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Unless an exception applies, cannabis and its derivatives are considered *marijuana*, which is a Schedule I controlled substance under the Controlled Substances Act (CSA). Schedule I controlled substances are subject to the most stringent regulation by the U.S. Drug Enforcement Administration (DEA), and prohibited acts with Schedule I controlled substances are subject to criminal punishment. One exception to the general rule categorizing cannabis as marijuana is *hemp*. The Agriculture Improvement Act of 2018 (2018 farm bill) carved out hemp from the definition of marijuana in the CSA. After passage of the 2018 farm bill, hemp is no longer a controlled substance under the CSA. The 2018 farm bill defines *hemp* as any part of the cannabis plant or its derivatives containing no more than 0.3% delta-9 tetrahydrocannabinol (delta-9 THC) on a dry-weight basis. Delta-9 THC is a cannabinoid, a chemical compound produced by cannabis. Tetrahydrocannabinols (THCs)—of which delta-9 THC is one type—are psychoactive cannabinoids that are naturally contained in cannabis or synthetically created in a lab. Other cannabinoids (like cannabidiol, or CBD) are not psychoactive. THC is separately classified as a Schedule I controlled substance, unless an exception applies. Similar to the 2018 farm bill's exclusion of hemp from the definition of marijuana, DEA's scheduling regulations exclude substances that meet the definition of *hemp* implemented by the 2018 farm bill from the classification of THC as a Schedule I controlled substance.

Following the enactment of the 2018 farm bill, the cannabis industry began producing certain cannabis products that contain less than 0.3% delta-9 THC but a total THC concentration that exceeds 0.3%. Some of these products may be intoxicating to the user. Given that THC is separately listed as a Schedule I controlled substance, there is some uncertainty regarding which of these products are legally considered hemp. DEA and two federal appellate courts have interpreted the hemp provisions of the 2018 farm bill to reach divergent conclusions regarding whether certain cannabis products are hemp.

In August of 2020, DEA issued an interim final rule to clarify the interaction between the 2018 farm bill's hemp provisions, the CSA's regulation of THC as a Schedule I controlled substance, and DEA scheduling regulations that exclude hemp from the classification of THC. In the rule, DEA stated that the 2018 farm bill "limits the control" of THC that is "naturally occurring" in hemp but that it "does not impact the control status of synthetically derived tetrahydrocannabinols." In a 2021 opinion letter, DEA stated that it considered delta-8 THC (another type of THC produced by cannabis) to be hemp if it is extracted from cannabis that has a delta-9 THC concentration of not more than 0.3%, but delta-8 THC would be a synthetic THC—and therefore a Schedule I controlled substance—if it is produced from non-cannabis materials. The U.S. Court of Appeals for the Ninth Circuit held in *AK Futures LLC v. Boyd Street Distro* that the plaintiff's delta-8 THC products fit within the statutory definition of *hemp* because the products are "hemp-derived" and contain "less than 0.3% of delta-9 THC," rejecting the argument that the products were synthetic THC because the delta-8 THC was extracted or refined through a manufacturing process. Later, the U.S. Court of Appeals for the Fourth Circuit (Fourth Circuit) held in *Anderson v. Diamondback Investment Group, LLC* that the plaintiff's THC-O products were hemp, directly contradicting DEA's March 15, 2023, letter opining that products containing THC-O are Schedule I controlled substances because they contain synthetically derived THC.

As products with more than 0.3% concentration of total THC have entered the market, many states have passed or are debating laws restricting or prohibiting these products. Various participants in the hemp industry have challenged several of these state efforts to prohibit certain cannabis products by filing lawsuits, primarily arguing that (1) the state laws violate the Dormant Commerce Clause and (2) the 2018 farm bill preempts the state laws. Two federal appellate courts, the Fourth Circuit and the Eighth Circuit, have issued opinions upholding two such state laws from Virginia and Arkansas, respectively.

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Introduction

Marijuana has been regulated under Schedule I of the Controlled Substances Act (CSA)—the most stringent level of controls—since 1970.¹ In 2018, Congress carved out an exception for certain cannabis substances from regulation under the CSA in the Agriculture Improvement Act of 2018 (2018 farm bill) by defining *hemp* and excluding *hemp* from the definition of *marijuana*.² The 2018 farm bill defines hemp based on how much delta-9 tetrahydrocannabinol (delta-9 THC) is in the product—a type of cannabinoid found in the cannabis plant with psychoactive effects that produces the “high” associated with marijuana.³ The 2018 farm bill carve out means that certain products derived from cannabis, such as cannabidiol (CBD) products, may be sold without violating the CSA, so long as they contain less than 0.3% delta-9 THC.⁴ In addition to delta-9 THC, other cannabinoids found in or derived from the cannabis plant, such as delta-8 THC, may also be psychoactive and produce a “high” effect.⁵ Following enactment of the 2018 farm bill, the cannabis industry has manufactured and sold many products that contain less than 0.3% delta-9 THC but contain other cannabinoids with psychoactive effects and may produce the “high” typically associated with marijuana—such products are sometimes called “intoxicating hemp” products.⁶ Producers of intoxicating hemp products have asserted that such products qualify as hemp as defined under the 2018 farm bill based on the level of delta-9 THC.⁷

The proliferation of such products has led to questions at the federal level as to which products are regulated as marijuana under the CSA and which fall under hemp exemption. The U.S. Drug Enforcement Administration (DEA), which administers the CSA, and the courts have interpreted the 2018 farm bill’s definition of *hemp* and considered its interaction with the CSA and DEA’s scheduling regulations to determine which products are legally considered to be *hemp*.⁸ The rise of intoxicating hemp products has also generated concern in certain states.⁹ Since the enactment of the 2018 farm bill, some states have passed legislation restricting or prohibiting certain hemp products, often by amending the states’ controlled substances laws.¹⁰ In response, various

¹ Controlled Substances Act, Pub. L. No. 91-513, tit. II, 84 Stat. 1242 (1970) (codified as amended at 21 U.S.C. §§ 801–904).

² The Agriculture Improvement Act of 2018 (2018 farm bill), Pub. L. No. 115-334, § 297A(1), 132 Stat. 4490 (2018).

³ 7 U.S.C. § 1639o(1).

⁴ See *id.*; 21 U.S.C. §§ 802(16), 812(c)(10).

⁵ Elena Schmidt, *Comparing Exotic Cannabinoids: Delta-9 THC, Delta-8, Delta-10, HHC, HHCP, THCOa & THCP*, ACS Laboratory (Dec. 10, 2024), <https://www.acslab.com/cannabinoids/comparing-exotic-cannabinoids>.

⁶ Paul Demko, *Kids Are Buying Pot-Like Drugs from Corner Stores. Lawmakers Want to Stop It.*, POLITICO (Mar. 13, 2024), <https://www.politico.com/news/2024/03/13/hemp-regulator-crackdown-00146398>.

⁷ *Id.*; see also AK Futures LLC’s Response Brief at 18, *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682 (9th Cir. 2022) (No. 21-56133), ECF No. 14.

⁸ See Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639 (Aug. 21, 2020) (to be codified at 21 C.F.R. pts. 1308, 1312); *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682, 682 (9th Cir. 2022); *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024).

⁹ See Demko, *supra* note 6 (“In more than 20 states—ranging from Florida to Ohio, California to Mississippi—legislators are proposing laws aimed at putting stricter guardrails around intoxicating hemp products or banning them altogether.”).

¹⁰ See, e.g., VA. CODE ANN. § 3.2-4112 (2023) (“‘Hemp product’ means a product . . . that . . . when offered for retail sale . . . contains a total tetrahydrocannabinol concentration of no greater than 0.3 percent . . .”); *id.* § 4.1-600 (2023) (defining marijuana for purposes of the Cannabis Control Act as any part of the cannabis plant, excluding hemp products as defined in § 3.2-4112, subject to certain exceptions); *id.* § 4.1-1116 (2023) (criminalizing the advertising of marijuana); *id.* § 4.1-1108 (2021) (criminalizing the consumption of marijuana in any public place); *id.* § 4.1-1100 (2023) (criminalizing the possession of more than one ounce of marijuana); *id.* § 18.2-248.1 (2020) (criminalizing the (continued...))

participants in the cannabis industry have challenged several of these new laws.¹¹ For example, lawsuits have been filed to challenge the laws of Arkansas and Virginia, in which hemp industry plaintiffs asserted that the state laws restricting or prohibiting certain THC products are preempted by the 2018 farm bill and violate the Dormant Commerce Clause.¹²

This report begins with some background on cannabis and the legal definitions of hemp and marijuana. It then discusses DEA's efforts to implement the *hemp* definition in the 2018 farm bill and two federal appellate decisions interpreting the definition. The report then provides an overview of two states' recent efforts to regulate intoxicating hemp and the legal challenges to those state laws based on federal preemption and the Dormant Commerce Clause. The report concludes with selected considerations for Congress.

