Appendix G

Letter PM 104 Attachment -
Los Angeles Times Article

Los Angeles Times, by Paige St. John, Dec. 19, 2024

California's cannabis supply chain: Hidden pesticides and no public monitoring

- Half of vapes tested contained 'hidden' pesticides that regulators don't monitor.
- Cannabis growers report use of prohibited substances to the state with little consequence.
- Cannabis brands promise to clean up, but many are not warning consumers of what they're leaving on the shelf to sell out.

For Santa Cruz County cannabis farmers battling infestations of aphids, one chemical in particular worked wonders. Those in the know were effusive in their praise of pymetrozine to save their high-dollar weed crops from the destructive, sap-sucking bugs.

A strong formulation of the pesticide worked "very, very well on aphids and root aphids, which were massive issues," said Scott Eaton, cultivation manager for a farm that reported applying the pesticide 76 times from 2021 to 2022 after learning about it from other growers in the farming valley.

"We were all communicating with each other about how great it was," he said.

There was one major problem.

The use of pymetrozine on cannabis is illegal in California.

Treating cannabis crops with prohibited chemicals such as pymetrozine has become so casual that The Times found farms including these applications in their monthly pesticide use reports to the state. There is no evidence that state regulators or county agriculture departments routinely take note or act on these reports.

The overlooked practice is among a number of faults in California's farm-to-dispensary cannabis supply chain, with troubling consequences for the state's $5-billion legal cannabis market and serious health risks to its consumers.

More than half of cannabis smoking products in California's legal market contain chemicals for which there is no public safety monitoring, a Times analysis of hundreds of product tests and industry surveys suggest.

The cannabis supply chain that underpins these products is so convoluted, and the data collected by the state so unreliable, that it is nearly impossible to pinpoint the origins of contamination.

And there is no systematic procedure, such as with tainted lettuce or ground beef, to identify the scope and severity of contamination and limit public harm.

"If California can't get this right, it would be a tremendous tragedy," a Trinity County cannabis consultant, John Brower, complained this fall to the advisory board that guides the state Department of Cannabis Control. "This thing got handed to

the state regulators on a silver platter ... and now we find ourselves in a spot where very few consumers have a good reason to choose a regulated market [product]."

Regulators minimized the extent of contamination in the supply chain, saying they believe the majority of legal products meet state standards.

"The spotlight on this issue ultimately reinforces why a regulated marketplace is essential," the Department of Cannabis Control said in a prepared statement. "What we're seeing is not unique to cannabis, or to California, but part of the maturation process of a newly regulated sector."

The agency refused interview requests.

The creation of a legal cannabis market was sold to California voters as a way to protect public health. But by design, California lawmakers limited the role of the state's Department of Pesticide Regulation, which has well-established programs for tracking and dealing with pesticides in agriculture. Responsibility for regulating pesticides in cannabis instead went to a startup agency, the Department of Cannabis Control. Six years after legalization, the agency says it is pledged to safeguard the public, but is still setting up a lab fully capable of testing for those compounds, and creating enforcement mechanisms.

The perceived regulatory void has driven private sector solutions, ranging from voluntary safety tests that far exceed state standards, to a controversial campaign to track down, and report, contaminated products. There is divided opinion on whether consumers will reward, or punish, such revelations.

"With the consumer of cannabis, it doesn't matter if they care or not," said grower Raw Garden's chief executive, Thomas Martin, who provided the backing for sweeping tests of vapes on store shelves in the spring and summer this year, which led to more than a dozen state product recalls.

"We have a responsibility to deliver clean."

The Times investigation included the largest analysis of its kind of pesticides in cannabis smoking products. It drew from tests conducted independently for The Times and others that came from a private market survey.

More than 370 legal cannabis products from 86 brands bought from state-licensed stores were tested for pesticides, along with products from tobacco shops and unlicensed stores. The analysis checked for more than 290 pesticides beyond the 66 chemicals already included in California's mandatory screening requirement for cannabis products, a state list that has remained unchanged since guidelines were created in 2017.

These tests identified the presence of 45 pesticides California does not track in cannabis. All but one are illegal to use on the plant. The tests also found the presence of lab-created cannabis oils prohibited in the legal market, and potentially dangerous chemicals used to dilute products.

Hidden chemicals in cannabis

Independent lab tests found 79 toxic chemicals in California cannabis products, including 44 that state regulators don't monitor. Those below are listed in order of the greatest concentration found, with the degree to which they exceed state limits or the federal threshold used to evaluate tobacco pesticides, and the known health effects.

