid Industry is Born

Meanwhile, business operators, particularly those in the intoxicating hemp products industry, have taken advantage of these court decisions to develop

and deploy an intoxicating and non-intoxicating cannabinoid market on a national scale. The supply chain has expanded rapidly and now extends to all 50 states. The ability to have interstate commerce and a national supply chain has resulted in the expansion of a hemp-derived cannabinoid market valued between \$28.4 billion and \$35.0 billion. This is vastly different from the marijuana industry where each state’s supply chain is siloed and cannot scale beyond its state’s borders.

With Expansion also Comes Criticism.

Not everyone is supportive of the rapid expansion of the hemp derived industry. Opponents have claimed that there is an unfair lack of regulation on hemp, and an overburdensome level of regulation on marijuana. Other criticisms include the fact that, due to the limited regulation of hemp, intoxicating products can be accessed by minors and are distributed anywhere including gas stations and convenience stores. Product safety concerns have been raised given how the industry is mostly self-regulation. Safety concerns also exist due the lack of regulations around product testing and labeling. In addition, online sales and distribution of products allow for the potential of harmful chemicals and other ingredients to be consumed by unsuspecting consumers. Hemp cannabinoid companies have long requested states develop rules and regulations related to product testing, truth and labeling and age gating. However, hemp operators chafe at the idea of being regulated similar to marijuana or to be recriminalized given that by federal definition, hemp is considered a legal agricultural product.

Calls for Greater Federal Oversight Go Unheeded

Cannabis and hemp stakeholders have long asked congress to provide greater clarity with regards to hemp regulation post farm gate. Both industries have called upon congress to federally regulate hemp products based on the end product and not the ingredients. While the USDA has fulfilled their obligations under Federal law, other Federal Regulatory groups, such as the FDA (Food and Drug Administration) have so far put up strenuous resistance to deploying a national regulatory structure. As such,

there is no no overarching set of federal rules related to hemp-based products, no safety protocols, no regulations related to sales and distribution and no standards related to age gating and product labeling. Many outside the beltway, have assumed that these key concerns will be addressed in the next (Currently overdue) farm bill. However, many of those operators who have been impacted by the lack of federal regulations remain skeptical.

Lack of Federal Oversight Leads to Confusion, State Interventions

Given the limited amount of progress at the federal level to address key regulatory and public safety concerns, states have felt compelled to address the lack of federal regulations via state legislatures. This has resulted in a mishmash of rules and regulations that have made the navigation of interstate commerce very complex, has added costs to the supply chain

and in multiple instances killed entire industries. States have taken three types of approaches:

- 1) to lightly regulate the hemp-derived industry by following federal laws and little else. This includes requiring basic business licenses or endorsements to conduct hemp related business, but not strict rules related to product testing or labeling,
- 2) to provide restrictions on the production, distribution and sales of hemp-derived cannabinoids. These may limit the amount of intoxicating content in products or the types of products available to the consumer. Some states allow for the production of products for exports to other states, but not sales within a state. and
- 3) to implement total bans on the some or all products containing THC.



State Approaches to Legalized Consumer Access: From Full Legalization to Total Illegality⁹

We examined the different approaches towards hemp beverage laws from a state regulated cannabis perspective. Below is a summary of our findings.

Hemp THC beverages can be sold legally in 28 states outside of the marijuana dispensary system.

Adult-use: 12
Medical: 8
CBD only states: 7
States where MJ is illegal: 2

There are also states that restrict the sale of THC beverages by limiting the amount of THC in the beverages

Adult-use: 5
Medical: 4

Some states have taken a more strict approach to regulation. They have adopted via the legislative process to treat THC beverages more like a schedule 1 narcotic and to limit the access by consumers. These states allow for the sale of THC beverages only through marijuana dispensaries

Through marijuana shops only in 7 states

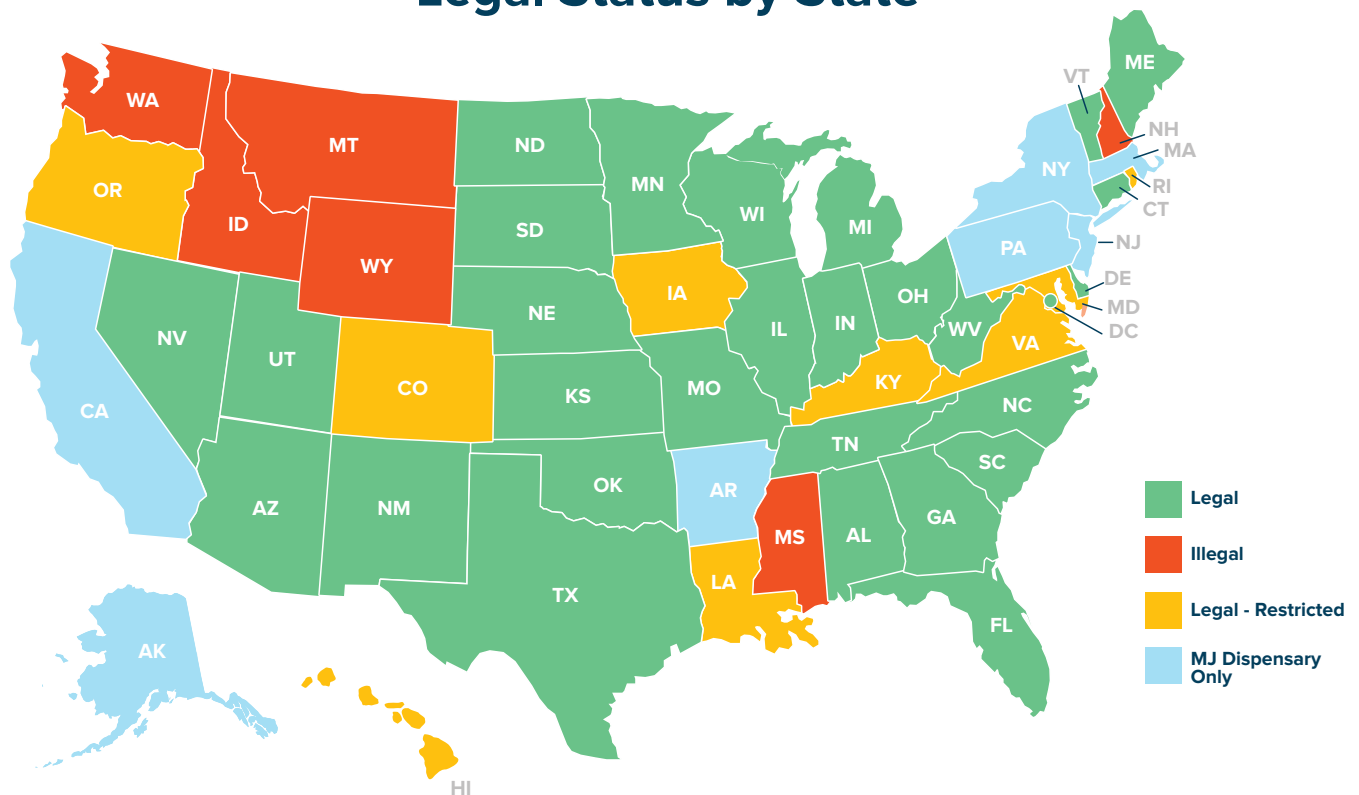
Adult-use: 5
Medical: 2

Hemp-derived THC beverages considered illegal in 6 states.

Status	Number of States
Legally sold	28
Restricted Sales, but legal	9
Sold only via marijuana dispensaries	7
Illegal	6

9. <https://vicentelp.com/insights/hemp-beverages-faq-federal-state-laws-reshaping-thc-drink-market/#:~:text=In%20short%2C%20the%20legal%20status,have%20outright%20prohibited%20their%20sale>

Legal Status by State



One element of these state interventions is that they are occurring regularly in multiple states, making for a very dynamic environment. Another issue is that states are not clear on what public safety issue they are trying to address or how to measure the effectiveness of these regulations. The policies seem to be tilting more towards public safety without assessing the impacts of the policies on businesses or the supply chains. The overall, results are that states are basically trying to solve problems at the state levels, that can only be fixed at the federal level.

State Versus Fed

States are setting policy that is intended to address the lack of federal regulations, but in doing so is creating so much uncertainty, that the entire hemp industry is impacted. This is hurting farmers, manufacturers and retailers without having any clear evidence that it is improving public safety. States appear to be in an either/or type of mindset of either inaction or recriminalizing hemp cannabinoids, when sensible middle ground solutions are available such as mandatory testing, truth in labeling and age gating.

These three policy changes alone, could immediately address a vast majority of public safety concerns and support many other public policy objectives.

The Unintended Consequences of State Interventions

By having state interventions to address federal regulatory issues, states are creating multiple externalities in the hemp industry. The states are creating an environment similar to the 2014 – 2018 era, where what is legal in one state is illegal in the other. Another issue is that farmers and operators are hesitant to participate in the hemp industry because they are not sure if what is legal one day, may be illegal the next or if what is planted legally in the spring may be deemed illegal upon harvest. Operators and farmers are not able to assess the risks associated with state level political changes. This is leading to high levels of uncertainty, a lack of participation in the market and a lack of investment flows. The lack of investment flows are also impacting the infrastructural development for the entire industry.

There are additional impacts that policy makers do not seem to be aware of. For example, banks are also not able to assess risks and legality based on dynamic changes at the state levels. As a result, hemp operators, even those in the fiber and grain industries are being de-banked. Fiber and grain operators are also being impacted by the lack of investments and infrastructural development. This has impacted opportunities in the automotive, construction, textile, plastic and industrial industries. The lack of precision at the state level and the inaction at the federal level, is impacting farmers, manufacturers and retailers to the tune of billions of dollars of lost economic potential. All of which could be avoided if greater clarity was provided at the federal level. Currently the costs to these industries, the potential, the employment and the tax revenues are much greater than the tradeoff related to any perceived public safety risks.

Key Issues Facing the Marijuana Regulators

To a certain extent, the regulation of THC derived either from hemp or marijuana ultimately is defined by each state legislature. State marijuana and alcohol regulators are positioning themselves to be the logical choice to be hemp derived THC and cannabinoid regulators, but that concept is receiving considerable push back from the industry. Regardless, regulating either marijuana or hemp is a difficult job given the levels of murkiness and uncertainty at the federal level. We felt it important

though, to give regulators an opportunity to provide inputs into this report from their perspective.

Here are the Inputs from a Major Cannabis Regulator Association.

Cannabis and hemp regulators continue to face challenges regulating a molecule (THC) that is both federally illegal when it comes from "marijuana" and federally legal when it comes from hemp. Regarding THC beverages, major issues for regulators include:

- (1) how to regulate interstate commerce for hemp THC beverages to ensure that what is sold in legal markets complies with regulations in those markets,*
- (2) ways to ensure that products and product packaging of THC beverages does not appeal to kids or induce consumption from underage individuals, and*
- (3) ways to improve consumer safety and educate consumers to ensure they understand what they are consuming, what the effects of the product might be, and how to avoid overconsumption.*

Much of these concerns could be addressed by regulating at the product intention level (Fit For Purpose) or by having greater clarity at the federal level. In the meantime, regulators and policy makers will continue to struggle to balance the public safety aspects of the market with managing the exponential growth that is currently occurring.

How are THC Beverages Made?

Whitney Economics felt it important to articulate how beverages are made and to include that process flow immediately after the section on regulator concerns. As one can see, a lot of the concerns expressed by regulators are already addressed by the beverage

makers. Part of this potential disconnect is a lack of education and part of this requires closer partnership and communication between regulators and the suppliers of these beverages.



HOW ARE THC BEVERAGES MADE?

Many consumers, regulators, policy makers and ancillary businesses do not understand the complexity of the THC beverage supply chain. This appendix is intended to outline some of the key steps in the making of beverages and the supply chain.



It all starts with the plant.