Background on Cannabis, Hemp, and Marijuana

Cannabis produces, or can be used to produce, chemical compounds called cannabinoids.¹³ Cannabis has long been used for its psychoactive effects by inhalation or consumption of the leaves, but increasingly entities are extracting specific compounds and isolating or chemically manipulating them to introduce them into a wider array of products.¹⁴ Some of these products are nonintoxicating products like CBD oil, while others may be used in products that may have psychoactive effects.¹⁵ Federal law treats cannabis products differently depending on the type and quantity of the cannabinoids they contain and depending on whether the cannabinoids are "synthetically derived."¹⁶ The most well-known types of cannabinoids are tetrahydrocannabinol (THC) and CBD.¹⁷ CBD is not psychoactive, but THC is psychoactive and may produce the "high" associated with marijuana.¹⁸ There are many types of THC. Delta-9 THC is the most common and well-known form of THC and naturally occurs in the cannabis plant.¹⁹ Other forms of THC include delta-8 tetrahydrocannabinol (delta-8 THC), delta-10 tetrahydrocannabinol (delta-10 THC), and tetrahydrocannabinol-O-acetate (THC-O).²⁰ Some types of THC occur naturally in the cannabis plant, while others do not, and the chemical processes required to isolate

sale of marijuana); ARK. CODE ANN. § 5-64-215(a)(5)(A)(i) (2023) (including on Schedule VI "[a] product derived from industrial hemp that was produced as a result of a synthetic chemical process that converted the industrial hemp or a substance contained in the industrial hemp into delta-8, delta-9, delta-6a,10a, or delta-10 tetrahydrocannabinol including their respective acetate esters; and [] any other psychoactive substance derived therein"); *id.* § 5-64-419(b)(5) (2021) (criminalizing the possession of Schedule VI controlled substances); *see also* Katharine Neill Harris, Victoria Jupp & Lisa Pittman, *Mapping Hemp Products' Legal Status Across US States*, BAKER INSTITUTE (Dec. 6, 2024), <https://www.bakerinstitute.org/research/mapping-hemp-products-legal-status-across-us-states>.

¹¹ *See N. Va. Hemp & Ag. LLC*, 700 F. Supp. at 416; *Bio Gen LLC*, 690 F. Supp. 3d at 933–34.

¹² *Id.*

¹³ *FDA Regulation of Cannabis and Cannabis-Derived Products, Including Cannabidiol*, FDA (July 16, 2024), <https://www.fda.gov/news-events/public-health-focus/fda-regulation-cannabis-and-cannabis-derived-products-including-cannabidiol-cbd#whatare>.

¹⁴ *See* Schmidt, *supra* note 5.

¹⁵ *See* Demko, *supra* note 6.

¹⁶ *See* 7 U.S.C. § 1639o(1) (definition of "hemp"); 21 U.S.C. § 802(16) (definition of "marijuana"); Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639, 51641 (Aug. 21, 2020) (to be codified at 21 C.F.R. pts. 1308, 1312).

¹⁷ *What You Need to Know (And What We're Working to Find Out) About Products Containing Cannabis or Cannabis-Derived Compounds, Including CBD*, FDA (Mar. 5, 2020), <https://www.fda.gov/consumers/consumer-updates/what-you-need-know-and-what-were-working-find-out-about-products-containing-cannabis-or-cannabis>.

¹⁸ *Id.*

¹⁹ *Id.*

²⁰ *See* Schmidt, *supra* note 5.

or produce sufficient quantities to use vary depending on the type of THC. For example, delta-8 THC and delta-10 THC are found in cannabis in trace amounts, and they are manufactured by chemically altering CBD.²¹ THC-O is a psychoactive cannabinoid that does not occur naturally in the cannabis plant.²² It is made by converting CBD extracted from hemp to delta-8 THC and then adding acetic anhydride to the delta-8 THC molecules to produce THC-O.²³

Under federal law, cannabis and its derivatives fall into two main categories: *marijuana* and *hemp*. Currently, unless an exception applies, cannabis and its derivatives are legally classified as *marijuana*, which is a Schedule I controlled substance under the federal CSA.²⁴ Inclusion in Schedule I means marijuana is subject to the most stringent CSA restrictions, and unauthorized activities involving marijuana are subject to significant criminal penalties.²⁵

Hemp is the primary exception to the general rule categorizing cannabis as marijuana. The 2018 farm bill established a legal definition of hemp and excluded hemp from the definition of marijuana under the CSA.²⁶ Thus, after enactment of the 2018 farm bill, hemp is no longer a controlled substance under the CSA.²⁷ The 2018 farm bill defines *hemp* as any part of the plant or its derivatives containing no more than 0.3% delta-9 THC.²⁸

THC has been separately classified as a Schedule I controlled substance since 1970, unless an exception applies.²⁹ THC includes THC that naturally occurs in the plant and synthetic equivalents of those substances, as well as their derivatives and isomers.³⁰ DEA's existing regulation classifying THC as a Schedule I controlled substance was amended to exclude hemp following the enactment of the 2018 farm bill.³¹ Similar to the 2018 farm bill's exclusion of hemp from the statutory definition of marijuana, DEA's scheduling regulations exclude substances that meet the definition of *hemp* implemented by the 2018 farm bill from the classification of THC as a Schedule I controlled substance.³² Specifically, DEA's regulatory definition of THC excludes

²¹ 5 Things to Know About Delta-8 Tetrahydrocannabinol – Delta-8 THC, FDA (May 4, 2022), <https://www.fda.gov/consumers/consumer-updates/5-things-know-about-delta-8-tetrahydrocannabinol-delta-8-thc>; Pat Goggins, *What Is Delta-10?*, LEAFLY (Aug. 29, 2022), <https://www.leafly.com/news/cannabis-101/what-is-delta-10>.

²² Dario Sabaghi, *What Is THC-O Acetate, and Why Is It Getting Attention?*, FORBES (Apr. 4, 2022), <https://www.forbes.com/sites/dariosabaghi/2022/01/18/what-is-thc-o-acetate-and-why-is-it-getting-attention/>.

²³ *Id.*

²⁴ 21 U.S.C. §§ 801–904.

²⁵ See 21 U.S.C. § 841. For more information on marijuana's status as a Schedule I controlled substance under the Controlled Substances Act, see CRS In Focus IF12270, *The Federal Status of Marijuana and the Policy Gap with States*, by Lisa N. Sacco, Joanna R. Lampe, and Hassan Z. Sheikh (2024).

²⁶ 7 U.S.C. § 1639o(1); 21 U.S.C. § 802(16).

²⁷ See 7 U.S.C. § 1639o(1); 21 U.S.C. § 802(16). The buying and selling of hemp products, however, may violate other federal law. The farm bill explicitly preserved the authority of the U.S. Food and Drug Administration (FDA) to regulate these products under the Federal Food, Drug, and Cosmetic Act (FD&C Act), and therefore products containing hemp remain subject to the provisions of the FD&C Act and FDA's regulations. See 7 U.S.C. § 1639r(c). FDA's regulation of hemp falls outside of the scope of this report. For more information on FDA's regulation of hemp, see CRS In Focus IF12477, *FDA's Oversight of Hemp-Derived Compounds*, by Renée Johnson (2023), and CRS Legal Sidebar LSB11227, *Legal Effect of Marijuana Rescheduling on FDA's Regulation of Cannabis*, by Dorothy C. Kafka (2024).

²⁸ 7 U.S.C. § 1639o(1).

²⁹ 21 C.F.R. § 1308.11(d)(31) (2025); see also Controlled Substances Act § 202(c)(17).

³⁰ 21 C.F.R. § 1308.11(d)(31).

³¹ See Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639 (Aug. 21, 2020) (to be codified at 21 C.F.R. pts. 1308, 1312).

³² *Id.*

“any material, compound, mixture, or preparation” that qualifies as hemp as defined in the 2018 farm bill.³³

Following enactment of the 2018 farm bill, the cannabis industry began producing certain products that contain less than 0.3% delta-9 THC but have a total THC concentration that exceeds 0.3%.³⁴ As a result of the total THC concentration, these products may be intoxicating to the user.³⁵ Due to the delta-9 THC concentration, however, these products may legally qualify as hemp and be exempt from CSA restrictions that apply to marijuana and to THC specifically. Critics of the proliferation of these THC products dub this interpretation of the 2018 farm bill the “THC loophole.”³⁶ Given that THC is separately listed as a Schedule I controlled substance, certain products may contain less than 0.3% delta-9 THC, potentially qualifying as hemp, while also containing amounts of another separately scheduled THC (e.g., delta-8 THC) whose presence would normally cause the product to be scheduled. There is therefore some uncertainty regarding whether certain of these products are legally considered hemp.

Federal Interpretations of the 2018 Farm Bill's Definition of *Hemp*

As discussed above, marijuana and THC are Schedule I controlled substances under the CSA, but hemp is not.³⁷ Cannabis and its derivatives are considered marijuana unless an exception applies, and one such exception is hemp.³⁸ Hemp is defined in the 2018 farm bill as follows:

The term “hemp” means the plant *Cannabis sativa* L. and any part of that plant, including the seeds thereof and all derivatives, extracts, cannabinoids, isomers, acids, salts, and salts of isomers, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 percent on a dry weight basis.³⁹

THC is a type of cannabinoid that is found in the cannabis plant and may be present in both hemp and marijuana.⁴⁰ Since the passage of the 2018 farm bill, courts and DEA have considered how this exception applies to certain cannabis products containing a total THC concentration of 0.3% or greater but less than 0.3% delta-9 THC.⁴¹

³³ *Id.*

³⁴ See Demko, *supra* note 6.

