CITY OF Billings

VISION STATEMENT:
"The Magic City: A diverse, welcoming community where people prosper and business succeeds."

WORK SESSION AGENDA

COUNCIL CHAMBERS | September 20, 2021 | 5:30 P.M.

CALL TO ORDER: Mayor Cole

1. **Marijuana Business Regulation, Licensing, and Zoning.**
   (Presented by: Karen Tracy, Assistant City Attorney)
   - Public Comment

2. **NorthWestern Energy Land Purchase.**
   (Presented by: Kevin Ploehn, Aviation and Transit Director)
   -Public Comment

3. **Bicycle and Pedestrian Advisory Committee (BPAC) Annual Presentation.**
   (Presented by: Scott Barber, BPAC Chair; Anna O'Donnell, BPAC Vice-Chair; and Dorothy Dupree, BPAC Member)
   - Public Comment

4. **Code Enforcement Division - Dirty Dozen Update.**
   (Presented by: Nicole Cromwell, Zoning Coordinator)
   - Public Comment

5. **American Rescue Plan Agency (ARPA) Funds.**
   (Presented by: Andy Zoeller, Finance Director and Chris Kukulski, City Administrator)
   - Public Comment

COUNCIL DISCUSSION:

PUBLIC COMMENT on "NON-AGENDA ITEMS". Speaker Sign-in required. (*Restricted to ONLY items not on this printed agenda. Comments are limited to 3 minutes or as set by the Mayor. Please sign the roster at the cart located at the back of the Council chambers or at the podium.)*

ADJOURN:

Note:

- This meeting is an "informal" meeting of the City Council. The content of the Agenda is subject to change at the meeting.
- In the event there is a Closed Executive Session at the end of a Work Session, the sole purpose is to discuss litigation strategy. The other parties to the case(s) discussed are not public bodies or associations as described in Section 2-3-203(1) and (2), MCA. The meeting is closed, as allowed by Section 2-3-203(4)(a), MCA, "to discuss a strategy to be followed with respect to litigation when an open meeting would have a detrimental effect on the litigating position" of the City of Billings.

City Council Work Session
Date: 09/20/2021
Title: Marijuana business regulation, licensing, and zoning
Presented by: Karen Tracy
Department: Legal
Presentation: No

RECOMMENDATION

No action is required of council at this time. Staff is providing an update to City Council on regulatory options for consideration as well as an update on efforts and progress made on prior City Council directives.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

On August 9, 2021, City Council passed Resolution 21-10981 to place the question regarding whether to permit recreational, adult-use dispensaries within City limits to the voters. Contemporaneously with this matter being presented to the voters, a committee consisting of staff and council members is working toward developing regulations for marijuana businesses that will be allowed by state law, effective January 1, 2022.

STAFF DIRECTION FROM CITY COUNCIL AT THE SEPTEMBER 7, 2021 WORK SESSION

At the September 7, 2021 work session, City Council provided the following staff direction in developing necessary regulations:

Zoning: review provisions providing for separation of marijuana businesses from residential use.
Provide consolidated map reflecting all areas subject to the 1,000 foot buffer zone for purposes of viewing the cumulative effect of such a zoning ordinance.

Dispensary caps: Work on regulations in this area.

Furnish council with data regarding dispensary concentrations in other jurisdictions for purposes of contemplating a potential number of dispensaries to be permitted.

Some members of City Council expressed concern over a merit-based allocation of dispensary licenses, expressing favor for a lottery system.

Licensing structure: work on developing a licensing structure that would permit the City to timely respond to violations that may occur in marijuana businesses.

Cultivation caps: staff acknowledged that additional work was needed in this area in order to provide information to the City Council sufficient for the City Council to make a policy decision regarding whether a cap was necessary or desirable.

Additional education: City Council members expressed a desire for additional education to determine if, and to what extent, the introduction of marijuana businesses in the City may be detrimental to the health, safety, and welfare of City residents so that the City Council could properly balance the policy considerations of protecting the health, safety, and welfare of City residents with promoting businesses. In particular, City Council members expressed concern of local business interests in the newly created marijuana business industry.

Information has been provided to council and the committee by email in the interim and in this staff memorandum as well.

Testing: The need for testing was discussed in terms of necessity and scope. No consensus was reached. Staff will provide clarification of what is intended by the term "testing."

STATUS OF DISPENSARIES OPERATING WITHIN THE CITY AND WITHIN YELLOWSTONE COUNTY

The Montana Department of Revenue Cannabis Control Division indicates that there are 39 medical marijuana licensed businesses in "Billings." Internet available information and a few of the city-county maps confirmed that 2 dispensaries are within the city limits, 27 are outside of the city limits but within the county, and addresses could not be located for the

remaining licensed businesses. The regional inspector for the state confirmed that there are only two dispensaries within City limits, as did an attorney from the Department of Revenue. Many state regulatory functions are being transitioned from DPHHS to the Department of Revenue in anticipation of the January 1, 2022 effective dates.

Local governments throughout states with legalized marijuana employ a variety of regulatory structures, including

- Caps on the number of dispensaries;
- Use of zoning to restrict marijuana business to certain areas;
- Regulating distance between marijuana businesses;
- Regulating distance between marijuana business and sensitive areas such as schools;
- Prohibiting marijuana businesses from being operated as home businesses;
- Limiting size of growing operations
- Developing comprehensive licensing requirements.

POLICY DIRECTION OF OTHER MONTANA JURISDICTIONS

Staff has conferred with attorneys in Kalispell, Bozeman, and Great Falls regarding their approaches towards new marijuana businesses authorized by state law:

Great Falls: Great Falls will continue to prohibit marijuana businesses based upon the illegality of such businesses under federal law. We do not believe that this is a viable option because the Montana Medical Marijuana Act is being repealed and House Bill 701 does not allow for local prohibitions without the vote of electors.

Bozeman: Bozeman voters approved recreational marijuana by over 70%. Bozeman currently caps their medical marijuana dispensaries at 20, issued on a first-come, first-served basis. This process worked well for the first several years and licenses were still available, notwithstanding the 20 dispensary cap. However, in the last two years, all licenses were "snapped up" in anticipation of the roll-out of recreational marijuana. Well funded businesses would buy out the owners of existing licenses and then would come in together with the current licensee surrendering their license, immediately followed by someone buying that license. This was the work around the prohibition against transferring licenses. The situation became frustrating, and Bozeman will likely eliminate all caps and amend their ordinances to treat all marijuana sales equally. The businesses are restricted to only certain zones and prohibited in the downtown area. Bozeman has ordinances requiring certain retail aesthetics, which are by definition incompatible with state laws for marijuana retail businesses (clear windows into businesses versus no public view of marijuana products and plants). These limitations combined with high real estate prices will likely push dispensaries out of city limits and into the county.

Kalispell: Kalispell plans to regulate through zoning, with marijuana businesses being limited to a relatively small geographic area in retail, industrial, and warehouse districts, and excluded from the downtown area. In addition, marijuana businesses will require an administrative conditional use permit. The contemplated zoning includes a residential buffer, a buffer from sensitive areas, and a buffer between businesses, but the specific distances for each have not been finalized. Just outside of Kalispell city limits is what can be characterized as a medical marijuana corridor. Kalispell anticipates that medical marijuana licensees throughout the state will seek to open retail dispensaries in Flathead County beginning 1/1/2022. Kalispell staff have also experienced difficulty in reaching staff in the Department of Revenue.

POLICY DIRECTION OF OUT-OF-STATE JURISDICTIONS

Staff has surveyed other out-of-state jurisdictions to determine how the above regulatory options have been utilized. It is common to see marked differences among cities within the same state. For example, Anchorage, Alaska does not cap dispensaries, while Fairbanks Alaska does have a cap. In Colorado, Fort Collins does not have a cap, while Pueblo caps recreational marijuana dispensaries at 8 and has developed a comprehensive scheme for the award, renewal, and revocation of those licenses. Microsoft Word - Retail Marijuana Stores Rules and Regs - TDG Amended (pueblo.us) .

LIMITS ON DISPENSARY CAPS

If the Billings City Council elects to limit the number of dispensaries, several issues need to be considered:

How many dispensaries
How will the licensees be selected

DISPENSARY DATA:

Ohio -- Ohio caps dispensaries. Ohio permits medical marijuana, but not recreational marijuana. Ohio initially utilized a merit based allocation system, but subsequently moved to a lottery system. Ohio utilizes consulting firms as needed in the administration of their marijuana business licensing. Ohio recently expanded the number of licenses

from 57 to 130. Ohio's population is 11,690,000. With the increased number of dispensaries, Ohio has one medical marijuana dispensary for every 89,923 residents. Ohio's recent presentation by the Ohio Medical Marijuana Control Program is attached. EX 1.

Illinois - Illinois caps dispensaries. Illinois permits recreational marijuana and initially allocated 58 licensed dispensaries and used a multi-step lottery approach that reserves a certain number of licenses for populations impacted disproportionately by the "war on drugs." Initial errors in administering the lottery resulted in lawsuits against the state. Illinois is currently adding 75 adult dispensaries for a total of 133 adult-use dispensaries. Illinois' population is 12,671,821. Illinois has one adult use marijuana dispensary for every 95,276 residents.

Pennsylvania--Pennsylvania caps dispensaries. Pennsylvania has medical marijuana use and caps the potential number of dispensaries at 150 (50 licensees, but no more than 3 locations per licensee). Pennsylvania's population is 12,801,989. Pennsylvania has one medical marijuana dispensary for every 85,346 residents. Pennsylvania's method of allocating licenses could not be located. However, their 2-year biennial report is attached; EX 2 this report states that medical marijuana dispensaries have a $30,000 permit fee and must have a doctor or pharmacist on staff at all times.

Michigan-Michigan does not appear to cap its dispensaries. The best information available is that there are 364 medical dispensaries and a population of approximately 9,987,000. Michigan has one medical marijuana dispensary for every 27,436 residents. Michigan's adult-use industry is in its early stages and good data is unavailable.

Oregon-Oregon does not appear to cap its dispensaries and has the greatest density of dispensaries: approximately 1 for every 5600 residents. Once Oregon began licensing recreational marijuana retail dispensaries, demand for medical marijuana licenses dropped from 425 dispensaries in October 2016 to 2 medical marijuana dispensaries in October 2020. The Oregon 2021 Recreational Marijuana Supply and Demand Legislative Report published by the Oregon Liquor Control Commission (OLCC) is an attachment to this staff memo. EX 3.

Washington State- Washington State caps its dispensaries. The State of Washington took a similar approach and eventually merged its categories of licenses and capped its licenses at 556 (roughly one dispensary per 24,000 residents). The cap covers the total number of dispensaries, both medical and recreational.

City of Pueblo, CO-The City of Pueblo caps only the number of adult use dispensaries and has capped that at 8 for a population of approximately 165,982 (roughly one dispensary per every 21,000 residents). The City of Pueblo DOES NOT cap medical marijuana dispensaries.

The following publications were located which may assist the City Council in formulating marijuana business policy related to the zoning of marijuana businesses and capping the number of dispensaries.

Everson, EM, Dilley JA, Maher JE, Mack CE., Post-Legalization Opening of Cannabis Stores and Adult Cannabis Use in Washington State, 2009-2016. *Am. J. Public Health.* 2019;109(9):1294-1301.

The above peer reviewed publication published results of a study that found that increasing cannabis retail access was associated with increased current and frequent use and noted "regardless of how cannabis is consumed, frequent use--such as daily or near-daily use--is likely of more concern than occasional use and has recently been identified as a risk. The study found that local retail access, but not state legalization of possession itself, was associated with increased cannabis use and that local jurisdictions may be able to limit increased use through enacting policies such as retail bans, moratoriums, caps on retail license numbers, or density or zoning restrictions. This was the case even for jurisdictions that bordered communities with less stringent policies given that use significantly increased in areas located within 0.8 miles of a retailer. Adult current use significantly increased in areas located within 18.4 miles of a cannabis retailer, with a larger increase occurring in areas located within 0.8 miles of a retailer. Frequent past-month use, likely the more serious public health concern, increased significantly in areas located within 0.8 miles of a retailer.

This publication is copyrighted, but is available for purchase through the following link: Post-Legalization Opening of Retail Cannabis Stores and Adult Cannabis Use in Washington State, 2009--2016 | AJPH | Vol. 109 Issue 9 (aphapublications.org)

TESTING OF PRODUCTS SOLD THROUGH DISPENSARIES

Although the State of Montana has provided for testing at the state level in House Bill 701, there is no statutory provision for disclosure of this data to local governmental entities. Because the retail program has not commenced in Montana, no Montana testing data for retail marijuana is available.

The Montana Medical Marijuana Act provided for testing pursuant to 50-46-304, and also required testing labs to report that

information through the seed-to-sale tracking system. However, this information was not made available to local governmental entities. As such, there is no way to verify whether representation made to the public regarding marijuana and marijuana products is applicable until local governmental entities are statutorily granted access to this information effective January 1, 2022.

The two forgoing issues, and the study referenced below, lend uncertainty regarding the accuracy of representations made to consumers regarding the content of their purchased products. Council may wish to provide for the ability to test products as advisable for the protection of public health and safety. This need not be a formal or comprehensive program at this time, but merely one that reserves such a testing power to the City as determined by future data gleaned from the seed-to-sale tracking system or other future events.

There is no federal regulation of marijuana. By comparison, food, alcohol, tobacco, drugs, and firearms are all subject to federal regulations and enforcement.

One peer reviewed publication found that edible products tested in three major cities (San Francisco, Los Angels, Seattle) were significantly mislabeled: 23% were under-labeled (stronger than indicated), 60% were over-labeled with respect to THC content (less potent than indicated), and 17% were accurately labeled. Vandrey R, Raber JC, Raber ME, Douglass B, Miller C, Bonn-Miller MO. Cannabinoid dose and label accuracy in edible medical cannabis products. Research Letter. JAMA. 2015;313:2491-3. The article may be accessed through the following link. Labeling Accuracy of Cannabidiol Extracts Sold Online | Addiction Medicine | JAMA | JAMA Network

PUBLIC SAFETY IMPACT OF LEGALIZATION OF MARIJUANA

The research in this area is a mixed bag. One study found no increase in *fatal* motor vehicle accidents but noted that data was unavailable to determine any change in the number of *non-fatal* motor vehicle accidents. Jayson D. Aydelotte et al. "Crash Fatality Rates After Recreational Marijuana Legalization in Washington and Colorado" *American Journal of Public Health* 107, no. 8 (August 1, 2017): pp. 1329-1331. Crash Fatality Rates After Recreational Marijuana Legalization in Washington and Colorado | AJPH | Vol. 107 Issue 8 (aphapublications.org)

However, more recently, the Rocky Mountain High Intensity Drug Trafficking Area released its study entitled "The Legalization of Marijuana in Colorado: The Impact," Vol. 8, September 8. The full study is available at www.RMHIDTA.org. The executive summary of the study is attached to this staff memo. EX 4.

Other studies have attempted to reach a definitive conclusion, but have been unsuccessful. See Wu Guangzhen et al. "Impact of recreational marijuana legalization on crime: Evidence from Oregon" *Journal of Criminal Justice* 72 (2020) 101742 https://doi.org/10.1016/j.jcrimjus.2020.101742

PUBLIC HEALTH IMPACT OF MARIJUANA USE

In addition to the information provided to City Council through the publication "Cannabis in Medicine: An Evidence-Based Approach," Finn, Kenneth ed. 2020, attached is a report from the State of Oregon's Retail Marijuana Scientific Advisory Committee which sought to summarize recently published scientific evidence on the health effects of marijuana. EX. 5

The National Academy of Sciences found conclusive or substantial evidence on the association between cannabis use and health:

1. A therapeutic effect of cannabis for the treatment of chronic pain in adults
2. A therapeutic effect as antiemetics in the treatment of chemotherapy-induced nausea and vomiting (oral cannabinoids)
3. A therapeutic effect for improving patient-reported multiple sclerosis spasticity symptoms (oral cannabinoids)
4. Worse respiratory symptoms and more frequent chronic bronchitis episodes (long-term cannabis smoking)
5. Increased risk of motor vehicle crashes
6. Lower birth weight of offspring (cannabis smoking)
7. The development of schizophrenia or other psychoses, with the highest risk amount the most frequent users (cannabis)
8. Stimulant treatment of ADHD during adolescence is not a risk factor for the development of problem cannabis use
9. Being male and smoking cigarettes are risk factors for the progression of cannabis use to problem cannabis use.
10. Initiating cannabis use at an earlier age is a risk factor for the development of problem cannabis use.
11. There is a statistical association between increases in cannabis use frequency and the progression to developing problem cannabis use.

Additional information may be found utilizing the link below.

National Academies of Sciences, Engineering, and Medicine 2017. *The Health Effects of Cannabis and Cannabinoids:*

The Current State of Evidence and Recommendations for Research. Washington, DC: The National Academies Press.
https://doi.org/10.17226/24625 http://nap.edu/24625

Cannabis in Medicine: An Evidence-Based Approach, sets out the following conclusions:

1. There is substantial evidence that cannabis use causally increases risk of psychosis in a dose-response fashion, especially in adolescents and individuals with pre-existing psychotic symptoms or risk factors including family history of schizophrenia. p. 89.
2. Among individuals diagnosed with major depression, bipolar disorder or schizophrenia, there is robust evidence that regular cannabis use is associated with a more severe and chronic course of illness, less robust response to treatment and lower rates of remission. p. 89.
3. The potential for suicidal behaviors is clearly the most severe mental health risk from marijuana use. p. 104
4. State legalization of marijuana in the USA has made a significant impact on many aspects of pediatric health. Unintentional pediatric exposures continue to rise, and there continues to be many unknowns regarding the impact of breastfeeding and passive smoke exposures. p. 129.
5. The results of exposing the vulnerable CNS [central nervous system] of children and adolescents to THC over time can lead to variable levels of cognitive dysfunction, cannabis dependence, and neuropsychiatric disorders such as psychosis. p. 147.
6. As marijuana potency has increased and use is becoming more acceptable, the emergency department presentations are increasing in frequency and severity. p. 165.
7. Cannabis smoke inhalation by any means puts its users at undue repiratory risk due to mitigation of respiratory immune defense, increase in respiratory secretions, and development of pulmonary syndromes such as bronchitis, COPD, emphysema, necrotizing bronchiolitis, pneumothorax, pneumomediastinum, fungal pneumonia, tuberculosis, and lung cancer. p. 195.
8. Vaping is causing lung illnesses and lung damage to such a degree that hospital treatment is usually required, and in several notable cases, death occurs. p. 202.
9. THC and CBD can also deompose when heated excessively and form chemical compounds that can also cause serious health issues, including lung ailments. p. 202.
10. Marijuana use has been associated with adverse cardiovascular outcomes which include acute coronary syndromes, coronary artery dissection, coronary vasospasm, coronary thrombosis, arrhythmias, stroke, vasculitis, myocarditis, and cardiomyopathies. p. 211.

The above are a small fraction of the information available in this medical textbook which is available through the following link:

Cannabis in Medicine - An Evidence-Based Approach | Kenneth Finn | Springer

The Centers for Disease Control and Prevention (CDC) have issued a number of findings concerning the effect of marijuana use on people. A sample of those findings are attached. EX. 6.

ALTERNATIVES

Staff seeks council direction regarding dispensary caps (medical and/or recreational), if any, and direction on method of allocation, if so. Staff seeks input on caps to be applied to cultivation licensees, if any.

FISCAL EFFECTS

Fiscal effects have not been quantified at this time. Council will have the opportunity to set licensing fees at a level to offset identified costs of licensing.

Attachments

EXHIBIT 1
EXHIBIT 2
EXHIBIT 3
EXHIBIT 4
EXHIBIT 5
EXHIBIT 6

Ohio Medical Marijuana Control Program

State of Ohio Board of Pharmacy

RFA II Proposal – 4.19.2021

Requirements for Determining # of Dispensaries

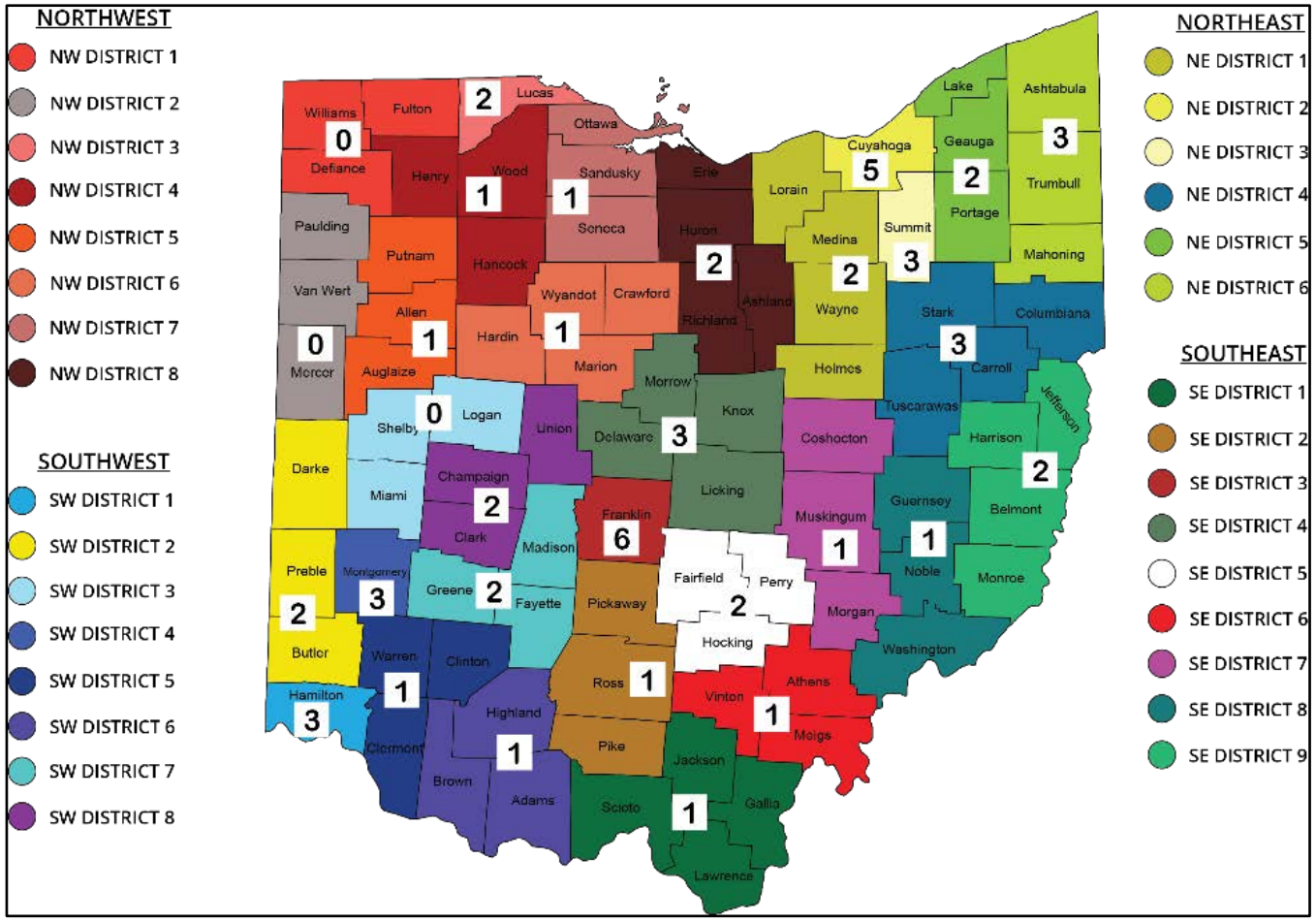
Section 3796.05 of the Revised Code and rule 3796:6-2-05 of the Administrative Code require the State of Ohio Board of Pharmacy to consider the following when determining the number of dispensaries in the state:

1) The population of this state;
2) The number of patients seeking to use medical marijuana; and
3) The geographic distribution of dispensary sites.

