

Marijuana Ordinance Q&A

Compassion Centers & Conversion Licenses

What is a compassion center?

Delaware's [Medical Marijuana Act](#) created the state's [Medical Marijuana Program](#), which has been operated by the Office of Medical Marijuana within Delaware Health and Social Services (DHSS) Division of Public Health. Under State code, municipalities may regulate but may not prohibit compassion centers from operating within their jurisdiction.

Title 16 § 4902A of the Delaware Code defines a *Registered Compassion Center* as a “not-for-profit entity registered pursuant to §4914A of this title that acquires, possesses, cultivates, manufactures, delivers, transfers, transports, sells, supplies, or dispenses marijuana, paraphernalia, or related supplies and educational materials to registered qualifying patients who have designated the dispenser to cultivate marijuana for their medical use and the registered designated caregivers of these patients.”

[The Delaware Marijuana Control Act](#) created a new recreational marijuana program to be operated by the [Office of the Marijuana Commissioner](#) within the Department of Safety and Homeland Security (DSHS).

[House Bill 425](#) became effective in July 2024. This bill moves the Office of Medical Marijuana from DHSS to the Office of the Marijuana Commissioner within DSHS.

There are currently [12 open compassion centers](#) in the state of Delaware, one of which is located within the City of Dover on Jefferic Boulevard. Some compassion centers, such as Best Buds, operate as dispensaries that simply sell medical marijuana products to medical cardholders. Others grow, manufacture, and sell medical marijuana.

What is a conversion license?

[House Bill 408](#) became effective July 2024. This bill creates a conversion license for existing medical marijuana compassion centers to operate for recreational marijuana purposes. The Office of the Marijuana Commissioner plans to begin the conversion license process in early August and have all businesses converted before October 31st of this year. Converted companies will be able to expand growing and manufacturing operations once the license is awarded, though no adult use sales will occur prior to April of 2025, which is when the recreational marijuana retail establishments will open.

Will conversion license holders retain not-for-profit status?

No. According to Delaware State Code, a Compassion Center must have not-for-profit status. When medical companies convert to dual use, retaining not-for-profit status will no longer be a requirement, though license holders will be required to certify that they will continue to support medical patients. With conversion, the recreational marijuana retail stores will also sell medical marijuana to medical cardholders.

What will happen to compassion centers?

The Office of the Marijuana Commissioner expects the demand for medical marijuana compassion centers to decline as recreational marijuana retail stores open. As such, they expect all medical locations to request conversion licenses. If an existing compassion center is issued a conversion license by the state, but local code does not allow a

recreational marijuana business to operate at the existing location, the business would have to relocate to utilize the conversion license.

It is expected that medical marijuana cardholders will utilize recreational retailers. The advantage of having a medical card is that these patients will not have to pay the tax levied on recreational marijuana, and those who are not eligible to purchase recreational marijuana would still have access (i.e. a person under 21 years of age with medical need).

Water and Energy Consumption

How much water and energy does a marijuana cultivation facility utilize?

Water Use

Local Examples

After reaching out to existing operations in Delaware, which include both cultivation and manufacturing activities, we learned that water use varies significantly depending on the cultivation method used. On the lower end, there is a facility of about 10,000 SF that uses an amount of water comparable to 5-6 houses. There is another facility of approximately 100,000 SF whose peak use was 75,000 gallons of water in a month.

Additional Research

Studies have found that cannabis requires significantly more water than other crops such as wheat, corn, soybeans. A commonly referenced statistic on water usage within cannabis grow operations comes from a 2021 study from the Journal of Cannabis Research, which found that on average, one cannabis plant needs 6 gallons of water per day (**Source:** [How much water does it take to grow cannabis? | Cannabis | Tucson Weekly](#))

[The Cannabis Control Commission for the Commonwealth of Massachusetts](#) provides information on Best Management Practices for Water Usage. They note that water usage may differ between indoor marijuana cultivation facilities depending on the plant cultivation method used. Additionally, water recycling systems may be used to clean and filter used water back into irrigation, reducing the amount of freshwater input into the system. That said, medical marijuana studies estimate that a 250 SF grow room would generally require 98 inches of water per year, or 40 gallons of water per day.