Marijuana / Hemp Cultivation

- The plants are grown. This is roughly a 4 month process.
- The plants are harvested, dried and cured.
- The plant matter is then tested



The plant material is processed to extract the oils

- The essential oils are extracted from the plant.
- The initial extracted material contains, the essential oil, a waxy material and water
- The water and waxy materials are then separated from the oil. This can be done in a variety of ways.
- The oils are then tested



The oils are then refined to separate out the chemical compounds

- Although the unrefined oil can be used in a variety of applications and uses, such as in vaporizers, tinctures, balms and edibles, many beverage manufacturers prefer a more refined ingredient.
- Having refined ingredients make the products and consumer experiences more consistent.
- The separation of the oils into a distillate form or as an isolate form is a scientific chemical process. The more refined the compounds get, then more valuable it is, however there is a cost associated with this refinement in terms of the level of yield one gets from the raw inputs. The further refined the materials are the more inputs you need to produce volume.
- The end product of super refined oils can actually be a powdery substance or remain as an oil. These ingredients are shelf stable and can then be used as an ingredient
- These ingredients are most commonly THC, CBD, CBG, CGN and other cannabinoids
- The scientific conversions that occur during the processing stages are tested multiple times during the process



A note on Decarboxylation

- One of the processes to convert one compound into another is via the use of heat.
- By applying heat, a chemical compound can be converted into another.
- Some would define this as synthesis, but this is not an accurate term or one that has been much maligned
- Many ingredients in the U.S. food chain would be defined as synthetic, so the process of synthesis is not necessarily a bad one.



Once the ingredients are separated, they are then emulsified

- This is a little bit of the secret sauce as an ingredient's provider.
- There are only a handful of large scale emulsifiers in the U.S.
- The emulsified product is one of the key ingredients in THC (and other cannabinoid) beverages.



The process is then shifted over to the beverage supplier

- The emulsified materials then mixed together with other ingredients that make up part of the beverage recipe.
- The beverage supplier can either mix the ingredients in house into a compound and begin the canning process or they can send it closer to the market to be canned.



This receipt is then sent to the canner

- Once the canner receives the ingredients, they added together all of the ingredients and begin the canning process.
- The canner will utilize three main ingredients plus water
- Emulsified ingredients
- Food ingredients
- Flavoring agents

The canner then mixes up all of the ingredients, flavoring and water and the inserts into a can or bottle.
The product is then tested again before it is shipped to a distributor or a customer.



Once in the can, the product is ready for sale

- The product can then be sent to a distributor, directly to a retail client or directly to a consumer.
- Beverage suppliers utilize all three distribution channels
- Distributors are very influential in terms of creating new markets for beverage suppliers, however many suppliers receive a significant portion of their revenues by selling directly to consumers.
- This is in part due to the complexities of the legal environments and is also in part due to the nascency of the industry.

Who are the Suppliers?

The Emergence of THC Beverage Brands

There have been a number of different paths that operators have taken to enter into the THC beverage market. Many of these paths opened up immediately upon the passage of the 2018 Farm Act. An additional route opened up after the state of Minnesota passed legislation that allowed for the sales of cannabinoids in the state.

Existing Marijuana Beverage Suppliers

Cannabis beverages have been around prior to the 2018 Farm Act, but did not gain much traction in dispensaries. Many dispensary operators did not want to dedicate floor space to a product that represented only 1% - 2% of total revenues. However, given that they had established a brand and a process, once the market opened up outside of the dispensary system and had the ability to ship to multiple states, the economies of scale worked in their favor and the companies took advantage. It simply took a change in the formulations away from marijuana and over to hemp.

This in a way was liberating for these manufacturers as they had gone from using THC from marijuana (defined as containing greater than 0.3% delta-9 THC by dry weight and very restrictive from a regulatory perspective), to using ingredients derived from hemp with isolated THC.

Micro-Beer Brewers

Micro beer brewers have been under economic distress over the past few years. Once the 2018 Farm Act was signed into law, micro brewers had

the infrastructure to formulate and manufacture THC beverages. This added income stream saved many small businesses. This was very evident in the testimonials from Minnesota we received when doing our research.

New Hemp Entrepreneurs

Existing hemp operators that already were familiar with working with cannabinoids in their gummy lines and with vapes, began gravitating towards beverages once they realized that interstate commerce was a possibility and that there was demand for a low-dose product that could be consumed in more social settings. Expanding their product offerings also added new revenue streams.

Former Wine & Distilled Spirits Companies

Some wine and distilled spirit operators saw an opportunity to step into the intoxicating THC beverage industry very early on. Some saw a good fit with the alcohol distribution model, while others figured out that they could use their wine processing facilities to make THC beverages. This is similar to how craft-beer operators leveraged their infrastructure. Former wine and spirits executives were able to establish their brands and expand market share nationally, by leveraging their professional experiences with alcohol. Other wine and distilled spirits operators interested in the market felt that there was too much uncertainty in the market to justify investing in it. As a result, many are now intrigued by the market as they see the successes of other early entrants.

“Regardless of the reason for market entry, the THC beverage industry expanded exponentially over the past 5 years.”

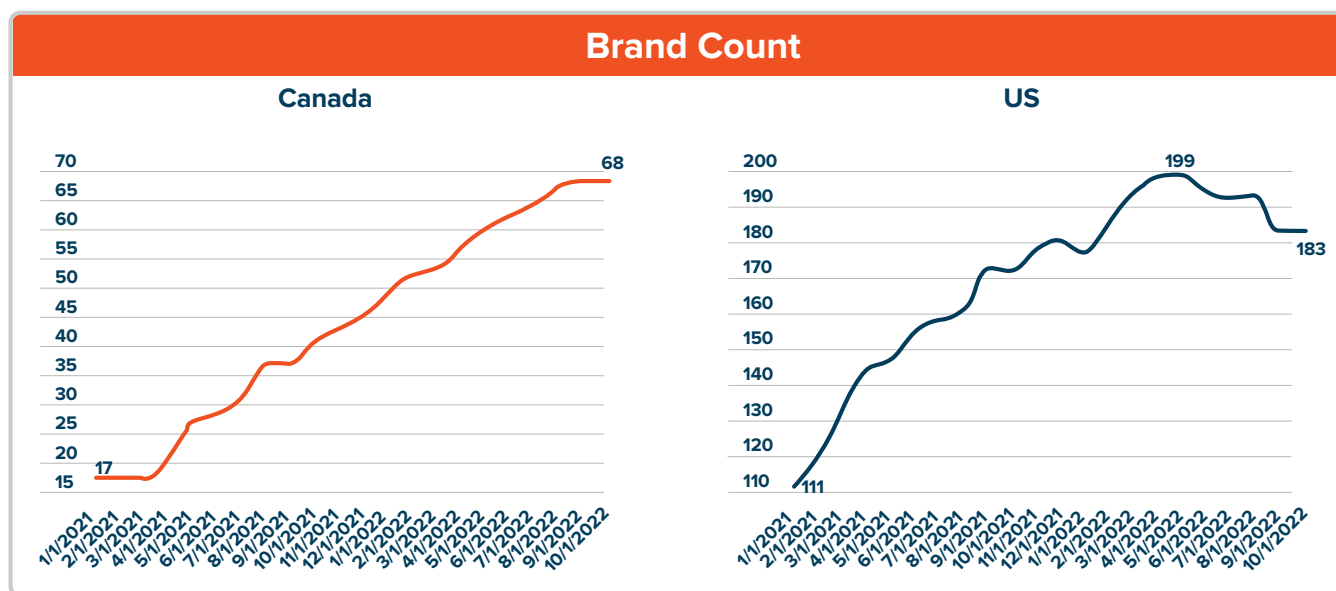
Top Brands¹⁰

There are roughly 500 – 750 THC beverage brands of various sizes and scale. The 500 – 750 brands are a mixture of beverage makers in the marijuana industry and the remainder are hemp related. There are fewer than 20 that have reached economies of scale though. The number of brands in the U.S. remains elusive. The identification of brands is a challenge. The fact that brands are not showing up on normal web searches indicates that there is greater opportunity for more consumer education and awareness.

Part of the lack of brand awareness has come from the fact there is a tremendous amount of uncertainty when it comes to prohibition and anti-hemp legislation. Many brands simply would prefer to stay under the radar online or they are comfortable having their distributors do the heavy lifting. Some of the craft brewers have

carved their niche and have a loyal following already. Another issue that is limiting the online advertising of hemp-derived THC beverages is that they may face becoming deplatformed by google, Instagram and other social platforms.

On the marijuana side, in a report from Headset based on data in 2022, there were 183 brands¹¹ that were supporting dispensaries across the U.S. Data from both Headset and BDSA suggest that the percentage of total revenue of beverages sold at marijuana dispensaries is between 0.9% and 2.0%. Assuming that this number of brands remained in 2024, the total sales of THC beverages in the dispensary system in 2024 was \$270.8 million, an average of \$1.5 million per brand and is forecasted to be \$306.2 million in 2025.



Source: <https://www.headset.io/industry-reports/cannabis-beverages-examining-category-performance-trends>

Most top brands have a presence in multiple states and show up most often on search results. Many top brands shared revenue data with Whitney Economics however,

we agreed not to divulge individual revenue data. Instead, we have summarized the top brands and the level of revenues they collectively represent.

¹⁰. <https://www.alcoholprofessor.com/blog-posts/cannabis-drinks-rtids#:~:text=Short%20answer%2C%20yes,are%20legal%20in%2024%20states>.

¹¹. <https://www.headset.io/industry-reports/cannabis-beverages-examining-category-performance-trends>

Here are some of the top brands in the U.S. market

Top U.S. Brands	
Brez	Keef
CANN	North Canna
Cantrip	Nowadays
Cheech and Chong	Rebel Rabbit
Crescent Canna	Tilray
Cycling Frog	Trail Magic
Delta	Uncle Arnies
Fable	Wanna
High Rise	Wynk
High Spirits	1906
Total "Top 20" Revenue: \$377.1 Million	

Special Topic: **Cycling Frog**



The Future of Functional Beverages: A Cannabis-Infused Perspective

The functional beverage category is rapidly evolving — and cannabis is at the center of that transformation. At Cycling Frog, we're proud to be a national leader in THC-forward beverages, offering consumers a refreshing, regulated, and responsible alternative to alcohol.

As the category gains traction, we continue to see growing demand for low-dose, sessionable formats that allow people to socialize, relax, and enjoy themselves without the negative side effects of alcohol. Our flagship line of 5mg and 10mg THC seltzers is designed for exactly that — creating approachable, flavorful, and consistent experiences for both new and returning consumers.

Still, the road to mainstream acceptance is far from smooth. From advertising restrictions and state-by-state compliance patchworks, to a lack of consumer education and distribution barriers, cannabis beverages

face a unique set of challenges. Yet, we believe these obstacles present opportunities — to innovate, to advocate, and to normalize.

Cycling Frog is committed to leading with integrity. We believe cannabis beverages should be:

Accessible — priced and distributed in ways that allow more people to participate

Transparent — labeled clearly, dosed consistently, and marketed responsibly

Enjoyable — flavorful and fun, without unnecessary gimmicks or stigma

As the cannabis beverage category continues to expand, we see an enormous opportunity to build a new kind of drinking culture — one that's healthier, more inclusive, and more conscious. We're here for that future, and we're excited to help shape it. Let's enjoy the ride together.

Author's note: *Cycling Frog was one of the sponsors of this report. We would like to thank our sponsors for their financial contribution to the publication without attempting to influence the outcome of the analysis.*



How are THC Beverages Sold?

There are three main channels of distribution for THC beverages that are in addition to the marijuana dispensary distribution model. Beverage makers can either sell directly to businesses, sell to businesses via a distributor or sell direct to consumer online.

Direct to Business (B2B)

Beverage makers can sell directly to businesses. This is not always the most efficient means of distribution; however, the beverage maker can have direct access to the customer and build and maintain the business relationship and provide more personalized care.

Sales Through a Distributor

Although there is less direct business to business contact, beverage distributors have been a major driving force in expanding the hemp THC beverage market. With the decline in overall alcohol sales (beer, wine, distilled spirits), distributors were faced with reduced revenues. The THC beverage makers were able to backfill some of this lower revenue. In this sense the beverage supplier / distributor model was beneficial to both parties.

Originally, large scale distributors were somewhat reluctant to embrace hemp-derived THC beverages due to the lack of certainty from a legal perspective and the very dynamic regulatory environment at both the state and federal levels. Most THC beverage makers were only able to use small or medium sized distributors to get their foot in the door with customers. However, once the large-scale distributors realized the significant opportunity that THC beverages represented and were more familiar with the legal landscape, they entered the market en-masse. This led to an increased surge in demand for THC beverages and accelerated the growth of the industry.