³⁵ *Id.*

³⁶ Rob Mentzer, *A Loophole in Federal Marijuana Law Has Led to the Creation of New THC Product*, NPR (Jan. 4, 2025), <https://www.npr.org/2022/01/04/1070338052/a-loophole-in-federal-marijuana-law-has-led-to-the-creation-of-new-thc-product>.

³⁷ See 21 U.S.C. § 802(16); 21 C.F.R. § 1308.11(d)(31) (2025).

³⁸ 7 U.S.C. § 1639o(1); 21 U.S.C. § 802(16).

³⁹ 7 U.S.C. § 1639o.

⁴⁰ See *What You Need to Know (And What We're Working to Find Out) About Products Containing Cannabis or Cannabis-Derived Compounds, Including CBD*, *supra* note 17.

⁴¹ See Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639 (Aug. 21, 2020) (to be codified at 21 C.F.R. pts. 1308, 1312); *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682, 682 (9th Cir. 2022); DEA, Opinion Letter to Kight Law Office PC (Feb. 13, 2023), <https://cannabusiness.law/wp-content/uploads/DEA-THCO-response-to-Kight.pdf>; *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024).

DEA's Interim Final Rule and 2021 Opinion Letter

On August 21, 2020, DEA issued an interim final rule to clarify its interpretation of the hemp provisions of the 2018 farm bill.⁴² In this rule, DEA explains how the 2018 farm bill's de-scheduling of hemp affected the Schedule I status of THC.⁴³ The interim final rule states that the 2018 farm bill "limits the control" of THC that is "naturally occurring" in hemp.⁴⁴ According to DEA, the 2018 farm bill "does not impact the control status of synthetically derived [THC] because the statutory definition of 'hemp' is limited to materials that are derived" from the cannabis plant.⁴⁵ For products with "synthetically derived" THC, the amount of delta-9 THC "is not a determining factor in whether the material is a controlled substance" because "[a]ll synthetically derived [THCs] remain schedule I controlled substances."⁴⁶

The precise meaning of "synthetically derived" THC is the subject of some debate, with many interested parties submitting public comments asking for clarification on the phrase's meaning.⁴⁷ Some have argued that any cannabinoid that needs to be extracted or refined through a manufacturing process is "synthetically derived."⁴⁸ Others have argued that, regardless of the extraction process, a THC that naturally occurs in the cannabis plant is not "synthetically derived," and a THC that does not occur naturally in the plant and must be made in a laboratory is "synthetically derived."⁴⁹

In a September 2021 opinion letter, DEA took the position that THC is a "synthetically derived" Schedule I controlled substance if it is produced from non-cannabis materials.⁵⁰ DEA stated that it considered delta-8 THC to be hemp if it is extracted from a cannabis substance but a Schedule I controlled substance if the delta-8 THC is synthetically produced from non-cannabis materials.⁵¹

The Ninth Circuit's Decision in *AK Futures LLC v. Boyd Street Distro*

The U.S. Court of Appeals for the Ninth Circuit has considered whether cannabis products containing delta-8 THC were legally hemp or marijuana.⁵² In *AK Futures LLC v. Boyd Street Distro*, the court concluded that the products at issue were hemp.⁵³

⁴² Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639 (Aug. 21, 2020) (to be codified at 21 C.F.R. pts. 1308, 1312).

⁴³ *Id.*

⁴⁴ *Id.* at 51641.

⁴⁵ *Id.*

⁴⁶ *Id.*

⁴⁷ See DEA 2020-0023: Implementation of the Agriculture Improvement Act of 2018, REGULATIONS.GOV (Aug. 21, 2020), <https://www.regulations.gov/document/DEA-2020-0023-0001/comment?filter=synthetic>.

⁴⁸ See, e.g., Response Brief of Defendant-Appellee Diamondback Investment Group, LLC at 33–34, *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024) (No. 23-1400), ECF No. 17.

⁴⁹ See, e.g., Reply Brief of Appellant Tonya Anderson at 11, *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024) (No. 23-1400), ECF No. 18.

⁵⁰ See DEA, Opinion Letter to Alabama Board of Pharmacy (Sept. 15, 2021), <https://albop.com/ooodoardu/2021/10/ALBOP-synthetic-delta8-THC-21-7520-signed.pdf>.

⁵¹ *Id.*

⁵² See *AK Futures*, 35 F.4th at 682.

⁵³ *Id.* at 692.

In *AK Futures*, the plaintiff filed a lawsuit claiming, among other things, that the defendant infringed on its “Cake”-branded trademark for one of its e-cigarette products by selling counterfeit versions of the product.⁵⁴ As an affirmative defense, the defendant argued that the plaintiff did not have a protectible trademark in the “Cake” brand because the plaintiff’s products containing delta-8 THC were illegal.⁵⁵ The plaintiff countered that the 2018 farm bill’s definition of hemp encompassed delta-8 THC products as long as they contained no more than 0.3% delta-9 THC.⁵⁶ Specifically, the plaintiff contended that a straightforward reading of the 2018 farm bill deems all products that are sourced from the cannabis plant and contain no more than 0.3% delta-9 THC to be hemp.⁵⁷

In contrast, the defendant argued that the delta-8 THC in the plaintiff’s products was a Schedule I controlled substance because it was a “synthetic THC.”⁵⁸ According to the defendant, hemp excludes synthetic THC’s, which all “remain schedule I controlled substances.”⁵⁹ Under the defendant’s interpretation, a material may be synthetic THC if it was chemically manipulated or manufactured, and this distinction does not depend on the source of the material.⁶⁰ According to the defendant, delta-8 THC is “synthetically derived” because it must be extracted from the cannabis plant and “refined through a manufacturing process.”⁶¹

The federal trial court had granted the plaintiff’s motion for a preliminary injunction, finding (among other things) that the plaintiff was likely to succeed on its claim that its products were legal, and therefore protectible under trademark law.⁶² The Ninth Circuit affirmed, holding that the plaintiff’s delta-8 THC products fit within the statutory definition of *hemp* because the plaintiff’s uncontradicted evidence indicated that the products were “hemp-derived” and contained “less than 0.3% of delta-9 THC.”⁶³ To support its conclusion, the appellate panel noted that delta-8 THC is “produced naturally by the cannabis plant.”⁶⁴ The court held that the 2018 farm bill definition did not depend on the manner in which derivatives, extracts, and cannabinoids were produced.⁶⁵ Rather, the definition encompassed all such derivatives, extracts, and cannabinoids so long as they were derived from the cannabis plant rather than from non-cannabis materials.⁶⁶

⁵⁴ *Id.* at 685–86.

⁵⁵ Appellant’s Opening Brief at 5, *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682 (9th Cir. 2022) (No. 21-56133), ECF No. 9. To own an unregistered trademark, a party must demonstrate it was “the first to use the mark in commerce, and such use must be lawful.” *AK Futures*, 35 F.4th at 689 (citing *S. Cal. Darts Ass’n v. Zaffina*, 762 F.3d 921, 926, 930-32 (9th Cir. 2014)).

⁵⁶ *AK Futures LLC’s Response Brief* at 18, *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682 (9th Cir. 2022) (No. 21-56133), ECF No. 14.

⁵⁷ *Id.* at 18–19.

⁵⁸ Appellant’s Opening Brief at 12, *AK Futures LLC v. Boyd St. Distro*, 35 F.4th 682 (9th Cir. 2022) (No. 21-56133), ECF No. 9 (citing Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639, 51641 (Aug. 21, 2020)).

⁵⁹ *Id.*

⁶⁰ *Id.*

⁶¹ *AK Futures*, 35 F.4th at 692.

⁶² *AK Futures LLC v. Boyd St. Distro LLC*, 2021 WL 4860513, *1, 5 (C.D. Cal. Sept. 15, 2021).

⁶³ *AK Futures*, 35 F.4th at 691 (internal quotation marks omitted); *see also id.* at 696 (“Plain statutory text compels the conclusion that *AK Futures’* products are lawful, and we see no other reason to deny a preliminary injunction. We affirm.”).

⁶⁴ *Id.* at 691.

⁶⁵ *Id.* at 692.