The Board is required to consider these factors each biennial licensing term to determine whether a sufficient number of medical marijuana dispensaries exist.

Dispensary Districts

- To ensure geographic distribution, the Board established 31 dispensary districts. The districts were developed using the following factors:
  - Established rules and regulations in other state medical marijuana programs
  - Patient populations
  - Consultation with regulators in other states
  - Ohio's population
  - Existing compliance resources for the State Board of Pharmacy
  - Access to major Ohio roadways
- Districts were also posted for public comment prior to implementation.



Factor #1: The population of this state

The Board initially issued 57 provisional licenses and there are currently 52 dispensaries that are operational.

Looking at the bordering states that operate medical marijuana programs, Ohio's current number of licenses is comparatively low based upon state population.

State	Population	Number of Medical Marijuana Dispensaries	Dispensaries Per Capita (100k)
Ohio	11.69 million	57	0.48
Pennsylvania	12.8 million	109	0.85
Michigan	9.987 million	364 - medical outlets only	3.64
NOTE: Michigan's medical marijuana program has been in operation since approximately 2008 and includes a recreational program. Pennsylvania's program became operational in 2018. Ohio's program became operational in 2019.			

Factor #2: The number of patients seeking to use medical marijuana

- When Ohio's program began, initial assumptions estimated anywhere between 12,000–24,000 patients within the first two years of the program. These assumptions were based upon experiences of other states (CT, IL, MA, MN, NH and NY).

- These states demonstrated relatively low rates of patient growth in the first two years of their respective programs.

- As of January 2021 (when the assessment was conducted), Ohio's Medical Marijuana Control Program reported 136,507 registered patients. This number is significantly larger than patient registration assumptions for the first two years of program operation.

Factor #2: The number of patients seeking to use medical marijuana

- Adding to this, patient demand differs significantly by dispensary district. For example, SW-3 (Franklin County) has a total of 17,050 patients across 6 licenses (average patients per dispensary = 2,841).

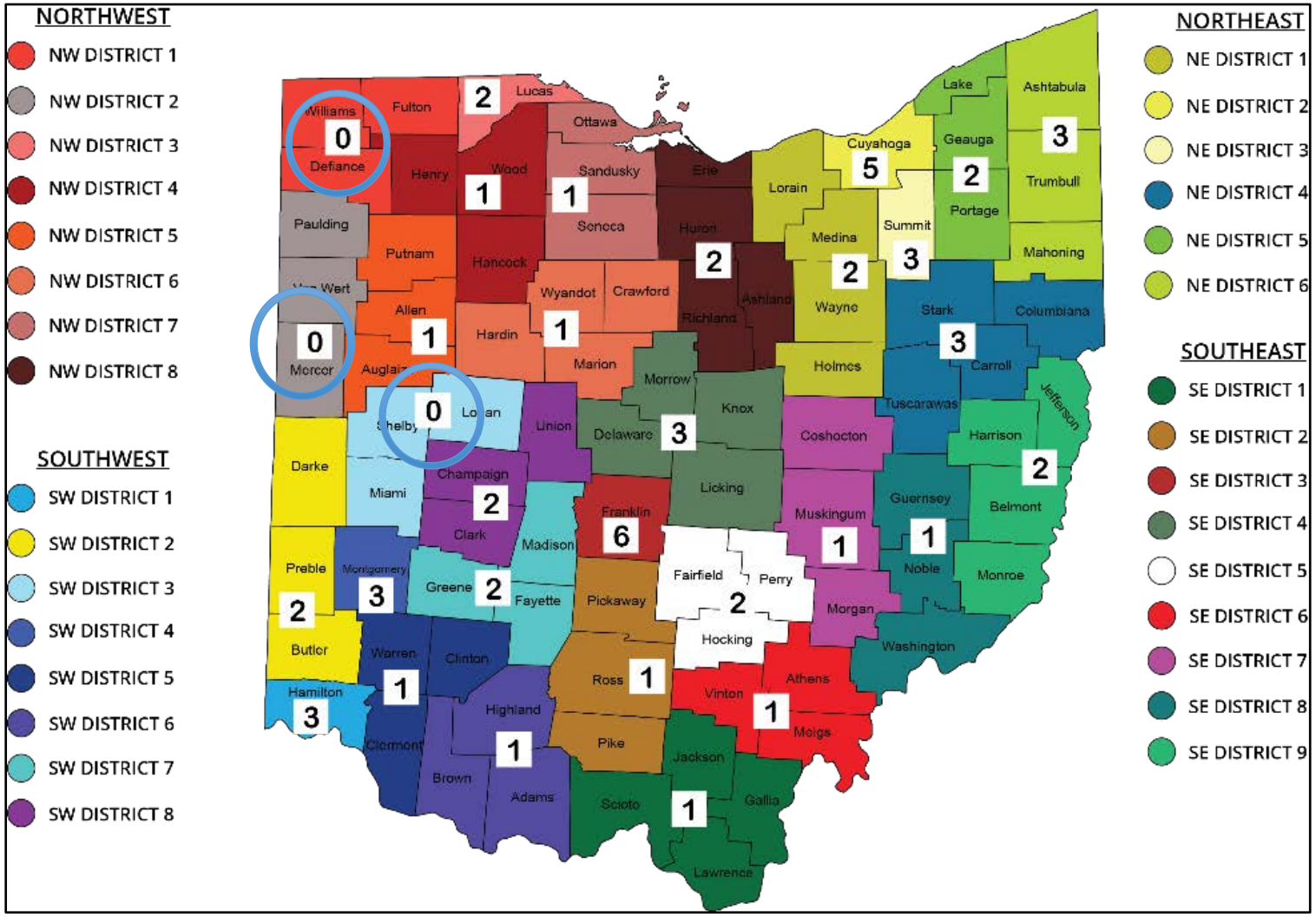
- This figure is significantly higher than other dispensary districts, such as SE-6 (Vinton, Athens, Meigs) which averages only 1,315 patients per dispensary. Therefore, any expansion needs to promote equal access across dispensary districts.

Factor #3: The geographic distribution of dispensary sites to ensure patient access to medical marijuana

During the initial RFA process, the Board did not receive any viable applications for dispensaries in the following districts:

- NW District 1 (Williams, Fulton, Defiance)
- NW District 2 (Paulding, Van Wert, Mercer)
- SW District 3 (Shelby, Miami, Logan)

Dispensary Districts & Number of Current Dispensary Licenses



Assessment of the Three Required Factors

Factor #1: The number of dispensaries per capita compared to other medical marijuana programs indicates a need to increase the number of Ohio dispensary licenses.

Factor #2: The number of patients seeking to use medical marijuana exceeds initial estimates, indicating a need to increase the number of Ohio dispensary licenses with a particular focus on meeting patient demand in certain districts.

Factor #3: There are three dispensary districts without an operational dispensary, thus indicating a need to increase the number of dispensaries to ensure geographic distribution and patient access.

Assessing the Number of Additional Dispensary Licenses for RFA II

To assess the needs for additional dispensaries, the Board conducted an analysis of patient data by dispensary district with the following goals:

1. Promotion of dispensaries in districts where there are currently none;
2. Increasing access in higher demand dispensary districts to ensure equal access across the districts.

Assessing the Number of Additional Dispensary Licenses for RFA II

To achieve the first goal, the Board plans to add dispensary licenses in the three dispensary districts that currently do not have licenses:

- NW District 1 (Williams, Fulton, Defiance)
- NW District 2 (Paulding, Van Wert, Mercer)
- SW District 3 (Shelby, Miami, Logan)

Assessing the Number of Additional Dispensary Licenses for RFA II

To achieve the second goal, the Board analyzed the number of patients per dispensary district with the intent of equal access across districts (see chart on next slide).

Assessing the Number of Additional Dispensary Licenses for RFA II

District	Number of Dispensaries (includes PDLs)	Patients Per District	Patients Per # of Dispensaries (includes PDLs)
SW - 8	2	2989	1494.5
SW - 7	2	2858	1429
SW - 6	1	1315	1315
SW - 5	1	7245	7245
SW - 4	3	8389	2796.333333
SW - 3	0	2288	-
SW - 2	2	5817	2908.5
SW - 1	3	12191	4063.666667
SE - 9	2	1748	874
SE - 8	1	1350	1350
SE - 7	1	1438	1438
SE - 6	1	1350	1350
SE - 5	2	2558	1279
SE - 4	3	5233	1744.333333
SE - 3	6	17050	2841.666667
SE - 2	1	1687	1687
SE - 1	1	1647	1647
NW - 8	2	2783	1391.5
NW - 7	1	1545	1545
NW - 6	1	1838	1838
NW - 5	1	1827	1827
NW - 4	1	2008	2008
NW - 3	2	3145	1572.5
NW - 2	0	793	-
NW - 1	0	1093	-
NE - 6	2	6734	3367
NE - 5	2	5636	2818
NE - 4	3	6296	2098.666667
NE - 3	3	5944	1981.333333
NE - 2	5	13725	2745
NE - 1	2	5987	2993.5
	Total = 57	**Total = 136,507**	**Avg = 2667.25**

Proposed Dispensary License Allocation

- To promote equal access across regions, the Board developed the following proposed RFA II based upon feedback from the industry and patients.

- This included a review of patient survey data and industry feedback (OMCIA, etc.) that highlights the need for more dispensaries to improve access and reduce costs to patients.

    - In a recent survey of Ohio patients conducted by the program, 58% of respondents indicated they were either “somewhat dissatisfied” or “very dissatisfied” with the price of products.

Proposed Dispensary License Allocation

- The allocation method uses a metric of **1,200 registered patients per dispensary per district**.

- This figure attempts to address access by including all registered patients in each district. This accounts for patients who have registered but may have not purchased due to cost or access issues.

- This figure also ensures dispensary viability, as the Board has determined a dispensary needs between 300-600 active patients to maintain viability.

Assumptions for Proposed Allocation

Assumptions for the proposed allocation:

- Add dispensary licenses for every district that exceeds 1,200 patients per dispensary per district to bring the number of patients per dispensary per district below 1,200 registered patients.
- Any region with less than 1,200 patients per dispensary per district, is not eligible to receive another dispensary license.
- The three districts without a dispensary license will automatically receive at least one dispensary license to meet geographic diversity requirements.
- Patient numbers include both active patients and patients who have registered but have not purchased medical marijuana.

Current

District	**Current** Number of Dispensaries (includes PDLs)	Patients Per District & Patients Per Dispensary
NW - 4	1	2008

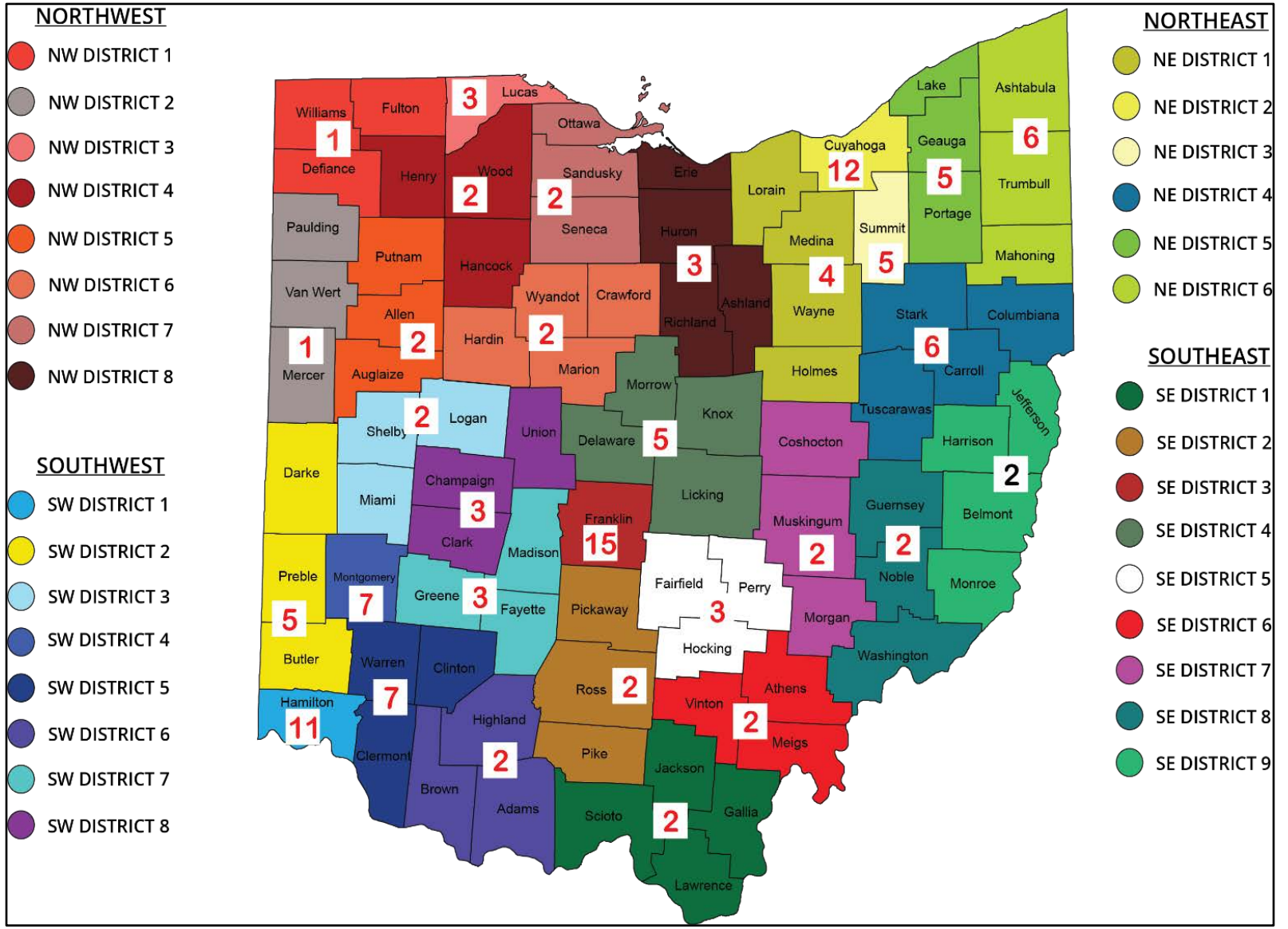
Proposed

District	**Proposed Total** Number of Dispensaries	Patients Per Dispensary
NW - 4	2	1004

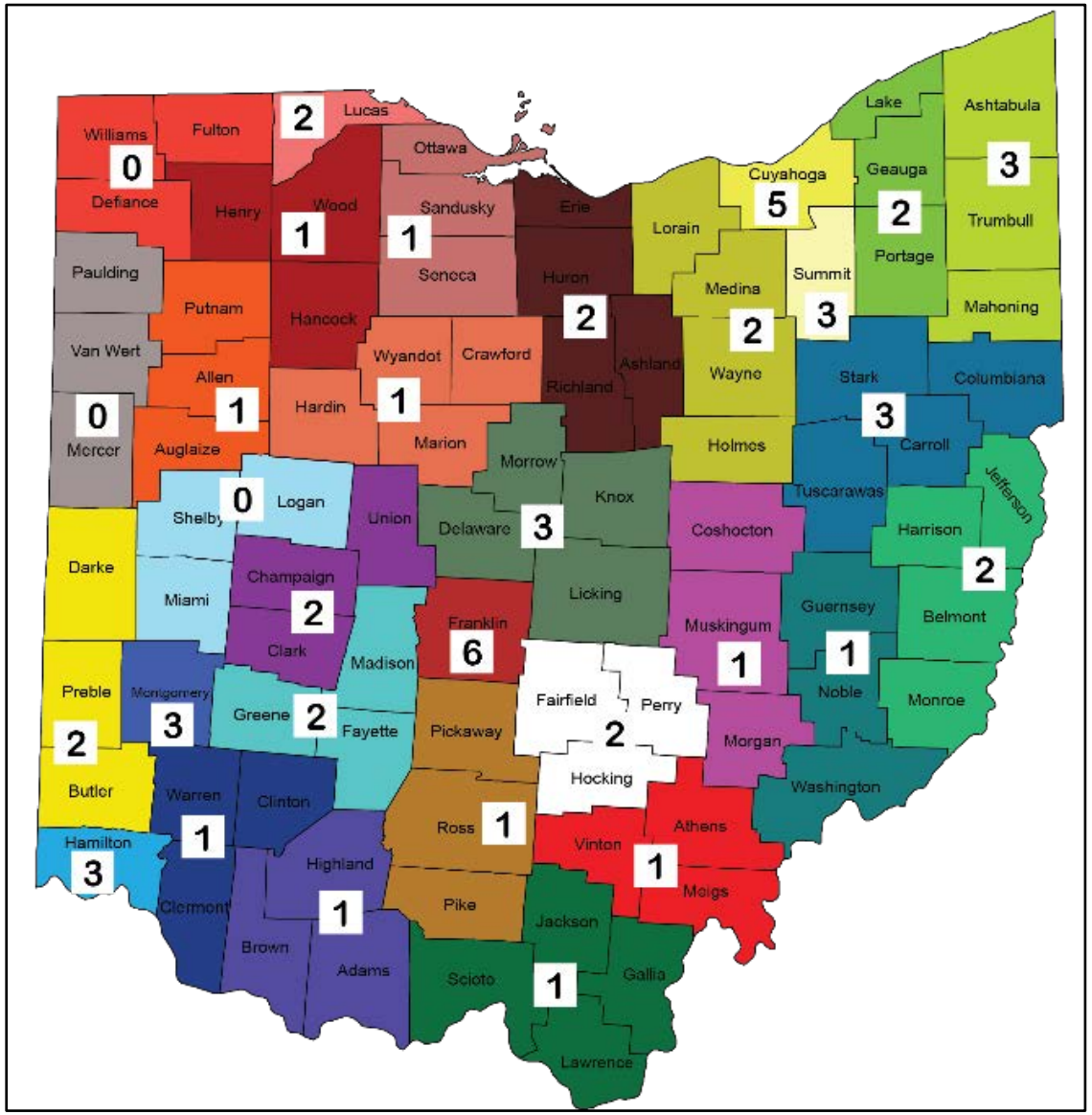
Proposed Allocation - RFA II

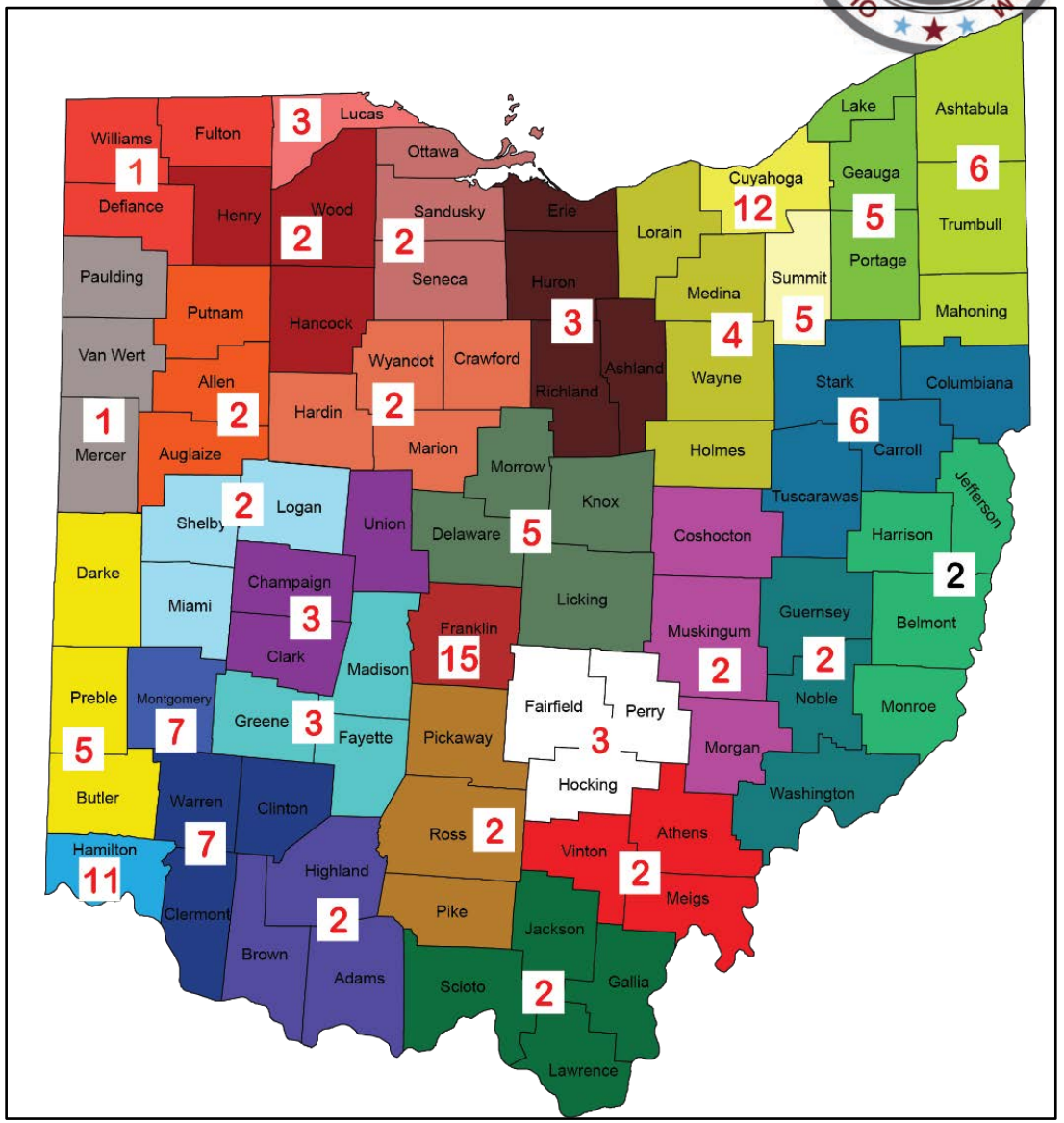
Region	Proposed Number of New Dispensaries	Proposed Total of Dispensaries	Proposed Patients Per # of District Dispensaries <1,200
SW - 8	1	3	996.3333333
SW - 7	1	3	952.6666667
SW - 6	1	2	657.5
SW - 5	6	7	1035
SW - 4	4	7	1198.428571
SW - 3*	2	2	1144
SW - 2	3	5	1163.4
SW - 1	8	11	1108.272727
SE - 9	0	2	874
SE - 8	1	2	675
SE - 7	1	2	719
SE - 6	1	2	675
SE - 5	1	3	852.6666667
SE - 4	2	5	1046.6
SE - 3	9	15	1136.666667
SE - 2	1	2	843.5
SE - 1	1	2	823.5
NW - 8	1	3	927.6666667
NW - 7	1	2	772.5
NW - 6	1	2	919
NW - 5	1	2	913.5
NW - 4	1	2	1004
NW - 3	1	3	1048.333333
NW - 2*	1	1	793
NW - 1*	1	1	1093
NE - 6	4	6	1122.333333
NE - 5	3	5	1127.2
NE - 4	3	6	1049.333333
NE - 3	2	5	1188.8
NE - 2	7	12	1143.75
NE - 1	3	5	1197.4
Total	**73**	**130**	**Avg = 974.2371387**

Proposed Allocation



Comparison - Current vs. Proposed





Assessment of Proposed Allocation Process

- Adds 73 new dispensary licenses to ensure geographic distribution and patient access.