The supplier / distributor model makes a lot of economic sense. Beverage makers can leverage the significant amount of infrastructure that is already in place. Distributors already have the relationships

with restaurants, bars, liquor stores and other retail businesses, so for the beverage makers it is simply a matter of delivering a good product at a reasonable price that appeals to consumers. The supplier / distributor model also generates solid business intelligence data, such as average sales per business (Store, bar, restaurant, etc), average run rates on products, total market saturation and top brands. In fact, some of this type of data went into this report.

Direct to Consumer (D2C)

Many of the hemp THC beverage makers initially began sales on line. It was a simpler model and payments were made immediately by the consumer. It was easier to predict cash flow and made operations and inventory planning more flexible and nimbler. Some hemp-derived THC beverage makers also had existing product lines such as gummies or edibles, so the online beverage sales model was a simple extension of what they were already doing.

The D2C model also allows the beverage maker the opportunity to interface directly with the consumer. This enables the beverage maker to provide educational materials to the consumer as well. This helps establish brand loyalty. One of the benefits of this model is that it also enables the industry as well as the beverage makers, the ability to gain far deeper insights on consumer demographics and consumer behavior than any of the other models. Beverage makers can survey the consumer directly and use that data to provide greater insights on consumer and market trends.

One of the draw backs of the D2C model is that it has higher costs associated with it. A majority of these higher costs, such as shipping, are borne by the consumer. However, it may be that consumers using this model do so out of preference and simplicity, while other customers may prefer a brand that is not currently available in that area.

A note on D2C sales policies:

There is a debate within the THC beverage industry as to whether or not D2C sales should be allowed. One argument is that all THC beverages sales should be managed and coordinated via distributors. This is similar to how alcohol is sold in many states. The argument is that there is already an infrastructure for other intoxicating alcoholic beverages and it could make it easier to be regulated.

On the other hand, others argue that D2C sales already are established and make up a high percentage of some brand's sales. D2C supporters also state that the market is too nascent to impose this level of restrictions on the industry and that there can be a symbiotic relationship between distributors and supporters of D2C sales and that the total sales would actually be larger than if done separately. D2C sales channels could also be used to promote sales of products at locations that are supported by distributors, thus becoming a win/win for both groups.

Whitney Economics feels that the legal and regulatory environment is too nascent to resolve this debate and that a continuation of all models makes the most economic sense at this time.

Sales of Beverages Through Regulated Marijuana Dispensaries

Prior to the signing of the 2018 Farm Bill, beverages containing THC were considered a schedule 1 narcotic. Under state rules, they could only be sold in marijuana dispensaries. However, a large majority of dispensary operators did not want to support the THC beverage industry, because they did not want to install refrigeration units and displays. Precious floor space would have to be dedicated to support these products and few were willing to do this. The dispensary operators did not see a positive ROI on products that represent 1% - 2% of total revenues. As a result, the marijuana industry essentially capitulated the THC beverage market to the hemp-beverage manufacturers.

Many of the marijuana beverage makers that did commit to the market also converted over to providing hemp-derived THC beverages. Currently, the total

sales of THC beverage that are sold through regulated dispensaries are an estimated \$270 million nationwide, or 24% of the total legal sales. Dispensary share of the total legal THC beverage sales is expected to decline significantly as the hemp-derived THC market expands and attracts new consumers. By 2028, dispensary related share of sales is forecasted to decrease to 16.6%.

To Summarize How THC Beverages Are Sold

There are multiple channels from which these products make it into the hands of the consumer. THC beverage makers have been forced to remain nimble in order to adapt to the changing environment. Each distribution model has been successful and has catered to a diverse group of consumers. Collectively they have all contributed to the accelerated growth of the market. How policies unfold over the next several years will determine the growth and trajectory for years to come.

Consumer Behaviors, Trends & Target Consumers

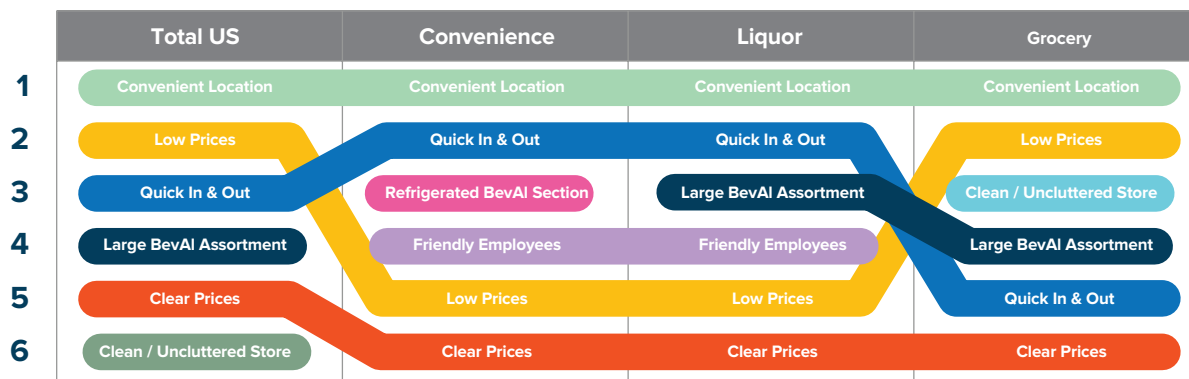
The main question coming from both within and outside of the beverage industry is who are the target consumers? Who is actually buying these products? Most research and first-hand interviews indicate that the female power shopper (FPS), formerly known as the 40-year-old soccer mom, is the key purchaser of these products. Most hemp THC beverage suppliers noted that this demographic is one of the main target audiences for their products.

This was confirmed by grocery store operators in states where there is access (ex. Minnesota), as FPS generally have no inclination to go to a marijuana dispensary, particularly if they are shopping with their children. The grocery store access makes it more convenient to purchase these products and the consumers are responding.

Shoppers are time starved & have somewhere to be

Important factors when choosing a retailer for this BevAI trip (by channel)...

Store Choice Consideration



It's not all about price. Convenience Store shopper have many considerations in mind when choosing a store. Shoppers value Conv for their location, friction free shopping, and cold box.

Omnichannel Shopping Fundamentals Study by NIQ BASES (OSF) 2024

Is this a Gen Z thing?

Another consumer behavior trend is that alcohol sales in general are declining globally. Some comments have been that younger generations are simply not buying alcohol and are buying cannabis instead. While there is a shift in consumer preference by Gen Zer's, data show that the number of consumers purchasing alcohol has stayed rather consistent, instead, they are simply purchasing less. The question then becomes is this a trend that is associated with a new product

introduction, or will sales of alcohol continue to decline as consumers gain more access and awareness of these products. The fact that Gen Zer's are continuing to purchase alcohol may simply be due to the fact that they cannot purchase THC beverages in the same social settings as one can alcohol. Whitney Economics is predicting that once access to THC beverages becomes more widespread, look for alcohol sales to continue to decline but then reach an equilibrium at a lower level and then level off.

Getting to the Numbers: How to Assess the Total & Legal THC Beverage Market

Quite frankly, modelling the demand has been challenging. There are no real defined demand forecasting models to leverage, not good ones at least and there is a lack of access to data. Not everyone is willing to share their data. By contrast, calculating the demand of marijuana derived THC beverages is easy. That data is available based on point-of-sale data. The data modelling challenges exist in the hemp derived area of the beverage market. Federal systems that gather data on the overall markets, has not yet caught up to the hemp-derived intoxicating markets. Data is limited and those that have data, place a high value on it. The hope is that by establishing a baseline of numbers in this report, future forecasts will be further refined.

In order to extrapolate the amounts of potential sales, we first looked to companies that make THC beverages. Many of these manufacturers were quite generous with their data, some providing revenues, revenue growth, the number of states and average cases per client. Others provided general guidance but enough data to triangulate via the known data from others.

As part of this methodology, we examined the volume of case sales to various retailers. In some instances, we examined bars, others restaurants, while other extrapolations looked at sales in grocery stores and liquor stores. Each model looked at the value of the

market if each entity bought 1, 2, 3, 5, 10 cases per month. A case is defined as 24 x 12-ounce cans.

The second methodology used in this analysis was gleaned in discussions with beer, wine and distilled spirit companies. In these interviews, there were estimates on the percentage of cannibalization they believed was occurring as a result of cannabis THC sales. It is notable that marijuana THC beverages were not seen as being competitive, but when lower dose hemp-derived THC beverages came about, then there was a greater correlation related to the sales declines. The range of sales declines caused directly from cannabis/hemp THC beverages was from 4% on the low-end, with 10% as the most common response and 15% on the high end. Having 10% of total liquor sales shifting over to THC beverages is not an unreasonable assumption, given how in a very normalize market like Minnesota, some liquor store operators are already seeing this level of cannibalization occur.¹²

The third model examines the average revenue per supplier and then multiplies it by the estimated number of total operators in the THC beverage industry. The total number of operators is estimated to be between 500 and 750 in the hemp-derived industry with roughly 200 (183¹³) in the marijuana regulated market. While this is a measure of the total market value, it is not possible to break down the data on a state-by-state basis.

12. <https://www.politico.com/news/2024/07/10/minnesota-weed-drinks-00165375>

14. <https://www.headset.io/industry-reports/cannabis-beverages-examining-category-performance-trends>

Total Market Value

In reviewing the total potential market for THC beverage, we chose to based our analysis off of the 10% cannibalization rate of alcohol. 10% is considered

the midpoint. Based on cannibalization of alcohol the total addressable market for THC beverages is:

Total Potential Market	Amount
Low:	\$4.96 billion (5%)
Mid:	\$9.91 billion (10%)
Upper:	\$14.87 billion (15%)

Low: \$4.96 billion (5%) Mid: \$9.91 billion (10%) Upper: \$14.87 billion (15%)

Note: The overall TAM was alternatively estimated to be \$3.6 billion \$7.3 billion to \$10.8 billion, with a midpoint of \$7.2 billion (Based on FRED Alcohol Sales Data)

A Note About Estimates of State Sales of Alcohol:

Finding reliable data on alcohol sales by state was a challenge. Most alcohol sales estimates are based on volume of alcohol and the taxes each state derives from these sales. We took data from IBIS , as it gave

us summaries of every state. Another option was to use federal data (St Louis Federal Reserve) on sales of alcohol by retail operators and liquor stores¹⁵. The total sales were roughly equivalent to the IBIS data. A third source of state and total U.S. sales data came from the distilled spirits industry.¹⁶



14. Example: Beer, Wine & Liquor Stores in Georgia - Market Research Report (2015-2030) | IBISWorld
15. <https://fred.stlouisfed.org/series/MRTSSM4453USN>
16. <https://www.distilledspirits.org/news/discuss-aeb-u-s-spirits-revenues-maintain-market-share-lead-of-total-beverage-alcohol-market-in-2023/>

Total Legal Estimates

The total estimated legal sales of THC beverages in 2024 is between \$1.0 billion - \$1.3 billion. This is significantly higher than all other industry estimates, but is based on data. One reason for this difference is that previous estimates did not combine the sales from hemp and marijuana related beverages. Some hemp THC beverage sales estimates were in the \$300 million - \$400 million range, but these estimates are too low given that there is publicly available data to support

a higher number. For example, a report in Politico indicated that based on tax revenues, the sales in Minnesota alone were in excess of \$200 million. Sales at marijuana dispensaries, even at 0.9% would amount to \$270 million.

Overall, the sales were split between the top twenty brands, the 183 dispensary brands and the remaining 300 or so smaller brands.

Brand Grouping	2024 Revenue
183 Dispensary Brands	\$270,796,917
Smaller brands	\$454,287,725
Top 10 Brands	\$377,100,000
Total	\$1,102,184,642

Overall, the total legal estimates in 2024 were: **\$1.0 billion to \$1.3 billion**, with the market split **76% hemp** retail derived and **24% marijuana** dispensary retail derived.