⁶⁶ *Id.*

The Ninth Circuit also rejected the defendant's arguments that relied on DEA's final rule interpreting the 2018 farm bill.⁶⁷ As an initial matter, the panel held that it did not need to consider whether to defer to DEA's interpretation because the statute's definition of *hemp* is unambiguous.⁶⁸ The court nevertheless observed that, even under DEA's interpretation, the products at issue would have been considered hemp and not synthetic THC.⁶⁹ According to the court, DEA's interpretation is consistent with its view that hemp is "materials that are derived from" cannabis, and synthetic THC is materials "derived from non-cannabis sources."⁷⁰ This explanation, the court suggested, meant that DEA believed that the source of the product—not the method of manufacture—was the dispositive factor for ascertaining whether the product is hemp or is synthetic THC.⁷¹ In response to the defendant pointing out that delta-8 THC appears on DEA's website among the Schedule I controlled substances, the Ninth Circuit determined that, to the extent the website suggests that hemp-derived delta-8 THC remains controlled regardless of its delta-9 concentration level, it is inconsistent with both the statutory text and DEA's regulations.⁷²

DEA's 2023 Opinion Letter

In another opinion letter issued on February 13, 2023, DEA addressed the status of THC-O.⁷³ In the letter, DEA opined that THC-O—a compound that does not occur naturally in the cannabis plant—is a Schedule I controlled substance because it "can only be obtained synthetically, and therefore [does] not fall under the definition of hemp."⁷⁴ The opinion letter did not explicitly address the agency's prior position in the 2021 opinion letter that a THC compound is synthetically derived if it comes from non-cannabis materials.⁷⁵ The 2023 letter focused on whether or not the cannabinoid naturally occurs in cannabis, rather than whether or not the cannabinoid was derived from cannabis materials.⁷⁶

⁶⁷ *Id.*

⁶⁸ *Id.* The now-overturned *Chevron* doctrine required courts to defer to reasonable agency interpretations of statutes if the statute is ambiguous. See *Loper Bright Enterprises v. Raimondo*, 603 U.S. 369 (2024). The Ninth Circuit did not consider whether DEA's interpretation of the statute was reasonable because the court determined that the statute was unambiguous. *AK Futures*, 35 F.4th at 692. After *Loper Bright*, a court is not required to defer to reasonable agency interpretations of ambiguous statutes; instead, a court must interpret a statute to find its "best" reading, applying the traditional tools of statutory interpretation. *Loper Bright*, 603 U.S. at 23. For more information on the overruling of the *Chevron* doctrine, see CRS Legal Sidebar LSB11189, *Supreme Court Overrules Chevron Framework*, by Benjamin M. Barczewski (2024).

⁶⁹ *AK Futures LLC*, 35 F.4th at 692 (quoting Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639, 51641 (Aug. 21, 2020)).

⁷⁰ *Id.*

⁷¹ *Id.*

⁷² *Id.* at 693.

⁷³ DEA, Opinion Letter to Kight Law Office PC (Feb. 13, 2023), <https://cannabusiness.law/wp-content/uploads/DEA-THCO-response-to-Kight.pdf>.

⁷⁴ *Id.*

⁷⁵ See DEA, Opinion Letter to Alabama Board of Pharmacy (Sept. 15, 2021), <https://albop.com/oodoardu/2021/10/ALBOP-synthetic-delta8-THC-21-7520-signed.pdf>; DEA, Opinion Letter to Kight Law Office PC (Feb. 13, 2023), <https://cannabusiness.law/wp-content/uploads/DEA-THCO-response-to-Kight.pdf>.

⁷⁶ *Id.*

The Fourth Circuit's Decision in *Anderson v. Diamondback Investment Group*

On September 4, 2024, the Fourth Circuit issued an opinion in *Anderson v. Diamondback Investment Group* that appears to contradict DEA's 2023 opinion letter on THC-O by determining that products containing THC-O were hemp.⁷⁷

In *Anderson*, the defendant employer fired the plaintiff from her job for failing two drug tests.⁷⁸ The plaintiff claimed, among other things, that her firing violated a North Carolina law that prohibited an employer from terminating an employee for engaging "in the lawful use of lawful products."⁷⁹ The Fourth Circuit considered whether the products that the plaintiff consumed—which included CBD oil, delta-8 THC, delta-10 THC, and THC-O—were legally hemp, and therefore not subject to the CSA, under the 2018 farm bill.⁸⁰ The plaintiff argued the products that she used were legally hemp because they contained cannabinoids that naturally occurred in cannabis, including the products containing THC-O.⁸¹ The defendant argued that at least one of the products the plaintiff admitted to consuming, THC-O, is an illegal synthetic cannabinoid that did not qualify as hemp.⁸² The defendant relied on the DEA interim final rule that states "all synthetically derived [THCs] remain[ed] Schedule I controlled substances"⁸³ and on the agency's 2023 opinion letter that concluded THC-O was a Schedule I controlled substance because it did "not naturally occur in the cannabis plant and can only be obtained synthetically."⁸⁴

The Fourth Circuit rejected the defendant's argument and instead agreed with the Ninth Circuit in *AK Futures* that the 2018 farm bill definition unambiguously establishes that "hemp" includes "all" cannabinoids, and derivatives and extracts of cannabis, so long as they do not cross the 0.3% delta-9 THC threshold.⁸⁵ According to the court, whether a substance is considered hemp does not depend on how it was manufactured but rather whether it comes from cannabis.⁸⁶ The court also noted that, in light of the U.S. Supreme Court's decision in *Loper Bright v. Raimondo* overturning the *Chevron* doctrine, the court would not need to defer to DEA's interpretation even if the court had determined that the statutory definition was ambiguous.⁸⁷ According to the Fourth Circuit, a

⁷⁷ See *Anderson*, 117 F.4th at 188.

⁷⁸ *Id.* at 169–70.

⁷⁹ *Id.* (quoting N.C. GEN. STAT. § 95-28.2(b) (2024)).

⁸⁰ *Id.* at 182–88. The court also mentions that plaintiff consumed products containing hexahydrocannabinol, which is another cannabinoid. *Id.* at 185.

⁸¹ Reply Brief of Appellant Tonya Anderson at 11, *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024) (No. 23-1400), ECF No. 18. THC-O is made "by taking CBD [a cannabinoid naturally occurring in cannabis] and converting it to Delta-8 or Delta-9," then adding an "acetate." *Anderson*, 117 F.4th at 185 n.11 (citing Anna Kaufman, *What Is THC-O? Similar to Delta-8, It's Making Waves in the Cannabis Market*, USA TODAY, <https://www.usatoday.com/story/news/health/2023/06/02/what-is-thco/70252031007/> (last updated June 6, 2023, 9:18 AM) (explaining that THC-O derives from hemp, though in a roundabout sort of way: it is manufactured "by taking CBD and converting it to [d]elta-8 or [d]elta-9," then adding an "acetate" to those cannabinoids)).

⁸² Response Brief of Defendant-Appellee Diamondback Investment Group, LLC at 33–34, *Anderson v. Diamondback Invest. Grp. LLC*, 117 F.4th 165, 188 (4th Cir. 2024) (No. 23-1400), ECF No. 17.

⁸³ *Id.* at 33 (citing Implementation of the Agriculture Improvement Act of 2018, 85 Fed. Reg. 51639, 51641 (Aug. 21, 2020)).

⁸⁴ *Id.* (citing DEA, Opinion Letter to Kight Law Office PC (Feb. 13, 2023)).

⁸⁵ *Anderson*, 117 F.4th at 187–88 (citing *AK Futures*, 35 F.4th at 692).

⁸⁶ *Id.*

⁸⁷ *Id.* (citing *Loper Bright*, 603 U.S. at 393). In *Loper Bright*, the U.S. Supreme Court overruled the *Chevron* doctrine, which required courts to defer to an agency's reasonable interpretation of an ambiguous statute administered by the agency. *Loper Bright Enters.*, 603 U.S. at 412.

product containing THC-O that was derived from cannabis is hemp under the 2018 farm bill's definition so long as it does not contain more than 0.3% delta-9 THC.⁸⁸ Synthetic cannabinoids, the court opined, were "compounds manufactured entirely out of synthetic materials."⁸⁹

Legal Challenges to State Laws Restricting Certain THC Products

Since the enactment of the 2018 farm bill, more than 20 states have enacted or are debating legislation to stringently regulate cannabis products with a total THC concentration of more than 0.3%.⁹⁰ Some of these laws—such as those in Virginia and Arkansas—prohibit certain activities involving certain cannabis products by including them in their state controlled substances laws.⁹¹ Various parties within the cannabis industry have challenged some of these states' laws on the ground that (1) the 2018 farm bill preempts these laws and (2) the state laws violate the Dormant Commerce Clause.⁹² The Fourth Circuit addressed a challenge to Virginia's law, and the Eighth Circuit addressed a challenge to Arkansas's law.⁹³

Legal Background

Federal and State Status of Cannabis

Under federal law, cannabis is categorized into hemp and marijuana. Unless an exception applies, cannabis and its derivatives are considered marijuana, which, as discussed above, is a Schedule I controlled substance under the CSA.⁹⁴ One exception is hemp, which is defined by the 2018 farm bill as any part of the cannabis plant or its derivatives containing no more than 0.3% delta-9

⁸⁸ *Id.*

⁸⁹ *Id.* at 188. Despite ruling that a product containing THC-O is not necessarily illegal, the court granted summary judgment to the employer because the plaintiff did not offer any evidence about the delta-9 THC concentrations of the products that she used. *Id.* This lack of evidence left the court unable to determine conclusively whether the products that the plaintiff used were hemp, and thus lawful, under the 2018 farm bill's definition. *Id.*

⁹⁰ See Demko, *supra* note 6; Molly Ashford, *As More States Move to Restrict Intoxicating Hemp, People in the Industry Worry for Its Future*, NPR (June 10, 2025), <https://www.kcur.org/news/2025-06-10/states-restrict-intoxicating-hemp-industry-future>.