- Brings dispensaries per capita to 1.11, which exceeds PA (0.85) but is lower than the Michigan number (3.64).

- Comparable to the January 2021 request from the industry (OMCIA) for a total of 150 dispensary licenses (a proposed increase of 93 dispensaries from the current allocation).

Proposed Dispensary RFA II Process

- As previously done, RFA II will require applicants to specify the district(s) wherein they are applying, and provisional dispensary licenses will be awarded based on those districts. The districts will remain the same as in the previous RFA.

- Dispensary applications will be scored to determine who is a qualified applicant.

- All viable applications will be entered into a lottery system, wherein individual lotteries will be held for each dispensary district with available licenses.

pennsylvania
DEPARTMENT OF HEALTH

Official Report

This two-year report of the Pennsylvania Department of Health's Office of Medical Marijuana is to comply with 35 P.S. § 10231.1105

May 15, 2020

Introduction

This document, the official report of the Pennsylvania Department of Health (Department), serves to comply with the requirements of Section 1105 of the Medical Marijuana Act (Act), 35 P.S. § 10231.1105, which requires the Department to issue a written report every two years, beginning May 17, 2018, to:

- The Governor;
- The President *pro tempore* of the Senate;
- The Majority Leader and the Minority Leader of the Senate;
- The Speaker of the House of Representatives;
- The Majority Leader and the Minority Leader of the House of Representatives;
- The chairman and minority chairman of the Judiciary Committee of the Senate;
- The chairman and minority chairman of the Public Health and Welfare Committee of the Senate;
- The chairman and minority chairman of the Judiciary Committee of the House of Representatives;
- The chairman and minority chairman of the Health Committee of the House of Representatives; and
- The Attorney General of the Commonwealth.

In accordance with the Act, this report includes:

(1) An assessment of the use of medical marijuana as a result of the enactment of the Act;

(2) An assessment of the benefits and risks to patients using medical marijuana under the Act, including adverse events; and

(3) Recommendations for amendments to the Act for reasons of patient safety or to aid the general welfare of the citizens of this Commonwealth.

I. Section 1105(b)(1)

An assessment of the use of medical marijuana as a result of the enactment of the Act.

Pennsylvania Medical Marijuana Program (Program)
The Act was signed into law on April 17, 2016. The Department administers and enforces the Act, issues medical marijuana ID cards to certified patients and approved caregivers, and issues permits to grower/processors and dispensaries within the commonwealth.

The Department's vision is to have a high quality, efficient and compliant medical marijuana program for commonwealth residents afflicted with a serious medical condition as defined by the Act. The Program provides access to medical marijuana to these patients through a safe and effective method of distribution and promotes high quality research into the effectiveness of medical marijuana in treating a patient's serious medical condition.

Under the Program, patients, who are residents of the commonwealth and who have a serious medical condition as certified by a physician, may obtain medical marijuana product at commonwealth dispensaries holding a valid permit issued by the Department.

Under the Act, the forms of medical marijuana available in Pennsylvania were initially limited to the following:

- A form medically appropriate for administration by vaporization or nebulization (excluding dry leaf or plant form);
- Pill;
- Topical forms, including gel, creams or ointments;
- Tinctures;
- Liquid; and
- Oil.

As a result of Medical Marijuana Advisory Board (Board) recommendation in the final report authorized by the Act, approval by the secretary, and implementation by temporary regulations, dry leaf or plant form for administration by vaporization became an acceptable form of medical marijuana for Pennsylvania patients, effective May 17, 2018. Dry leaf was made available for purchase by certified patients and approved caregivers in permitted dispensaries in August 2018. An individual must satisfy three qualifications to be a patient in the Program: (1) be a resident of the Commonwealth of Pennsylvania; (2) have a serious medical condition; and (3) obtain a certification by a practitioner who is registered with, and approved by, the Program.

There were initially 17 serious medical conditions covered under the Act. The Act defined a "serious medical condition" as any one of the following:

- Amyotrophic lateral sclerosis;
- Autism;
- Cancer;
- Crohn's disease;

- Damage to the nervous tissue of the spinal cord with objective neurological indication of intractable spasticity;
- Epilepsy;
- Glaucoma;
- Huntington's disease;
- Inflammatory bowel disease;
- Intractable seizures;
- Multiple sclerosis;
- Neuropathies;
- Parkinson's disease;
- Positive status for human immunodeficiency virus or acquired immune deficiency syndrome;
- Post-traumatic stress disorder;
- Severe chronic or intractable pain of neuropathic origin or severe chronic or intractable pain in which conventional therapeutic intervention and opiate therapy is contraindicated or ineffective; and
- Sickle cell anemia.

As a result of Board recommendations in the final report authorized by the Act, approval by the secretary, and implementation by temporary regulations, effective May 17, 2018, the list of serious medical conditions for which a patient may be certified to use medical marijuana has been modified/expanded to include: cancer, including remission therapy; neurodegenerative diseases; terminal illness; dyskinetic and spastic movement disorders; severe chronic or intractable pain of neuropathic origin or severe chronic or intractable pain; and opioid use disorder for which conventional therapeutic interventions are contraindicated or ineffective, or for which adjunctive therapy is indicated in combination with primary therapeutic interventions.

Additionally, pursuant to the process for reviewing and approving new serious medical conditions adopted by the Board in its final report, effective July 20, 2019, the Board recommended, and the secretary approved, the following new serious medical conditions as qualifying for the use of medical marijuana upon proper certification by an approved practitioner: Anxiety disorders and Tourette Syndrome.

The following represents the most up-to-date list of the 23 approved serious medical conditions:

- Amyotrophic lateral sclerosis;
- Anxiety disorders;
- Autism;
- Cancer, including remission therapy;
- Crohn's disease;
- Damage to the nervous tissue of the central nervous system (brain-spinal cord) with objective neurological indication of intractable spasticity, and other associated neuropathies;
- Dyskinetic and spastic movement disorders;
- Epilepsy;
- Glaucoma;

- Huntington's disease;
- Inflammatory bowel disease;
- Intractable seizures;
- Multiple sclerosis;
- Neurodegenerative diseases;
- Neuropathies;
- Opioid use disorder for which conventional therapeutic interventions are contraindicated or ineffective, or for which adjunctive therapy is indicated in combination with primary therapeutic interventions;
- Parkinson's disease;
- Positive status human immunodeficiency virus or acquired immune deficiency syndrome;
- Post-traumatic stress disorder;
- Severe chronic or intractable pain of neuropathic origin or severe chronic or intractable pain;
- Sickle cell anemia;
- Terminal illness; and
- Tourette syndrome.

Grower/Processors
Grower/processors grow medical marijuana plants and process those plants into acceptable forms of medical marijuana products for distribution to dispensaries.

The Department may issue permits to no more than 25 grower/processors. No more than five grower/processors may also be issued a dispensary permit. The application process requires an applicant – at a minimum – to:

- Apply for, and be awarded, a permit with the Department before growing/processing medical marijuana;
- Provide information or evidence in the permit application, including, but not limited to:
    - Their ability to maintain effective security and control to prevent diversion, abuse or other illegal conduct;
    - Their compliance with municipality zoning requirements; and
    - A diversity plan that establishes a goal of opportunity and access in employment and contracting;
- Submit a permit application with:
    - Initial non-refundable fee of $10,000;
    - Permit fee of $200,000, which is refundable if the permit is not granted; and
    - Proof of $2 million in capital ($500,000 of which must be on deposit in a financial institution).

The applicants who receive a permit, including their employees, must complete a two-hour training course that was developed by the Department, with subject matter including methods to recognize and report unauthorized activity, diversion of medical marijuana for unlawful

purposes, falsification of identification cards, proper handling of medical marijuana, and recordkeeping, as required by the Act.

The Department released Phase I permit applications for grower/processors on Jan. 17, 2017, and it awarded 12 permits to successful applicants on June 20, 2017. Phase II permit applications for grower/processors were released on April 5, 2018, and 13 permits were awarded to successful applicants on July 31, 2018. Currently, 22 grower/processors are operational and actively growing and processing medical marijuana. The permit held by one grower/processor, AGRiMED Industries of PA LLC, was not renewed in 2019 and the status of their permit is currently the subject of active litigation.

Dispensaries

Dispensaries dispense medical marijuana products to certified patients and approved caregivers for the treatment of serious medical conditions. Dispensaries are charged with maintaining clean, efficient, and secure facilities and ensuring that medical marijuana products are dispensed only to certified patients and approved caregivers.

The Department may issue permits for no more than 50 dispensaries. Each dispensary may have up to three separate locations, for a total of up to 150 dispensary locations in the commonwealth. The application process requires an applicant – at a minimum – to:

- Apply for, and be awarded, a permit with the Department before dispensing medical marijuana product;
- Provide information or evidence in the permit application, including, but not limited to:
    - A description of business organization and activities;
    - Their ability to maintain effective security and control to prevent diversion, abuse or other illegal conduct;
    - Their compliance with municipality zoning requirements; and
    - A diversity plan that establishes a goal of opportunity and access in employment and contracting;
- Submit a permit application with:
    - Initial non-refundable fee of $5,000;
    - Permit fee of $30,000, which is refundable if the permit is not granted; and
    - Proof of $150,000 in capital.

The applicants who receive a permit, including their employees, must complete a two-hour training course that was developed by the Department, with subject matter including methods to recognize and report unauthorized activity, diversion of medical marijuana for unlawful purposes, falsification of identification cards, proper handling of medical marijuana, and recordkeeping, as required by the Act.

A dispensary shall have either a physician or pharmacist onsite at all times when medical marijuana products are being dispensed to certified patients and approved caregivers. If a dispensary has more than one location, a physician assistant or a certified registered nurse practitioner may be onsite at other locations in lieu of the physician.

The Department released Phase I permit applications for dispensaries on Jan. 17, 2017, and awarded permits to 27 primary dispensaries, on June 29, 2017. Phase II permit applications for dispensaries were released on April 5, 2018, and 23 permits were awarded to successful applicants on Dec. 18, 2018. Currently, 80 dispensary sites have been deemed operational and are actively dispensing medical marijuana products to certified patients and approved caregivers. Two dispensary permittees decided not to pursue their permits and, therefore, those permits will be made available in the future during a Phase III.

Dispensing activities to certified patients and approved caregivers began on Feb. 15, 2018. To date, there have been 12,606,458 products sold during 4,432,579 dispensing events.

Grower/Processor and Dispensary Inspections
The Department employs a team of safety inspection supervisors and safety inspectors who visit all permitted medical marijuana organizations to inspect and ensure that grower/processors and dispensaries are complying with all statutory and regulatory requirements. To date, 476 regulatory inspections have been completed.

These statutory and regulatory requirements were designed to protect patients and the commonwealth's residents. Failure to comply with these requirements may result in a medical marijuana organization receiving one or more of the following penalties: suspension or revocation of operating permit, civil penalties of up to $10,000 for each violation, order of restitution of funds or property unlawfully obtained or retained, or issuance of a cease and desist order of some or all operations.

Laboratories
As part of the regulatory requirements, the Department's Office of Medical Marijuana issued guidance for testing and sampling of medical marijuana by a Department-approved laboratory. A commonwealth approved laboratory collects samples for testing after harvesting the medical marijuana and again after processing it into a medical marijuana product. Approved medical marijuana laboratories test for contaminants and potency to ensure that medical marijuana adheres to its chemical labeling. This is done so that patients receive the correct form and dosage to treat their serious medical conditions.

There are currently six approved laboratories in Pennsylvania. These laboratories are:

- ACT Laboratories of Pennsylvania LLC;
- Keystone State Testing LLC;
- Steep Hill Pennsylvania;
- PCR Labs LLC;
- US Cannalytics LLC; and
- Budding Analytical Laboratory, LLC.

Physicians and Practitioners
A practitioner is a physician who has registered and been approved by the Department to certify a patient as having a serious medical condition that qualifies for treatment with medical marijuana. A physician may register as a practitioner by meeting the following criteria: (1) hold a valid, unexpired, unrevoked, unsuspended Pennsylvania license to practice medicine, (2)

demonstrate to the Department by training or expertise that he or she is qualified in treating serious medical conditions, (3) apply to the Department to be registered with the program, and (4) successfully complete the required four-hour course, established by the Department, regarding the latest scientific research on medical marijuana, including the risks and benefits of medical marijuana.

On July 25, 2017, the Department began registering physicians for the Program. To date, 1,889 physicians have registered, and 1,349 have been approved to certify patients to use medical marijuana product. Also, to date, 306,291 patient certifications have been issued by approved practitioners since the Program began.

As a result of Board recommendations in the final report authorized by the Act, approval by the secretary, and implementation by temporary regulations, the Department will require that patients under 18 years of age be certified by a practitioner who is board eligible/certified in pediatrics or pediatric specialties, neurology with special qualifications in child neurology, child and adolescent psychiatry or adolescent medicine (whether through pediatrics, internal medicine or family practice). Because of the potential effects of medical marijuana use on a developing brain, a practitioner with specialized knowledge relating to minor patients is preferred; however, the number of registered practitioners meeting these qualifications and accepting new patients is, at present, too limited to effectuate this requirement without delaying much needed medicine to a vulnerable population of patients. Therefore, the provision will not become effective until there are a sufficient number of practitioners who meet these qualifications and who are registered with the Department to provide certification services to patients under 18 years of age.

Patients and Caregivers

Before obtaining medical marijuana products at a dispensary, patients must complete the following steps: (1) register online with the Department; (2) be certified as a patient by an approved practitioner who will assess if medical marijuana is appropriate for their serious medical condition and ensure that there are no contraindications with any existing treatments; and (3) purchase a medical marijuana ID card. Once a patient is issued a medical marijuana ID card, the individual can obtain medical marijuana product in accordance with the recommendation on their patient certification.

Certified patients who are age 18 and older and do not require a caregiver will be issued an ID card that they can use at a dispensary to obtain medical marijuana product.

No certified patient under the age of 18 will be issued an ID Card. Minors will have a designated caregiver who may be a parent, legal guardian, or a designee approved by the Department, who will obtain medical marijuana product for them.

Certified patients unable to obtain medical marijuana product independently will not be issued an ID card. Certified patients who are minors, homebound, or individuals who typically rely on a caregiver will have a designated caregiver to obtain their medical marijuana product.

A caregiver must be at least 21 years old, register with the Department, and complete a federal background check (FBI fingerprints). A certified patient can designate up to two caregivers and

an approved caregiver may be designated by up to five certified patients.

On Nov. 1, 2017, the Department opened the patient and caregiver registry. To date, there are 297,317 patients and 29,040 caregivers registered in the Program.

A medical marijuana ID card issued by the Department has a fee of $50 and is valid for the amount of time authorized by an approved practitioner, up to a maximum of one year. Certified patients may qualify for a reduced fee ID card if they participate in any of the following programs: CHIP, Medicaid, PACE/PACENET, SNAP or WIC. To date, 320,445 medical marijuana ID cards have been issued to certified patients and approved caregivers.

Chapter 20

Chapter 20 of the Act, 35 P.S. §§ 10231.2001-2003, allows research to be conducted at Pennsylvania academic institutions. An accredited medical school within the commonwealth that operates or partners with an acute care hospital licensed in Pennsylvania, applies to the Department to be certified as an academic clinical research center (ACRC). Upon certification by the Department, the ACRC must then partner with an approved clinical registrant (CR). An approved clinical registrant is defined as an entity that applied for, and received, the approval of the Department to: (1) hold a permit as both a grower/processor and a dispensary and (2) enter into a research contract with a certified ACRC.

Chapter 20 will enhance efforts to determine how medical marijuana can be best used to effectively treat various serious medical conditions.

Applications to become an approved ACRC were made available on April 5, 2018. The Department published the list of approved ACRCs in the Pennsylvania Bulletin on May 19, 2018. On May 14, 2018, Governor Tom Wolf announced eight universities that are approved, effective May 19, 2018, ACRCs in Pennsylvania. The eight universities include:

- Drexel University College of Medicine, Philadelphia;
- Lewis Katz School of Medicine at Temple University, Philadelphia;
- Penn State College of Medicine, Hershey;
- Sidney Kimmel Medical College at Thomas Jefferson University, Philadelphia;
- Perelman School of Medicine at the University of Pennsylvania, Philadelphia;
- University of Pittsburgh School of Medicine, Pittsburgh;
- Lake Erie College of Osteopathic Medicine (LECOM), Erie; and
- Philadelphia College of Osteopathic Medicine, Philadelphia.

The Department released Phase I applications to become approved as a CR on May 24, 2018. No CRs were approved during Phase I. The Department released Phase II applications to become approved as a CR on March 7, 2019, and three CRs were awarded on June 19, 2019. The Department released Phase III applications to become approved as a CR on Sept. 5, 2019, and four CRs were awarded on Feb. 20, 2020. The Department released Phase IV applications to become approved as a CR on Feb. 27, 2020. Applications were due to be mailed to the Department and postmarked no later than March 26, 2020. One ACRC is available to be partnered with an approved CR for Phase IV.

Two approved CRs held dispensary permits issued under Chapter 6 of the Act, which will be converted under Chapter 20 and will, therefore, be made available in the future during a Phase III.

The Medical Marijuana Advisory Board

Section 1201 of the Act, 35 P.S. § 10231.1201 established the Board. Section 1201(j) states that the Board has the following ongoing duties:

> (1) To examine and analyze the statutory and regulatory law relating to medical marijuana within this Commonwealth.
> (2) To examine and analyze the law and events in other states and the nation with respect to medical marijuana.
> (3) To accept and review written comments from individuals and organizations about medical marijuana.

The Board continues to meet on a quarterly basis in furtherance of these duties. Schedule dates and locations of these meeting can be found in the PA Bulletin.

Temporary Regulations

The Department began promulgating temporary regulations governing operation of the Program on Oct. 29, 2016, and added chapters on various dates through Dec. 2018. The bulk of the temporary regulations were initially set to expire on May 12, 2020. However, pursuant to Act 10 of 2020, the expiration date for the entirety of the temporary regulations has been extended until Nov. 20, 2021, or upon the publication of the final-form regulations by the Department, whichever is sooner.

II. Section 1105(b)(2)

An assessment of the benefits and risks to patients using medical marijuana under the Act, including adverse events.

The benefits to patients are evidenced by their continuing to visit permitted dispensaries to purchase medical marijuana products to treat their serious medical conditions. To date, there have been 12,606,458 products sold during 4,432,579 dispensing events.

The implementation of Chapter 20 of the Act, 35 P.S. §§ 10231.2001-2003, which allows research to be conducted at Pennsylvania academic institutions, will enhance efforts to determine how medical marijuana can be best used to effectively treat various serious medical conditions. Both benefits and risks to patients using medical marijuana under the Act will be realized once Chapter 20 of the Act is fully implemented and the research studies conclude.

A research summit was held in July 2019 to kick off the beginning of the implementation of Chapter 20. All approved ACRCs and three of the approved CRs were in attendance. The ACRCs discussed their planned research projects, and all in attendance had a robust discussion about identifying the benefits and risks to patients using medical marijuana under the Act.

To date, the Department has approved seven of the eight available CRs. The approved CRs are in the beginning stages of their operational status. Research studies have begun at one approved CR.

The Department also engages a physician workgroup, led by the Secretary of Health, that meets on a quarterly basis. This physician workgroup has representation from many areas of medicine who see patients with approved serious medical conditions. The physician workgroup provides their medical expertise and advice while guiding the Medical Marijuana Program on the implementation of the program.

As required by § 1161.38(a), since the last report, the Department has received 26 reports of adverse events from medical marijuana products dispensed from permitted dispensaries. None of these adverse events resulted in a product recall, as all were related to patient-specific issues.

III. Section 1105(b)(3)

Recommendations for amendments to the Act for reasons of patient safety or to aid the general welfare of the citizens of this Commonwealth.

The Department has the following recommendations for amendments to the Act for reasons of patient safety or to aid the general welfare of the citizens of this Commonwealth:

1. Remove 35 P.S. § 10231.2109(a). Applicability
   (a) Dispensaries.--The provisions of this act with respect to dispensaries shall not apply beginning 1,095 days from the effective date of an amendment to the Controlled Substances Act (Public Law 91-513, 84 Stat. 1236) removing marijuana from Schedule I of the Controlled Substances Act, allowing Pennsylvania's permitted medical marijuana dispensaries to remain open.

2. Re-empower the Board with all duties initially provided to them in issuing the final report under 35 P.S. §§ 10231.1201(j) and 10231.1202, and permit the Board to issue annual reports in order to make changes such as adding or reducing the number of grower/processor or dispensary permits. The Board's annual reports could be approved by the Secretary and implemented through final omitted regulation.

3. Change definition of caregiver to include an entity by changing "individual" to "person," which will allow long term care facilities, nursing homes, etc. to be approved as caregivers. Current definitions are:
   - "Caregiver." The individual designated by a patient or, if the patient is under 18 years of age, an individual under section 506(2), to deliver medical marijuana. 35 P.S. § 10231.103
   - "Person." A natural person, corporation, foundation, organization, business trust, estate, limited liability company, licensed corporation, trust, partnership, limited liability partnership, association or other form of legal business entity.

4. Revise the first sentence of 35 P.S. § 10231.502(b) to read "A caregiver not previously approved as a caregiver under this section shall submit fingerprints for the purpose of obtaining criminal history record checks, and the Pennsylvania State Police or its authorized agent shall submit the fingerprints to the Federal Bureau of Investigation for the purpose of verifying the identity of the applicant and obtaining a current record of any criminal arrests and convictions." This would modify the background check requirement for the caregiver renewal process, allowing for expedited access for those caregivers previously approved within the Program. The Department will require state background checks under 35 P.S. § 10231.502(a)(3) for caregiver renewals.

5. Further revise 35 P.S. § 10231.502(b) to include the following language: "The information provided under this subsection shall not be limited by 18 Pa.C.S. § 9121(b)(2)," which would allow the Department to receive background checks in electronic form, expediting the caregiver approval process to allow for faster patient access for those requiring the assistance of a caregiver.

6. Revise 35 P.S. § 10231.602(a)(4) to include the following language: "The information provided under this subsection shall not be limited by 18 Pa.C.S. § 9121(b)(2)," which would allow the Department to receive background checks in electronic form, expediting the affiliation process for medical marijuana organization principals, financial backers, operators, and employees.