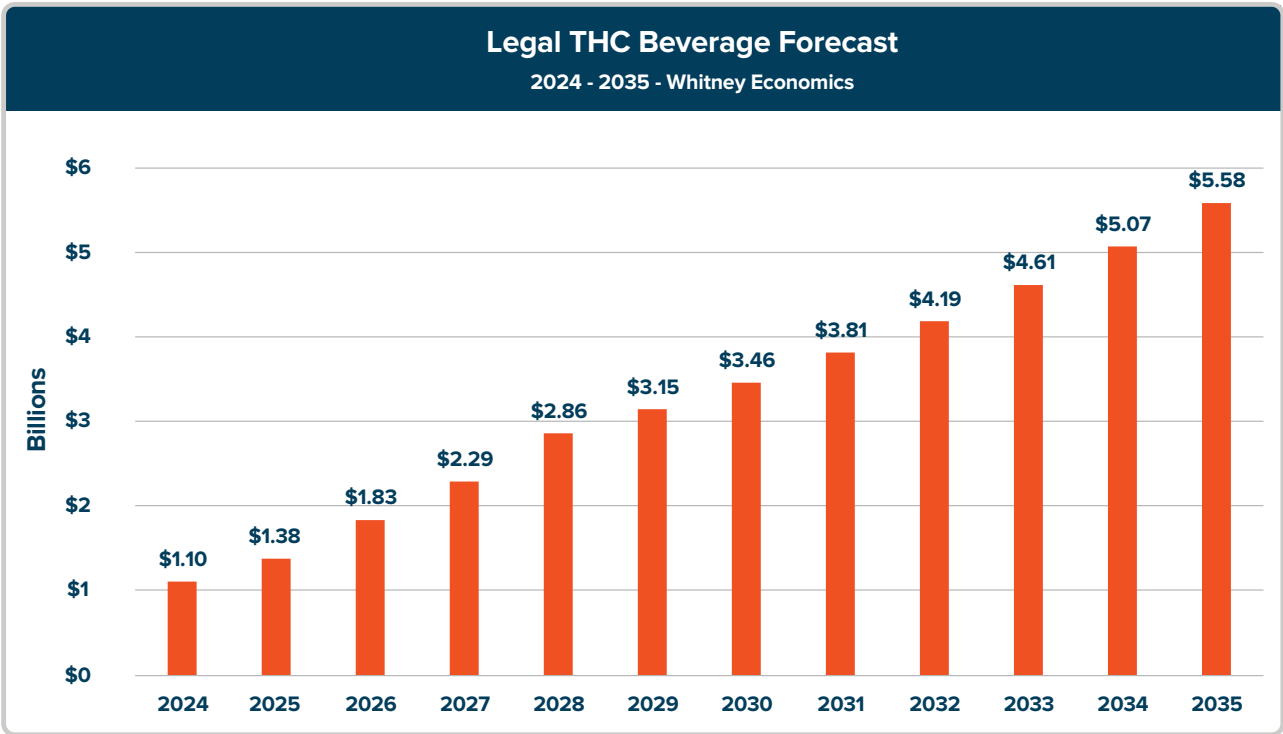
Forward Looking Legal Sales Forecast:

The \$1.1 billion in total legal sales of THC beverages in the U.S. represents only 11.1% of the total market potential. Given the nascency of the market, there is a large amount of growth opportunity possible over the next decade.

Whitney Economics is forecasting overall growth in 2025 of 25%. This would be more aggressive given the trajectory of the market, however, there is a tremendous amount of uncertainty at both the federal and state levels that could inhibit the growth potential of the industry. We are predicting that by

the end of 2025, there will be greater clarity on hemp derived THC in particular and in 2026, there will be an acceleration of the growth.

A majority of the near termed growth will be in existing legal markets, where greater distribution can still occur. With greater access will come greater consumer demand. Future growth (2030 – 2035) will demand upon state reforms in those illegal or tightly restricted states. Once reasonable regulations occur, look for each state to look like Minnesota in terms of capturing a high percentage of market potential.



Key issues facing the THC beverage industry

There several major issues associated with the THC beverage industry that will influence opportunities for THC beverage industry and determine the rate of growth and potential market.

- **Regulatory Certainty**

Regulatory certainty is critical to attract investment and create strategic plans. The market is currently very dynamic both at the state and federal levels. As a result, there is also a lot of additional cost associated with participating in this market.

Given that there are still proposals in congress to ban hemp-derived cannabinoids including THC, there are no certainties beyond the USDA on who will actually regulate this industry and what the federal framework would be. This lack of federal guidance is making it a challenge to plan and conduct interstate commerce, develop an efficient and low-cost supply chain or even obtain insurance and other financial instruments.

- **Production Cost Differentials with Beer & Other Beverage Suppliers**

Production costs remain high relative to other beverage industries. For example, cans alone can cost 3x – 4x the price that other beverage manufacturers pay (\$0.27- \$0.08/can). Co-packing services also run 4x the cost. Ingredients as well. The impact of this cost differential is that it is driving up costs unnecessarily and providing less incentives for consumers to participate. Once costs are normalized there are opportunities for growth and increased consumer participations

- **Carve Out for Beverages Versus Keeping Hemp in One Bucket**

State and federal policies are confused when it comes to how to regulate the hemp industry. While some policy makers are proposing cannabinoid bans focused on consumer safety, policy makers are also viewing beverages in a different light. If beverage policy

includes carve outs for them specifically while banning or strictly regulating other products, there may be unintended consequences that impact the entire hemp industry and potentially the supply chain. These carve outs could also increase the confusion for regulators, thereby increasing risks and costs.

- **Standards**

Currently there are a vast array of policies and operational procedures in the making of the ingredients and the THC beverages. Strong actors have strict controls over processes and traceability that allow them to identify and address issues should they occur. Others have little to no traceability. This can increase risks to operators and consumers alike. In addition, without having standards in place nationally related to safety, labeling, testing, ingredients, and production, operators are facing an environment where each state does something different. These state-by-state standards force operators to have separate processes for each state. This reducing the opportunities for economies of scale and hurts the revenue potential of the suppliers.

- **Safety**

Safety is a major focus for many suppliers of THC beverages. However, there is less focus on safety when it comes to producing ingredients. There simply are no safety standards as there are no safety studies. This is an area for future focus as the industry comes into the light. Some ingredient suppliers are creating a competitive advantage by focusing on quality and safety while reducing cost. However, unfortunately, this is currently the exception rather than the rule. Many of the THC beverage manufacturing leaders are establishing de-facto standards, but these are more centered around product specifications and purity levels more so than around product safety. Ingredient suppliers are beginning to innovate around product safety standards that are safer and less expensive as

a means to drive low cost low-quality suppliers out of the industry. However, these actions need the support of state and federal regulators and that regulatory infrastructure simply is not there yet.

One safety aspect that is becoming the gold standard, is the use of batch tracing and QR codes that consumer can use to assess the quality of the products and

manufacturers can use in case there is a quality related excursion. Look for this type of transparency and traceability to be required not only for hemp-derived cannabinoid products, but also for the entire regulated marijuana market. This level of safety tracking and traceability is currently not present in regulated marijuana products.

Outlook for the future

Because of the history associated with THC either from marijuana or hemp, the deployment of the THC beverage industry is not as straight forward as it would be for other industries. Despite this nuance, there is tremendous potential for the market as a whole. There are several items that provide for an optimistic outlook

In Terms of Predicting the Future of the Market:

- The market has already carved a niche and is poised for expansion. This expansion will continue for the remainder of this decade
- Given the level of economic activity, regulators are looking for ways to enable the market more so than to ban it. This will ultimately lead to more favorable policy rather than outright bans. It will just take a while for this to occur. Operators will need to prepare for this dynamic.
- It will be a bumpy ride for several years while the federal and state policies settle and a more legal regulatory framework can be deployed.
- As scale occurs and prices decline, look for greater adoption by consumers
- THC beverages are not a fad, then will continue to expand with greater consumer access.
- Once federal reform occurs, look for an acceleration of growth nationally
- The market will expand beyond the female power shoppers and younger generations to increase with older consumers looking for an alternative to alcohol.
- Look for more states to do carve outs for beverages and hand off regulatory authority to alcohol distributors and regulators. This may not be the best solution for the entire cannabis industry, as the three-tier model does not work for all product types.

CONCLUSION

The THC beverage industry has evolved into a significant, yet still nascent industry. It has benefitted from policy changes with the 2018 Farm Act as well as great timing from a consumer preference perspective. Regulatory murkiness has created an environment filled with uncertainty and risk, but for those who took the risk to deploy products early in this cycle, they have the potential for significant returns.

The total market, based on the percentage of alcohol sales is roughly \$9.9 billion at the midpoint and other models affirm this estimate, such as sales in Minnesota

and revenue reports of early adopters. Total sales in 2024 were estimated to be between \$1.0 and \$1.3 billion and this is forecasted to go 25% in 2025 and 33% in 2026. By the end of the decade, policies should be less murky and more predictable to the point where sustained growth is possible.

State can also benefit from the growth of the industry via increased employment and a new tax revenue stream. This will incentivize reform but will take a while to settle. Overall, the outlook for the industry is very positive.



APPENDICES

A note of Appreciation and Acknowledgement to the Contributors of this Report.....	30
Charts and Graphs.....	31
Total Addressable Market by State based on Alcohol Cannibalization Rates	31
Legalization Status of THC Beverage by State	32
Breakdown of Potential Sales by Channel (Restaurants, Bars and Off Premise)	33
Sales Tax Potential by State	34
How are THC Beverages Made?	35
About the Author / Statement of Conflicts	37
References and Data Sources	38



APPENDIX

A note of Appreciation and Acknowledgement to the Contributors of this Report

Over the past 18 months, there has been a tremendous amount of generosity provided to Whitney Economics by individuals and companies. We wanted to recognize those who have provided inputs and insights.

Individuals

Art Massolo
Ben Kennedy
Brian Applegarth
Chris Fontes
Danielle Bernstein
David Anglum
David Briggs
Hannah Clark
Joe Grabowski
Justin Swanson
Kenny Morrison
Marley Bankoff
Matt Melander
Michael Lefko
Michelle Palacios
Morris Beagle
Nathan Johnson
Paolo Sobral
Ryan Irving
Sam Neff
Steve Anderson
Sully Sullivan
Ted Whitney (*No relation*)

Companies

Bose Law Group
CANN
Cheech and Chong
CQ Drinks
Craft Beer Alliance
Cubs Foods
Cycling Frog (Report Sponsors)
Evergreen Herbal
Fable
High Spirits
LaurelCrest
Maison Bloom
OregonHops.org
Rebel Rabbit
Rexis Biotech
Sarene Craft Beer Distributors
Scattergood Magic
Sun Theory
Vertosa

APPENDIX

Charts and Graphs

Total Addressable Market by State based on Alcohol Cannibalization Rates

Legal Status	State	Sales	5%	10%	15%
Legal	Alabama	871	43.545	87.09	130.635
Legal - Restricted - Dispensary	Alaska	273	13.665	27.33	40.995
Legal	Arizona	774	38.685	77.37	116.055
Legal - Restricted - Dispensary	Arkansas	819	40.96	81.92	122.88
Legal - Restricted - Dispensary	California	14,600	730	1460	2190
Legal - Restricted	Colorado	2,900	145	290	435
Legal	Connecticut	1,600	80	160	240
Legal	Delaware	791	39.535	79.07	118.605
Legal	D.C.	0	0	0	0
Legal	Florida	9,000	450	900	1350
Legal	Georgia	2,600	130	260	390
Legal - Restricted	Hawaii	79	3.94	7.88	11.82
Illegal	Idaho	299	14.97	29.94	44.91
Legal	Illinois	3,000	150	300	450
Legal	Indiana	1,600	80	160	240
Legal - Restricted	Iowa	210	10.48	20.96	31.44
Legal	Kansas	1,000	50	100	150
Legal - Restricted	Kentucky	1,100	55	110	165
Legal - Restricted	Louisiana	407	20.33	40.66	60.99
Legal	Maine	225	11.25	22.5	33.75
Legal - Restricted	Maryland	2,500	125	250	375
Legal - Restricted - Dispensary	Massachusetts	4,000	200	400	600
Legal	Michigan	2,300	115	230	345
Legal	Minnesota	2,400	120	240	360
Illegal	Mississippi	522	26.115	52.23	78.345
Legal	Missouri	754	37.68	75.36	113.04
Illegal	Montana	243	12.145	24.29	36.435
Legal	Nebraska	194	9.715	19.43	29.145
Legal	Nevada	664	33.175	66.35	99.525
Illegal	New Hampshire	1,100	55	110	165
Legal - Restricted - Dispensary	New Jersey	5,300	265	530	795
Legal	New Mexico	189	9.425	18.85	28.275
Legal - Restricted - Dispensary	New York	6,600	330	660	990
Legal	North Carolina	1,700	85	170	255
Legal	North Dakota	278	13.92	27.84	41.76
Legal	Ohio	1,300	65	130	195
Legal	Oklahoma	573	28.66	57.32	85.98
Legal - Restricted	Oregon	676.6	33.83	67.66	101.49
Legal - Restricted - Dispensary	Pennsylvania	5,400	270	540	810
	Puerto Rico	0	0	0	0
Legal - Restricted	Rhode Island	604	30.215	60.43	90.645
Legal	South Carolina	1,100	55	110	165
Legal	South Dakota	113	5.66	11.32	16.98
Legal	Tennessee	1,400	70	140	210
Legal	Texas	12,400	620	1240	1860
Legal	Utah	418	20.895	41.79	62.685
Legal	Vermont	154	7.695	15.39	23.085
Legal - Restricted	Virginia	1,700	85	170	255
Illegal	Washington	1,300	65	130	195
Legal	West Virginia	107	5.34	10.68	16.02
Legal	Wisconsin	828	41.42	82.84	124.26
Legal	Wyoming	178	8.92	17.84	26.76
	Total	99,143	4,957	9,914	14,872