Dover Water System Analysis

The City of Dover Water and Wastewater Department completed an analysis to determine the sufficiency of the water system to support marijuana cultivation in the IPM, M and A zones. Based upon the modeling, the system could support the water demand associated with a 100,000-square-foot cultivation facility in most areas where the current draft ordinance proposes allowing cultivation facilities. In some areas, an increase in the size of the water main might be required to meet fire flow requirements. City staff ran the model using water demand at 108 Thousand gallons (Tgal) per day and also at 75 Tgal per month. The higher number is based on industry research, and the lower number is based on the actual water demand for a cultivation and manufacturing facility in Delaware. The modeling identified several areas where the required fire flow could not be supported even with a water main upgrade. Language could be added to the draft ordinance that specifies that off-site upgrades, including water main replacement to support demand, would be the responsibility of the applicant.

For revenue projection, using the conservative estimate of the 75 Tgal per month demand for the Delaware example, the water revenue would be approximately \$275 per month or \$3,300 annually.

Electric Consumption

Local Example

After reaching out to existing operations in Delaware, which include both cultivation and manufacturing activities, we learned that water use varies depending on the cultivation method used. There is a facility of about 10,000 SF whose demand for electricity is roughly equal to 30 houses in the area. There is also a warehouse of approximately 100,000 SF whose monthly electric use peaked at 536,000 kWh in a month.

Newark: To address the variability in water and energy use, Newark ensured that their code allows them to deny plans if they would exceed the capacity of existing utility infrastructure, with the option for the developer to pay for necessary upgrades to move the project forward.

National Examples

Oregon: Within the state, cannabis cultivators are generally required to forecast their energy needs before beginning operation and must also submit annual energy use reports.

Oak Creek, Colorado: This is a small town of about 1,000 people with public power. They have a one block industrial area, which now houses a number of cannabis businesses including four grow operations. Their town administrator said that the business brought a 26% increase in load, leading to \$800,000 in revenues in 2016. They were projecting \$1 million in revenues the following year but invested \$460,000 in electric system upgrades. Upgrades were supported, in part, by annual licensing fees as well as plant investment fees collected from cannabis businesses.

Boulder, Colorado: Requires commercial growers to pay \$2.16 per kilowatt hour or use renewable energy systems to reduce their loads. Source: [Putting the 'Green' in Renewable Energy at Cannabis Grow Facilities: Pullman & Comley \(pullcom.com\)](#)

Additional Research

A [2018 report from the American Public Power Association](#) notes that there is a need for more data regarding marijuana cultivation and energy consumption. It is known that growing cannabis indoors requires the use of lighting, venting, and air conditioning, which all require electricity. However, it has been a challenge for utilities to establish a baseline energy consumption rate for this industry. Based on interviews with medical marijuana growers in California, one utility came up with a rough standard:

- A single 1,000-watt high density discharge light consumes 1,100 watts per four foot-by-four foot area. That averages out to 68.8 watts per square foot. However, it is possible to use more energy efficient lighting implements, such as LED's.
- The report also references a 2012 study by Evan Mills published in the journal Energy Policy, which found that it takes about 13,000 kWh a year to operate a four-by-four-by-eight foot grow area.
- An account manager from a Public Utility in Washington is quoted in the report comparing a cannabis grow operation with the load profile of a data center or a hospital.

The [National Conference of State Legislatures \(NCSL\)](#) reported on average electricity consumption in Boulder County Colorado in 2015.

- The average electricity consumption of a 5,000-square-foot indoor marijuana cultivation facility was 41,808 kWh per month. By comparison, the average household in the county used about 630 kWh per month.