List of dangerous chemical toxins and their effects.

Table with 3 columns and 76 rows. Currently displaying rows 1 to 5.

Pesticide	Peak	About and effects
Chlorfenapyr	2,060.60	**Insecticide** not permitted on any food products; no amount is allowed in California cannabis. **Exposure symptoms include** nausea, vomiting, headache, difficulty breathing, wheezing, chest tightness and short-term

Table with 3 columns and 76 rows. Currently displaying rows 1 to 5.

Pesticide	Peak	About and effects
		memory loss; combustion (pyrolysis) releases hydrogen cyanide and other toxic gases. In rats, it concentrated in breast milk, causing increased death of offspring.
Pymetrozine	839.40	**Insecticide** prohibited in the European Union, Canada and Norway and only for restricted use in the United States on food crops. **It is a reproductive toxin and carcinogen** and in rat studies caused damage to endocrine organs. ⚠ **Not screened for in California cannabis.**
Trifloxystrobin	488.40	**Fungicide** used on agricultural crops and as a seed treatment. Endocrine disruptor and developmental toxin. **Exposure symptoms include** headache, dizziness, nausea, vomiting and irritated eyes. Pyrolysis creates hydrogen cyanide. Rat studies showed fused bones.
2-Phenylphenol	268.00	**Disinfectant** and permitted fungicide on pears and citrus. **It is a carcinogen** and might also affect the body's natural hormones. ⚠ **Not screened for in California cannabis.**
Bifenazate	237.00	Restricted-use **miticide** used on a large variety of crops. **Questionable developmental and reproductive toxin and endocrine disruptor.**

For pesticides prohibited upon detection, a base limit of 30 parts per billion was used to calculate exceedances. For pesticides for which California has set no limit, the U.S. evaluation criterion for tobacco pesticides was used.

Times reporting; California Department of Pesticide Regulation; Russo, E.B. Current Therapeutic Cannabis Controversies and Clinical Trial Design Issues, 2016; Paul, K.C. and others in Nature, 2023; U.S. Environmental Protection Agency; European Commission records

The contamination is so widespread there is evidence of insufficient clean-grown weed to supply the state's $1-billion cannabis vape market. One brand said it was having difficulty sourcing pesticide-free cannabis concentrates. One of the state's largest oil manufacturers, Sisu Extracts said it found 60% of the cannabis crops it bought to make distillate contained pesticides not on California's screening list. It could provide clean oil to only select customers willing to pay a higher price.

These additional prohibited chemicals include insecticides such as pymetrozine, a carcinogen banned in Europe and approved in the United States for a limited number of crops, and a germicide, ortho-phenylphenol, once present in Lysol and today primarily used to disinfect hospitals and dog kennels. They include eight pesticides that federal regulators say pose a risk to people or the environment and that can be bought by licensed applicators only.

By far the most frequent was pymetrozine, appearing in 31% of samples and at levels higher than any other pesticide.

According to emails obtained by The Times under a public records act request, California's cannabis regulators by 2019 had already heard growers were using the contraband insecticide.

"I don't know if this pesticide has been deemed safe for use on cannabis and is not talked about — or if pymetrozine is indeed the 'dirty secret' of the California cannabis industry," a Central Coast farm manager wrote to regulators that November. He said two Humboldt County farms were using the prohibited pesticide and he suspected there were others.

The email chain shows that the report was shared among state agencies responsible for protecting the public from pesticides on cannabis, but that no action was taken.

Toxicologists in the state pesticide department that year had attempted to launch a cannabis surveillance program. Meeting notes show department staff met with a Monterey County analytical lab to discuss testing cannabis seized by law enforcement for 330 pesticides — akin to the scrutiny given to food. The intent was twofold: provide the public a reason to steer clear of the illicit market, and warn regulators what pesticides might show up in the legal market.

Such broad monitoring is critical, "or the whole supply chain suffers," said Keith Bisogno, the analytics business consultant who took part in the talks. Without surveillance, health threats can catch regulators off guard, he said. For instance, "no one was looking for melamine in baby formula ... and then it showed up in baby formula from China."

State records show the surveillance program was scuttled, staff told to "halt such activity until further guidance could be provided." The state agency did not respond to a request for information on who halted the project and why. Budget documents show taxpayers since 2020 have paid $3.5 million a year for cannabis pesticide enforcement that was supposed to include residue testing.