With the Governor's authorization in accordance with the Proclamation of Disaster Emergency (Proclamation) issued on March 6, 2020, operation of the following statutory provisions is temporarily suspended in order to respond to the COVID-19 emergency. Based on the successful operation of the Program under these temporary suspensions, the Department would like to request that the following statutory provisions be removed permanently:

1. The requirement in 35 P.S. § 10231.802(a)(1) that dispensing must occur in an indoor enclosed facility. The Department of Health (DOH) will allow dispensary employees to go out to the vehicle, retrieve their ID, go back inside and dispense product in accordance with regulatory dispensing requirements and then deliver to the vehicle. In all cases, the vehicle must be located on "site" (which is defined in 28 Pa. Code § 1161.23(a) as the total area contained within the facility's property line boundaries).

2. The limitation that only five patients may be assigned to one caregiver, which would provide more caregivers to patients in need. 35 P.S. § 10231.303(b)(4)

3. The phrase "in-person" from the definition of "continuing care" in 35 P.S. §10231.103 to allow for remote consultations for certifications. In all cases, patient records must be reviewed and evaluated.

4. The 30-day supply limit found in 35 P.S. § 10231.405d. DOH will require approved practitioners to notate on the patient's certification authorization to dispense a 90-day supply.

2021
Recreational Marijuana Supply and Demand Legislative Report

Oregon Liquor Control Commission

February 1, 2021

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Executive Summary

Pursuant to ORS 475B.548, the Oregon Liquor Control Commission (OLCC) is required by law to report to the Legislature the amount of marijuana produced by Recreational Producers and bought by consumers in Oregon from Recreational Retailers. The 2021 edition of the biennial Supply & Demand Report also includes an analysis of Oregon Medical Marijuana Program (OMMP) demand based on data entered into the Cannabis Tracking System by larger medical grow sites. This report does not analyze personal home grow marijuana nor the illicit market.

This report finds that since the study period of the 2019 Supply & Demand Report, production has increased by 78% while the amount of cannabis sold increased by 150%. This comparatively larger increase in consumption has helped boost demand from 50% of total annual supply to 65%.

The Oregon cannabis market has achieved a more sustainable price level for Producers while consumer prices have remained low. However, aggregate supply continues to exceed annual demand, despite a historic level of sales in Oregon in the months following COVID-19. While the supply of usable marijuana has tightened, the supply of cannabis extracts and concentrates, which are comparatively shelf-stable and have been buoyed by cheap input prices, have remained abundant.

The growth trajectory of cannabis demand in 2021 and beyond is highly uncertain. If not for COVID, growth in demand in 2020 would have almost certainly been flatter. If consumers return to the patterns of consumption they exhibited pre-COVID, demand will almost certainly decline or flatten in 2021. If, however, at least some aspect of COVID-era consumption persists as a "new normal," demand will likely remain stable or increase. In either case, demand in 2021 is unlikely to exhibit the same levels of growth that 2020 saw.

Supply, on the other hand, will almost certainly grow at higher rates in 2021. Although Senate Bill 218 in the 2019 Legislative Session established a moratorium on Producer licenses, the law only affects applications submitted after June 15, 2018; the OLCC is still processing the final batch of applications received by that deadline. The number of issued Producer licenses increased by only 30 between December 2019 and December 2020 – but due to efforts by the OLCC to clear its application backlog, this number may grow by as much as 100 before April 2021. The amount of cannabis harvested in 2020 increased by 37% compared to 2019, and a growth in Producer licenses will continue this trend of increasing supply.

With the prospect of increasing supply, flattening growth in demand, and a large pre-existing baseline of extract/concentrate inventory, it is unclear how long the market's healthy balance will continue to play out. If demand flattens or declines at the same time that supply continues to rise, competition among Producers may drive wholesale prices back into the price spiral seen in late 2017.

Oregon cannabis licensees have proven themselves adaptable and resilient, whether in the face of price shocks, historic wildfires, or a once-in-a-century pandemic. Regardless of what happens over the next two years, the current state of the OLCC cannabis market is much improved over early 2019. And as the last two years have shown, licensees are likely to adapt to any challenges that arise.

To obtain a paper copy of this report contact the Oregon Liquor Control Commission's Recreational Marijuana program at marijuana@oregon.gov. Published online at https://marijuana.oregon.gov under the "Legislative Reports" header.

Introduction

Pursuant to ORS 475B.548, by February 1 of each odd-numbered year the Oregon Liquor Control Commission (OLCC), which licenses and regulates production and sales of recreational marijuana in Oregon, must submit a report to the Legislative Assembly on the following:

> *the approximate amount of marijuana produced by marijuana producers that hold a license issued under ORS 475B.070 and the approximate amount of marijuana items sold by marijuana retailers that hold a license issued under ORS 475B.105, and whether the supply of marijuana in this state is commensurate with the demand for marijuana items in this state.*

At the time of last biennium's Recreational Marijuana Supply & Demand report (submitted to the Legislature on January 31, 2019), [1] OLCC licensees faced daunting challenges: wholesale prices were at all-time lows, annual supply was double annual demand, the market contained a significant amount of inventory stock that had accumulated year-over-year, and pending applications for additional Producer licenses would have represented a further doubling of annual harvest yield (had those licenses been issued).

In the intervening two years, the market conditions for those operators that have weathered the challenges are significantly brighter. COVID-19 certainly brought its own set of challenges, but substantial growth in consumer demand in spring and summer within the regulated OLCC cannabis market resulted in $1.1 billion in total sales during 2020. This rise in demand, both due to COVID-19 and routine year-over-year increases since the Oregon cannabis market's inception, has contributed to the wholesale price of usable marijuana flower sold at retail to recover to levels last seen in late 2017. The recovery of wholesale prices (for usable marijuana) has occurred at the same time that retail prices for consumers have remained at or below $5.50 per gram for nearly every month since July 2018.

However, much of the future of supply and demand in the OLCC marketplace remains uncertain. Demand spiked in the spring and summer following Oregon's "stay home, stay safe" orders amid an influx of federal relief money to consumers via increased unemployment insurance payments and federal stimulus checks. If this rate of growth in demand can be sustained, even partially, then businesses will likely continue to experience this more stable market environment. If, however, this level of growth in demand proves unsustainable, market conditions for OLCC licensees may deteriorate. Moreover, OLCC's processing of the backlog of pending applications has reached those applications submitted in June 2018; as of January 8, 2021, 117 "pre-moratorium" producer applications for new licenses were assigned to OLCC license investigators.[2] Based on proposed square footage, these applications would increase the total recreational productive capacity by nearly 11%.

In short, the OLCC cannabis marketplace has a significantly brighter, albeit unpredictable, outlook for OLCC licensees in January 2021 than in January 2019 while continuing to offer the illicit market steep competition.

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[1] *Oregon Liquor Control Commission*. "2019 Recreational Marijuana Supply and Demand Legislative Report." January 31, 2019. https://www.oregon.gov/olcc/marijuana/Documents/Bulletins/2019%20Supply%20and%20Demand%20Legislative%20Report%20FINAL%20for%20Publication(PDFA).pdf.

[2] This reflects applications pending for new licenses; it excludes Change of Ownership applications.

Results and Methods

This section of the report provides a brief overview of the methodology and primary findings of the analysis. Later sections of the report evaluate supply and demand conditions, as well as the characteristics of the current inventory stock. Based on data recorded in the Cannabis Tracking System by Oregon Medical Marijuana Program growers since June 2018, this report also includes an appendix that analyzes medical marijuana supply and demand.

Using data on sales and harvests in the Oregon Cannabis Tracking System, the OLCC estimates that between January and December 2020, OLCC Producers harvested 7.66 million pounds of wet cannabis, and 65% of that supply was purchased by consumers. This is a significant increase from the prior report's estimate demand being 50% of supply over the July 2018 to June 2019 time period. However, it is a more modest rise in the demand-to-supply ratio than may have been expected by both the degree of recovery of usable marijuana wholesale prices and the size of the increase in sales dollars in 2020.

As discussed in greater depth below, this topline finding illustrates the paradox of the Oregon cannabis market. On the one hand, supply of usable marijuana that will be sold as usable marijuana has shifted towards supply/demand equilibrium, and in fact during the summer months that supply becomes comparatively tight. On the other hand, *overall* supply of harvested marijuana is abundant, with a large portion of the harvest functioning as low-cost input material for extracts and concentrates. The extract and concentrate demand segment has seen strong growth, but the growth in extract/concentrate supply continues to outpace it.

The short answer to why the OLCC cannabis market moved closer to equilibrium compared to the prior study period (July 2017 to June 2018) is that demand witnessed unprecedented increases – due first to declining retail prices that boosted demand, then a surge in purchases caused by COVID-19 – while supply has increased more modestly. Compared to the prior study period, the amount of THC sold in 2020 increased by 150%, while the wet weight harvested grew by only 78%. These distinct growth paths have been a boon in helping the market self-correct and come more into line with consumer demand.

Method of Calculating Supply and Demand

This report utilizes the same supply and demand estimation methodology as the 2019 Supply and Demand Report. For a more complete description of the method used, see the 2019 report's Technical Appendix.

As a brief overview, this report's method calculates the aggregate milligrams of THC for all cannabis items sold in the OLCC system. This amount of THC is then converted to a "wet weight equivalent" of the amount of cannabis that would have had to have been harvested in order to supply this amount of THC.

The calculated wet weight equivalent of demand is compared to the *actual* wet weight that was harvested by OLCC producers within the same period; this comparison provides the degree to which the OLCC market is in equilibrium between supply and demand.

This report is descriptive, not predictive. It is a point-in-time estimate based on behavior already exhibited by suppliers (OLCC licensees) and demanders (consumers). Shifts in these behaviors – for example, consumers shifting towards one product type and away from another – can result in a different supply/demand degree of equilibrium, even with the same amount of wet weight harvested.

Figure 1: 2019 Supply and Demand Report Distribution of Wet Weight Equivalent of Demand Results

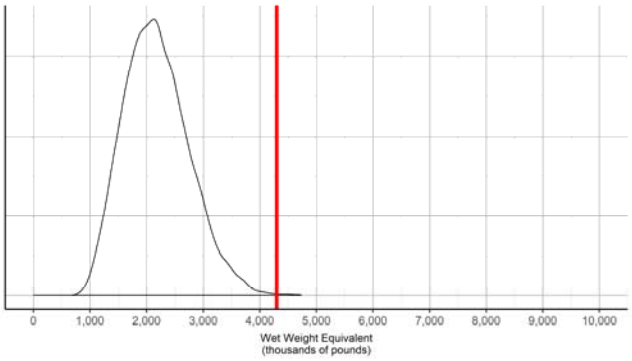
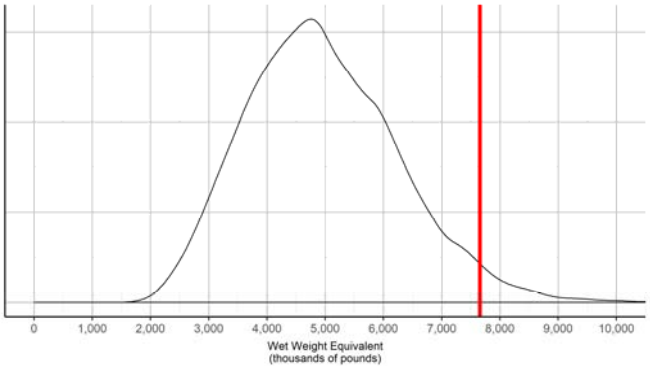


Figure 2: 2021 Supply and Demand Report Distribution of Wet Weight Equivalent of Demand Results



** Red line represents actual wet weight harvest amount in the study period*

This topline improvement in equilibrium between the two reports (demand as 65% of supply in the 2021 report versus 50% of supply in the 2019 report) may seem understated compared to other signs of market health. For example, wholesale prices for usable marijuana sold by Producers to Retailers increased by 32% between June 2018 and December 2020 (from $1,129 to $1,499), and sales in 2020 were nearly 40% higher than in 2019. Why isn't the ratio of demand to supply even higher, given the unprecedented surge in cannabis sales in 2020?

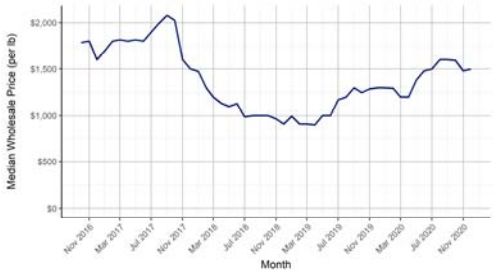
First and foremost, most discussions of demand focus exclusively on *dollars* sold, rather than quantity sold – and when both prices and quantities are increasing, there is an additive effect on the amount of revenue. For example, between March 2019 and March 2020 the quantity of THC sold increased by 18%, but total dollars of sales surged by 38%. Because retail prices rose between June 2018 and December 2020, the increase in sales in terms of *dollars* overstates the growth in quantity demanded.

Second, and more importantly, the method used in this report standardizes *all* marijuana items sold to a single unit (milligrams of THC) and compares that to a single equivalent unit (wet weight of raw cannabis harvested; see sidebar on page 3 for more details). In other words, this is a "whole basket" approach that looks at the market *overall* and determines total market equilibrium for the full year. This method does not speak to the degree of equilibrium of specific product categories (e.g. usable marijuana) versus others (e.g. cannabinoid products) nor to degrees of "intrayear" equilibrium (e.g. summer vs. fall). The cannabis market, like other markets, is self-correcting (to a degree); consumers substitute across product classes based on availability and prices. Substitution also exists at the supply level, with OLCC Producers and Wholesalers choosing "channels" to sell into (retail versus processing) based on current and anticipated prices.

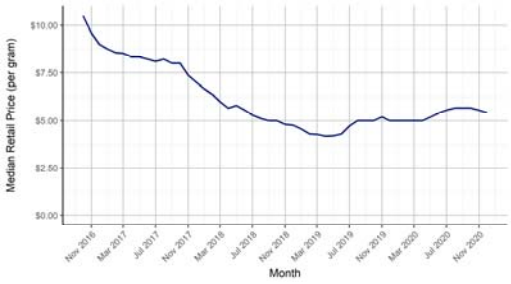
This observation is critical in order to understand why demand in the OLCC cannabis market is "only" 65% of supply: the supply of usable marijuana, which is comparatively perishable, has grown significantly tighter (particularly during certain portions of the year) at the same time that the supply of cannabis extracts and concentrates, which are comparatively shelf-stable and have been buoyed by cheap input prices, have remained abundant.

This "tale of two product types" is illustrated in Figures 3 through and 6: Extract/Concentrate Wholesale and Retail Price Trends. Both wholesale and retail prices have increased for usable marijuana, with price bumps occurring in late spring when usable marijuana supply traditionally tightens. Extracts and concentrates, on the other hand, stand in stark contrast, with wholesale and retail prices remaining remarkably stable since late 2018. Later sections of this report further analyze this dichotomy of usable marijuana and extract/concentrate supply.

Figures 3 and 4: Usable Marijuana Wholesale and Retail Price Trends



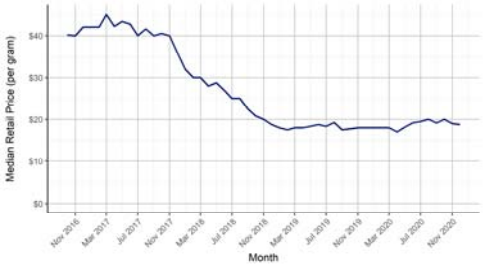
Wholesale price per pound, usable marijuana



Retail price per gram, usable marijuana

Figures 5 and 6: Extract/Concentrate Wholesale and Retail Price Trends

Wholesale price per ounce, extracts and concentrates



Retail price per gram, extracts and concentrates

Trends in Demand

Front and center in any discussion of cannabis demand is the effect of COVID-19 on consumer behavior. Oregon was far from the only state to experience an increase in demand for cannabis products,[3] and cannabis was far from the only market to experience a surge in demand.[4] Consumer behaviors shifted during 2020, and demand for cannabis within the OLCC market could have been driven by any one of three (non-mutually exclusive) factors: increases in demand from the pre-existing base of consumers, new consumers trying cannabis for the first time, or consumers from other markets (medical or illicit)

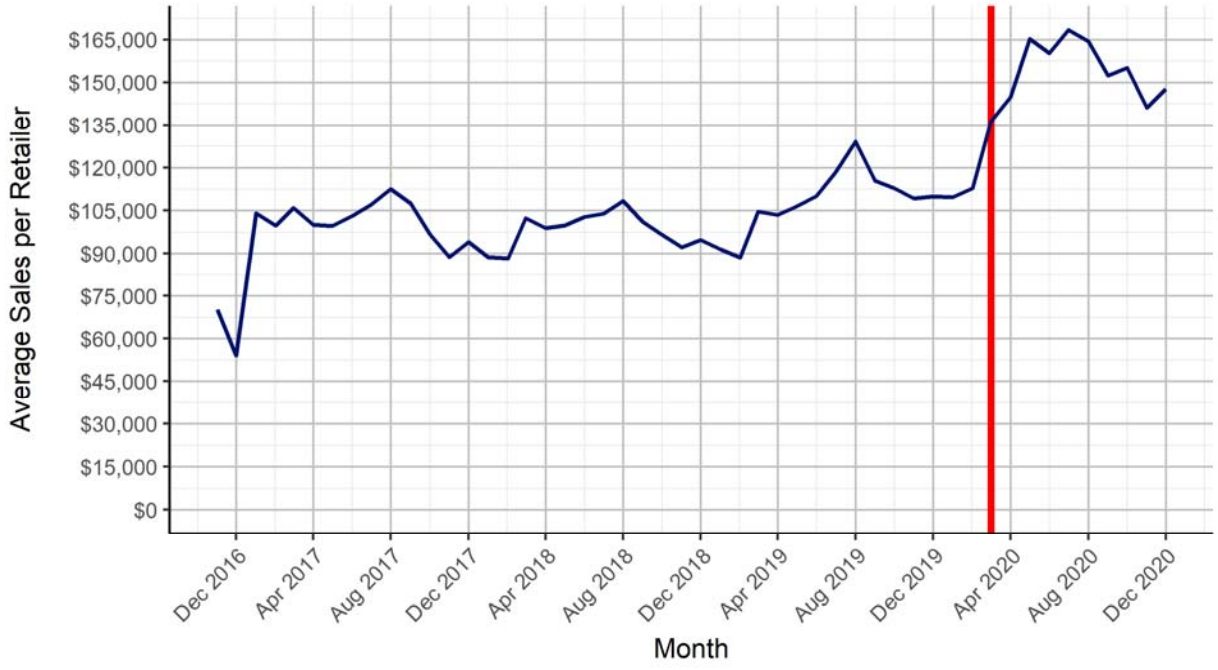
[3] Barcott, Bruce. "Marijuana sales data reveal Americans bought 67% more weed to survive 2020." *Leafly*. December 22, 2020. https://www.leafly.com/news/industry/marijuana-sales-data-americans-bought-more-weed-to-survive-2020.

[4] Narishkin, Abby; Steve Cameron; and Victoria Barranco. "Why toilet-paper demand spiked 845%, and how companies kept up with it." *Business Insider*. September 28, 2020. https://www.businessinsider.com/why-toilet-paper-demand-spiked-845-how-companies-kept-up-2020-5.

transitioning to OLCC retailers in order to minimize prolonged contact with other individuals. Although each particular factor's unique contribution to overall demand is unknown, as is how much this increase in demand will persist into future years, the overall effect on demand in 2020 is clear: cannabis sales increased 40% year-over-year and total sales broke the $1 billion mark for the first time.

This increase in demand can be illustrated in two ways: dollars sold and quantities sold. Since January 2017 (the month after "Early Start Sales" by medical dispensaries to recreational consumers ceased), monthly sales per OLCC retailer have been extremely consistent: mean monthly sales per retailer in February 2020 were $112,000, compared to $104,000 in January 2017.[5] In March 2020, however, the average sales per retailer increased by 21% to $136,000 – and grew another 24% when it peaked in July at nearly $168,500 (see Figure 7).

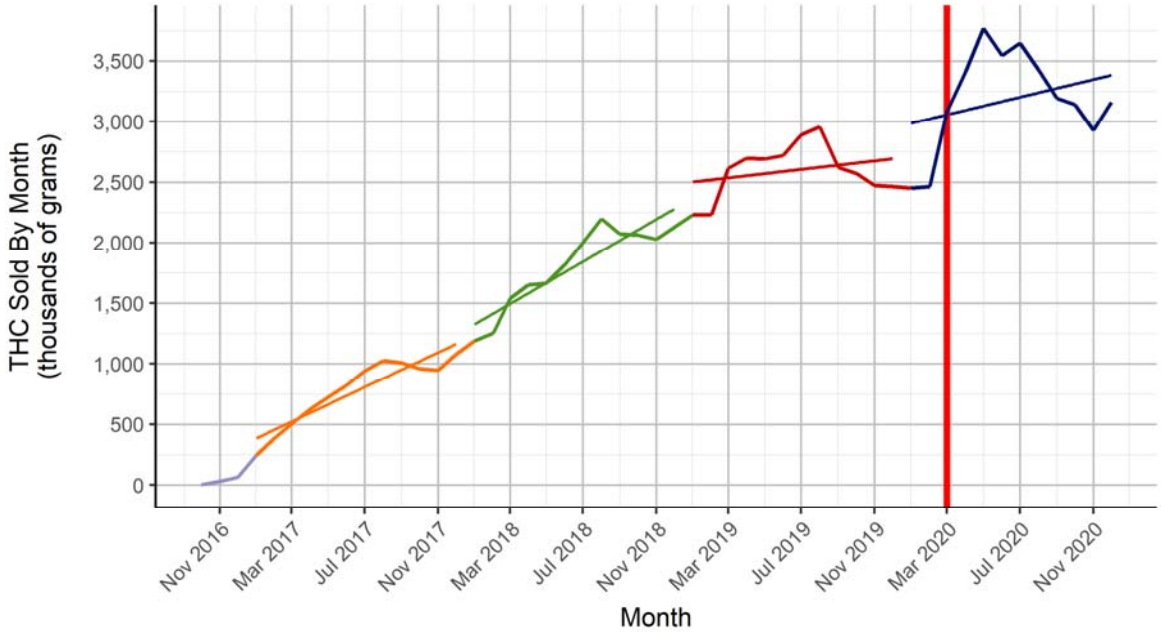
Figure 7: Average (mean) monthly sales per licensed retailer



In terms of quantity demanded, the trend line of THC sold annually had started to flatten in 2019 and the beginning of 2020 – until it ballooned by 25% between February and March 2020. Similar to dollars sold, the amount of THC purchased peaked in the summer before decreasing to a level slightly above the pre-COVID trend (see Figure 8).

[5] Total sales have increased 128% over that same time period. The number of retail licenses with recorded sales also grew by 112% between January 2017 and February 2020, from 293 to 619.

Figure 8: Quantity Demanded, milligrams of THC



The long-term demand trend since mid-2018 has been one of strong growth. However, in the absence of COVID's influence on consumer behavior, it is unclear what demand would have been – or what it will become when the pandemic subsides. It is undeniable that COVID caused a large demand spike between March and July. What is less clear is how much of the demand in the second-half of 2020 was COVID-induced versus a "new normal." The answer to that question will in all likelihood determine whether the Oregon cannabis market over the next year moves towards or away from equilibrium.