⁹¹ See VA. CODE ANN. § 3.2-4112 (2023) ("‘Hemp product’ means a product . . . that . . . when offered for retail sale . . . contains a total tetrahydrocannabinol concentration of no greater than 0.3 percent . . ."); *id.* § 4.1-600 (2023) (defining marijuana for purposes of the Cannabis Control Act as any part of the cannabis plant, including hemp products as defined in § 3.2-4112, subject to certain exceptions); *id.* § 4.1-1116 (2023) (criminalizing the advertising of marijuana); *id.* § 4.1-1108 (2021) (criminalizing the consumption of marijuana in any public place); *id.* § 4.1-1100 (2023) (criminalizing the possession of more than one ounce of marijuana); *id.* § 18.2-248.1 (2020) (criminalizing the sale of marijuana); ARK. CODE ANN. § 5-64-215(a)(5)(A)(i) (2023) (including on Schedule VI "[a] product derived from industrial hemp that was produced as a result of a synthetic chemical process that converted the industrial hemp or a substance contained in the industrial hemp into delta-8, delta-9, delta-6a,10a, or delta-10 tetrahydrocannabinol including their respective acetate esters; and [] any other psychoactive substance derived therein"); *id.* § 5-64-419(b)(5) (2021) (criminalizing the possession of Schedule VI controlled substances); see also Katharine Neill Harris, Victoria Jupp & Lisa Pittman, *Mapping Hemp Products' Legal Status Across US States*, BAKER INSTITUTE (Dec. 6, 2024), <https://www.bakerinstitute.org/research/mapping-hemp-products-legal-status-across-us-states>.

⁹² See *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472, 492, 496 (4th Cir. 2025); *Bio Gen LLC v. Sanders*, — F.4th —, 2025 WL 1740322, *3–5 (8th Cir. June 24, 2024).

⁹³ *N. Va. Hemp & Ag. LLC*, 125 F.4th at 483; *Bio Gen LLC*, 2025 WL 1740322, *1–2. Two district court decisions in cases challenging legislation from New Jersey and Wyoming are currently on appeal before other federal appellate courts. See *Loki Brands LLC*, 2024 WL 4457485 at *3–4; *Green Room LLC*, 2024 WL 3817820 at *1–2.

⁹⁴ 21 U.S.C. §§ 801–904.

THC.⁹⁵ THC is separately classified as a Schedule I controlled substance, unless an exception applies.⁹⁶ Similar to the statutory definition of marijuana, DEA regulations exclude *hemp* from the classification of THC as a Schedule I controlled substance, based on the 2018 farm bill exemption.⁹⁷ Schedule I controlled substances are subject to the most stringent federal substance controls, and prohibited acts associated with the substances may give rise to severe criminal penalties.⁹⁸ Substances not regulated under the CSA may still be subject to other federal regulatory schemes, such as the Federal Food, Drug, and Cosmetic Act.⁹⁹

In addition to the federal CSA, each state has its own controlled substance laws.¹⁰⁰ State substance control laws often roughly mirror federal law, and such laws are relatively uniform across states, because many states have adopted versions of a model statute called the Uniform Controlled Substances Act.¹⁰¹ Through state controlled substance laws, states have sometimes opted to impose state laws that are either more or less strict than those of the CSA.¹⁰² Relevant here, some states have amended their controlled substance laws to prohibit certain products that may be considered hemp under federal law.¹⁰³

Preemption

Federal preemption is the doctrine that federal law supersedes certain conflicting state laws.¹⁰⁴ The Constitution's Supremacy Clause, which provides that federal law is "the supreme Law of the Land," is the basis for this doctrine.¹⁰⁵ A principle that guides courts' preemption analysis is the intent of Congress, which is "the ultimate touchstone" of preemption analysis.¹⁰⁶ The Supreme Court has at times also used a canon of construction called "the presumption against

⁹⁵ 7 U.S.C. § 1639o(1); 21 U.S.C. § 802(16).

⁹⁶ 21 C.F.R. § 1308.11(d)(31) (2025).

⁹⁷ *Id.*

⁹⁸ *See* 21 U.S.C. § 841.

⁹⁹ *See* 7 U.S.C. § 1639r(c) ("Nothing in this subchapter shall affect or modify . . . the Federal Food, Drug, and Cosmetic Act[.]").

¹⁰⁰ *See* CRS Legal Sidebar LSB10482, *State Marijuana "Legalization" and Federal Drug Law: A Brief Overview for Congress*, by Joanna R. Lampe (2024).

¹⁰¹ *Controlled Substances Act*, UNIFORM LAW COMMISSION, <https://www.uniformlaws.org/committees/community-home?CommunityKey=9873a9bf-7335-4be7-855d-b17c9e8ff3dd> (last visited Jan. 6, 2025).

¹⁰² *See* LAMPE, *supra* at note 100.

¹⁰³ *See* VA. CODE ANN. § 3.2-4112 (2023) ("‘Hemp product’ means a product . . . that . . . when offered for retail sale . . . contains a total tetrahydrocannabinol concentration of no greater than 0.3 percent . . ."); *id.* § 4.1-600 (2023) (defining marijuana for purposes of the Cannabis Control Act as any part of the cannabis plant, including hemp products as defined in § 3.2-4112, subject to certain exceptions); *id.* § 4.1-1116 (2023) (criminalizing the advertising of marijuana); *id.* § 4.1-1108 (2021) (criminalizing the consumption of marijuana in any public place); *id.* § 4.1-1100 (2023) (criminalizing the possession of more than one ounce of marijuana); *id.* § 18.2-248.1 (2020) (criminalizing the sale of marijuana); *see also* ARK. CODE ANN. § 5-64-215(a)(5)(A)(i) (2023) (including on Schedule VI "[a] product derived from industrial hemp that was produced as a result of a synthetic chemical process that converted the industrial hemp or a substance contained in the industrial hemp into delta-8, delta-9, delta-6a,10a, or delta-10 tetrahydrocannabinol including their respective acetate esters; and [] any other psychoactive substance derived therein"); *id.* § 5-64-419(b)(5) (2021) (criminalizing the possession of Schedule VI controlled substances).

¹⁰⁴ For more information on the federal preemption doctrine, *see* CRS Report R45825, *Federal Preemption: A Legal Primer*, by Bryan L. Adkins, Alexander H. Pepper, and Jay B. Sykes (2023).

¹⁰⁵ U.S. CONST. art. VI, cl. 2; *see also* ArtVI.C2.3.4 *Modern Doctrine on Supremacy Clause*, CONSTITUTION ANNOTATED, https://constitution.congress.gov/browse/essay/artVI-C2-3-4/ALDE_00013402/ (last visited Jan. 10, 2025).

¹⁰⁶ ArtVI.C2.3.4 *Modern Doctrine on Supremacy Clause*, CONSTITUTION ANNOTATED, https://constitution.congress.gov/browse/essay/artVI-C2-3-4/ALDE_00013402/ (last visited Jan. 10, 2025).

preemption,” which instructs that federal law should not be read to preempt laws involving the states’ historic police powers¹⁰⁷ unless that was clearly intended by Congress.¹⁰⁸

Federal law can preempt state law through two types of preemption: express and implied. Express preemption applies when a federal provision expressly states that it intends to prohibit certain state regulation.¹⁰⁹ Federal law impliedly preempts state law when the intent to preempt is implicit in the federal law’s structure and purpose.¹¹⁰ Conflict and field preemption are the two types of implied preemption. Conflict preemption is a doctrine under which federal law takes precedence over conflicting state laws.¹¹¹ Such a conflict exists when it is impossible to comply with both state and federal law, or where the state law stands as an obstacle to the accomplishment of the full purposes of Congress.¹¹² Field preemption occurs when a pervasive scheme of federal regulation demonstrates that Congress has a desire to occupy the entire field of regulation.¹¹³

The 2018 farm bill contains two provisions relevant to state regulation of products legally considered hemp under the 2018 farm bill. The first provision expressly preempts states from regulating “the transportation or shipment of hemp or hemp products . . . through the State.”¹¹⁴ The second clause is a savings clause that limits federal preemption—allowing states to be more (but not less) stringent than the 2018 farm bill. That second provision states that “[n]othing [in the 2018 farm bill] preempts or limits any law of a State . . . that . . . regulates the production of hemp; and . . . is more stringent than [the 2018 farm bill].”¹¹⁵

Dormant Commerce Clause

The Constitution’s Commerce Clause empowers Congress to pass federal laws “to regulate Commerce . . . among the several States.”¹¹⁶ The Supreme Court has interpreted this clause to prohibit state laws that unduly restrict interstate commerce.¹¹⁷ This doctrine, sometimes called the Dormant Commerce Clause, “prevents the States from adopting protectionist measures and thus preserves a national market for goods and services.”¹¹⁸ The Supreme Court has identified two primary principles that limit a state’s authority to regulate interstate commerce: (1) state laws may

¹⁰⁷ The Supreme Court uses the term “police power” to refer to the states’ general power of governing, such as regulating to promote public health, safety, and welfare. *See, e.g., Nat’l Fed’n of Indep. Bus. v. Sebelius*, 567 U.S. 519, 536 (2012) (“Our cases refer to this general power of governing, possessed by the States but not by the Federal Government, as the ‘police power.’” (quoting *United States v. Morrison*, 529 U.S. 598, 618–19 (2000))).