Toxicologists within the pesticide department subsequently proposed small changes in the levels allowed for pesticides on California's 66-pesticide cannabis screening list — proposals repeatedly ignored by cannabis regulators.

They would make no suggestion to add pymetrozine or any other pesticide to the testing list.

The U.S. Environmental Protection Agency controls how pesticides may be used, determining the crops that chemicals can be used on, and the maximum residues safe for human consumption. Because cannabis is not legal under federal law, there are no pesticides approved to use on the crop. And it is a felony to use a pesticide in violation of its EPA-approved label.

California therefore confines cannabis growers to fighting insects and molds with natural predators, bacterial controls, natural oils or products deemed so harmless they have no federal residue limits.

Most of the 66 chemicals on California's cannabis screening list, however, are not legal to use on the crop. There is little research on the safety of these pesticides when burned and inhaled. To set residue limits, state toxicologists have turned to the only other commonly smoked plant: tobacco.

California toxicologists adopted European tobacco standards where those existed, and for the rest applied the EPA's trigger for requiring further data when evaluating pesticides for use on tobacco crops.

How to deal with contaminants illegal to use on cannabis, but for which there are no state residue limits, is a point of contention in the industry.

"It's not for me to find out which of the 17,000 pesticides a farmer is using, because I'm not a chemist," said Mark Unterbach, CEO of Procan Labs, the oil-manufacturing sister company to Stiiizy, the state's top-selling vape brand. "You count on the state to regulate this."

In the Times analysis, pymetrozine was present in 13 out of 14 vaping products by Stiiizy in the greatest concentration of any products tested and analyzed.

Stiiizy executives said that because California does not require testing for pymetrozine, and has set no residue limit for the pesticide, the company is not in violation of state regulation. Nevertheless, the company has joined other brands in now testing for pesticides not on California's screening list. Those companies said they seek to reduce contaminants in future products even in the absence of new state regulation.

Visitors check out products at the Stiiizy booth at the Hall of Flowers event at the Ventura County Fairgrounds. (Genaro Molina / Los Angeles Times)

Some brands said they would leave existing stocks of contaminated products on store shelves.

To pull them from sale "would bankrupt every single cannabis company," said the owner of one major brand, speaking on condition he not be named.

His decision?

"We're gonna sell through."

After a Times investigation in June showed California's reliance on private labs had failed to keep contaminated cannabis products off store shelves, regulators told lawmakers they had multiple fixes in the works. Among those promises was a program to track down the sources of contamination. The Department of Cannabis Control in a written statement said it conducts source investigations on all recalled products — but was still developing a way to trace pesticides back to the farms they came from.

Contract records show the state's seed-to-sale cannabis tracking system, operated by vendor METRC, was intended to enable just such investigations. But a Times review of scores of previously undisclosed supply chain records shows that when it comes to vaping products, METRC's computer trails can reveal very little as well as contain erroneous information about products.

METRC was set up to collect data down to the detail of every plant on every licensed cannabis farm, and from there, its journey to market and sale. But the majority of vapes contain distillate, the cannabis equivalent to hot dog filler. It is a flavorless oil extracted from otherwise unusable plant trimmings, moldy material and poor quality flower collected from farms across the state. Those homogenized oils are further blended, in some cases to dilute known pesticides.

A METRC tag on a cannabis plant at a cannabis farm in Garberville. (Brian van der Brug / Los Angeles Times)

The METRC data, for example, showed the insecticide methoxyfenozide lurking in a Raspberry Parfait-flavored BBrand vape could have come from plants grown over a period of four years on any of 986 farms, collected in more than 72,000 "harvests."

Also according to METRC records, some products that tested clean were made from the very same plants as products heavily laden with pesticides.

A Calaveras County cannabis grower said it was impossible that her farm was, as METRC stated, the sole source of cannabis for a Kind Republic vape containing 10 pesticides and recently recalled by the state.

"I know not to spray all this stuff because you know, you can't sell it," said Enendina Venegas, owner of Steel Wheel Farms.

The Department of Cannabis Control disputed the notion that METRC data is unreliable. "The rate of these inaccuracies does not compromise the integrity" of the system, it said.

Meanwhile, the state fails to make use of readily available data from the farms on probable sources of cannabis contamination.

California requires those using controlled pesticides to file monthly use reports, which go both to the state and to county agriculture commissioners.