Legalization Status of THC Beverage by State

State	Legal Status	Comment
Alabama	Legal	Need ABC license. 10 mg cap, 40mg
Alaska	Legal - Restricted - Dispensary	MJ Dispensary only
Arizona	Legal	A total ban is in court, temporarily in dispensaries only
Arkansas	Legal - Restricted - Dispensary	MJ Dispensary only
California	Legal - Restricted - Dispensary	MJ Dispensary only Banned any detectable levels
Colorado	Legal - Restricted	1.75mg, 15:1 CBD to THC ration
Connecticut	Legal	1mg limit , 5mg per container
Delaware	Legal	Bill to restrict to liquor stores only
District of Columbia	Legal	Sales currently banned
Florida	Legal	
Georgia	Legal	Hemp License required
Hawaii	Legal - Restricted	2.5mg limit
Idaho	Illegal	
Illinois	Legal	
Indiana	Legal	
Iowa	Legal - Restricted	4.0 mg, 10 mg per package
Kansas	Legal	
Kentucky	Legal - Restricted	5.0mg per 12 ounce, 3 - tier system. Liquor stores only
Louisiana	Legal - Restricted	5.0mg, 40 mg per package, OK at grocery store
Maine	Legal	Proposals to have 5mg
Maryland	Legal - Restricted	0.5mg limit. Produced only by MJ Licensees
Massachusetts	Legal - Restricted - Dispensary	Only in MJ dispensaries
Michigan	Legal	Proposals to have same as Colorado, 1.75mg, 15:1 CBD:THC
Minnesota	Legal	
Mississippi	Illegal	Grey area, Proposed bans, AG, Need FDA Approval
Missouri	Legal	Very Grey, executive order in 2024 banned beverages
Montana	Illegal	0.5mg, 2.0mg per package, Requires FDA approval
Nebraska	Legal	
Nevada	Legal	10mg, 100mg per package, very murky in terms of details
New Hampshire	Illegal	effective 07/03/24, New Hampshire enacted SB 505, which permanently bans the sale of hemp-derived products containing any THC.
New Jersey	Legal - Restricted - Dispensary	Only in MJ dispensaries
New Mexico	Legal	
New York	Legal - Restricted - Dispensary	MJ Dispensaries, 1mg limit , 10mg per container, 15:1 CBD-THC ratio
North Carolina	Legal	restaurants, bars, breweries
North Dakota	Legal	
Ohio	Legal	dispensaries, liquor stores and other licensed retailers
Oklahoma	Legal	
Oregon	Legal - Restricted	2mg, 20 per serving, must be registered with mj regulator
Pennsylvania	Legal - Restricted - Dispensary	very murky. Assume only in mj dispensaries
Rhode Island	Legal - Restricted	1mg, 5mg package.. liquor stores, vape stores, etc.
South Carolina	Legal	Attorney general determined legal in writing
South Dakota	Legal	HB1008
Tennessee	Legal	3 tier, regulated by alcohol, No grocery stores or convenience stores
Texas	Legal	
Utah	Legal	Must register with the dept of Ag and food
Vermont	Legal	
Virginia	Legal - Restricted	2mg per package 25:1 CBD- THC ratio
Washington	Illegal	Only in MJ dispensaries, hemp only as an ingredient to supplement MJ THC.
West Virginia	Legal	Must register with the dept of Ag and food
Wisconsin	Legal	bars, restaurants, grocery stores and liquor stores
Wyoming	Illegal	

Breakdown of Potential Sales by Channel (Restaurants, Bars and Off Premise)

Note: These projections are based on the number of cases of demand for restaurants and bars. Off premise is the difference between the total demand and that of the restaurants and bars. These numbers will be more refined in future reports as we get more inputs from distributors.

State	Alcohol sales	TAM based on Cannabilization	TAM	Bars	Restaurants	Off Premises	% Bar	% Restaurants	% off Premises
Alabama	\$871	\$87.09	\$87,090,000	\$4,235,490	\$23,692,500	\$59,162,010	4.9%	27.2%	67.9%
Alaska	\$273	\$27.33	\$27,330,000	\$2,483,460	\$3,783,510	\$21,063,030	9.1%	13.8%	77.1%
Arizona	\$774	\$77.37	\$77,370,000	\$10,427,130	\$29,940,030	\$37,002,840	13.5%	38.7%	47.8%
Arkansas	\$819	\$81.92	\$81,920,000	\$1,922,130	\$14,132,880	\$65,864,990	2.3%	17.3%	80.4%
California	\$14,600	\$1,460.00	\$1,460,000,000	\$57,323,700	\$208,442,970	\$1,194,233,330	3.9%	14.3%	81.8%
Colorado	\$2,900	\$290.00	\$290,000,000	\$13,267,800	\$32,620,320	\$244,111,880	4.6%	11.2%	84.2%
Connecticut	\$1,600	\$160.00	\$160,000,000	\$5,068,980	\$22,253,940	\$132,677,080	3.2%	13.9%	82.9%
Delaware	\$791	\$79.07	\$79,070,000	\$1,156,680	\$5,501,520	\$72,411,800	1.5%	7.0%	91.6%
D.C.	\$0	\$27.84	\$27,840,000	\$2,959,740	\$6,376,320	\$18,503,940	10.6%	22.9%	66.5%
Florida	\$9,000	\$900.00	\$900,000,000	\$29,461,320	\$117,500,220	\$753,038,460	3.3%	13.1%	83.7%
Georgia	\$2,600	\$260.00	\$260,000,000	\$7,212,240	\$55,683,450	\$197,104,310	2.8%	21.4%	75.8%
Hawaii	\$79	\$7.88	\$7,880,000	\$1,522,395	\$5,383,665	\$973,940	19.3%	68.3%	12.4%
Idaho	\$299	\$29.94	\$29,940,000	\$5,987,520	\$10,667,700	\$13,284,780	20.0%	35.6%	44.4%
Illinois	\$3,000	\$300.00	\$300,000,000	\$47,491,920	\$64,499,490	\$188,008,590	15.8%	21.5%	62.7%
Indiana	\$1,600	\$160.00	\$160,000,000	\$14,883,750	\$32,260,680	\$112,855,570	9.3%	20.2%	70.5%
Iowa	\$210	\$20.96	\$20,960,000	\$7,407,855	\$7,818,525	\$5,733,620	35.3%	37.3%	27.4%
Kansas	\$1,000	\$100.00	\$100,000,000	\$4,983,930	\$13,488,930	\$81,527,140	5.0%	13.5%	81.5%
Kentucky	\$1,100	\$110.00	\$110,000,000	\$5,222,070	\$20,883,420	\$83,894,510	4.7%	19.0%	76.3%
Louisiana	\$407	\$40.66	\$40,660,000	\$13,386,870	\$13,699,125	\$13,574,005	32.9%	33.7%	33.4%
Maine	\$225	\$22.50	\$22,500,000	\$2,262,330	\$8,164,800	\$12,072,870	10.1%	36.3%	53.7%
Maryland	\$2,500	\$250.00	\$250,000,000	\$7,518,420	\$28,122,390	\$214,359,190	3.0%	11.2%	85.7%
Massachusetts	\$4,000	\$400.00	\$400,000,000	\$11,941,020	\$38,172,870	\$349,886,110	3.0%	9.5%	87.5%
Michigan	\$2,300	\$230.00	\$230,000,000	\$22,385,160	\$48,561,120	\$159,053,720	9.7%	21.1%	69.2%
Minnesota	\$2,400	\$240.00	\$240,000,000	\$14,713,650	\$27,053,190	\$198,233,160	6.1%	11.3%	82.6%
Mississippi	\$522	\$52.23	\$52,230,000	\$1,769,040	\$14,346,720	\$36,114,240	3.4%	27.5%	69.1%
Missouri	\$754	\$75.36	\$75,360,000	\$10,988,460	\$30,173,310	\$34,198,230	14.6%	40.0%	45.4%
Montana	\$243	\$24.29	\$24,290,000	\$8,879,220	\$7,948,530	\$7,462,250	36.6%	32.7%	30.7%
Nebraska	\$194	\$19.43	\$19,430,000	\$4,507,650	\$5,291,325	\$9,631,025	23.2%	27.2%	49.6%
Nevada	\$664	\$66.35	\$66,350,000	\$11,243,610	\$16,538,580	\$38,567,810	16.9%	24.9%	58.1%
New Hampshire	\$1,100	\$110.00	\$110,000,000	\$357,210	\$8,269,290	\$101,373,500	0.3%	7.5%	92.2%
New Jersey	\$5,300	\$530.00	\$530,000,000	\$14,968,800	\$49,506,390	\$465,524,810	2.8%	9.3%	87.8%
New Mexico	\$189	\$18.85	\$18,850,000	\$1,888,110	\$8,910,810	\$8,051,080	10.0%	47.3%	42.7%
New York	\$6,600	\$660.00	\$660,000,000	\$57,646,890	\$120,309,300	\$482,043,810	8.7%	18.2%	73.0%
North Carolina	\$1,700	\$170.00	\$170,000,000	\$13,012,650	\$57,034,530	\$99,952,820	7.7%	33.5%	58.8%
North Dakota	\$278	\$27.84	\$27,840,000	\$6,446,790	\$4,381,290	\$17,011,920	23.2%	15.7%	61.1%
Ohio	\$1,300	\$130.00	\$130,000,000	\$30,345,840	\$60,315,030	\$39,339,130	23.3%	46.4%	30.3%
Oklahoma	\$573	\$57.32	\$57,320,000	\$6,957,090	\$18,791,190	\$31,571,720	12.1%	32.8%	55.1%
Oregon	\$677	\$67.66	\$67,660,000	\$14,594,580	\$28,985,040	\$24,080,380	21.6%	42.8%	35.6%
Pennsylvania	\$5,400	\$540.00	\$540,000,000	\$39,888,450	\$64,701,180	\$435,410,370	7.4%	12.0%	80.6%
Puerto Rico	\$0	\$0.00	\$0	\$0	\$0	\$0			
Rhode Island	\$604	\$60.43	\$60,430,000	\$3,895,290	\$7,489,260	\$49,045,450	6.4%	12.4%	81.2%
South Carolina	\$1,100	\$110.00	\$110,000,000	\$6,259,680	\$27,143,100	\$76,597,220	5.7%	24.7%	69.6%
South Dakota	\$113	\$11.32	\$11,320,000	\$5,358,150	\$4,862,430	\$1,099,420	47.3%	43.0%	9.7%
Tennessee	\$1,400	\$140.00	\$140,000,000	\$5,834,430	\$34,277,580	\$99,887,990	4.2%	24.5%	71.3%
Texas	\$12,400	\$1,240.00	\$1,240,000,000	\$47,730,060	\$137,875,770	\$1,054,394,170	3.8%	11.1%	85.0%
Utah	\$418	\$41.79	\$41,790,000	\$2,568,510	\$14,754,960	\$24,466,530	6.1%	35.3%	58.5%
Vermont	\$154	\$15.39	\$15,390,000	\$1,735,020	\$3,552,660	\$10,102,320	11.3%	23.1%	65.6%
Virginia	\$1,700	\$170.00	\$170,000,000	\$3,316,950	\$41,139,900	\$125,543,150	2.0%	24.2%	73.8%
Washington	\$1,300	\$130.00	\$130,000,000	\$16,176,510	\$40,658,760	\$73,164,730	12.4%	31.3%	56.3%
West Virginia	\$107	\$10.68	\$10,680,000	\$2,585,520	\$6,103,553	\$1,990,928	24.2%	57.1%	18.6%
Wisconsin	\$828	\$82.84	\$82,840,000	\$46,471,320	\$31,716,360	\$4,652,320	56.1%	38.3%	5.6%
Wyoming	\$178	\$17.84	\$17,840,000	\$2,738,610	\$3,438,450	\$11,662,940	15.4%	19.3%	65.4%
Total	\$99,143	\$9,942.18	\$9,942,180,000	\$663,390,000	\$1,687,218,863	\$7,591,571,138	6.7%	17.0%	76.4%

Sales Tax Potential by State

As was mentioned earlier, calculating state tax revenue potential is very complex when it comes to beverages. Given most states base the tax on liquid volumes, this is an area of policy that is still being

defined. In this summary, we assumed a standard sales-based retail tax. Overall, the states would generate nearly a half a billion dollars based on the TAM.