¹⁰⁸ *Id.* In a 2016 decision, the Supreme Court declined to apply the presumption against preemption in a case dealing with express preemption, signaling that the doctrine applies only in implied preemption cases. *See Puerto Rico v. Franklin Cal. Tax-Free Tr.*, 579 U.S. 115, 125 (2016).

¹⁰⁹ *See Altria Grp., Inc. v. Good*, 555 U.S. 70, 76 (2008).

¹¹⁰ *See Gade v. Nat’l Solid Wastes Mgmt. Ass’n*, 505 U.S. 88, 98 (1992).

¹¹¹ *Id.* at 108.

¹¹² *Arizona v. United States*, 567 U.S. 387, 399 (2012).

¹¹³ *Id.* at 401 (“Where Congress occupies an entire field, as it has in the field of alien registration, even complementary state regulation is impermissible.”).

¹¹⁴ 7 U.S.C. § 1639o note.

¹¹⁵ *Id.* § 1639p(a)(3)(A).

¹¹⁶ U.S. CONST. art. I, § 8, cl. 3; *see also ArtI.S8.C3.7.1 Overview of Dormant Commerce Clause*, CONSTITUTION ANNOTATED, https://constitution.congress.gov/browse/essay/artI-S8-C3-7-1/ALDE_00013307/ (last visited Dec. 2, 2024).

¹¹⁷ *ArtI.S8.C3.7.1 Overview of Dormant Commerce Clause*, CONSTITUTION ANNOTATED, https://constitution.congress.gov/browse/essay/artI-S8-C3-7-1/ALDE_00013307/ (last visited Dec. 2, 2024).

¹¹⁸ *Tenn. Wine & Spirits Retailers Ass’n v. Thomas*, 588 U.S. 504, 514 (2019).

not discriminate against interstate commerce, and (2) states may not impose undue burdens on interstate commerce.¹¹⁹ State laws that discriminate against out-of-state goods or nonresident economic actors can be sustained only if they are “narrowly tailored to ‘advanc[e] a legitimate local purpose.’”¹²⁰ On the other hand, state laws that “regulat[e] even-handedly to effectuate a legitimate local public interest” are generally upheld unless the burden on interstate commerce “is clearly excessive in relation to the putative local benefits.”¹²¹

Virginia

In 2023, the Commonwealth of Virginia enacted SB 903 to address the sale of hemp products with total THC concentrations that exceed 0.3%.¹²² SB 903 amended its statutory definition of a “hemp product” to include a 0.3% limitation on the “total tetrahydrocannabinol concentration.”¹²³ After this amendment, products containing more than 0.3% total THC were considered marijuana rather than hemp, thus subjecting the recreational advertising, public consumption, and possession over a certain amount of such products to potential criminal penalties.¹²⁴ For example, after the passage of SB 903, advertising, public consumption, or possession over a certain amount of a product with 0.1% delta-9 THC and 0.4% delta-8 THC would be a criminal offense under Virginia law.¹²⁵ SB 903 also prohibited those registered to process hemp¹²⁶ from selling hemp if they knew or had reason to know that the buyer will use the hemp in a substance that contains a total THC concentration exceeding 0.3%.¹²⁷

Hemp retailers and a hemp consumer filed suit against Virginia state officials, requesting a preliminary injunction that would prevent the state from enforcing SB 903 during the litigation.¹²⁸ The plaintiffs argued that they were likely to succeed on the merits of their claims that SB 903 violated the Dormant Commerce Clause and was expressly preempted by the 2018 farm bill.¹²⁹

¹¹⁹ *South Dakota v. Wayfair, Inc.*, 585 U.S. 162, 173 (2018).

¹²⁰ *Tenn. Wine & Spirits Retailers Ass’n*, 588 U.S. at 518 (quoting *Dep’t of Revenue of Ky. v. Davis*, 553 U.S. 328, 338 (2008)).

¹²¹ *Wayfair*, 585 U.S. at 173 (quoting *Pike v. Bruce Church, Inc.*, 397 U.S. 137, 142 (1970)).

¹²² S.B. 903, 2023 Gen. Assemb., Reg. Sess. (Va. 2023).

¹²³ VA. CODE ANN. § 3.2-4112 (2023) (“‘Hemp product’ means a product . . . that . . . when offered for retail sale . . . contains a total tetrahydrocannabinol concentration of no greater than 0.3 percent . . .”).

¹²⁴ *Id.* § 4.1-600 (2023) (defining marijuana for purposes of the Cannabis Control Act as any part of the cannabis plant, excluding hemp products as defined in § 3.2-4112, subject to certain exceptions); *id.* § 4.1-1116 (2023) (criminalizing the advertising of marijuana); *id.* § 4.1-1108 (2021) (criminalizing the consumption of marijuana in any public place); *id.* § 4.1-1100 (2023) (criminalizing the possession of more than one ounce of marijuana); *id.* § 18.2-248.1 (2020) (criminalizing the sale of marijuana). On the other hand, Virginia has legalized medical marijuana. *See id.* § 4.1-1601 (2024).

¹²⁵ *Id.* § 4.1-600 (2023) (defining marijuana for purposes of the Cannabis Control Act as any part of the cannabis plant, excluding hemp products as defined in § 3.2-4112, subject to certain exceptions); *id.* § 4.1-1116 (2023) (criminalizing the advertising of marijuana); *id.* § 4.1-1108 (2021) (criminalizing the consumption of marijuana in any public place); *id.* § 4.1-1100 (2023) (criminalizing the possession of more than one ounce of marijuana); *id.* § 18.2-248.1 (2020) (criminalizing the sale of marijuana).

¹²⁶ Under Virginia law, a person who is not federally licensed to process hemp must obtain a state registration before growing, handling, or processing hemp in Virginia. *See* VA. CODE ANN. § 3.2-4116(A) (2023).

¹²⁷ *Id.* § 3.2-4116(C) (2023).

¹²⁸ *N. Va. Hemp & Ag. LLC v. Virginia*, 700 F. Supp. 3d 407, 416 (E.D. Va. 2023), *aff’d in part, vacated in part*, 125 F.4th 472 (4th Cir. 2025).

¹²⁹ *Id.*

The district court denied the motion for preliminary injunction.¹³⁰ The plaintiffs appealed this decision to the Fourth Circuit.¹³¹

On appeal, the plaintiffs argued that the 2018 farm bill expressly preempts SB 903 because Virginia's law impeded interstate commerce in products that are federally considered hemp and because the 2018 farm bill prevented states from prohibiting the transportation or shipment of hemp or hemp products.¹³² The defendants responded by arguing that the 2018 farm bill preempted only state laws that prohibited the transportation or shipment of hemp or hemp products through the state and not their sale or possession.¹³³ As evidence that the express preemption provision should be interpreted narrowly, the defendants pointed to the 2018 farm bill's savings clause, which expressly permitted states to regulate the production of hemp more stringently than federal regulation.¹³⁴ The plaintiffs in turn argued that the district court erred in relying on this savings clause because it allowed states to impose "more stringent" regulations pertaining to "the production of hemp" and did not apply to the sale or possession of hemp.¹³⁵

The Fourth Circuit affirmed the district court's determination that the plaintiffs did not show a likelihood of success on the merits on their express preemption claim.¹³⁶ The court reasoned that the 2018 farm bill did not say anything about states' ability to regulate hemp within their borders.¹³⁷ To the contrary, it authorized states to impose "more stringent" regulations on hemp production.¹³⁸ The court reasoned that even though the provision allowing "more stringent regulation" explicitly mentions the production of hemp and not its possession or sale, "silence cannot constitute express preemption."¹³⁹

The plaintiffs also appealed the district court's Dormant Commerce Clause determination.¹⁴⁰ They challenged the portion of SB 903 that prohibited those registered to process hemp from selling it if they know or have reason to know that the buyer will use the hemp in a substance that contains a total THC concentration exceeding 0.3%.¹⁴¹ According to the plaintiffs, this sales restriction prevented Virginia hemp processors from selling their raw, federally compliant product to out-of-state buyers "since no other state has that standard."¹⁴² They contended that the restriction discriminated against out-of-state buyers because it would effectively forbid out-of-state buyers

¹³⁰ *Id.* at 412–13.