The Department of Pesticide Regulation screens millions of those reports annually, assisted by a software program that flags cases where a pesticide is used on an unapproved crop. Error reports are sent to county agriculture commissioners for investigation.

California Department of Cannabis Control inspectors Eric LeBlanc and Laura Powell look over METRC logs and manifests at a Garberville farm. (Brian van der Brug / Los Angeles Times)

The Times found farms in nine counties had filed hundreds of reports detailing the use of prohibited pesticides on cannabis, without triggering alerts from the state or drawing the notice of local agriculture officials.

Although Santa Cruz County farm inspection records fail to note the use of pymetrozine on Eaton's farm, he said he stopped using it after a local agriculture official told him it was prohibited. State records show other cannabis growers nearby continued to use the chemical as recently as this summer.

State pesticide regulators did alert Monterey County to a cannabis grower using 2,4-D — a compound in the Vietnam War-era herbicide Agent Orange — to highlight a potential misplaced decimal point in the quantity of the chemical being used 23 years after the expiration of its product registration. No mention was made that the product is illegal to use on cannabis.

State pesticide regulators said they modified the software to ignore pesticides used on cannabis, and relied on human reviewers to catch abuses. As a partial solution, they released a list of 101 registered products that are allowed.

There needs to be better information sharing and delegation of responsibility between state agencies responsible for protecting the public from pesticides in cannabis, and the county agriculture officials who inspect most farms, said Andrew Smith, Sonoma County's agriculture commissioner and a member of the state cannabis advisory board.

"We can't investigate what we don't know," Smith said.

Department of Cannabis Control director Nicole Elliot declined requests to be interviewed. In September at an advisory board meeting she emphasized her agency's "commitment to data-driven science-based policy making." At the same time, she acknowledged that change can be slow, and urged patience "in times when sensationalized narratives may dominate headlines..."

"The benefits of our work at times unfold gradually but the positive long-term outcomes will be undeniable," she said.

Since The Times' report in June, the Department of Cannabis Control has ordered 266 products off store shelves over suspected pesticide contamination. Nearly all are the subject of whistleblower complaints from 2023 or tied to a Los Angeles manufacturer identified by The Times as the source of multiple contaminated products.

Some of those products were already illegal to sell, such as Phat Panda vapes recalled more than 200 days after their expiration date. Asked what public health benefit comes from belatedly recalling products that would have been on shelves for more than a year, the agency said it believed items remained in the supply chain. It did not provide information on how it reached that conclusion.

were found to contain pesticides and synthetic cannabis oil, both posing health risks.

New regulations to revise the cannabis pesticide testing list were promised in January but have yet to be adopted. A draft proposal in November by the Department of Pesticide Regulation would add 10 chemicals to the screening, and in response to lobbying from mosquito control districts, pull two chemicals from the list.

Those recommendations would mean California consumers would still have no protection from 38 pesticides found in testing for The Times, as well as many illegal Chinese pesticides currently showing up on cultivation sites.

The proposed list also did not include a germicide discovered after a Los Angeles-area cannabis industry worker fell ill and sent the prerolls he was smoking to a testing lab used by the newspaper. That case underscores the difficulty in both identifying contamination sources and in linking health symptoms to those products.

The worker, who asked to not be named because of concerns with harassment in the industry, said he suffered a burning throat and watering eyes, followed for days by severe nausea. Fearing he suffered something more than a bout of flu, he sent his prerolls to Anresco Laboratories, in San Francisco.

Zach Eisenberg, vice president of the analytical lab, said the products contained 26.8 ppm of ortho-phenylphenol, a level so unusually high for any pesticide that he called it "disgusting."

It is impossible to know whether the chemical caused the worker's symptoms.

Ortho-phenylphenol, or OPP for short, is a carcinogen and can cause kidney damage. Historically it was used in agriculture as a corrosive soap to keep mold off stored citrus, but fell out of favor a decade ago. The chemical today is primarily used as a disinfectant in hospitals, dog kennels and the like. It is not approved for use on cannabis.

The brand carrying this disinfectant was Maven. The Times found OPP present in multiple Maven products it sent to two labs — including the rolling papers used on some of those pre-rolls — as well as in the joints sold by other brands.