State	Sales Tax Rate	TAM	Simplified Tax Revenue Potential
Alabama	4.00%	\$87,090,000	\$3,483,600
Alaska	0.00%	\$27,330,000	\$0
Arizona	5.60%	\$77,370,000	\$4,332,720
Arkansas	6.50%	\$81,920,000	\$5,324,800
California	7.25%	\$1,460,000,000	\$105,850,000
Colorado	2.90%	\$290,000,000	\$8,410,000
Connecticut	6.35%	\$160,000,000	\$10,160,000
Delaware	0.00%	\$79,070,000	\$0
D.C.	6.00%	\$27,840,000	\$1,670,400
Florida	6.00%	\$900,000,000	\$54,000,000
Georgia	4.00%	\$260,000,000	\$10,400,000
Hawaii	4.00%	\$7,880,000	\$315,200
Idaho	6.00%	\$29,940,000	\$1,796,400
Illinois	6.25%	\$300,000,000	\$18,750,000
Indiana	7.00%	\$160,000,000	\$11,200,000
Iowa	6.00%	\$20,960,000	\$1,257,600
Kansas	6.50%	\$100,000,000	\$6,500,000
Kentucky	6.00%	\$110,000,000	\$6,600,000
Louisiana	4.45%	\$40,660,000	\$1,809,370
Maine	5.50%	\$22,500,000	\$1,237,500
Maryland	6.00%	\$250,000,000	\$15,000,000
Massachusetts	6.25%	\$400,000,000	\$25,000,000
Michigan	6.00%	\$230,000,000	\$13,800,000
Minnesota	6.875%	\$240,000,000	\$16,500,000
Mississippi	7.00%	\$52,230,000	\$3,656,100
Missouri	4.225%	\$75,360,000	\$3,183,960
Montana	0.00%	\$24,290,000	\$0
Nebraska	5.50%	\$19,430,000	\$1,068,650
Nevada	6.85%	\$66,350,000	\$4,544,975
New Hampshire	0.00%	\$110,000,000	\$0
New Jersey	6.625%	\$530,000,000	\$35,112,500
New Mexico	5.00%	\$18,850,000	\$942,500
New York	4.00%	\$660,000,000	\$26,400,000
North Carolina	4.75%	\$170,000,000	\$8,075,000
North Dakota	5.00%	\$27,840,000	\$1,392,000
Ohio	5.75%	\$130,000,000	\$7,475,000
Oklahoma	4.50%	\$57,320,000	\$2,579,400
Oregon	0.00%	\$67,660,000	\$0
Pennsylvania	6.00%	\$540,000,000	\$32,400,000
Puerto Rico			
Rhode Island	7.00%	\$60,430,000	\$4,230,100
South Carolina	6.00%	\$110,000,000	\$6,600,000
South Dakota	4.50%	\$11,320,000	\$509,400
Tennessee	7.00%	\$140,000,000	\$9,800,000
Texas	6.25%	\$1,240,000,000	\$77,500,000
Utah	6.10%	\$41,790,000	\$2,549,190
Vermont	6.00%	\$15,390,000	\$923,400
Virginia	5.30%	\$170,000,000	\$9,010,000
Washington	6.50%	\$130,000,000	\$8,450,000
West Virginia	6.00%	\$10,680,000	\$640,800
Wisconsin	5.00%	\$82,840,000	\$4,142,000
Wyoming	4.00%	\$17,840,000	\$713,600
Total		\$9,942,180,000	\$575,296,165

APPENDIX

How are THC Beverages Made?

Many consumers, regulators, policy makers and ancillary businesses do not understand the complexity of the THC beverage supply chain. This appendix is intended to outline some of the key steps in the making of beverages and the supply chain.

It All starts with the plant: Marijuana / Hemp Cultivation

- The plants are grown. This is roughly a 4 month process.
- The plants are harvested, dried and cured.
- The plant matter is then tested

The plant material is processed to extract the oils

- The essential oils are extracted from the plant.
- The initial extracted material contains, the essential oil, a waxy material and water
- The water and waxy materials are then separated from the oil. This can be done in a variety of ways.
- The oils are then tested

The oils are then refined to separate out the chemical compounds

- Although the unrefined oil can be used in a variety of applications and uses, such as in vaporizers, tinctures, balms and edibles, many beverage manufacturers prefer a more refined ingredient.
- Having refined ingredients make the products and consumer experiences more consistent.
- The separation of the oils into a distillate form or as an isolate form is a scientific chemical process. The more refined the compounds get, then more valuable it is, however there is a cost associated with this refinement in terms of the level of yield one gets from the raw inputs. The further refined the materials are the more inputs you need to produce volume.
- The end product of super refined oils can actually be a powdery substance or remain as an oil. These ingredients are shelf stable and can then be used as an ingredient. These ingredients are most commonly THC, CBD, CBG, CGN and other cannabinoids
- The scientific conversions that occur during the processing stages are tested multiple times during the process.

A note on Decarboxylation

- One of the processes to convert one compound into another is via the use of heat.
- By applying heat, a chemical compound can be converted into another.
- Some would define this as synthesis, but this is not an accurate term or one that has been much maligned
- Many ingredients in the U.S. food chain would be defined as synthetic, so the process of synthesis is not necessarily a bad one.

Once the ingredients are separated, the ingredients are then emulsified

- This is a little bit of the secret sauce as an ingredient's provider.
- There are only a handful of large scale emulsifiers in the U.S.
- The emulsified product is one of the key ingredients in THC (and other cannabinoid) beverages.

The process is then shifted over to the beverage supplier

- The emulsified materials then mixed together with other ingredients that make up part of the beverage recipe.
- The beverage supplier can either mix the ingredients in house into a compound and begin the canning process or they can send it closer to the market to be canned.

This receipt is then sent to the canner

- Once the canner receives the ingredients, they added together all of the ingredients and begin the canning process.
- The canner will utilize three main ingredients plus water
- Emulsified ingredients
- Food ingredients
- Flavoring agents

The canner then mixes up all of the ingredients, flavoring and water and the inserts into a can or bottle.

Once in the can, the product is ready for sale

- The product can then be sent to a distributor, directly to a retail client or directly to a consumer.
- Beverage suppliers utilize all three distribution channels
- Distributors are very influential in terms of creating new

markets for beverage suppliers, however many suppliers receive a significant portion of their revenues by selling directly to consumers.

- This is in part due to the complexities of the legal environments and is also in part due to the inactivity of the industry.

APPENDIX

About the Author / Statement of Conflicts

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 currently has investments in a cannabis investment fund, Mantis Growth Investments, and he is a member of the fund's Board of Directors.
- 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

References & Data Sources

Alabama

<https://www.wvtm13.com/article/alabama-thc-hemp-bill-rules-regulations-445/65106837#:~:text=What's%20allowed?-,The%20bill%20allows%20the%20sale%20of%20edibles/beverages%20limited%20to,to%20have%20child%2Dresistant%20packaging>

<https://www.axios.com/local/huntsville/2025/06/16/new-thc-rules-july-1-huntsville-alabama-legislature>

<https://www.ibisworld.com/united-states/industry/alabama>

Alaska

<https://mjbizdaily.com/judge-upholds-alaska-limitations-on-intoxicating-hemp-derived-thc-products/>

<https://alaskabeacon.com/2025/05/29/judge-alaska-limits-on-intoxicating-hemp-products-do-not-violate-the-u-s-constitution/>

<https://www.ibisworld.com/united-states/industry/alaska/beer-wine-liquor-stores/16415/>

Arizona

<https://www.ycsoaz.gov/News-Articles/ILLLEGAL-THC-SELLING#:~:text=Arizona%20Attorney%20General:%20Selling%20THC,Our%20state%20laws%20are%20stricter.>

<https://www.ibisworld.com/united-states/industry/arizona/beer-wine-liquor-stores/17071/>

Arkansas

<https://arkansascannabis.org/thc>

<https://www.kark.com/news/state-news/arkansas-attorney-general-tim-griffin-set-for-tuesday-afternoon-announcement/>

<https://www.ibisworld.com/united-states/industry/arkansas/beer-wine-liquor-stores/17731/>

California

<https://www.cdph.ca.gov/Programs/OPA/Pages/NR24-26.aspx#:~:text=Retail%20sale%20of%20hemp%20food,making%20abilities%20in%20developing%20brains.>

<https://harris-sliwoski.com/cannalawblog/bad-news-for-hemp-thc-beverages-in-california/>

<https://mjbizdaily.com/california-moves-to-make-hemp-derived-thc-ban-permanent/>

Colorado

<https://coloradocannabis.org/hemp>

<https://www.denverpost.com/2024/02/27/thc-infused-seltzers-colorado-law-liquor-stores-restaurants/>

<https://getblitzd.us/blogs/news/thc-drinks-in-liquor-stores-whaaaaat>

<https://www.ibisworld.com/united-states/industry/colorado/beer-wine-liquor-stores/14362/>

Connecticut

https://portal.ct.gov/cannabis/knowledge-base/articles/what-do-package-stores-need-to-do-to-continue-to-sell-thc-infused-beverages?language=en_US

<https://www.cannabisbusinesstimes.com/us-states/connecticut/news/15686594/connecticut-law-regulating-thc-infused-beverage-sales-takes-effect>

<https://www.ibisworld.com/united-states/industry/connecticut/beer-wine-liquor-stores/18944/>

Delaware

<https://whyy.org/articles/delaware-liquor-stores-non-alcoholic-thc-marijuana/>

<https://spotlightdelaware.org/2025/06/11/delaware-hemp-thc-regulations/#:~:text=Originally%20introduced%20as%20one%20sweeping%20measure%2C%20the,as%20gummies%2C%20smokable%20flower%2C%20tinctures%2C%20and%20oils.>

<https://spotlightdelaware.org/2025/06/11/delaware-hemp-thc-regulations/>

<https://www.ibisworld.com/united-states/industry/delaware/beer-wine-liquor-stores/19567/>

District of Columbia

All hemp-derived THC beverage sales currently banned

Florida

<https://abcfws.com/guide-to-thc-infused-drinks#:~:text=Are%20THC%20beverages%20legal%20in,on%20a%20dry%20weight%20basis.&text=So%2C%20every%20THC%20beverage%20you,shelves%20is%20legal%20to%20drink.>

<https://www.tallahassee.com/story/news/politics/2025/04/02/florida-lawmakers-regulate-hemp-thc-infused-drinks/82303262007/#:~:text=Hemp%20and%20hemp%20extract%20products,a%20permit%20to%20sell%20hemp.>

Georgia

<https://rules.sos.ga.gov/GAC/40-32-5>

<https://www.church.law/georgia-legislature-passes-new-hemp-regulations/>

<https://www.ibisworld.com/united-states/industry/georgia/beer-wine-liquor-stores/20713/>

Hawaii

<https://www.multistate.us/insider/2025/5/5/thc-on-tap-a-review-of-2025-cannabis-infused-beverage-legislation>

<https://hawaiiistatecannabis.org/hemp#whathempproductsarelegalinhawaii>

https://www.capitol.hawaii.gov/sessions/session2025/bills/SB1633_SD1_.PDF

<https://baynews9.com/fl/tampa/news/2024/11/28/green-approves-amendments-to-hemp-regulations#:~:text=Open%20in%20Our%20App,to%20produce%20manufactured%20hemp%20products>

<https://www.ibisworld.com/united-states/industry/hawaii/beer-wine-liquor-stores/21223/>

Idaho

Cannabis is currently banned in Idaho

<https://www.ibisworld.com/united-states/industry/idaho/beer-wine-liquor-stores/21848/>