Dover Electric System Analysis

The City of Dover Electric Department determined that based on a 100,000-square-foot cultivation facility, with an electric demand of 5.36 kWh per square foot per month, the annual demand would be about 6.4 Megawatts. Such a facility would be the fourth largest electric customer in Dover. The Department determined that the system could support this demand. This hypothetical customer would pay approximately \$462,500 for electricity in a year, \$100,000 - \$150,000 of which would go to purchase of power.

How much water and energy does a marijuana manufacturing facility utilize?

There is very little available research on this subject. The bulk of literature addressing heavy water and energy consumption in the marijuana industry focuses on cultivation. Manufacturing marijuana may be similar to other manufacturing uses in terms of water and energy use. The demand for water and energy would vary depending on the size of the facility and equipment and practices used.

Sustainable Practices

There are practices that can help cannabis grow facilities to reduce water and energy consumption. Solar power generation, use of LED light bulbs, and drip water irrigation are some examples. Generally, water and energy standards are handled at the state level. Most states where cannabis is legal, including Colorado, do not require cultivation facilities to meet specific energy standards, though Illinois and Massachusetts do. The Office of the **Marijuana Commissioner's Draft Regulations require that marijuana cultivation facilities have an environmental and sustainability plan** that includes efforts the facility will take to minimize the environmental impact of its operations and plans to minimize water usage.

Odor Mitigation

Unlike sustainable practices, odor mitigation is more often handled at the local level. For example, nearly every county in Colorado has a strict odor ordinance. Ordinances generally require the use of some kind of filtration system. The most common type is Carbon Filtration, though biofilters, ozone generators, and other methods are also used.

The National Cannabis Industry Association Policy Council issued a [publication](#) addressing industry impacts, best management practices, and policy considerations in 2020. The section titled 'Best Management Practices: Air Quality' on page 40 includes a detailed summary of odor control technology used. They note that **Carbon Filtration is the most commonly used and recommended technology for reducing odor emissions** as they are effective and reliable when properly maintained.

Canada has federal requirements for odor filtration. Before obtaining a commercial license for indoor production of cannabis, applicants need to demonstrate that they have an [adequate air filtration system](#). Health Canada's [Good production practices guide for cannabis](#) contains the requirements for filtration and ventilation systems and proper maintenance is required (Section 5.1.5.1). Some ordinances require that the applicant hire a specialist (such as HVAC technician) to help them comply with local odor control requirements.

According to an [article in Chemical and Engineering News](#), Byers Scientific is an example of a company working to create emerging odor-mitigation technology. They combine "Carbon Scrubbers" and vaporizers to mitigate odors caused by the venting process, which is when roof vents are opened to control temperature and humidity. The carbon scrubbers absorb odors before air passes through a waterless vapor emitted along the base of each top vent. The vapor neutralizes the odors before they are released into the environment, according to Byers Scientific.

Cultivation within Agricultural Preservation Districts

Are Marijuana Cultivation Facilities permitted within Agricultural Preservation Districts?

Agricultural Preservation Districts are administered by the State's Department of Agriculture. The Department of Agriculture does not have clear guidance to answer this question at this time, although they raised two major considerations.

First, according to the Department of Agriculture, agricultural buildings are permitted within Agricultural Preservation Districts, which might allow for cultivation operations. However, ancillary uses, such as offices, laboratories, and processing areas, would not be permitted within an Agricultural Preservation District. The existing cultivation facilities in Delaware also include associated/ancillary uses, including manufacturing, testing, and retail. Any uses other than cultivation would clearly not be permitted (as either a principal or accessory use) within Agricultural Preservation Districts.

Second, some Agricultural Conservation Easements were purchased with a combination of State and Federal funds. Marijuana remains illegal under federal law, so this would also need to be considered if a request came forward.

Further review and consultation with the Department of Agriculture would be necessary if the City received a request to allow a cultivation facility on a property within an Agricultural Preservation District.