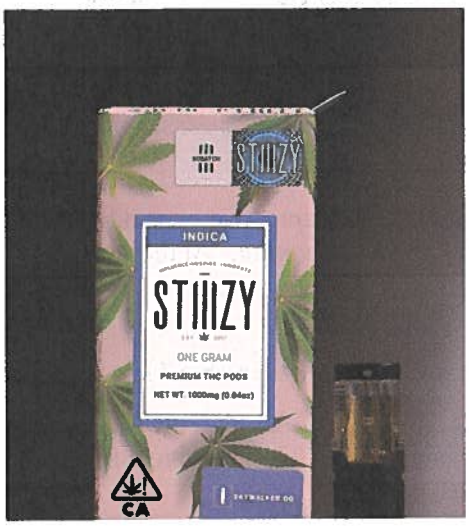
When Maven executives in September were told of the test results, they promised to investigate and share their findings.

Chief Operating Officer Mike Corvington in an email referenced "some surprising areas where we may have identified the need for changes in our post-harvest materials."

After that, Corvington ceased to respond to inquiries. A lawyer for Maven sent a brief statement asserting the products complied with California's regulations for testing for 66 listed pesticides.

The Times shared its recent pesticide findings with 26 brands, from the state's biggest sellers to small store brands. Most executives said they would seek cleaner distillate for future products. A few said they would pull tainted products from stores, but not publicize that action.

All were worried about public disclosure of contaminants that regulators had never warned them to watch for.



Vapes by Stiiizy contained the highest levels of pymetrozine, a carcinogenic pesticide whose screening is not required by California regulators. (Dania Maxwell / Los Angeles Times)

"The regulated market is extremely fragile," said Ron Gershoni, CEO of Jetty Extracts. "I worry that discrediting the regulated market will push consumers to the black market, where products are objectively less safe for consumers."

In the long wait for state action, factions within the industry are attempting self-regulation.

San Diego-based Infinite Chemical Analysis Labs, which alongside Anresco provided testing services to The Times, raced to expand the number of pesticides it can test for. Cultivator and vape manufacturer Raw Garden and the March and Ash retail store chain sought extensive pesticide testing studies on hundreds of vape products made by the state's top brands. Those results were provided both to the newspaper and to state regulators.

Meanwhile, Catalyst retail chain owner Elliot Lewis built a promotional campaign around setting higher testing standards. A small industry consortium in early December launched a nonprofit to take up the task of crafting pesticide standards for more than 200 chemicals.

The Environmental & Consumer Compliance Organization, or ECCO, offers to certify cannabis goods that undergo expanded testing. Brands awarded the ECCO label also would be subject to spot tests of their products pulled from stores.

Trent Overholt, president of cannabis oil manufacturer Noble Pacific and an organizing member of ECCO, said it will probably take time to catch on with consumers.

"If all this becomes is a prompt for the [Department of Cannabis Control] to go in and just do some smart pragmatic reform, so that the legal channel means clean again, then great," Overholt said. "It's worth the trouble."

Though going beyond the testing limits of regulators, ECCO's standards would still permit pesticides at levels higher than others are comfortable with.

An Oakland-area delivery service switched oil suppliers when its owner learned of low levels of pesticides in the company's house vapes.

"I don't know enough about this, to risk anybody's safety by putting something out there that even has ... a small amount of a pesticide," said Three Trees President Sean Smith.

"I don't want to be that person."

Marijuana Moment 2.24.25 Ben Adlin

Traffic Safety Official Emphasizes Need For Roadside Marijuana Testing At Congressional Transportation Hearing

The issue of marijuana-impaired driving arose again at congressional hearing last week, with a representative of the Governors Highway Safety Association emphasizing the importance of roadside drug testing as a tool to help combat deadly car crashes. "I think the first and foremost thing that is going to assist us in preventing those tragedies from taking place is oral fluid roadside testing," said Michael Hanson, who's also director of traffic safety at the Minnesota Department of Public Safety.

Hanson was responding to a question from House Transportation & Infrastructure Subcommittee on Highways and Transit member Rep. Rob Bresnahan (R-PA), who had asked how to address concerns around impaired driving. "With states getting out in front of federal legislation relating to marijuana specifically," he said, "do you have any recommendations or ideas or technologies that we can start to implement that would detect a more instantaneous level of impairment?"

In response, Hanson pointed to saliva testing as an example of "instruments and technology" that law enforcement officers could deploy in the field "to detect recent use of a cannabis product that is a strong indicator that that person may be impaired." "Putting those tools in the hands of law enforcement to prevent that from happening—or allow them to process somebody who may be impaired—is going to be important," he told lawmakers at the February 12 hearing. Written testimony from Catherine Chase, president of Advocates for Highway and Auto Safety, also pointed to measures such as "extending zero tolerance for under age 21 and open container laws to include marijuana use and its products"—laws already on the books in most states with legal cannabis.