Illinois

<https://illinoiscannabis.org/hemp>

<https://www.engrainedbrewing.com/thc-bev-faq>

<https://www.ibisworld.com/united-states/industry/illinois/beer-wine-liquor-stores/22443/>

Indiana

<https://hilliardsbeer.com/exploring-indianas-thc-drink-revolution-trends-challenges-and-market-insights/>

<https://thehempdoctor.com/areas-we-serve/is-delta-9-legal-in-indiana/>

<https://www.ibisworld.com/united-states/industry/indiana/beer-wine-liquor-stores/23020/>

Iowa

<https://thehempdoctor.com/blog/is-delta-9-legal-in-iowa-an-update/#:~:text=Iowa%20first%20legalized%20hemp%20in,illegal%20under%20the%20Iowa%20Code.>

<https://usamdt.com/drug-use/are-thc-drinks-legal/#:~:text=The%20breakdown%20is%20simple.,making%20hemp%20a%20marketable%20product.>

<https://www.ibisworld.com/united-states/industry/iowa/beer-wine-liquor-stores/23682/>

Kansas

<https://cloudcolastore.com/pages/thc-soda-in-kansas>

<https://jonathanwmccconnell.com/2025/01/01/delta-8-and-delta-9-laws-in-kansas-criminal-defense-lawyers-wichita-ks/#:~:text=Delta%2D9%20THC:%20Under%20the,are%20permitted%20in%20the%20state.>

<https://www.ksnt.com/news/local-news/kansas-ag-kbi-consider-crackdown-on-thc-drink-sales/#:~:text=The%202018%20Farm%20Bill%20changed,industrial%20hemp%20industry%20to%20grow.>

<https://www.ibisworld.com/united-states/industry/kansas/beer-wine-liquor-stores/24331/>

Kentucky

<https://www.kentuckycannabislaw.com/navigating-kentucky-sb202-what-cannabis-beverage-businesses-need-to-know/#:~:text=Big%20changes%20are%20here%20for,quota%20retail%20package%20license%20location.>

<https://www.whas11.com/article/money/business/kentucky-thc-beverage-ban-sale-bars-restaurants/417-d81ca278-a786-4a6b-a2cc-da0e2270c747#:~:text=LOUISVILLE%2C%20Ky.,the%20box%20at%20liquor%20stores.>

<https://www.chfs.ky.gov/agencies/dph/dphps/fsb/Pages/HDCP.aspx>

<https://www.ibisworld.com/united-states/industry/kentucky/beer-wine-liquor-stores/24983/>

Louisiana

<https://mjbizdaily.com/louisiana-bans-thca-flower-sale-of-hemp-products-at-gas-stations/#:~:text=Beverages%20OK;%20serving%20limits%20flexible,including%20so%2Dcalled%20THCA%20flower.>

<https://www.crescentcanna.com/louisiana-cannabis-laws/#:~:text=Current%20Regulations%20in%20Louisiana&text=All%20Louisiana%20hemp%20products%20must,than%200.5%20milligrams%20of%20THC.>

<https://www.ibisworld.com/united-states/industry/louisiana/beer-wine-liquor-stores/25633/>

Maine

<https://cloudcolastore.com/pages/thc-soda-in-maine#:~:text=Yes!,legally%20in%20Pine%20Tree%20State.>

<https://cannabislaw.report/new-hemp-laws-in-connecticut-maine-arkansas-and-maryland/#:~:text=a%20concentration%20of%20less%20than,was%20a%20different%20trademarked%20product.>

<https://usamdt.com/drug-use/are-thc-drinks-legal/#:~:text=The%20breakdown%20is%20simple.,making%20hemp%20a%20marketable%20product.>

<https://www.seacoastonline.com/story/news/local/2025/02/04/maine-looks-to-regulate-hemp-infused-beverages/78178062007/>

<https://www.pressherald.com/2025/06/14/these-thc-infused-drinks-face-little-oversight-in-the-us-maine-is-scrambling-to-rein-in-sales/>

<https://www.ibisworld.com/united-states/industry/maine/beer-wine-liquor-stores/26271/>

Maryland

<https://mjbizdaily.com/maryland-governor-approves-marijuana-consumption-lounges-but-with-no-smoking/>

<https://www.ibisworld.com/united-states/industry/maryland/beer-wine-liquor-stores/14255/>

Massachusetts

<https://commonwealthbeacon.org/marijuana/state-crackdown-on-hemp-products-uneven/#:~:text=Hemp%20businesses%20argue%20that%20under,clear%20guidance%2C%E2%80%9D%20said%20Oliveri.>

<https://www.mcglinchey.com/insights/hemp-derived-thc-in-massachusetts-navigating-the-regulatory-maze/>

<https://abstraxhops.com/blogs/learn/adding-thc-drinks-to-your-product-portfolio-stay-aware-of-shifting-regulations>

<https://www.mass.gov/doc/cbd-and-thc-in-food-manufactured-or-sold-in-massachusetts/download#:~:text=Is%20it%20legal%20to%20process,be%20derived%20from%20hemp%20synthetically.>

<https://www.ibisworld.com/united-states/industry/massachusetts/beer-wine-liquor-stores/12714/>

Michigan

<https://www.metrotimes.com/weed/cannabis-beverages-could-be-the-future-of-social-drinking-in-michigan-38901191>

<https://www.ibisworld.com/united-states/industry/michigan/beer-wine-liquor-stores/27984/>

Minnesota

<https://www.politico.com/news/2024/07/10/minnesota-weed-drinks-00165375>

<https://www.ibisworld.com/united-states/industry/minnesota/beer-wine-liquor-stores/14155/>

<https://tcbmag.com/municipal-liquor-stores-log-28th-consecutive-year-of-record-sales/>

<https://sovos.com/shipcompliant/blog/hemp-derived-beverages-legal-compliance/#:~:text=As%20of%20February%2014%2C%202025:&text=Some%20states%2C%20like%20Minnesota%2C%20have,often%20its%20own%20licensing%20pathway.>

Mississippi

https://www.fox13memphis.com/news/mississippi-ag-takes-aim-at-hemp-products-including-delta-thc/article_c931317a-3d35-48a4-8414-286d849d5a91.html

<https://www.cannabisbusinesstimes.com/us-states/mississippi/news/15748808/consumable-hemp-products-illegal-without-fda-approval-mississippi-ag-says#:~:text=Consumable%20Hemp%20Products%20Illegal%20Without,signed%20into%20law%20on%20Feb.>

<https://www.ibisworld.com/united-states/industry/mississippi/beer-wine-liquor-stores/29136/>

Missouri

<https://missouriindependent.com/2025/02/06/bills-adding-regulations-to-hemp-derived-thc-beverages-advance-in-missouri-legislature/>

<https://www.alcoholawadvisor.com/2024/10/navigating-the-buzz-how-state-agencies-are-addressing-confusion-around-hemp-and-low-dose-thc-beverages/#:~:text=Missouri:%20In%20August%202024%2C%20an,on%20identifying%20%E2%80%9Cmisbranded%E2%80%9D%20products.>

<https://usamdt.com/drug-use/are-thc-drinks-legal/#:~:text=The%20breakdown%20is%20simple.,making%20hemp%20a%20marketable%20product.>

<https://missouriindependent.com/2024/10/03/cost-to-enforce-ban-on-intoxicating-hemp-products-in-missouri-estimated-at-nearly-900k/#:~:text=1%20executive%20order%20to%20ban%20unregulated%20psychoactive%20products.>

<https://apnews.com/article/cbd-delta8-thc-marijuana-cannabis-missouri-1eee287ba548058409b6d625a6f2fc82>

https://www.senate.mo.gov/25info/bts_web/Bill.aspx?SessionType=R&BillID=292

<https://www.ibisworld.com/united-states/industry/missouri/beer-wine-liquor-stores/29764/>

Montana

<https://www.mcdonaldhopkins.com/insights/news/introducing-the-hemp-legislation-blog-your-source-for-the-latest-u-s-hemp-product-regulations#:~:text=The%20proposed%20rules%2C%20among%20other,and%20it%20is%20effective%20immediately.>

<https://www.billtrack50.com/billdetail/1749861#:~:text=Sale%20of%20edible%20hemp%20PRODUCT,or%20another%20method%20of%20administration.>

<https://www.ibisworld.com/united-states/industry/montana/beer-wine-liquor-stores/30333/>

Nebraska

<https://www.criminaldefensene.com/is-delta-9-legal-in-nebraska/#:~:text=As%20a%20result,any%20THC%20products%20carries%20penalties.>

<https://nebraskapublicmedia.org/es/news/news-articles/as-more-states-move-to-restrict-intoxicating-hemp-people-in-the-industry-worry-for-its-future/#:~:text=The%202018%20Farm%20Bill%20removed,are%20manipulated%20to%20increase%20potency.>

<https://nebraskastatecannabis.org/thc>

<https://www.ibisworld.com/united-states/industry/nebraska/beer-wine-liquor-stores/30970/>

Nevada

<https://www.ibisworld.com/united-states/industry/nevada/beer-wine-liquor-stores/31609/>

New Hampshire

<https://www.newsfromthestates.com/article/state-crackdown-hemp-products-uneven>

<https://hempsupporter.com/news/updates-in-georgia-new-hampshire-and-rhode-island/#:~:text=In%20the%20closing%20days%20of,derived%20products%20that%20contain%20THC.>

<https://new-futures.org/2024-Hemp-Derived-THC-Products#:~:text=About%20the%20Bill,these%20dangerous%20and%20unregulated%20products.>

<https://www.ibisworld.com/united-states/industry/new-hampshire/beer-wine-liquor-stores/32244/>

New Jersey

<https://www.nj.gov/cannabis/news-events/20241012.shtml>

<https://vicentellp.com/insights/new-jersey-law-regulates-intoxicating-hemp-products/#:~:text=As%20of%20September%2012%2C%202024,of%20age%20is%20effective%20immediately.>

<https://www.ibisworld.com/united-states/industry/new-jersey/beer-wine-liquor-stores/13150/>

New Mexico

<https://www.env.nm.gov/cannabis-hemp/faqs/>

<https://newmexicostatecannabis.org/thc/delta-9>

<https://www.ibisworld.com/united-states/industry/new-mexico/beer-wine-liquor-stores/33407/>

New York

https://cannabis.ny.gov/system/files/documents/2024/10/permitted-and-prohibited-product-forms-guidance-document-nys-cannabinoid-hemp-program_v4.pdf

<https://www.ibisworld.com/united-states/industry/new-york/beer-wine-liquor-stores/12088/>

North Carolina

<https://raleighmag.com/2025/03/thc-cbd-beverages/>

<https://www.northcarolinahealthnews.org/2025/07/08/state-advisory-council-on-cannabis-how-to-regulate-nc-hemp-industry/#:~:text=The%202018%20Farm%20Bill%20removed,primary%20psychoactive%20chemical%20within%20cannabis.>

<https://www.ibisworld.com/united-states/industry/north-carolina/beer-wine-liquor-stores/14046/>

North Dakota

<https://ndlegis.gov/cencode/t04-1c18-1.pdf>

<https://northdakotacannabis.org/thc>

<https://www.ndda.nd.gov/news/retailers-must-do-due-diligence-hemp-derived-products>

<https://www.ibisworld.com/united-states/industry/north-dakota/beer-wine-liquor-stores/34561/>

Ohio

<https://www.justanswer.com/criminal-law/olcq4-able-sell-hemp-derived-thc-drinks-go.html>

<https://drinksunnydayz.com/pages/thc-drinks/ohio#:~:text=Are%20THC%20drinks%20legal%20in%20Ohio?,derived%20from%20hemp%2C%20not%20marijuana.>

[https://agri.ohio.gov/divisions/hemp-program/faqs/questions#:~:text=You%20do%20not%20need%20a,877\).](https://agri.ohio.gov/divisions/hemp-program/faqs/questions#:~:text=You%20do%20not%20need%20a,877).)

<https://www.dispatch.com/story/news/politics/2025/06/26/changes-to-ohio-marijuana-law-stall-over-hemp-local-funding/84339715007/>

<https://www.ibisworld.com/united-states/industry/ohio/beer-wine-liquor-stores/35153/>

Oklahoma

<https://www.oklahoman.com/story/news/state/2025/05/04/delta-8-synthetic-thc-oklahoma-legal-loopoles/83391032007/>

<https://www.thebrunelawfirm.com/cannabis-and-hemp-navigating-the-legal-distinctions-in-oklahoma/>

[https://www.flyingcloudthc.com/post/is-thc-legal-in-oklahoma#:~:text=Are%20THC%20drinks%20available%20and,\(marijuana%20derived\)%20THC%20products.](https://www.flyingcloudthc.com/post/is-thc-legal-in-oklahoma#:~:text=Are%20THC%20drinks%20available%20and,(marijuana%20derived)%20THC%20products.)