¹³¹ Notice of Appeal, *N. Va. Hemp & Ag. LLC v. Virginia*, 700 F. Supp. 3d 407 (E.D. Va. 2023) (No. 1:23-CV-01177), ECF No. 74.

¹³² Opening Brief of Appellants at 17, *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472 (4th Cir. 2025) (No. 23-2192), ECF No. 16–17 (citing 7 U.S.C. § 1639o note).

¹³³ Response Brief of Appellees at 31–36, *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472 (4th Cir. 2025) (No. 23-2192), ECF No. 24.

¹³⁴ *Id.* at 35 ("The Farm Act's savings clause provides that it does not 'preempt[] or limit[] any law of a State' that 'regulates the production of hemp' and is 'more stringent' than federal law." (quoting 7 U.S.C. § 1639p(a)(3)(A)). *See* 7 U.S.C. § 1639p(a)(3)(A) ("Nothing in this subsection preempts or limits any law of a State or Indian tribe that— (i) regulates the production of hemp; and (ii) is more stringent than this subchapter.").

¹³⁵ Opening Brief of Appellants at 18–20, *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472 (4th Cir. 2025) (No. 23-2192), ECF No. 17.

¹³⁶ *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472, 494 (4th Cir. 2025).

¹³⁷ *Id.*

¹³⁸ *Id.* (quoting 7 U.S.C. § 1639p(a)(3)(A)).

¹³⁹ *Id.*

¹⁴⁰ *Id.* at 496–97.

¹⁴¹ Opening Brief of Appellants at 28, *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472 (4th Cir. 2025) (No. 23-2192), ECF No. 17.

¹⁴² *Id.*

from accessing Virginia hemp and did not withstand heightened scrutiny.¹⁴³ The defendants responded that SB 903 is not discriminatory since it applied to all hemp regardless of whether it came from within the state or outside the state.¹⁴⁴ The defendants argued that SB 903 was not intended to benefit in-state economic interests and that any effect on interstate commerce was merely incidental and thus permissible.¹⁴⁵

The Fourth Circuit held that SB 903 does not discriminate against out-of-state interests because it applied to in-state and out-of-state buyers alike.¹⁴⁶ The court further held that the law does not unjustifiably burden interstate commerce, and therefore it affirmed the district court's determination that the plaintiffs failed to establish a likelihood of success on their Dormant Commerce Clause claim.¹⁴⁷ The court affirmed the lower court's denial of a preliminary injunction because the plaintiffs did not show they were likely to succeed on the merits of their challenge to SB 903.¹⁴⁸ Because this was a decision on a motion for a preliminary injunction, the case was remanded to the district court for further proceedings on the merits.¹⁴⁹

Arkansas

In 2023, the State of Arkansas enacted Act 629, a law that criminalized the growth, sale, transfer, or possession of certain products made from "industrial hemp."¹⁵⁰ Specifically, the state law criminalized those activities for any product that was "derived from industrial hemp that was produced as a result of a synthetic chemical process that converted the industrial hemp or a substance contained in the industrial hemp into delta-8 [THC], delta-9 [THC], delta-6a,10a [THC], or delta-10 [THC]" as well as "[a]ny other psychoactive substance derived therein."¹⁵¹ Act 629 criminalized the recreational use of these products by adding them to Arkansas's list of Schedule VI controlled substances under its controlled substances law, which roughly mirrors the CSA.¹⁵²

Hemp growers and retailers filed a lawsuit seeking a declaration that the Arkansas law did not prevent them from growing and selling their products and an injunction stopping Arkansas officials from enforcing the law against them.¹⁵³ The plaintiffs also sought a preliminary

¹⁴³ *Id.* at 30.

¹⁴⁴ Response Brief of Appellees at 53–55, *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F.4th 472 (4th Cir. 2025) (No. 23-2192), ECF No. 24.

¹⁴⁵ *Id.*

¹⁴⁶ *N. Va. Hemp & Ag. LLC v. Virginia*, 125 F. 4th 472, 496 (4th Cir. 2025).

¹⁴⁷ *Id.* at 497–98.

¹⁴⁸ *Id.* The Fourth Circuit reversed the district court's order partially denying a motion to dismiss on the ground that the plaintiffs lacked standing to challenge SB 903's restriction on Virginia processors selling of hemp to someone who will use it to exceed the total THC standard because none of the plaintiffs were licensed Virginia processors. *Id.* at 488–91.

¹⁴⁹ Preliminary Injunction, *Black's Law Dictionary* (12th ed. 2024).

¹⁵⁰ 2023 Ark. Acts 629 (S.B. 358). The terms *industrial hemp* and *hemp* are sometimes used interchangeably. See CRS Report R44742, *Defining Hemp: A Fact Sheet*, by Renée Johnson (2019).

¹⁵¹ ARK. CODE ANN. § 5-64-215(a)(5)(A)(i)–(j) (2023). Delta-6a10a is a mildly psychoactive cannabinoid that is present in the cannabis plant in trace amounts. See Nina Julia, *What Is Delta-6a10a THC?*, THE CENTER FOR ADVANCING HEALTH (Nov. 3, 2023), <https://cfah.org/delta-6a10a-thc/>; see also ARK. CODE ANN. § 5-64-419(b)(5) (2021) (criminalizing possession of a Schedule VI controlled substance).

¹⁵² See ARK. CODE ANN. § 5-64-215(a)(1)–(2). Marijuana and THC are also separately scheduled as Schedule VI controlled substances. *Id.* Arkansas amended its constitution to legalize medical marijuana under state law. See ARK. CONST. OF 1874, Amend. 98 § 3 (2016).

¹⁵³ *Bio Gen LLC v. Sanders*, 690 F. Supp. 3d 927, 933–34. (E.D. Ark. 2023) *rev'd in part, vacated in part*, No. 23-3237, 2025 WL 1740322 (8th Cir. 2025).

injunction, which would preclude the Arkansas officials from enforcing Act 629 while the lawsuit is pending.¹⁵⁴ In support of the motion for preliminary injunction, the hemp industry plaintiffs argued that they were likely to succeed on the merits of their claims that the 2018 farm bill preempted Act 629 and that Act 629 violated the Due Process Clause.¹⁵⁵ The district court determined that the preliminary injunction was warranted.¹⁵⁶

The Arkansas officials appealed the district court's order granting the preliminary injunction to the U.S. Court of Appeals for the Eighth Circuit.¹⁵⁷ They argued that the 2018 farm bill expressly preempts only laws that prohibit the transportation or shipment of hemp or hemp products through the state and that Act 629 does not run afoul of this provision because it includes an exception allowing "the continuous transportation through Arkansas" of hemp.¹⁵⁸ The hemp industry plaintiffs countered that the provision is not an effective exception for interstate commerce because "continuous transportation" is an undefined term that likely would not include temporary stops by a transporter within Arkansas, for example, for gas or overnight lodging.¹⁵⁹ The Eighth Circuit concluded that the 2018 farm bill does not preempt Act 629 because the term "continuous exception" has been interpreted by federal caselaw such that "a 'temporary pause' does not remove a shipment from continuous interstate commerce: as long as there is a 'practical continuity of movement.'"¹⁶⁰ The court predicted that the Arkansas Supreme Court would adopt this interpretation and therefore concluded that the "continuous transportation" provision allows for hemp to be transported in interstate commerce.¹⁶¹

The court also considered whether the plaintiffs were likely to succeed on their claim that the 2018 farm bill impliedly preempted Act 629 by standing "as an obstacle to the accomplishment and execution of the full purposes and objectives of Congress."¹⁶² The hemp industry plaintiffs argued that Congress intended to "federally protect hemp" and to mandate its nationwide legality, which intent is thwarted by Act 629's criminalization of the possession of certain cannabis products that are considered hemp by the 2018 farm bill.¹⁶³ The Eighth Circuit rejected this argument, determining instead that the text and structure of the 2018 farm bill shows that Congress wanted only to "facilitate state legalization of hemp, if a state wants to," and to "ensure other states do not become a hurdle to an in-state hemp industry (if the state chooses to legalize hemp)."¹⁶⁴ The court explained: "[J]ust because states may legalize hemp under the 2018 Farm Bill does not mean they must."¹⁶⁵

The Eighth Circuit likewise disagreed with the district court's conclusion that the hemp industry plaintiffs were likely to succeed on the merits of their claim that Act 629 violated the Due Process

¹⁵⁴ *Id.* at 932.

¹⁵⁵ Memorandum in Support of Motion for Preliminary Injunction at 15–17, 21–22, *Bio Gen LLC v. Sanders*, 690 F. Supp. 3d 927 (E.D. Ark. 2023) (4:23-CV-00718), ECF No. 3.

¹⁵⁶ *Bio Gen LLC*, 690 F. Supp. 3d at 941.

¹⁵⁷ *Bio Gen LLC v. Sanders*, No. 23-3237, 2025 WL 1740322, at *1 (8th Cir. June 24, 2024).

¹⁵⁸ Opening Brief of Appellants at 34-36, *Bio Gen LLC v. Sanders*, No. 23-3237, 2025 WL 1740322 (8th Cir. June 24, 2024) (citing 7 U.S.C. § 1639o note); ARK. CODE ANN. § 5-64-215(d).