With more than three quarters of all U.S. states having legalized marijuana for either medical or adult use, and in light of the possibility of federal rescheduling of the drug, concerns about highway safety loom large before policymakers. Though there's no widely agreed-upon way to test impairment by drivers at a roadside stop, efforts to develop and deploy field tests that screen for recent use have become more urgent in recent years.

The National Institute of Standards and Technology (NIST), for instance, is planning to convene government officials, forensics experts, academics, industry representatives, law enforcement and standards organizations in April for what it describes as "an open and candid discussion" about "the path forward to realize meaningful cannabis breathalyzer technology and implementation."

Topics to be discussed will include challenges facing marijuana breathalyzer design and development, obstacles to prosecutors handling drugged-driving cases and how NIST and others might partner to advance the technology. Impaired driving is of particular concern to the trucking industry, which has raised worries that rescheduling marijuana could complicate zero-tolerance drug policies.

Bresnahan at a separate congressional hearing last month asked Cargo Transporters Inc. CEO Dennis Dellinger, who was testifying on behalf of the American Trucking Associations (ATA), whether there was "anything specifically that Congress can do, or advocate for, to detect that immediate level of impairment with the half-lives of marijuana remaining inside of systems."

Dellinger replied that he thinks "there's a misconception out there, [with] marijuana or cannabis being legal, that people can operate vehicles under the influence, and that is a problem." "We do not have a test that tells us if you are under the influence or not, so we have to rely on the current urine test or the hair test, which tests back [beyond active impairment]," he said. "And I guess the struggle we have in our industry is we can't compromise the system we have until there is a workable solution for a test to know whether you are actually under the influence at the time." "I think, in our company, if we had an accident at any degree, and we had post-accident tests and we tested positive, we would struggle defending anything in that accident," Dellinger continued. "And the retribution we would get for that from the public, from the media, would be astonishing. So our position is that, right now, we have to accept the testing that we have."

In 2023, the U.S. Department of Transportation (DOT) finalized a rule permitting another alternative option to screening urine samples: saliva-based testing. Depending on frequency of use, THC is generally detectable in saliva anywhere from one to 24 hours after use, according to the agency. While saliva or blood tests can detect recent marijuana use better than urine or hair samples, however, there's another wrinkle: According to recent comments by a U.S. Department of Justice (DOJ) researcher, it's unclear whether a person's THC levels are even a reliable indicator of impairment.

On a podcast last year, Frances Scott, a physical scientist at the National Institute of Justice (NIJ) Office of Investigative and Forensic Sciences under DOJ, questioned the efficacy of setting "per se" THC limits for driving. Ultimately, she said, there may not be a way to assess impairment from THC levels, as law enforcement does for alcohol. One complication is that "if you have chronic users versus infrequent users, they have very different concentrations correlated to different effects," Scott said. "So the same effect level, if you will, will be correlated with a very different concentration of THC in the blood of a chronic user versus an infrequent user."

Last October, a study preprint posted on The Lancet by an eight-author team representing Canada's Centre for Addiction and Mental Health, Health Canada and Thomas Jefferson University in Philadelphia identified and assessed a dozen peer-reviewed studies measuring "the strength of the linear relationship between driving outcomes and blood THC" published through September 2023. "The consensus is that there is no linear relationship of blood THC to driving," the paper concluded. "This is surprising given that blood THC is used to detect cannabis-impaired driving."

Most states where cannabis is legal measure THC intoxication by whether or not someone's blood THC levels are below a certain cutoff. The study's findings suggest that relying on blood levels alone may not accurately reflect whether someone's driving is impaired. "Of the 12 papers included in the present review," authors wrote, "ten found no correlation between blood THC and any measure of driving, including [standard deviation of lateral position (SDLP)], speed, car following, reaction time, or overall driving performance. The two papers that did find a significant association were from the same study and found significant relationship with blood THC and SDLP, speed and following distance."

The issue was also examined in a federally funded study last year that identified two different methods of more accurately testing for recent THC use that accounts for the fact that metabolites of the cannabinoid can stay present in a person's system for weeks or months after consumption.