Trends in Supply

At the same time that consumer demand surged in 2020, cannabis supply has also continued to increase – particularly levels of concentrate and extract inventory. This illustrates the central paradox of the Oregon cannabis market: price signals for usable marijuana continue to exhibit signs of health, but supplier behavior and decision-making is resulting in a more than adequate supply of extracts and concentrates.

Gross Harvest Yields

The 2019 Supply and Demand report relied on harvest and sales information between July 2017 and June 2018. With the benefit of hindsight, it is clear that by selecting that time range, the 2019 report relied on overly lagged data and missed important harvest trends occurring in late 2018. By the date that the 2019 report was published, cannabis supply had already begun to temper and self-correct: despite OLCC Producer licenses increasing by 37% between October 1, 2017, and October 1, 2018, harvest yields in October 2018 were only 2.6% higher than in October 2017. Because of Oregon's preponderance of outdoor production and the majority of the annual harvest occurring in October (see Figure 9), that modest increase in October 2018 harvests meant that the total annual harvest only rose by 8.6% (see Figure 10). But in recent years as wholesale prices have begun to rise, Producers have

responded to these market signals by increasing production. As seen in both Figure 10 and Figure 11, harvest yields increased by 37% in 2020 compared to 2019, and the year-over-year increase in the amount of wet pounds harvested is now on par with the growth in retail sales.

Figure 9: Quantity Harvested by Year and Month

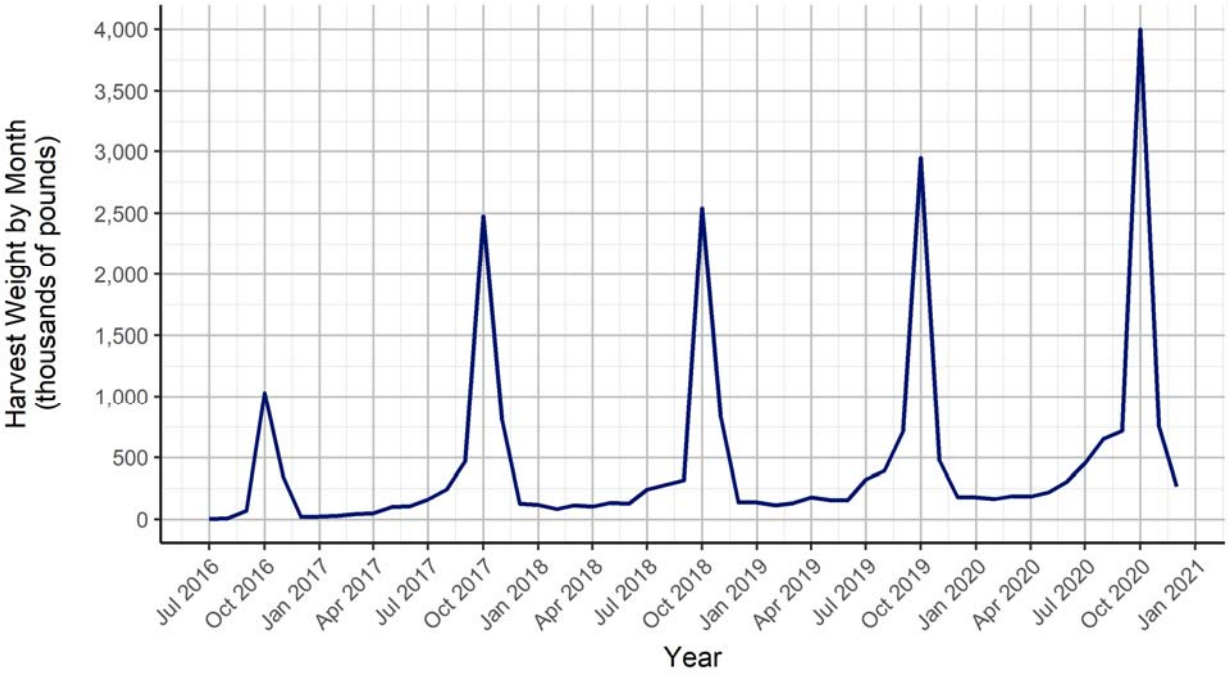


Figure 10: Total Annual Harvest, by Year

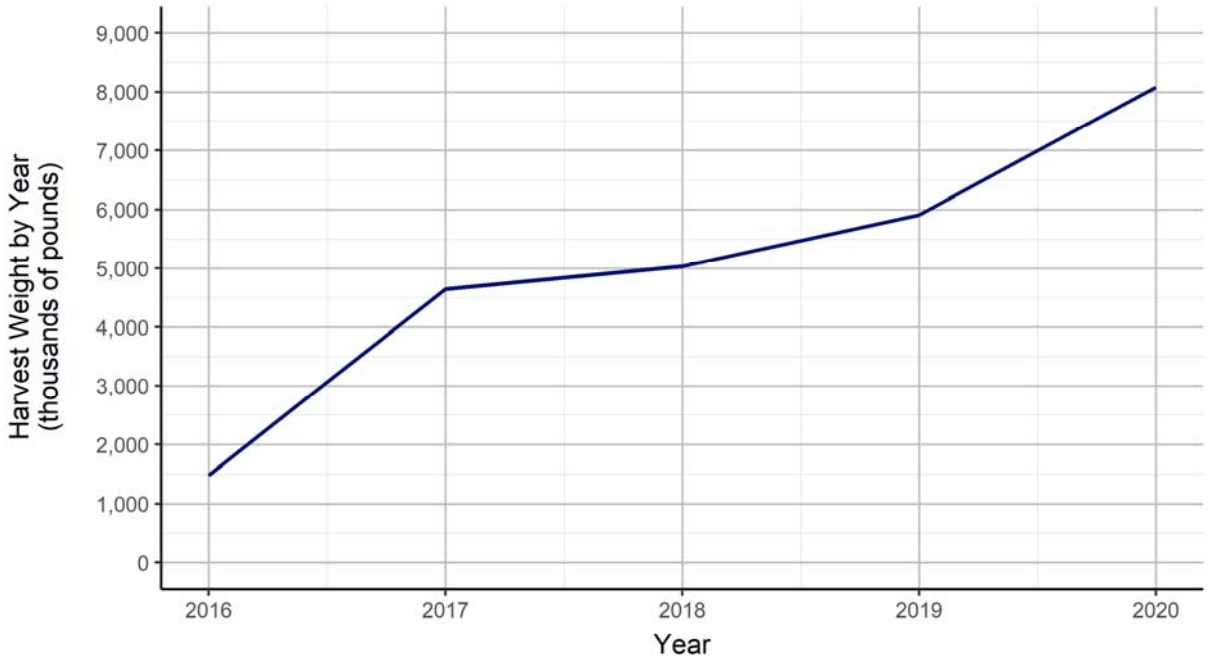
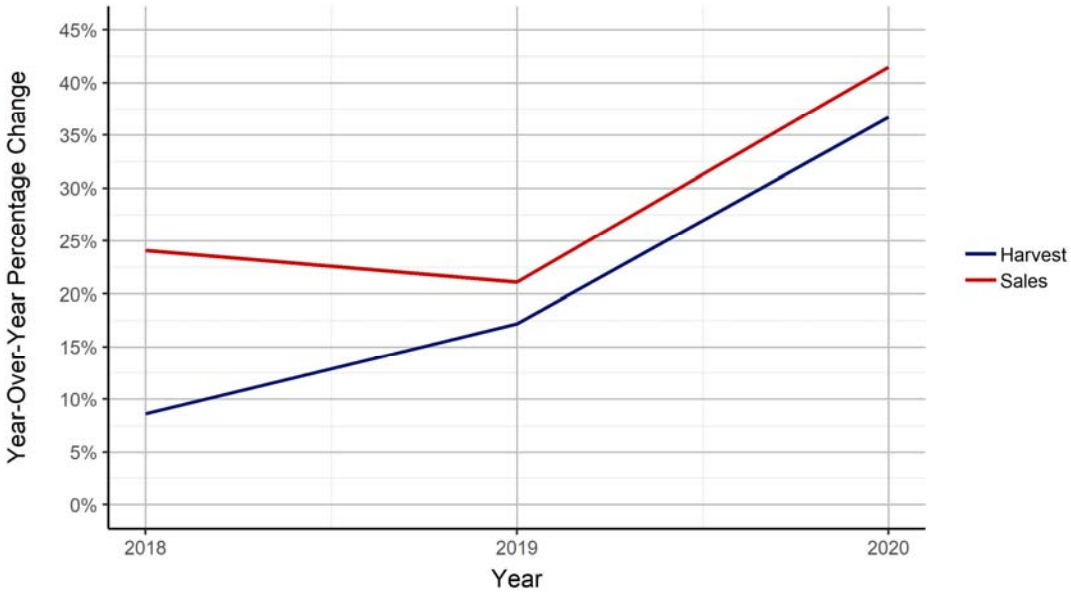


Figure 11: Year-Over-Year Growth in Sales and Harvests

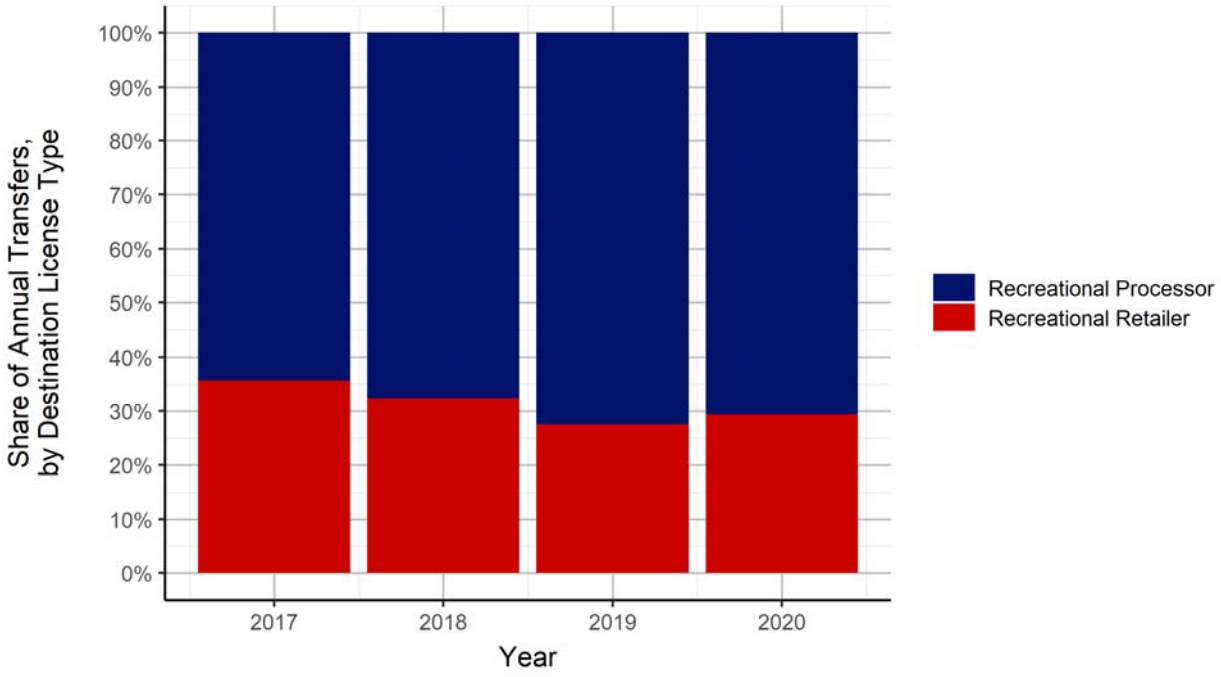


Transfers and Market Channels

The fact that the majority of Oregon's annual cannabis yield occurs in a single month (October) introduces significant path dependency of supply to the Oregon marketplace. Outdoor Producers are making decisions for the entire year in a short time window, at the same time that all other outdoor Producers are making the same calculations with the same available information. Once cannabis is sent to a Processor and converted to extract or concentrate, that supply is "locked in," regardless of shifts in future supply or demand. At that point it can either be sold as extract/concentrate or converted into cannabinoid products, but it cannot be "unconverted" back to usable marijuana. This results in seasonal shortages of usable marijuana (evidenced by the "price bumps" in Figures 3 and 4: Usable Marijuana Wholesale and Retail Price Trends), when outdoor usable marijuana (particularly flower) is at a premium and as consumer demand exhibits seasonal spikes in demand for usable marijuana.

The supplier trend of transferring a greater share of usable marijuana to Processors for conversion into secondary and tertiary products accelerated in 2018 and 2019. Although in 2020 a marginally larger share of usable marijuana has been sent to Retailers than in 2019, likely in response to rising wholesale prices, the rate of usable marijuana sold to Processors is still higher than in 2018.

Figure 12: Share of transfers by destination and year



These transfers of usable marijuana to Processors exhibit an interesting phenomenon. The months with the largest amount of usable marijuana being sent to Processors are the five months that span the period immediately prior to the outdoor harvest season through the month immediately thereafter. As seen in Figure 13, transfers to processors begin to rise in July, peak in October, decline, and then largely plateau for the remainder of the year. The average age[6] of product being transferred helps illuminate the underlying factors driving these volume trends: the age of the product being transferred is at its highest just prior to the harvest season, decreases precipitously in October through December, then begins to increase as the year progresses. In other words, Wholesalers and outdoor Producers liquidate inventory in the late summer to make room for October's yields; lock in deals with Processors in the fall with the newly harvested product; then sell more incrementally throughout the remainder of the year, likely as product proves unable to gain shelf space at retail.

The trend of transfers of usable marijuana to Retailers displays some similarities in regards to the general age trend of product being transferred, but there are also notable differences compared to the transfers to Processors. In terms of similarities, the average age of product being transferred is at its lowest immediately following the outdoor harvest season, and increases throughout the winter and summer. However, one major difference is that, except for the month of October, the usable marijuana being transferred to Retailers is on average younger than the usable marijuana being transferred to Processors. Additionally, the amount being transferred per month to Retailers has remained remarkably stable since March 2018 (with the notable exception of an increase in transfers in line with rising COVID-induced demand).

[6] As measured by the most recent harvest date of the co-mingled product being sent.

Figure 13: Quantity Shipped, by Month and Destination License Type

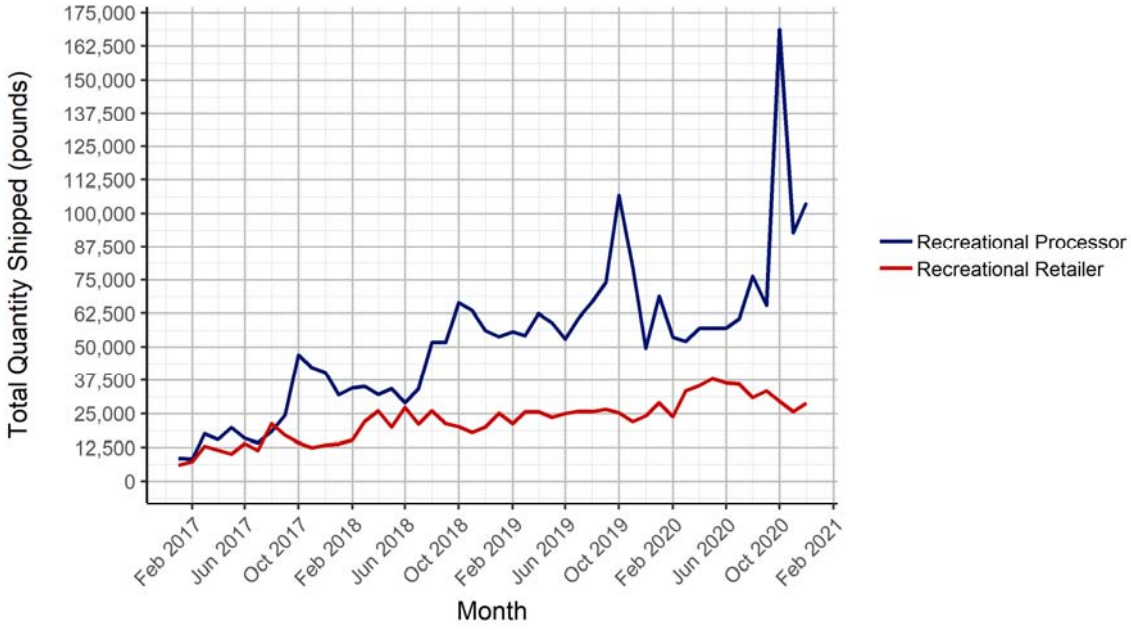
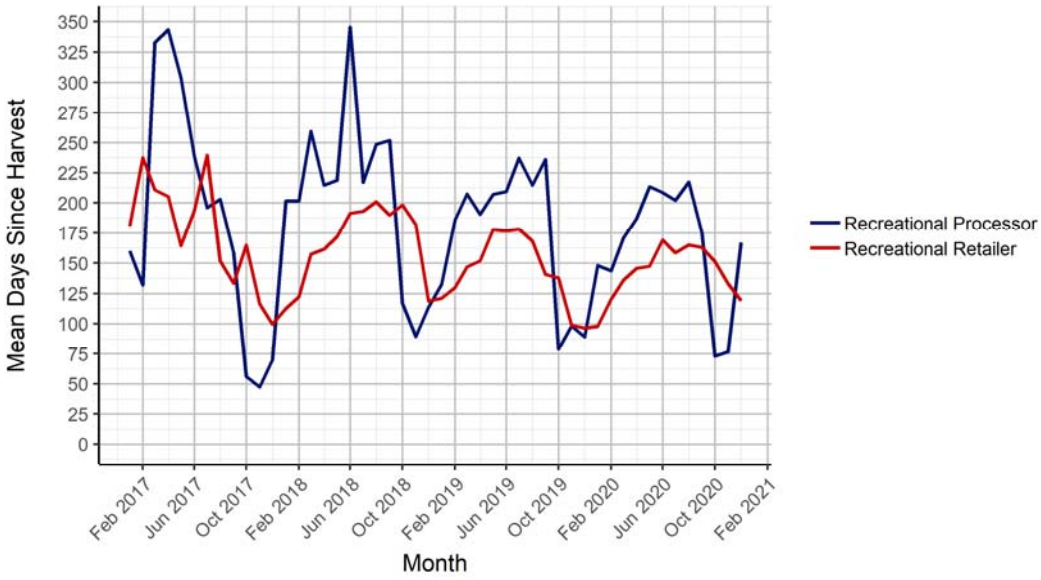


Figure 14: Days since Harvest for Product Shipped, by Destination License Type



The story of annual supply in the OLCC cannabis market is one of Processors benefitting from a seasonal glut of usable marijuana and the correspondingly low input prices, and of Processors remaining an outlet for usable marijuana that does not or cannot end up at Retailers. However, as will be discussed in the next section, given the uncertainty of year-over-year growth in demand and the sizeable existing inventory of extracts and concentrates, it is unclear the degree to which the market can continue to sustain this trend.

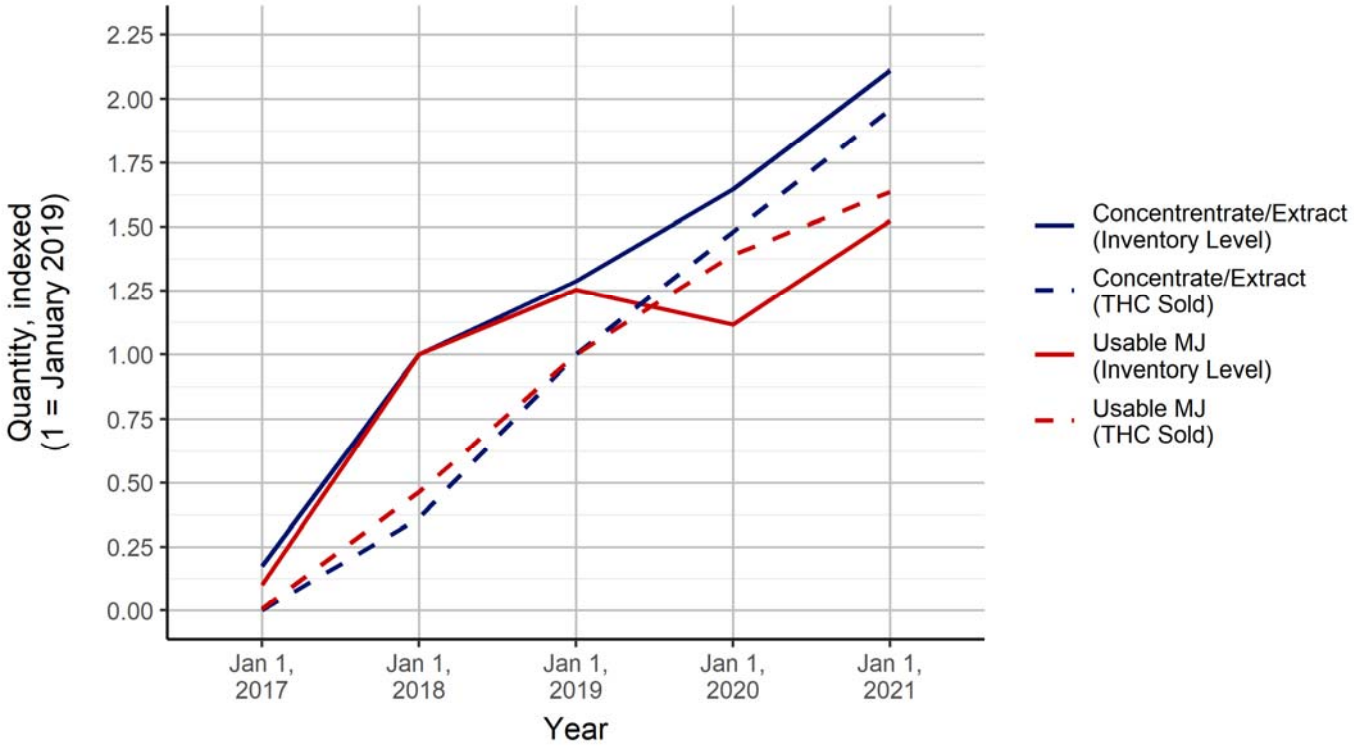
Characteristics of Existing Inventory Stock

Separate from the question of *annual flow* of supply is the question of the *current stock* of inventory. The current stock is the accumulation of the inventory that has been produced in the system but has not yet flowed out of the system (via waste, sales, or further processing).

The primary concern raised in the 2019 Supply and Demand report was not simply the one-year gap between supply and demand, but that the market effect of the single-year disequilibrium was magnified by the accumulation of continuous disequilibrium – an ever-increasing stock of inventory.

The issue of accumulating surplus for usable marijuana is less present in 2021 than 2019. Usable marijuana inventory levels are higher than in January 2019, but have seen a more gradual increase than the corresponding *sales* of usable marijuana. This is in large part due to a year-over-year decline in inventory between January 2019 and January 2020. Extracts and concentrates, however, continue to show steady growth in inventory stock. While this growth in inventory has been on trend with a rise in extract/concentrate sales, a flattening of the demand growth curve would leave operators with a disproportionately high stock on hand (see Figure 15).