¹⁵⁹ Appellee's Brief at 47-49, *Bio Gen LLC v. Sanders*, No. 23-3237, 2025 WL 1740322, at *42–44 (8th Cir. June 24, 2024).

¹⁶⁰ *Bio Gen LLC*, 2025 WL 1740322, at *4 (quoting *Walling v. Jacksonville Paper Co.*, 317 U.S. 564 (1943)).

¹⁶¹ *Id.*

¹⁶² *Id.* (quoting *Arizona v. United States*, 567 U.S. 387, 399 (2012)).

¹⁶³ Appellee's Brief at 47-49, *Bio Gen LLC v. Sanders*, No. 23-3237, 2025 WL 1740322, at *27–34 (8th Cir. June 24, 2024).

¹⁶⁴ *Bio Gen LLC*, 2025 WL 1740322, at *5.

¹⁶⁵ *Id.*

Clause of the Constitution because the terms “continuous transportation,” “synthetic substance,” and “psychoactive substance” as used in the Act were vague.¹⁶⁶ A law may violate the Due Process Clause if it either forbids or requires an act “in terms so vague that men of common intelligence must necessarily guess at its meaning.”¹⁶⁷ These kinds of laws fail to give “adequate guidance” regarding what conduct would violate the law to those who would be law-abiding or fail to provide clear standards that invite “arbitrary enforcement.”¹⁶⁸ The appellate panel determined that these provisions were not vague because “continuous transportation” is well-defined in federal law,¹⁶⁹ and “synthetic substance” is defined by an exhaustive list in the Arkansas Code.¹⁷⁰ The panel also determined that “psychoactive substances” is not so vague as to render Act 629 unconstitutional because “its proximity to ‘synthetic substance’ gives it sufficient meaning.”¹⁷¹

Because the Eighth Circuit disagreed that the plaintiffs were likely to succeed on the merits of their claims, it vacated the preliminary injunction and remanded the case for further proceedings to resolve the merits of the plaintiffs’ claims.¹⁷²

Considerations for Congress

In light of the uncertainty and disagreement over the 2018 farm bill’s *hemp* definition and the rise of certain THC products, Congress may consider whether to revise its definition as to which cannabinoid products are excluded from the definition of marijuana under the CSA. Congress has previously considered amending this definition. For example, the House FY2026 Agriculture Appropriations Draft Bill includes a provision that would redefine *hemp* to include the cannabis plant and all derivatives with a total THC concentration of not more than 0.3%.¹⁷³ A similar change was previously proposed in a version of the farm bill¹⁷⁴ introduced in the Senate during the 118th Congress (S. 5335).¹⁷⁵ An amendment to a House version of the farm bill¹⁷⁶ also suggested this change.¹⁷⁷ Such an amendment would consider all THC for the purposes of legally

¹⁶⁶ *Id.* at *5–6.

¹⁶⁷ *Id.* (quoting *Connally v. Gen. Const. Co.*, 269 U.S. 385, 391 (1926)).

¹⁶⁸ *Amdt5.8.1 Overview of Void for Vagueness Doctrine*, CONSTITUTION ANNOTATED, https://constitution.congress.gov/browse/essay/amdt5-8-1/ALDE_00013739/ (last visited Feb. 12, 2025).

¹⁶⁹ *Bio Gen LLC*, 2025 WL 1740322 at *4.

¹⁷⁰ *Id.* at *5–6 (citing ARK. CODE ANN. § 5-64-215(a)(5)).

¹⁷¹ *Id.* (citing *Cir. City Stores v. Adams*, 532 U.S. 105, 138 (2001) (“Like those other courts, this Court sees the sequence as an occasion to apply the interpretive maxim of *ejusdem generis*, that is, when specific terms are followed by a general one, the latter is meant to cover only examples of the same sort as the preceding specifics.”)).

¹⁷² *Id.* at *7; see *Preliminary Injunction*, Black’s Law Dictionary (12th ed. 2024).

¹⁷³ H.R. __ § 759, 119th Cong. (Draft June 4, 2025), <https://docs.house.gov/meetings/AP/AP01/20250605/118353/BILLS-119-SC-AP-FY2026-Agriculture-FY26AgricultureSubcommittee.pdf#page=113>.

¹⁷⁴ The farm bill is an omnibus, multiyear law that has typically been renewed about every five years since the 1930s. See CRS In Focus IF12047, *Farm Bill Primer: Background and Status*, by Jim Monke and Renée Johnson (2024). Congress wrote the 2018 farm bill to cover five years through FY2023 and the 2023 crop year. See *The Agriculture Improvement Act of 2018*, Pub. L. No. 115-334, 132 Stat. 4490 (2018). In November 2023, Congress enacted a one-year extension to cover through the end of 2024. See *Further Continuing Appropriations and Other Extensions Act*, Pub. L. No. 118-22, 137 Stat. 112 (2024). In December 2024, Congress enacted another one-year extension. See *American Relief Act*, Pub. L. No. 118-158, 38 Stat. 1722 (2025).

¹⁷⁵ *Rural Prosperity and Food Security Act of 2024*, S. 5335, 118th Cong. § 10016(1)(A) (2024).

¹⁷⁶ See *Farm, Food, and National Security Act of 2024*, H.R. 8467, 118th Cong. (2024).

¹⁷⁷ AMENDMENT TO H.R. 8467 OFFERED BY MRS. MILLER OF ILLINOIS (May 22, 2024), <https://docs.house.gov/meetings/AG/AG00/20240523/117371/BILLS-118-HR8467-M001211-Amdt-35.pdf>.

determining what is *hemp* and what is *marijuana*. This change would bring certain THC products back under the CSA and DEA regulation that are currently considered to be hemp or are in an uncertain area of regulation.

Congress could also consider other amendments to the *hemp* definition. For example, it could adopt DEA's interpretation that "synthetically derived" THC remains a Schedule I controlled substance. Using the term "synthetically derived" may raise new questions as to what Congress means by synthetic, unless it were clearly defined. How it would be defined would affect which products would be regulated by the CSA. Congress could also allow agency and judicial interpretations to play out without congressional intervention.

In light of different judicial interpretations of the scope of the 2018 farm bill's preemption clause, Congress could also consider amending the express preemption provision to clarify which state laws are preempted. Legal challenges to a New Jersey law and a Wyoming law that restricts certain THC products are pending in the U.S. Circuit Courts of Appeals for the Third Circuit and Tenth Circuit, respectively.¹⁷⁸ Clarification of the scope of the 2018 farm bill's preemption clause may affect the outcome of these lawsuits and may affect a state's ability to regulate certain THC products. To the extent Congress seeks to allow states to ban certain hemp products entirely, Congress could clarify that states may regulate the possession, use, or sale of hemp more stringently than the farm bill does; currently, the savings clause provision refers only to the production of hemp.¹⁷⁹ To the extent Congress would prefer to limit the states' power to ban these substances, Congress could clarify the laws it seeks to preempt.

Congress may also consider marijuana's status under the CSA, which would affect how cannabinoid products that are not deemed to be hemp would be regulated.¹⁸⁰ Either Congress or the executive branch has the authority to change the status of marijuana.¹⁸¹ Congress can change the status of a controlled substance through legislation, while the CSA empowers DEA to make scheduling decisions through the notice-and-comment rulemaking process.¹⁸² DEA is currently considering whether to reschedule marijuana from Schedule I to Schedule III via formal rulemaking.¹⁸³ Legislation was introduced in the 118th Congress that would have removed marijuana from regulation under the CSA.¹⁸⁴

¹⁷⁸ Notice of Appeal at 1–2, *Loki Brands, LLC v. Platkin*, No. 24-9389 (D.N.J. Oct. 10, 2024), ECF No. 21; Notice of Appeal, *Green Room LLC v. Wyoming*, No. 24-CV-128 (D. Wyo. July 19, 2024), ECF No. 34; see also Amended Notice of Appeal, *Green Room LLC v. Wyoming*, No. 24-CV-128 (D. Wyo. July 19, 2024), ECF No. 41.

¹⁷⁹ 7 U.S.C. § 1639p(a)(3)(A) ("Nothing . . . preempts or limits any law of a State . . . that . . . regulates the production of hemp; and . . . is more stringent than [the 2018 farm bill].").

¹⁸⁰ For more information on the legislative scheduling of controlled substances, see CRS In Focus IF12709, *Legislative Scheduling of Controlled Substances*, by Joanna R. Lampe (2024).

¹⁸¹ CRS Legal Sidebar LSB11105, *Legal Consequences of Rescheduling Marijuana*, by Joanna R. Lampe (2024).

¹⁸² *Id.* (citing 21 U.S.C. § 811(a)).

¹⁸³ Schedules of Controlled Substances: Rescheduling of Marijuana, 89 Fed. Reg. 44597, 44597 (May 21, 2024) (notice of proposed rulemaking).

¹⁸⁴ States Reform Act of 2023, H.R. 6028, 118th Cong. (2023).

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