A 2023 congressional report for a Transportation, Housing and Urban Development, and Related Agencies (THUD) bill said that the House Appropriations Committee "continues to support the development of an objective standard to measure marijuana impairment and a related field sobriety test to ensure highway safety."

A year earlier Sen. John Hickenlooper (D) of Colorado sent a letter to the Department of Transportation (DOT) seeking an update on that status of a federal report into research barriers that are inhibiting the development of a standardized test for marijuana impairment on the roads. The department was required to complete the report under a large-scale infrastructure bill that President Joe Biden signed, but it missed its reporting deadline.

Meanwhile, National Transportation Safety Board (NTSB) last year warned that marijuana rescheduling could create a "blind spot" with respect to drug testing of federally regulated workers in safety-sensitive positions—despite assurances from then-U.S. Transportation Secretary Pete Buttigieg that the cannabis rescheduling proposal "would not alter" the federal drug testing requirements. At a House committee hearing, Buttigieg had referenced concerns from ATA "about the broad public health and safety consequences of reclassification on the national highway system and its users," which the trucking association voiced in a letter to the secretary.

As more states legalize marijuana, a federal report published last year showed that the number of positive drug tests among commercial drivers fell in 2023 compared to the year before, dropping from 57,597 in 2022 to 54,464 in the prior year. At the same time, however, the number of drivers who refused to be screened at all also increased by 39 percent.Another question found that 65.4 percent of motor carriers believed current marijuana testing procedures should be replaced with methods that measure active impairment.

At the time, the report from the American Transportation Research Institute (ATRI) noted a 65,000-driver deficit in the country and said the fear of positives over marijuana metabolites—which can remain in a person's blood far long after active impairment—may be keeping would-be drivers out of the industry.

The record-high number of refusals came as the transportation industry faces a nationwide shortage of drivers, which some trade groups have said has only been made worse by drug testing policies that risk flagging drivers even when they're not impaired on the job. Current federal law mandates that commercial drivers abstain from cannabis, subjecting them to various forms of drug screening, from pre-employment to randomized testing.

In June 2022, meanwhile, an ATRI survey of licensed U.S. truck drivers found that 72.4 percent supported "loosening" cannabis laws and testing policies. Another 66.5 percent said that marijuana should be federally legalized.
Cannabis reform advocates, meanwhile, have also called on federal officials to change what they call "discriminatory" drug testing practices around the trucking industry.

A top Wells Fargo analyst said in 2022 that there's one main reason for rising costs and worker shortages in the transportation sector: federal marijuana criminalization and resulting drug testing mandates that persist even as more states enact legalization. Then-Rep. Earl Blumenauer (D-OR) sent a letter to the head of DOT in 2022, emphasizing that the agency's policies on drug testing truckers and other commercial drivers for marijuana are unnecessarily costing people their jobs and contributing to supply chain issues.

The 2022 ATRI report noted that research into the impact of cannabis use on driving and highway safety is currently mixed, complicating rulemaking to address the issue. A separate 2019 report from the Congressional Research Service (CRS) similarly found that evidence about cannabis's ability to impair driving is inconclusive.
A study published in 2019 concluded that those who drive at the legal THC limit—which is typically between two to five nanograms of THC per milliliter of blood—were not statistically more likely to be involved in an accident compared to people who haven't used marijuana.

Separately, the Congressional Research Service in 2019 determined that while "marijuana consumption can affect a person's response times and motor performance … studies of the impact of marijuana consumption on a driver's risk of

being involved in a crash have produced conflicting results, with some studies finding little or no increased risk of a crash from marijuana usage."

Another study from 2022 found that smoking CBD-rich marijuana had "no significant impact" on driving ability, despite the fact that all study participants exceeded the per se limit for THC in their blood. Evan as far back as 2015, a U.S. National Highway Traffic Safety Administration (NHTSA) concluded that it's "difficult to establish a relationship between a person's THC blood or plasma concentration and performance impairing effects," adding that "it is inadvisable to try and predict effects based on blood THC concentrations alone."

In a separate report last year, NHTSA said there's "relatively little research" backing the idea that THC concentration in the blood can be used to determine impairment, again calling into question laws in several states that set "per se" limits for cannabinoid metabolites. "Several states have determined legal per se definitions of cannabis impairment, but relatively little research supports their relationship to crash risk," that report said. "Unlike the research consensus that establishes a clear correlation between [blood alcohol content] and crash risk, drug concentration in blood does not correlate to driving impairment."