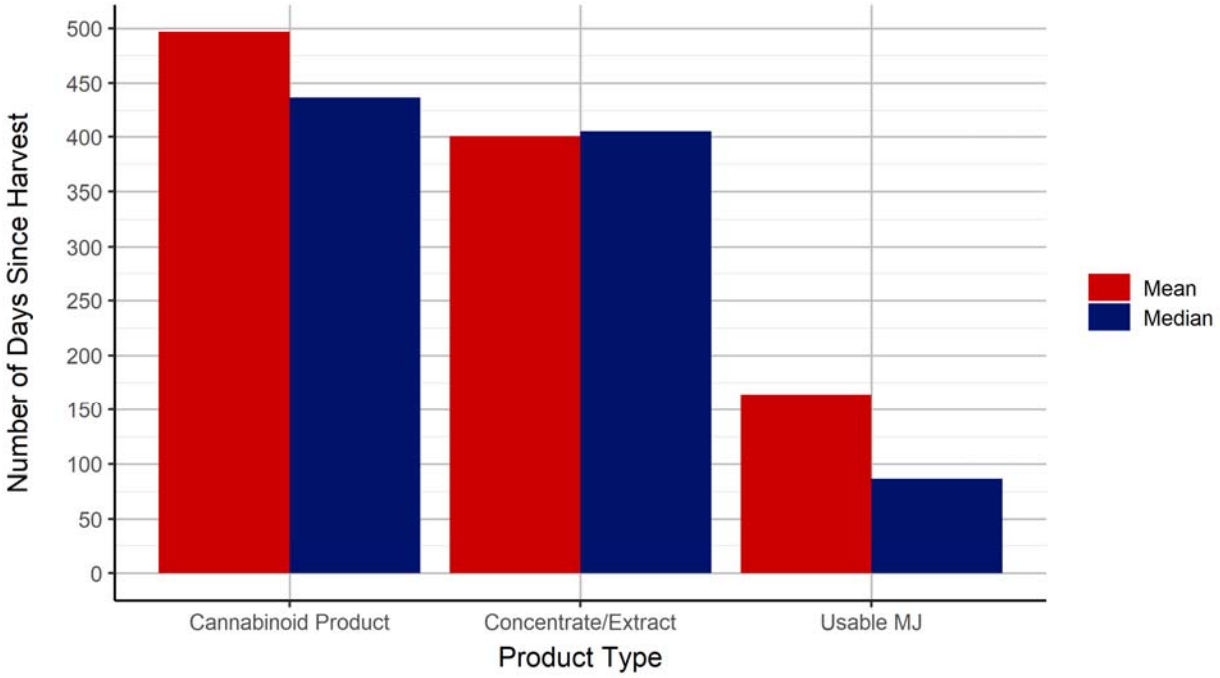
Figure 15: Quantity of THC Sold (for preceding 12 months) and Current Stock of Inventory, as of January 1, by Year and Product Type



This difference is also illustrated by the average age of the existing inventory by product type. Whereas usable marijuana in current inventories has an average age of less than 6 months, the average time

since concentrate and extracts' input material was harvested is more than 13 months (see Figure 16).[7] Combined with the findings of the discussion above, it is clear that concentrates and extracts use older material and sit on shelves longer when compared to usable marijuana that will be sold at retail.

Figure 16: Average Number of Days Since Harvest, by Product Type



Future Trends in Supply and Demand

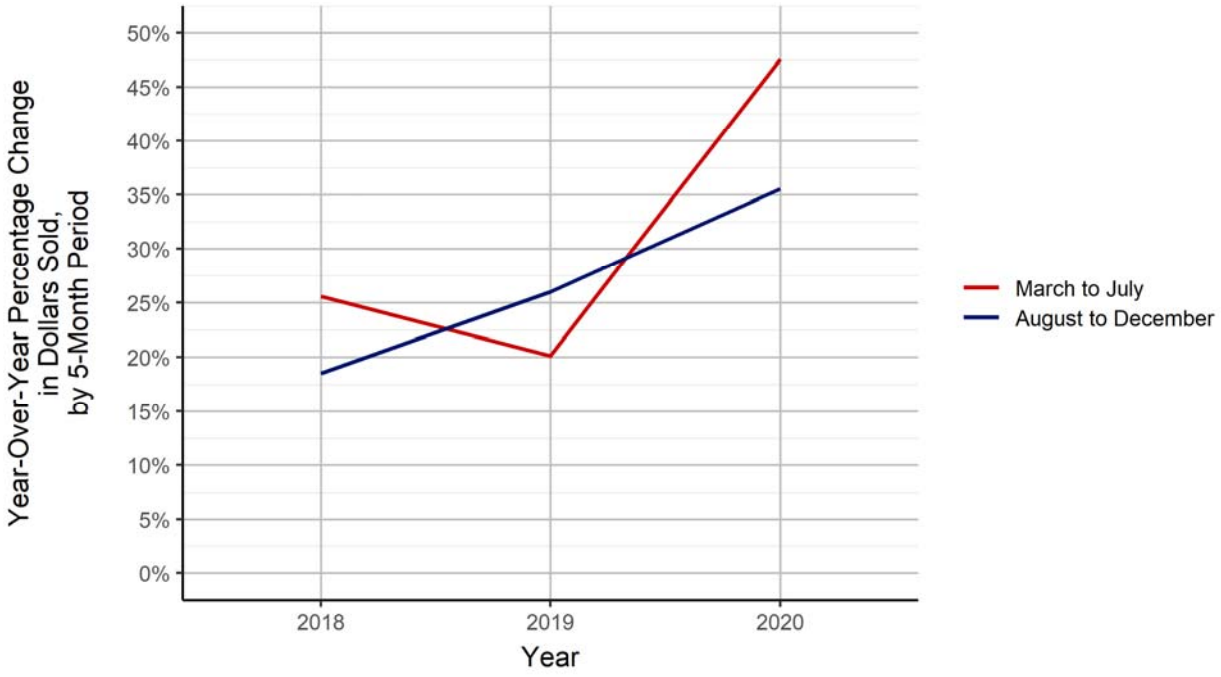
There is considerable uncertainty about the paths supply and demand will take over the next two years. This makes predicting the degree to which the OLCC cannabis market will be at equilibrium in two years' time virtually impossible. However, this section does lay out factors that will influence the direction each trend moves and the effects they may have on possible equilibrium. It is almost certain that both supply and demand will continue to grow, with each potentially experiencing double-digit growth each year. The central question will be whether demand in 2021 is more like 2020 or 2019.

Demand

The central question for predicting demand is how much the 2020 "COVID bump" will be sustained in 2021 as opposed regress to pre-pandemic levels. Because of the unique confluence of factors in March to July 2020 (the initial onset of COVID, issuance of the first stay-at-home orders, federal stimulus checks, and expansions of unemployment all co-occurring), sales growth will almost certainly not reach the heights of this period, when sales (in terms of dollars) grew nearly 50% year-over-year. Even the relatively "normal" subsequent five-month period (August to December) saw robust year-over-year growth (see Figure 17).

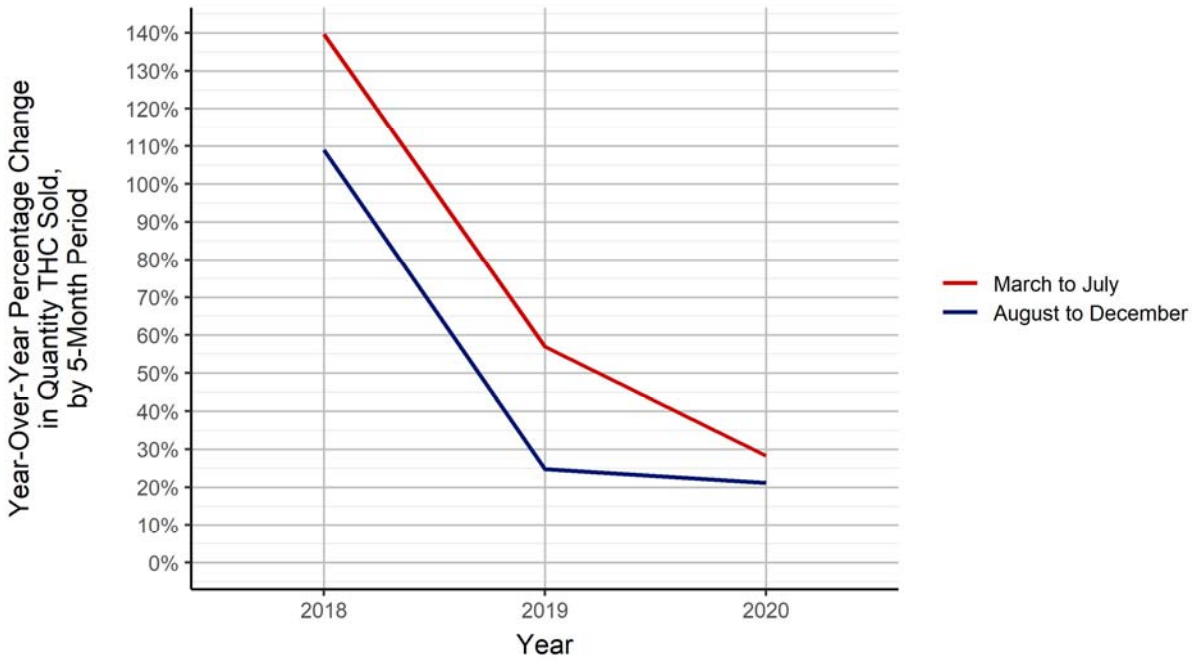
[7] Means and Medians are weighted by inventory quantity. The much lower weighted mean value for usable marijuana (86 days, or less than 3 months as of January 8, 2021) represents the large amount of freshly harvested product that is not fully trimmed, dried, and cured.

Figure 17: Year-Over-Year Change in Dollars of Product Sales, by 5-Month Period and Year



However, dollars sold paint only a partial picture, due to annual fluctuations in prices. In terms of actual supply/demand equilibrium, the *quantity* demanded is what matters. Quantity sold (in terms of milligrams of THC) actually illustrates a contrary trend: March to July 2020 saw a steeper decline of year-over-year growth in *quantity* sold, and the August to December 2020 period was more or less unchanged from the same period in 2019 (see Figure 18).

Figure 18: Year-Over-Year Change in Quantity THC Sold, by 5-Month Period and Year



This contrast illustrates the fundamental feature of demand: as prices decline the quantity demanded increases, and as prices rise the quantity demanded decreases. The March to July 2020 period, while strong, is lower in terms of year-over-year growth simply because the 2018 to 2019 growth, in response to freefalling prices, had been so remarkable. As seen in Figures 3 and Figure 8, consumer demand rose considerably at the same time that retail prices fell precipitously. Throughout 2019, however, retail prices for usable marijuana stabilized and then increased, creating downward pressure on sales and the 2019 trend line of the quantity sold began to flatten. In other words, 2020 exhibited strong growth because of COVID and in spite of rising prices.

It is virtually impossible to accurately predict demand after the "COVID effect" ends, let alone over the next two-year period, without first knowing what type(s) of consumers comprised the "COVID bump" in the first place. There are three (non-mutually exclusive) possibilities:

1) New consumers – either those who had never tried cannabis before, or had done so a long time prior but stopped consuming – began purchasing cannabis.
2) Consumers who relied on the illicit, home-grow, or medical markets transitioned to the OLCC market.
3) Existing patrons of OLCC Retailers increased their consumption.

Also important to know is how much of the increase in consumption is unique to COVID and its effects. For example, federal stimulus and temporary expansions of unemployment insurance boosted household incomes in the period immediately after COVID restrictions were first put in place. A large segment of the workforce is teleworking from home while also unable to pursue typical leisure activities. If the rise in consumption has been driven entirely, or predominantly, by preexisting OLCC Retailer customers increasing their purchase amounts, it seems likely that a societal "return to normal" would also result in a return to pre-COVID cannabis consumption patterns. However, if new or non-OLCC consumers shifted to the OLCC market due to COVID, it seems reasonable to assume that at least some of the new behavior will be "sticky" and result in demand that remains higher than the pre-pandemic levels.

Unfortunately, there are no good tools to yet understand the cause of the "COVID bump," particularly the characteristics of consumers. Oregon's Cannabis Tracking System records inventory and sales, but does not collect the characteristics of consumers.[8] The best alternatives for understanding this consumption trend are *post-hoc* surveys of cannabis use, which by their nature operate on a lag. For example, the National Survey on Drug Use and Health (NSDUH), the federal survey that provides the best long-term apples-to-apples comparison between years and states, only published its 2018-19 report in December 2020. Other Oregon-specific public health surveys may elucidate consumer characteristics and changes in behavior due to COVID, but those too operate on too large of a lag to have yet finalized data.

It will be some time before we definitively know what caused sales to rise so precipitously during COVID and how demand will be affected by a "return to normal" after COVID subsides. Despite the lack of conclusive evidence, however, the sales data does provide a basis to make some rough predictions regarding the course demand will take. As seen in Figure 8 above, the quantity sold in November 2020

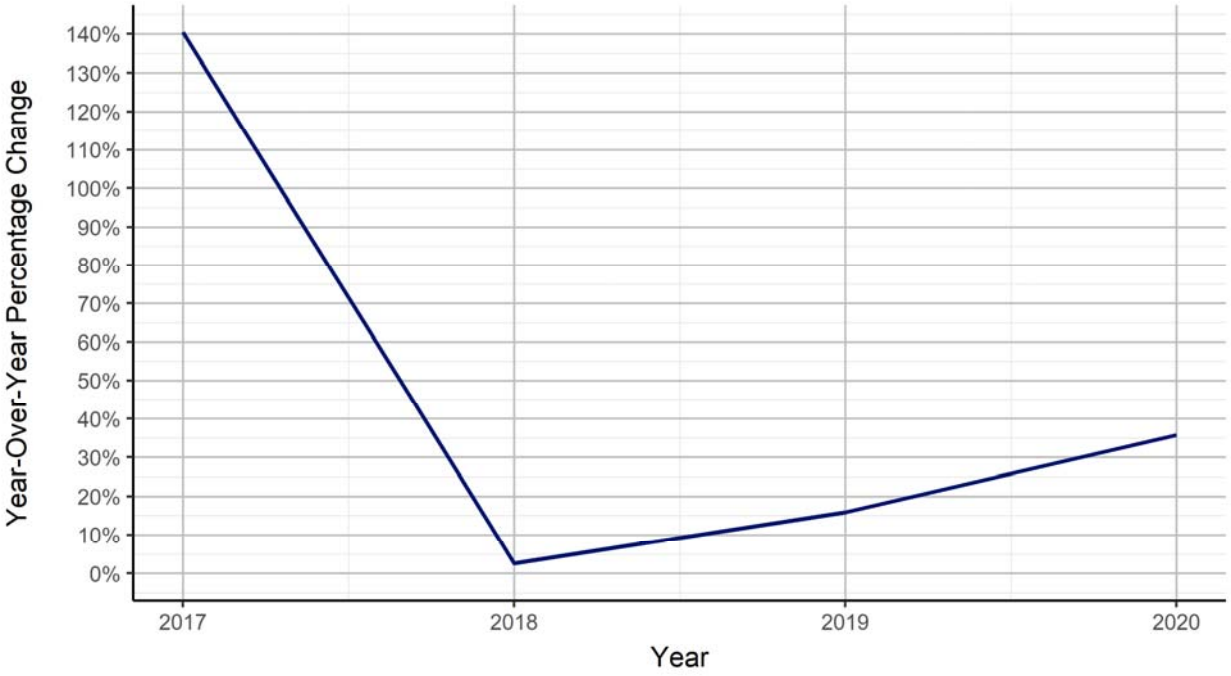
[8] In fact, ORS 475B.220 prohibits OLCC Retailers from recording any personally identifiable information without express consent of the purchaser.

was more or less on pace with what would have been expected pre-COVID. Even without knowing the exact cause(s) of the "COVID bump," it is safe to say that the months of March through July 2020 were unprecedented for consumers, and therefore saw unprecedented growth in sales. Although the aggregate *level* of THC sold in 2020 was considerably higher due to COVID, the slope of the trend line was only moderately steeper than in 2019. While rising prices may (in the near-term) push the dollars sold above pre-COVID year-over-year growth levels, the growth rate of the annual *quantity* sold seems most likely to fall somewhere in between August-December 2020 and August-December 2019. At best that would mean levels of demand that buoy prices and make modest inroads with supply; at worst it would mean flattening (or flat) demand that falls behind growth in supply.

Supply

As shown in Figure 11, 2020 saw a significant growth in harvest yields compared to both 2018 and 2019. In the same way that outdoor Producers responded to 2018 market signals by scaling back production, they are now responding to rising prices by planting and harvesting larger crops. Figure 19 shows the year-over-year harvest trends for October of each year since 2017; this year's growth rate is at its highest level since 2017.

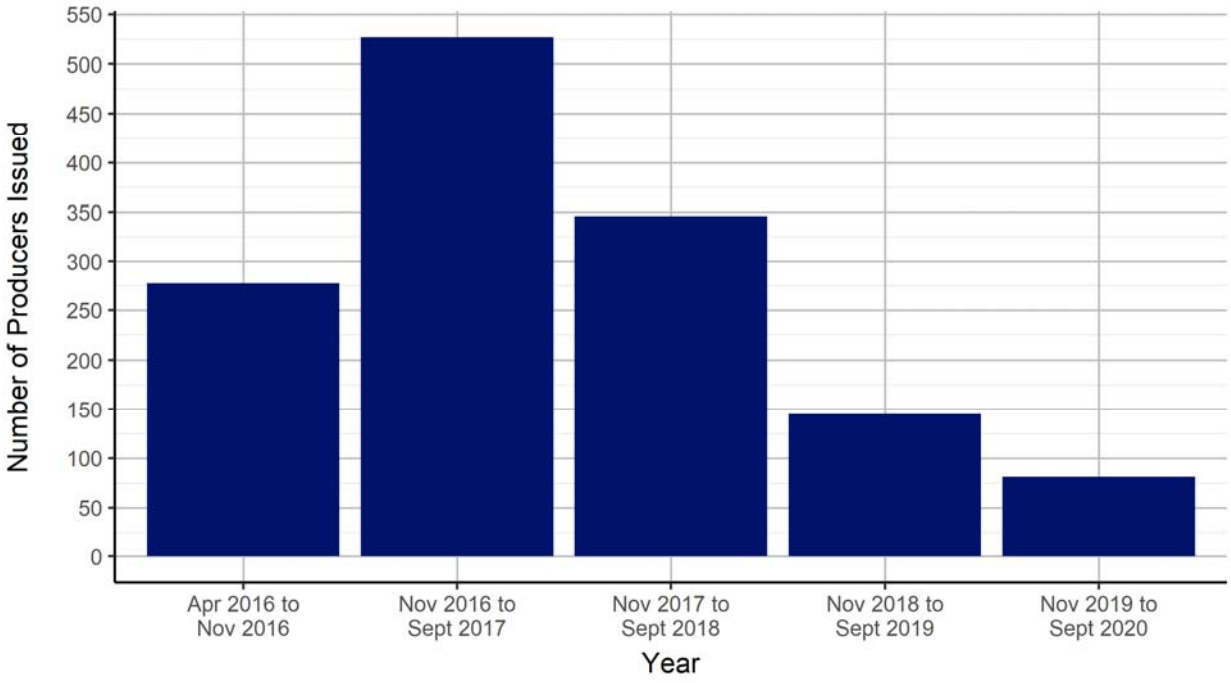
Figure 19: Year-Over-Year Percentage Increase in October Harvest, by Year



However, unlike in 2017 when increasing yields were in large part a function of new Producer licenses becoming active, the growth in production in 2020 has been driven to a much greater extent by more production from the same base of Producers. As seen in Figure 20, only 81 new Producer licenses were

issued between November 1, 2019 and September 30, 2020 – the lowest number issued in any similar period since licensing by OLCC began.[9]

Figure 20: Number of Producer Licenses Issued, by Period



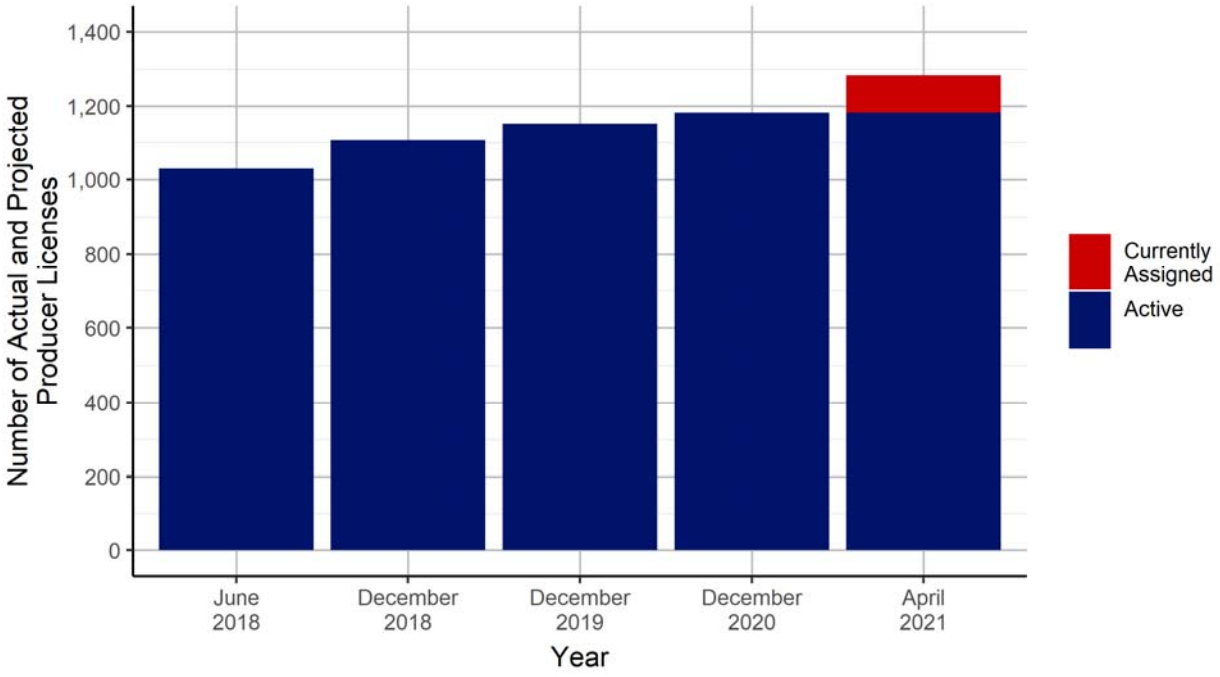
But this licensing trend is on the cusp of being reversed, which will only accelerate the growth in supply. Senate Bill 218 during the 2019 Legislative Session placed a moratorium on new Producer licenses, but this moratorium only affects Producer applications submitted after June 15, 2018. The OLCC is still processing the final batch of applications received by that deadline.

In fact, given the queue of Producer applications, the OLCC market is poised to see significant growth in 2021 harvests. Figure 21 shows the trajectory of the growth in Producer licenses since June 15, 2018. While the number of active Producers grew by only 152 between the 18 months of June 15, 2018 to December 28, 2020 – and by only 30 between December 2019 and December 2020 – this number may grow by as much as 100 (9%) over the next 3 months.[10] In terms of square footage, the increase would be even higher (nearly 11% more compared to current licensed production canopy).