<https://www.ibisworld.com/united-states/industry/oklahoma/beer-wine-liquor-stores/35741/>

Oregon

<https://harris-sliwoski.com/cannalawblog/oregon-hemp-alert-new-vendor-license-requirement-takes-effect-july-1/#:~:text=New%20Oregon%20hemp%20rules%20take,catch%20many%20people%20off%20guard.>

<https://www.oregon.gov/olcc/marijuana/pages/general-market-hemp-faq.aspx#:~:text=May%20I%20do%20this?,ODA's%20Hemp%20Testing%20webpage.%E2%80%8B>

<https://www.koin.com/news/oregon/mcmenamins-offering-new-thc-infused-beverages-at-oregon-locations/>

<https://www.ibisworld.com/united-states/industry/oregon/beer-wine-liquor-stores/36404/>

<https://www.oregon.gov/olcc/liquorstores/pages/distilled-spirits-sales.aspx>

Pennsylvania

<https://wanderingspiritspa.com/blogs/news/hemp-based-beverages-why-theyre-legal-to-sell-in-pennsylvania>

<https://www.khflaw.com/news/legal-intelligencer-high-hopes-for-hemp-derived-thc-infused-beverages/#:~:text=In%20general%2C%20and%20with%20exception,infused%20beverages%20to%20the%20public.>

<https://moonwlkr.com/blogs/news/delta-8-pennsylvania#:~:text=Delta%208%20is%20not%20classified,actions%2C%20or%20public%20safety%20concerns.>

<https://www.ibisworld.com/united-states/industry/pennsylvania/beer-wine-liquor-stores/13011/>

Rhode Island

<https://dbr.ri.gov/sites/g/files/xkgbur696/files/2025-03/CBD%20Pamphlet%203.14.2025.pdf>

<https://www.yahoo.com/news/hemp-derived-thc-drinks-could-190323422.html>

https://www.yahoo.com/news/r-cannabis-regulators-put-pause-210625124.html?guccounter=1&guce_referrer=aHR0cHM6Ly93d3cuZ29vZ2xILmNvbS8&guce_referrer_sig=AQAAKU5Ni0qY-Ktc9z7lbU7QyQqtgdEodJidJoZXBqyqNA5pIJ2nXo2Lwmv2sV9IA3tRvQ167qRJn6XSzkhRo6PWpxW_5xFJy0sK390isYKr0tfoTMyXqpCoxDqvTEZsTajxOSy2IX8ztVsefdTVpanJrc1_qnYOhMnhFGaASlgylmW

<https://www.marijuanamoment.net/rhode-island-officials-pause-new-hemp-retailer-licenses-as-they-study-sales-of-thc-drinks-in-liquor-stores-and-bars/>

<https://www.ibisworld.com/united-states/industry/rhode-island/beer-wine-liquor-stores/37562/>

South Carolina

<https://www.cannabissciencetech.com/view/south-carolina-s-attorney-general-issues-opinion-on-the-legality-of-beverages-containing-hemp-derived-cannabinoids>

<https://natlawreview.com/article/south-carolina-clears-path-hemp-beverages>

<https://dph.sc.gov/health-wellness/health-safety/hemp-beverages>

<https://www.ibisworld.com/united-states/industry/south-carolina/beer-wine-liquor-stores/38214/>

South Dakota

<https://sdlegislature.gov/Session/Bill/25167/262437>

<https://southdakotastatecannabis.org/thc>

<https://southdakotasearchlight.com/2024/08/30/thc-seltzers-quietly-find-a-foothold-in-cannabis-cautious-south-dakota/>

<https://www.ibisworld.com/united-states/industry/south-dakota/beer-wine-liquor-stores/38828/>

Tennessee

<https://www.cannabisbusinesstimes.com/us-states/tennessee/news/15746892/tennessee-governor-signs-hempkilling-legislation-banning-thca-synthetic-cannabinoids#:~:text=Tennessee,Tennessee%20Governor%20Signs%20'Hemp%20Killing'%20Legislation%2C%20Banning%20THCA,to%20the%20Alcoholic%20Beverage%20Commission.>

<https://www.adamsandree.com/last-call/what-to-know-about-licensing-and-selling-under-tennessees-new-hemp-derived-cannabinoid-law#:~:text=Tennessee%20enacted%20new%20legislation%20governing,effect%20until%20January%201%2C%202026.>

<https://www.ibisworld.com/united-states/industry/tennessee/beer-wine-liquor-stores/13833/>

Texas

<https://www.alcoholawadvisor.com/2024/10/navigating-the-buzz-how-state-agencies-are-addressing-confusion-around-hemp-and-low-dose-thc-beverages/#:~:text=Missouri:%20In%20August%202024%2C%20an,on%20identifying%20%E2%80%9Cmisbranded%E2%80%9D%20products.>

<https://www.getsoul.com/blogs/cbd-education/are-thc-drinks-legal-in-texas#:~:text=Adherence%20To%20The%200.3%25%20Delta,surpass%20this%20concentration%20are%20prohibited.>

<https://irglobal.com/article/is-thc-legal-in-texas-delta-8-delta-9-delta-10-thca-laws-explained/#:~:text=The%20legality%20of%20hemp%2Dderived,or%20have%20inaccurate%20lab%20tests.>

Utah

<https://ag.utah.gov/industrial-hemp-program/#:~:text=This%20program%20ensures%20consumer%20safety,be%20registered%20with%20the%20UDAF.>

<https://utahstatecannabis.org/thc>

<https://www.ibisworld.com/united-states/industry/utah/beer-wine-liquor-stores/40569/>

Vermont

https://www.rutlandherald.com/news/local/vermont-hemp-beverage-coalition-to-push-for-new-clearer-regulations/article_78a4d84f-4403-4f50-9623-54cfc7017e31.html

<https://vermontstaecannabis.org/thc>

<https://www.ibisworld.com/united-states/industry/vermont/beer-wine-liquor-stores/41189/>

Virginia

<https://www.vdacs.virginia.gov/food-hemp-product-enforcement.shtml>

<https://redfernhemp.com/learn-how-to-sell-compliant-hemp-products-in-virginia/#:~:text=To%20be%20sold%20legally%2C%20the,be%20required%20for%20the%20seller.>

<https://www.cannabisbusinesstimes.com/hemp-derived-cannabinoids/news/15711724/federal-court-rules-virginias-total-thc-hemp-regulations-supersede-2018-farm-bill>

<https://www.ibisworld.com/united-states/industry/virginia/beer-wine-liquor-stores/41797/>

Washington

https://lcb.wa.gov/education2cb/hemp-derived_and_synthetic_thc_products--legal#:~:text=In%202023%2C%20Washington's%20State%20Legislature,%2C%20like%20delta%2D8%20THC.

<https://www.ibisworld.com/united-states/industry/washington/beer-wine-liquor-stores/13621/>

West Virginia

<https://agriculture.wv.gov/licenses/hemp-and-kratom-products/#:~:text=All%20hemp%20products%20and%20hemp,any%20hemp%20product%20in%20WV.>

<https://westvirginiastatecannabis.org/hemp>

<https://www.ibisworld.com/united-states/industry/west-virginia/beer-wine-liquor-stores/42930/>

Wisconsin

<https://milwaukee-criminal-lawyer.com/cbd-thc-delta-9-and-delta-8-whats-legal-in-wisconsin/#:~:text=Your%20ability%20to%20use%2C%20possess,products%20is%20legal%20in%20Wisconsin.>

<https://usamdt.com/drug-use/are-thc-drinks-legal/#:~:text=The%20breakdown%20is%20simple.,making%20hemp%20a%20marketable%20product.>

<https://www.wisn.com/article/wisconsins-legal-thc-drinks-new-wave-of-cannabis-cocktails/63761729>

<https://www.ibisworld.com/united-states/industry/wisconsin/beer-wine-liquor-stores/43531/>

Wyoming

<https://www.wyoleg.gov/Legislation/2025/HB0267>

<https://mjbizdaily.com/wyoming-ban-on-hemp-derived-thc-products-survives-court-challenge/#:~:text=Wyoming's%20ban%20on%20hemp%2Dderived,%2C%E2%80%9D%20according%20to%20the%20legislation.>

<https://www.ibisworld.com/united-states/industry/wyoming/beer-wine-liquor-stores/44081/>

United States

<https://fred.stlouisfed.org/series/MRTSSM4453USN>

<https://www.distilledspirits.org/news/discus-aeb-u-s-spirits-revenues-maintain-market-share-lead-of-total-beverage-alcohol-market-in-2023/>

<https://www.distilledspirits.org/wp-content/uploads/2024/02/AEB-Support-Tables-2023-Final.pdf>

<https://www.cspdailynews.com/beverages/convenience-stores-help-drive-alcohol-beverage-dollar-growth#:~:text=In%20channel%20dollar%20share%20by,spirits%20and%205%25%20in%20wine.>

<https://www.ciliconplus.com/learn/thc-drinks-legality-in-the-usa/>

<https://www.multistate.us/insider/2025/5/5/thc-on-tap-a-review-of-2025-cannabis-infused-beverage-legislation>

<https://www.brewersassociation.org/category/insights/>

Other Topics

Brands

<https://podcasts.apple.com/us/podcast/22-how-thc-drinks-brand-cann-grew-to-%2436-million-in/id1678373669?i=1000646481615>

<https://www.cnn.com/2025/05/10/business/thc-drinks-legal-farm-bill>

<https://mjbizdaily.com/restrictions-lure-big-companies-to-hemp-derived-thc-beverage-market/>

<https://www.cannabisbusinesstimes.com/hemp/news/15739818/wana-beverages-thcinfused-hemp-drinks-hit-total-wine>

<https://mjbizdaily.com/keef-brands-moves-to-top-of-competitive-cannabis-beverage-sector/>

<https://www.modernretail.co/operations/cannabis-beverage-brands-are-making-inroads-with-liquor-chains-like-total-wine/>

General Market Data

<https://www.headset.io/category/beverage>

<https://www.headset.io/industry-reports/cannabis-beverages-examining-category-performance-trends>

<https://bngpayments.net/blog/bar-revenue-per-square-foot/#:~:text=How%20Much%20Revenue%20Does%20A,400%20percent%20on%20every%20drink.>

<https://restaurant.org/getmedia/cdfe9576-bc16-4197-904b-74c6e6ad69f4/alabama-state-fact-sheet-2025.pdf>

<https://taxpolicycenter.org/statistics/state-and-local-alcohol-tax-revenue>

<https://www.usatoday.com/story/money/2025/01/21/alcohol-trends-2025-moderation-low-non-alcoholic-survey/77351695007/#:~:text=Total%20alcohol%20sales%20at%20stores,%25%20in%201976%2D1978%20period.>

<https://www.politico.com/news/2024/07/10/minnesota-weed-drinks-00165375>

<https://mgmagazine.com/business/retail-merchandise/cannabis-infused-beverage-category-awash-in-sales/>

<https://mjbizdaily.com/keef-brands-moves-to-top-of-competitive-cannabis-beverage-sector/>

<https://www.washingtonpost.com/wellness/2025/01/31/cannabis-drinks-thc-dry-january/>

https://www.convenience.org/Media/Daily/2025/February/5/3-Cannabis-Drinks-See-Spike-in-Sales_Marketing

[https://growjo.com/company/Wana_Brands#:~:text=Estimated%20Revenue%20%20Valuation%20*%20Wana%20Brands's,Brands's%20estimated%20revenue%20per%20employee%20is%20\\$297%2C000.](https://growjo.com/company/Wana_Brands#:~:text=Estimated%20Revenue%20%20Valuation%20*%20Wana%20Brands's,Brands's%20estimated%20revenue%20per%20employee%20is%20$297%2C000.)

<https://natlawreview.com/article/crack-open-cold-one-future-and-legal-considerations-hemp-beverages#:~:text=Some%20states%2C%20like%20Minnesota%20and,must%20have%20the%20appropriate%20licensure.>

<https://www.alcoholprofessor.com/blog-posts/cannabis-drinks-rtids#:~:text=Short%20answer%2C%20yes,,are%20legal%20in%2024%20states>