[9] This represents the number of licenses issued, which includes both brand new licenses as well as changes of ownership. This, combined with license attrition, means that the cumulative number of issued licenses will not equal the growth in point-in-time active licenses.

[10] There were 1,182 licensed producers as of December 28, 2020. The estimate of newly issued producers before April 2021 is based the number of pending applications that are assigned for (investigative) processing as of January 8, 2021 (157). The estimate of 100 new licenses was based on adjusting the count of applications assigned (157), subtracting those applications that are for change of ownerships and would not result in a net increase of licenses (40), and adjusting for the overall approval rate over the last 12 months of applications assigned or pending assignment (87.4%).

Figure 21: Active and Projected Producer Licenses by Date

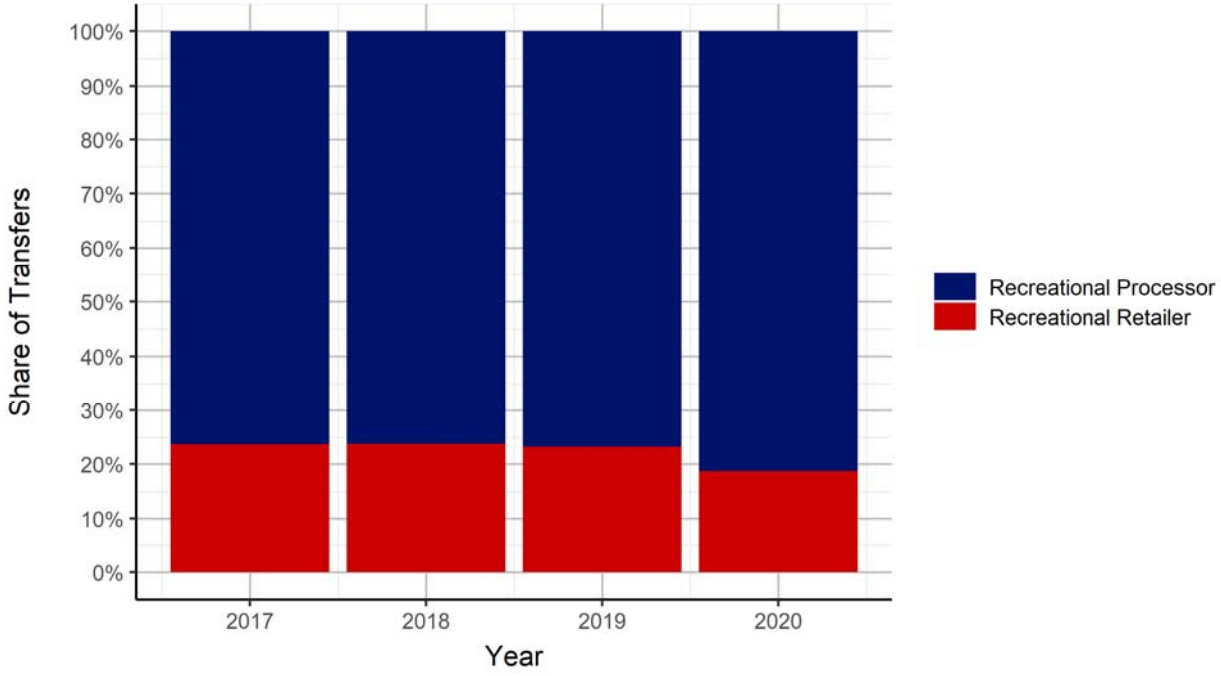


Despite this anticipated surge in the number of new Producer licenses, the effect on supply is unlikely to be felt before October 2021 for two reasons. First, approximately 84% of the proposed production square footage for these pending applications is outdoor, meaning that their productive capacity will be realized primarily in October.[11] Second, the October to December 2020 transfer trends show an increase in the share being sent to Processors compared to the same period in both 2018 and 2019 (see Figure 22). While Processors' annual aggregate share of usable marijuana transfers declined slightly between 2019 and 2020 (as discussed above and shown in

[11] This is more or less on par with the current proportion of indoor/outdoor; 84.9% of the currently licensed productive square footage is outdoor.

Figure 12), this increase in the share immediately following harvest indicates that the summer of 2021 is likely to see another tight supply of usable marijuana and a continued glut of processed products.

Figure 22: Share of Transfers (October to December each year), by Receiving License Type



The 2018 harvest and rising usable marijuana wholesale prices show that the OLCC cannabis market, like other markets, self-corrects in the face of supply and demand imbalances. However, this self-correction operates on a lag, in large part due to the heavy concentration of production in a single month. Outdoor Producers make decisions and investments regarding planting, labor, and material in the spring in anticipation of future market conditions. Consequently, the harvests in October and the levels of supply throughout the subsequent year are based on market signals from six (or more) months prior.

The OLCC market is almost certain to see significantly higher rates of production in October 2021 compared to October 2020, which itself was an acceleration over the most recent two years. So long as a federal prohibition on interstate trade of cannabis remains, the health of the Oregon cannabis market will be dictated entirely by the extent to which in-state demand keeps pace with this rising supply.

Conclusion

The OLCC market is currently a story of two micro-markets: one for usable marijuana, the other for extracts and concentrates. In the aftermath of the 2017 market glut, Producers have turned to Processors as an outlet for their harvest yields. Processors, in turn, are more than happy to take in cheap cannabis flower inputs to meet rising demand for extracts and concentrates. While this leaves usable marijuana scarcer during summer months and stocks of extracts and concentrates comparably ample year-round, the market has achieved its own healthy balance through this dynamic.

Demand in 2020 was strong, and in spite of sales by the end of the year regressing back towards the pre-COVID mean, 2021 will likely see continued growth. However, 2021 is unlikely to see the unprecedented

growth that the Oregon market witnessed between March and July of 2020. Moreover, an anticipated surge in Producer licenses in 2021, combined with an already strong growth in supply from the existing base of Producers, means that growth in supply will likely be quite high.

With the prospect of increasing supply, flattening growth in demand, and a large pre-existing baseline of extract/concentrate inventory, it is unclear how long the market's healthy balance will continue to play out. If supply in late 2021 increases above what the usable marijuana market channel can sustain, will Processors continue to operate as a "safety net" for Producers? Or will Processors, with ample inventory of processed items and the prospect of flattening consumer demand, start turning Producers away? If this latter scenario were to happen, then a deterioration of Producers' wholesale prices across the board would risk sending the market back into the late-2017 price spiral.

Oregon cannabis licensees have proven themselves adaptable and resilient, whether in the face of price shocks, historic wildfires, or a once-in-a-century pandemic. Regardless of what happens over the next two years, the current state of the OLCC cannabis market is much improved over early 2019: consumer prices remain low, wholesale Producer prices are significantly higher, and aggregate supply and demand are more closely balanced. Amid signs of uncertainty, one thing remains clear – Oregon cannabis will continue to mature in 2021 and, if the past is any predictor of the future, adapt to any challenges that arise.

Appendix: Medical Marijuana

Oregon's medical marijuana program (OMMP), established in by Measure 67 in 1998, is overseen and regulated by the Oregon Health Authority. Until OLCC began licensing businesses in 2016, OMMP was the only legal supply chain for cannabis in the state – and for a period of time known as "Early Start Sales," this supply chain served both medical and recreational customers.[12] As the recreational cannabis market was established in 2016, however, there was an exodus from OMMP as businesses, particularly medical dispensaries, transitioned to become licensed with the OLCC. For example, in October 2016, OMMP had 27,200 grow sites, 117 processors, and 425 dispensaries.[13] As of October 2020, those numbers had declined to 7,322 grow sites, 0 processors, and 2 dispensaries.[14]

Since June 2018, OMMP grow sites with three or more patients registered at the site are required to report using the OLCC's Cannabis Tracking System (CTS).[15] Currently there are approximately 460 OMMP grow sites active in CTS. If a grow site dips below three patients, that grow site instead reports into the Oregon Medical Marijuana Online System (OMMOS). The major difference between CTS and OMMOS is that, like recreational licensees, OMMP grow sites using CTS are required to reconcile inventory each day. In OMMOS, reporting is done in aggregate for the month.

For purposes of this report, the benefit of CTS tracking is that patient-level production and transfer data can be analyzed to quantify medical marijuana harvest and transfer activity. However, the major disadvantage of the way in which tracking requirements are structured is that it is porous because of substantial "churn" of grow sites in and out of CTS. For example, if a grow site has three patients in one month, but the next month one of the patient's registration expires, that grow site is "bumped out" of CTS until that patient's registration is renewed. Importantly, activity is only recorded in CTS if that activity was conducted when the grow site met the criteria to track in CTS. In the same example as above, a harvest or transfer is only recorded in CTS if the harvest or transfer is done in the month when the grow site had three patients; any harvest or transfer that is conducted at the time that the grow site had only two patients would be reported in OMMOS and not CTS.

To make this difficulty more concrete: there are currently 458 grow sites that meet the criteria for CTS tracking. Of those, approximately 270 were in CTS both in September 2019 and August 2020 and also recorded at least one harvest in CTS within that 12 month period. And of those, only 201 had recorded harvests in CTS prior to September 2019. To evaluate supply and demand equilibrium, both sides of the equation (harvests and transfers to patients) must be recorded – but if grow sites record one or both sides of that equation outside of CTS, that data is unavailable for analysis. In other words, while 458

[12] Early Start Sales began in October 2015 and ended December 31, 2016.
[13] "Oregon Medical Marijuana Program Statistical Snapshot October, 2016." https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/CHRONICDISEASE/MEDICALMARIJUANAPROGRAM/Documents/OMMP-Statistic-Snapshot-10-2016.pdf.
[14] "Oregon Medical Marijuana Program Statistical Snapshot October, 2020." https://www.oregon.gov/oha/PH/DISEASESCONDITIONS/CHRONICDISEASE/MEDICALMARIJUANAPROGRAM/Documents/OMMP_Statistical_Snapshot_10-20.pdf.
[15] OMMP processors and dispensaries are also required to report into CTS. Due to the overwhelming majority of OMMP users of CTS being medical grow sites (there are currently 0 medical processors and only 1 medical dispensary), this section exclusively discusses CTS data in regards to medical grow sites.

grow sites are currently in CTS, only 201 grow sites had the data in CTS that is necessary to evaluate supply and demand.

For the 201 grow sites with sufficient data to include in this analysis (approximately 44% of the grow sites tracked in CTS), the ratio of demand (measured by transfers to patients) to supply (measured by the amount of harvested material "packaged" in CTS) during the 12-month study period was approximately 80%.[16] As with the recreational market estimate, the medical supply estimate takes into account harvest waste but does *not* include estimates of "spoilage."[17] This estimate also does not take into account transfers to medical processors, dispensaries, or the limited transfers allowed to recreational licensees, due to the small size of such activity. In the case of medical processors and dispensaries, that portion of the supply chain has essentially dried up completely, leaving those outlets irrelevant in discussions of demand. In the case of the transfers to recreational licensees, only 19 grow sites exercised that privilege in 2020.[18]

While useful as a "gut check" of medical supply and demand, the limitations of the data prevents meaningful conclusions from being drawn for the degree of equilibrium in the medical market as a whole. The 201 grow sites included in the analysis (representing 2.7% of the total number of OMMP grow sites in the state) are unlikely to be representative of the average grow site – the majority of grow sites grow for only one patient and are not required to report in either OMMOS or CTS.

However, extrapolating from the transfer activity of the 201 analyzed grow sites may elucidate an estimate of the maximum scope of *demand* in the OMMP system. Using these 201 grow sites, it is possible to evaluate the average number of transfers per year per patient, as well as the average amount of usable marijuana sent per transfer, and convert to a wet weight equivalent of supply needed. Using the median value of amount sent per transfer to each patient (2.1 pounds) and the most recent number of OMMP patients associated with a grow site (11,554 in October 2020), the extrapolated wet weight equivalent of demand from grow sites ranges between approximately 400,000 and 1,000,000 pounds (see Table 1).

[16] The method used to analyze the recreational and medical marijuana demand-to-supply ratios are not comparable. Due to the need to standardize a wide variety of product types in the recreational market, this report converted all sales to units of THC and then calculated a "wet weight equivalent" of the supply required to produce that much THC. However, because the medical marijuana market is at this point almost exclusively medical grow sites – which can only transfer usable marijuana to patients – this appendix uses the simpler approach of directly comparing the amount "packaged" from harvests to the amount actually transferred to patients.

[17] The rationale for this is that rates of "spoilage" and other waste can itself be a function of excess supply. In a supply environment more favorable to growers or Producers, lower quality usable marijuana (e.g. lower potency flower) would be saleable, whereas in a supply environment with excess capacity, such product would be more likely to be wasted.

[18] Under this privilege, medical grow sites are limited to 20 pounds each year.

Table 1: Medical Marijuana Extrapolated Demand by Multiplier Estimates

		Dry-to-Wet Weight Ratio Estimate	
		Upper Bound (14.3%)	**Lower Bound** (10%)
Number of transfers per patient, per year	**Upper Bound** (4.1)	707,220	1,011,325
	Lower Bound (2.4)	409,670	585,830

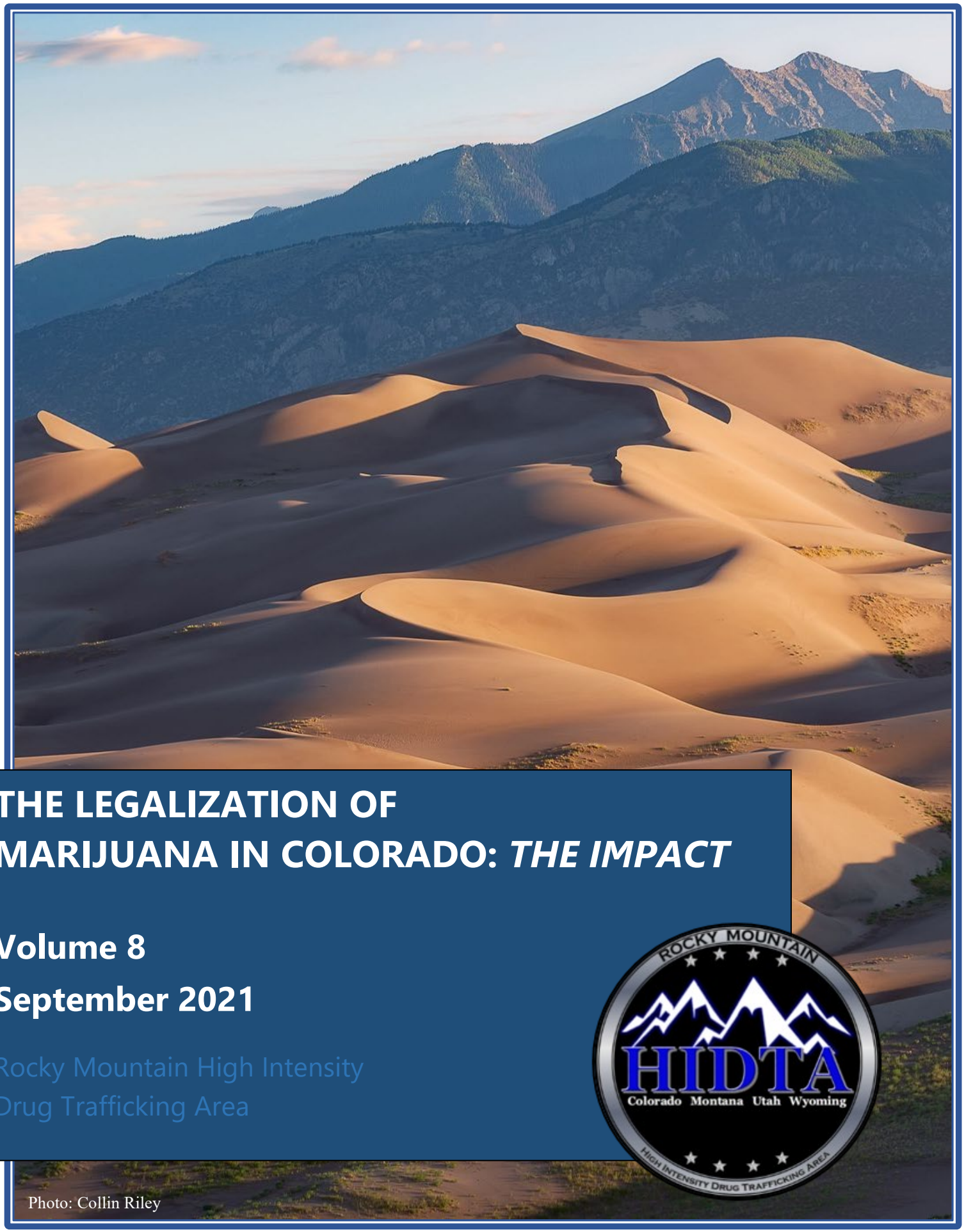
Table 1 varies two primary multipliers: the number of annual transfers per patient, and the weight ratio of "packaged" cannabis ready for transfer with its wet form. The upper bound of the annual transfers per patient is based on the mean and median values from CTS for the grow sites included in this analysis. In the case of the dry-to-weight ratio estimates, 14.3% is the actual ratio derived from CTS for the grow sites in the analysis, whereas 10% is the multiplier used in the recreational wet weight equivalent calculation.[19]

Combining this analysis with the recreational supply and demand analysis in the main body of this report, the aggregate amount of "slack supply" currently in the OLCC market would more than accommodate the entirety of demand from medical patients associated with an OMMP grow site. The 2020 estimate of the OLCC demand-to-supply ratio is 65% of 7.66 million wet pounds. The 17% remainder of this production amount is 2.7 million pounds – more than enough to accommodate the upper bound estimate of demand from OMMP grow sites. In fact, in 2020 there would have been a nearly 90% probability that the OLCC market could have sustained even the uppermost medical demand estimate of 1.01 million pounds.[20]

As noted above, this production amount is also anticipated to grow at a higher rate in 2021 and beyond, which would increase the OLCC system's capacity to accommodate medical demand.

[19] Some grow sites transfer whole harvested plants to patients, which at minimum would increase this ratio by reducing the amount of harvest waste that is generated. The recreational supply and demand estimate relies on data for usable marijuana that is being dried and cured for sale at retail, which on average will have generated more harvest waste.

[20] Probability based on the percentage of Monte Carlo simulations in which the wet weight equivalent of demand was 1.01 million pounds or more away from the actual wet weight harvest of 7.66 million pounds.



THE LEGALIZATION OF MARIJUANA IN COLORADO: *THE IMPACT*

Volume 8

September 2021

Rocky Mountain High Intensity Drug Trafficking Area

Photo: Collin Riley

REPORT AVAILABLE AT:
www.RMHIDTA.org

PREPARED BY THE ROCKY MOUNTAIN HIDTA
INVESTIGATIVE SUPPORT CENTER
SEPTEMBER 2021

Table of Contents

Executive Summary

The Rocky Mountain High Intensity Drug Trafficking Area (RMHIDTA) program has published annual reports every year since 2013 tracking the impact of legalizing recreational marijuana in Colorado. The purpose is to provide data and information so that policy makers and citizens can make informed decisions on the issue of marijuana legalization.

Section I: Traffic Fatalities & Impaired Driving

- Since recreational marijuana was legalized in 2013, traffic deaths where drivers tested positive for marijuana **increased 138%** while all Colorado traffic deaths **increased 29%.**
- Since recreational marijuana was legalized, traffic deaths involving drivers who tested positive for marijuana **more than doubled** from 55 in 2013 to 131 people killed in 2020.
- Since recreational marijuana was legalized, the percentage of all Colorado traffic deaths involving drivers who tested positive for marijuana **increased from 11%** in 2013 **to 20%** in 2020.

Section II: Marijuana Use

Since recreational marijuana was legalized in 2013:

- Past month marijuana use for ages 12 and older **increased 26%** and is **61%** higher than the national average, currently ranked **3rd** in the nation.
- Past month adult marijuana use (ages 18 and older) **increased 20%** and is **62% higher** than the national average, currently ranked **3rd** in the nation.
- Past month college age marijuana (ages 18-25) use **increased 10%** and is **53% higher** than the national average, currently ranked **3rd** in the nation.
- Past month youth marijuana (ages 12-17) use **decreased 22%** and is **39% higher** than the national average, currently ranked **7th** in the nation.

Section III: Public Health

- Marijuana *only* exposures **increased 185%** from 2013 when recreational marijuana was legalized compared to 2020.
- Treatment for marijuana use for all ages **decreased 34%** from 2013 to 2020.
- The percent of suicide incidents in which toxicology results were positive for marijuana has **increased** from **14%** in 2013 to **29%** in 2020.

Section IV: Black Market

- RMHIDTA Colorado Drug Task Forces (10) conducted **294 investigations** of black-market marijuana in Colorado resulting in:
    - **168** felony arrests
    - **5.54** tons of marijuana seized
    - **86,502** marijuana plants seized
    - **21** different states the marijuana was destined
- Seizures of marijuana reported to the El Paso Intelligence Center (EPIC) in Colorado **increased 48%** from an average of 174 parcels (2009-2012) when marijuana was commercialized to an average of 257 parcels (2013-2020) during the time recreational marijuana become legalized.

Section V: Societal Impact

- Marijuana tax revenue represent approximately **0.98%** of Colorado's FY 2020 budget.
- **66%** of local jurisdictions in Colorado have banned medical and recreational marijuana businesses.

Retail Marijuana Scientific Advisory Committee (RMSAC)
Revised OHA-Approved Public Health Statements, March, 2017

This document summarizes recently published scientific evidence on the health effects associated with marijuana use for the purpose of reviewing Oregon Public Health Division approved statements on the topic.

A previous series of reviews and original development of public health statements was conducted by the RMSAC in 2015, using the best evidence available at the time. The 2015 RMSAC Evidence Reviews with OHA-approved Public Health Statements can be found at: http://public.health.oregon.gov/PreventionWellness/marijuana/Pages/Retail-Marijuana-Scientific-Advisory-Committee.aspx.

The new major national reports on health effects from marijuana use or exposure referenced in tables are:

- **NAS, 2017: National Academies of Sciences, Engineering, and Medicine**. 2017. *The health effects of cannabis and cannabinoids: The current state of evidence and recommendations for research.* Washington, DC: The National Academies Press. doi: 10.17226/24625.. Available at http://nationalacademies.org/hmd/reports/2017/health-effects-of-cannabis-and-cannabinoids.aspx
- **CDC, 2017: Centers for Disease Control and Prevention (CDC).** *Marijuana and Public Health.* Website revision released January 26, 2017. https://www.cdc.gov/marijuana/index.htm

Tables are presented for several health categories:

1. Cognitive, neurological and mental health effects of adult marijuana use
2. Cardiovascular effects of marijuana use
3. Respiratory health and marijuana use
4. Effect of adolescent marijuana use on health and other outcomes
5. Fetal marijuana exposure and health effects; breast-fed infant marijuana exposure
6. Motor vehicle crashes and marijuana exposure
7. Problem marijuana use

Statements highlighted in yellow within tables are the current public health statements. These may be the original statements created in 2015 or revised statements that incorporate the new scientific evidence when applicable.

1. Cognitive, Neurological, and Mental Health Effects of Adult Marijuana Use				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Memory, Attention, Learning	MODERATE evidence of statistical association between acute cannabis use and impairment in the cognitive domains of learning, memory, and attention. (Conclusion 11-1a, page 11-6)	Acute marijuana use directly affects the brain -- specifically the parts of the brain responsible for memory, learning, attention, decision making, coordination, emotions, and reaction time. Heavy users of marijuana can have short-term problems with attention, memory, and learning, which can affect relationships and mood.	Heavy use of marijuana is associated with impaired memory, persisting a week or more after quitting.	Marijuana use can be associated with acute impairments in memory, attention and learning. Frequent use of marijuana is associated with impaired memory, persisting a week or more after quitting.
Symptoms of depression and anxiety	LIMITED evidence of a statistical association between near daily cannabis use and increased symptoms of anxiety. (Conclusion 12-9, page 12-24) and development of any type of anxiety disorder (except social anxiety disorder). (Conclusion 12-8a, page 12-23) MODERATE evidence of association between cannabis use and increased incidence of social anxiety disorder (regular cannabis use). (Conclusion 12-8b, page 12-23)	Marijuana use has been linked with depression and anxiety. However, it is not known whether this is a causal relationship or simply an association.	Regular use of marijuana is associated with future symptoms or diagnosis of anxiety.	Regular use of marijuana may be associated with symptoms of depression and anxiety.

	MODERATE evidence for association of cannabis use with a small increased risk for development of depressive disorders (Conclusion 12-5, page 12-17) and increased incidence of suicidal ideation and attempts; with higher incidence among heavier users (Conclusion 12-7a, page 12-19); and increased incidence of suicide completion. (Conclusion 12-7b, page 12-19)			Marijuana use may increase the risk of suicide.
Acute psychotic symptoms	MODERATE evidence of a small increase in risk (page 12-5)		Tetrahydrocannabinol (THC), a component of marijuana, can cause acute psychotic symptoms during intoxication	No change
Symptoms or diagnosis of psychosis, onset of schizophrenia	SUBSTANTIAL evidence of a statistical association between cannabis use and the development of schizophrenia or other psychoses, with the highest risk among the most frequent users. (Conclusion 12-1, page 12-6) LIMITED evidence of a statistical association between cannabis use and an increase in positive symptoms of schizophrenia (e.g., hallucinations) among individuals with psychotic disorders. (Conclusion 12-2(b) on page 12-11)	Marijuana users are significantly more likely than nonusers to develop chronic mental disorders, including schizophrenia. Some marijuana users have an increased risk for psychosis. Marijuana use can trigger psychosis in people with schizophrenia.	Regular use of marijuana may be associated with future symptoms or diagnosis of psychosis.	Marijuana users are significantly more likely than nonusers to develop chronic mental disorders, including schizophrenia. Some marijuana users have an increased risk for psychosis. Marijuana use can trigger psychosis in people with schizophrenia.

2. Cardiovascular Effects of Marijuana Use				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Myocardial infarction (heart attack)	LIMITED evidence of a statistical association between cannabis smoking and the triggering of acute myocardial infarction. (Conclusion 6-1(a), page 6-4) NO EVIDENCE to support or refute an association between chronic effects of cannabis use and heart attack. (Conclusion 6-1(b), page 6-4.)	The compounds in marijuana can affect the circulatory system and may increase the risk of heart attacks and strokes. Research has found a significant increase in the risk of heart attack in the hours after marijuana use. Smoking marijuana could also lead to increased risk for stroke, mini-stroke, and heart disease. Some evidence that marijuana use may lead to heart attack and stroke	Acute marijuana use may be associated with increased risk of heart attack among adults.	Marijuana use may be associated with increased risk of triggering a heart attack among adults.
Stroke (ischemic)	LIMITED evidence of a statistical association between cannabis use and ischemic stroke or subarachnoid hemorrhage. (Conclusion 6-2, page 6-7)	Some evidence that marijuana use may lead to heart attack and stroke.	Marijuana use may be associated with increased risk of stroke.	No change

3. Respiratory Health and Marijuana Use				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Airflow obstruction	No comment		Regular marijuana smoking is associated with mild decreased airflow in the lungs.	No change
Acute use improves airflow	MODERATE evidence of a statistical association between cannabis smoking and improved airway dynamics with acute use but not with chronic use. (Conclusion 7-1(a), page 7-4)		One-time marijuana use (edible or smoked) is strongly associated with immediate, short-term (1-6 hours) improved airflow in the lungs of healthy marijuana users & asthmatics.	There is some evidence that acute (but not chronic) marijuana smoking can improve airflow in the lungs.
Particulate matter	No comment		Marijuana smoke may deposit more particulate matter in the lungs per puff compared to tobacco smoke.	No change
Chronic Obstructive Respiratory Disease (COPD)	LIMITED evidence of a statistical association between occasional cannabis smoking and an increased risk of developing COPD when controlled for tobacco use. (Conclusion 7-2(a), page 7-7) NO or INSUFFICIENT evidence to support or refute an association between cannabis smoking and increased risk of hospital admission for COPD. (7-2(b), page 7-12)		There is conflicting research for whether or not regular marijuana smoking is associated with COPD.	Smoking marijuana may increase the risk of developing COPD

Chronic bronchitis with cough/wheeze/ sputum	SUBSTANTIAL evidence of a statistical association between long-term cannabis smoking and more frequent chronic bronchitis episodes. (Conclusion 7-3(a), page 7-10) MODERATE evidence of a statistical association between cessation of cannabis smoking and improvements in respiratory symptoms. (Conclusion 7-3(b), page 7-10.)	Smoking marijuana can lead to a greater risk of bronchitis, cough, and phlegm production. These symptoms generally improve when marijuana smokers quit. Strong evidence that marijuana use may lead to breathing problems, including inflammation of the airways and symptoms of chronic bronchitis, such as daily cough and phlegm.	Heavy marijuana smoking is associated with chronic bronchitis, including chronic cough, sputum production and wheezing.	Heavy marijuana smoking is associated with chronic bronchitis, including chronic cough, sputum production and wheezing. These symptoms generally improve when marijuana smokers quit.
Carcinogens in smoke, including smoke from water pipes or bongs	No comment		Marijuana smoke, both firsthand and secondhand, contains many of the same cancer-causing chemicals as tobacco smoke. Smoke from water pipes or bongs may contain more cancer-causing chemicals per milligram of Tetrahydrocannabinol (THC) compared to smoke from unfiltered joints.	
Lung cancer, pre-malignant lesions in airways	MODERATE evidence of no statistical association between cannabis smoking and the incidence of lung cancer. (Conclusion 5-1, page 5-3)		There is conflicting research for whether or not marijuana smoking is associated with lung cancer. Heavy marijuana smoking is strongly associated with pre-malignant lesions in your lungs.	Although there is not enough evidence to know whether smoking marijuana directly causes lung cancer, heavy marijuana smoking is strongly associated with pre-malignant lesions in the lungs.
Respiratory health effects from aerosolizing/ Vaporizing	No comment		There is currently not enough evidence to determine if aerosolizing or vaporizing marijuana is associated with effects on lung health.	No change

4. Effect of Adolescent Marijuana Use on Health and Other Outcomes				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Cognition	LIMITED evidence for an association between cannabis use and effects on cognitive development during adolescence. (page 11-7) MODERATE evidence for association between cannabis use and impairment in cognitive domains of learning, memory and attention (acute cannabis use). (Conclusion 11-1a, page 11-6)	When marijuana users begin using as teenagers, the drug may reduce attention, memory, and learning functions and affect how the brain builds connections between the areas necessary for these functions. Marijuana's effects on these abilities may last a long time or even be permanent. This means that someone who uses marijuana may not do as well in school and may have trouble remembering things.	Regular marijuana use by adolescents and young adults is associated with impaired learning, memory, math and reading achievement, even 28 days after last use. These impairments increase with more frequent marijuana use.	Marijuana use during adolescence may be associated with impairments in cognitive development.
Education and Income	LIMITED evidence for statistical association between cannabis use and impaired academic achievement and education outcomes (Conclusion 11-2, page 11-10). Cannabis use during adolescence is related to impairments in subsequent academic achievement and education, employment and income, and social relationships and social roles. (page 11-1)	Some evidence that marijuana use may lead to poor school performance, less academic and career success. Some evidence that marijuana use may lead to lower income.	Regular marijuana use by adolescents is associated with low academic achievement, such as not graduating from high school.	No change
Marijuana dependence	SUBSTANTIAL evidence that initiating cannabis use at an earlier age is a risk factor for the development of problem cannabis use. (Conclusion 13-2(j), page 13-12),	Strong evidence that marijuana use may lead to addiction.	Starting marijuana use during adolescence or young adulthood is associated with marijuana use disorder as an adult.	No change

Other drug use	MODERATE evidence of a statistical association between cannabis use and development of substance dependence and/or a substance abuse disorder for substances including alcohol, tobacco and other illicit drugs. (Conclusion 14-3, page 14-11) LIMITED evidence of an association between cannabis use and initiation of tobacco use (Conclusion 14-1, page 14-4) and changes in the rates and use patterns of other licit and illicit substances (Conclusion 14-2, page 14-7).		Marijuana use by adolescents and young adults - even occasional use - is associated with adult high-risk use of alcohol, tobacco, and other drugs (e.g. opioids and methamphetamine).	Marijuana use by adolescents and young adults -- even occasional use -- is associated with adult high-risk use of alcohol, tobacco, and other drugs.
Psychosis (see Section 1 above)	No comment		Regular marijuana use by adolescents and young adults is associated with an increased rate of psychotic symptoms and disorders such as schizophrenia in adulthood. This risk is increased among those who start using marijuana at a younger age and those with more frequent marijuana use.	No change
Mental health (depression, anxiety, suicidal thoughts) (see Section 1 above)	No comment		There is conflicting research for whether or not marijuana use by adolescents and young adults is associated with depression, anxiety or suicidal thoughts.	No change

5a. Fetal Marijuana Exposure and Health Effects				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
General	No comment	Using marijuana during pregnancy may increase your baby's risk of developmental problems.	There is no known safe level of marijuana use during pregnancy. Marijuana use during pregnancy may have negative effects on the fetus, regardless of when it is used during pregnancy.	No change
Tetrahydrocannabinol (THC) transfer to fetus	No comment		Tetrahydrocannabinol (THC) can pass from the mother to the fetus through the placenta. The fetus can be exposed to THC used by the mother.	Tetrahydrocannabinol (THC) passes from the mother to the fetus through the placenta and exposes the fetus to THC.
IQ and Cognitive and Behavioral Effects	INSUFFICIENT evidence to support or refute association between cannabis smoking during pregnancy and cognition/academic achievement. (Conclusion 10-4, page 10-12)	Marijuana use by mothers during pregnancy may be linked to problems with attention, memory, problem-solving skills, and behavior problems in their children.	Maternal use of marijuana during pregnancy may be associated with negative effects on exposed offspring, including decreased academic ability, cognitive function and attention. These effects may not appear until adolescence. Scientific literature on this topic is limited.	No change

Pregnancy complications including stillbirth	LIMITED evidence for statistical association between maternal cannabis smoking and pregnancy complications for the mother (which included stillbirth) (conclusion 10-1, page 10-4); evidence is especially weak for the association with stillbirth.		Marijuana use during pregnancy may be associated with an increased risk of stillbirth. Scientific literature on this topic is limited.	No change
Birth Weight	SUBSTANTIAL evidence but not conclusive (mostly because no RCTs) that smoking MJ during pregnancy is associated with decreased birth weight of offspring. (Conclusion 10-2, page 10-6)	Some research shows that using marijuana while you are pregnant can cause low birth weight.		Maternal use of marijuana during pregnancy can decrease the birth weight of the offspring.
Birth Defects	INSUFFICIENT evidence on congenital malformations (Page 10-6)		Marijuana use during pregnancy may be associated with an increased risk of heart defects (isolated simple ventricular septal defects) in exposed offspring. Scientific literature on this topic is limited.	No change

5b. Breast Fed Infants: Marijuana Exposure				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
General	No comment	Chemicals from marijuana can be passed to baby in breast milk. Data on the effects of marijuana exposure to the infant through breastfeeding are limited and conflicting.	Tetrahydrocannabinol (THC) can be passed from the mother's breast milk to the infant. THC exposure may affect the baby.	Tetrahydrocannabinol (THC) can pass from the mother's breast milk to the infant.

6. Motor Vehicle Crashes and Marijuana Exposure				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Motor Vehicle Crashes	SUBSTANTIAL evidence of a statistical association between cannabis use and increased risk of motor vehicle crashes. (Conclusion 9-3, page 9-11)	Some evidence that marijuana use may lead to increased risk for motor vehicle crashes.		Driving after using marijuana can increase the risk of motor vehicle crashes.

7. Problem Marijuana Use				
	NAS (National Academies of Sciences, Engineering, Medicine), 2017	**CDC, 2017**	**Oregon Public Health Division Approved Statements, 2015**	**Oregon Public Health Division Approved Statements, 2017**
Problem Cannabis Use (including Cannabis Use Disorder, dependence, and abuse)	SUBSTANTIAL evidence of a statistical association between increases in cannabis use frequency and progression to developing problem cannabis use (Conclusion 13-1, page 13-4)	Research shows that 1 in 10 marijuana users will become addicted. Signs of addiction include: unsuccessful efforts to quit using marijuana, giving up important social activities in favor of using marijuana, using marijuana even when it causes problems with everyday tasks at home, school, or work.	None	Frequent marijuana use increases the risk of developing problem use, including dependency.

Brain Health

Marijuana use directly affects brain function — specifically the parts of the brain responsible for memory, learning, attention, decision-making, coordination, emotions, and reaction time. [1,2]

What are the short-term effects of marijuana on the brain?

Recent marijuana use (defined as within 24 hours) in youth and adults has an immediate impact on thinking, attention, memory, coordination, movement, and time perception.[1]

What are the long-term effects of marijuana on the brain?

Marijuana affects brain development. Developing brains, such as those in babies, children, and teenagers, are especially susceptible to the harmful effects of marijuana and tetrahydrocannabinol (THC).[1,2] Although scientists are still learning about the effects of marijuana on developing brains, studies suggest that marijuana use by mothers during pregnancy could be linked to problems with attention, memory, problem-solving skills, and behavior in their children.[3-9]

Using marijuana before age 18 may affect how the brain builds connections for functions like attention, memory, and learning.[10] Marijuana's effects on attention, memory, and learning may last a long time or even be permanent,[11] but more research is needed to fully understand these effects. Youth who use marijuana may not do as well in school and may have trouble remembering things.[1,6,12,13]

The impact of marijuana use on the brain depends on many factors, including:

- Amount of tetrahydrocannabinol (THC) in marijuana (in other words, the concentration or strength),
- How often it is used,
- Age of first use, and
- Whether other substances (for example, tobacco and alcohol) are used at the same time.

Long-term impacts on the brain may also be caused by something other than marijuana, such as genetics, the home environment, or other unknown factors.[14] The National Institute on Drug Abuse is conducting a large long-term study (the Adolescent Brain Cognitive Development study, or ABCD study) to better understand the role marijuana and other substances play in adolescent brain development.

References +

Page last reviewed: October 19, 2020

Heart Health

Marijuana can make the heart beat faster and can make blood pressure higher immediately after use.[1,2] It could also lead to increased risk of stroke, heart disease, and other vascular diseases.[3-7] Most of the scientific studies linking marijuana to heart attacks and strokes are based on reports from people who smoked marijuana (as opposed to other methods of using it). Smoked marijuana delivers tetrahydrocannabinol (THC) and other cannabinoids to the body. Marijuana smoke also delivers many of the same substances researchers have found in tobacco smoke—these substances are harmful to the lungs and cardiovascular system.[8,9]

It is hard to separate the effects of marijuana chemicals on the cardiovascular system from those caused by the irritants and other chemicals that are present in the smoke. More research is needed to understand the full impact of marijuana use on the cardiovascular system to determine if marijuana use leads to higher risk of death.

References +

Page last reviewed: October 19, 2020

Lung Health

In many cases, marijuana is smoked in:

- joints (hand-rolled cigarettes),
- bongs (pipes or water pipes),
- bowls, or
- blunts (cigars or cigar wrappers that have been partly or completely refilled with marijuana).[1,2]

Smoked marijuana, regardless of *how* it is smoked, can harm lung tissues and cause scarring and damage to small blood vessels.[3,4]

Smoke from marijuana has many of the same toxins, irritants, and carcinogens (cancer-causing chemicals) as tobacco smoke.[5] Smoking marijuana can also lead to a greater risk of bronchitis, cough, and mucus production,[6-10] though these symptoms generally improve when marijuana smokers quit.[3, 11]

More research is needed to understand the specific effects marijuana smoking may have on lung cancer and other respiratory diseases like emphysema (lung condition that causes shortness of breath) and chronic obstructive pulmonary disease (COPD).

References +

Page last reviewed: October 19, 2020

Mental Health

Marijuana use, especially frequently (daily or nearly daily) and in high doses, can cause disorientation and sometimes unpleasant thoughts or feelings of anxiety and paranoia.[1]

People who use marijuana are more likely to develop temporary psychosis (not knowing what is real, hallucinations, and paranoia) and long-lasting mental disorders, including schizophrenia (a type of mental illness where people might see or hear things that are not really there).[2] The association between marijuana and schizophrenia is stronger in people who start using marijuana at an earlier age and use marijuana more frequently.

Marijuana use has also been linked to depression; social anxiety; and thoughts of suicide, suicide attempts, and suicide.[1]

References +

Page last reviewed: October 19, 2020

City Council Work Session

Date:	09/20/2021
Title:	NorthWestern Energy Land Purchase of Airport Property to Expand/Rebuild the Rimrock Substation
Presented by:	Kevin Ploehn, Director of Aviation and Transit
Department:	Airport
Presentation:	Yes

RECOMMENDATION

Staff recommends that a presentation before the City Council be provided to review background information and discuss the sale of approximately 14.7 acres of Airport property to NorthWestern Energy.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Airport's property extends about a third of the way down Airport Road toward the Billings Heights on the south side of the road and abuts the existing NorthWestern Energy Rimrock Substation. NorthWestern Energy needs to expand the Rimrock Substation to better supply the electrical needs of the community and would like to purchase the neighboring Airport land. Earlier discussions with Council were for a lease of this property; however, in a lease arrangement, it is still Airport property and their lease would be subordinate to the provisions and requirements of any existing or future agreement between the City and the United States relative to the development, operation, or maintenance of the Airport including all Grant Assurances. NorthWestern Energy's management found many of these conditions to be very onerous and opted not to pursue the lease option and wanted to pursue the land purchase. The Federal Aviation Administration (FAA) is willing to entertain this land sale; however, it will require a National Environmental Policy Act (NEPA) action and be advertised in the National Register prior to any sale. Subsequently, the FAA needs City Council's approval that they are willing to sell the land to NorthWestern Energy prior to pursuing the required Federal actions to release the land for sale to NorthWestern Energy.

ALTERNATIVES

Not applicable at this time.

FISCAL EFFECTS

The land would be sold at Fair Market Value, estimated to be $225,000.

City Council Work Session

Date:	09/20/2021
Title:	Bicycle and Pedestrian Advisory Committee Annual Presentation to Governing Bodies
Presented by:	Elyse Monat
Department:	Planning & Community Services
Presentation:	Yes

RECOMMENDATION

No action is needed on this item. It is an informational presentation only.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Bicycle and Pedestrian Advisory Committee (BPAC) will give its annual presentation to the City Council. BPAC is composed of 7 volunteer members, 3 appointed by the County, 3 appointed by the City, and 1 appointed by the Planning Board. The purpose of the Bicycle and Pedestrian Advisory Committee is to advise the City Council, Mayor, the County Commissioners, Planning Board, and all departments and boards of the City and County with regard to non-motorized transportation matters. The presentation will cover what BPAC does, its primary areas of support/recommendation, potential missed projects due to a lack of local match, bikeway and trail data, and next steps.

ALTERNATIVES

This item is a presentation only. No action is needed on the item.

FISCAL EFFECTS

There are no fiscal effects. This item is an informational presentation only.

Council Work Session **4.**
Meeting Date: 09/20/2021
Title: CE Division - Dirty Dozen Update
Presented by: Nicole Cromwell
Department: Planning & Community Services **Division:** Code Enforcement

RECOMMENDATION

Staff will make a presentation and be available for questions on the Code Enforcement Division Dirty Dozen Update. This presentation focuses on some of the most challenging properties in Billings in terms of compliance with codes like junk vehicles, abandoned structures, unsecured structures, and other violations. The last report to City Council was in July 2020. This report will update the last report and report on new cases reaching the top 12 list. No formal action is needed on this item.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

The Code Enforcement Division has provided a Quarterly Report to the City Council beginning in August 2017. This reporting period was changed to twice per year instead of each quarter. Due to overlapping priorities, the semi-annual reporting was delayed at the end of 2020 and the first half of 2021. The report contains case information on some of the most intractable active public nuisance cases handled through the Code Enforcement Division. The Code Enforcement Officer handling most of the blighted and abandoned property public nuisance cases is Craig Salzman. Officers Tanya Punt, Todd Morgan and Marshall Glunt also handle public nuisance cases involving collections of junk, junk vehicles, trash and debris. Over the last 5 1/2 years, the Division has handled over 600 public nuisance cases, closing 87% of those cases. The Division currently has 80 active public nuisance cases and 38 of those involve blighted, abandoned or dangerous structures. This report details some of these active cases. This semi-annual report has been named the "Dirty Dozen".

The division has received 3,100 new complaints so far in 2021. This is roughly equal to 2020 during the same time period. In addition to the 80 active public nuisance cases, the three other Code Enforcement Officers are each carrying about 100-150 active cases on a daily basis. These cases range from untended lawns to unlicensed campgrounds. Active and closed cases are provided on a searchable interactive map on the City of Billings webpages and general cases status information is available through our division Clerk, Trina Adams, 406-237-6146.

ALTERNATIVES

Not applicable

FISCAL EFFECTS

Not applicable

Attachments

Dirty Dozen List Sept 2021 update

Current	1st & 2nd Quarters 2021	Reporting Sept 2021					
Dirty Dozen rankings:	Rank last 1/4 (July 2020)	General Location	Compliance Issue	Owner Name and Address	Current Status	Previous Status	CE Case initiated
Number 1--retired	Number 1	23 Rhea Lane	Dangerous Structures		Structure demolished Feb 2021		**May 2017**
Number 1	Number 11	301 S 32nd St	Dangerous Structure/Boarded Building	John Skauge - 3121 Radcliff Dr Billings MT	Citation issued May 2021, June 2021 hearing Court ordered owner to demolish, demolition started Sept 10 2021	Battleship Apts - Explosion and Fire Dec 2019 - Building currently Boarded	**Dec 2019**
Number 2 --retired	Number 2	816 N 25th St	Boarded Building		Court hearing allowed owner to repair outside of structure. Case closed July 2021	Status hearing scheduled August 2020	**Nov 2017**
Number 2	Number 12	120 S 29th St	Abandoned Decaying Structure	Vilavong Keutla - 1311 Avenue F Billings, MT	Fire in rear structure - owner intends to request demo permit	On previous Dirty Dozen list - came off list 3rd Quarter of 2019	**Jan 2020**
Number 3	Number 8	835 Miles Ave	Abandoned and Blighted Structure	Jerome Kautzman - 2126 N 9th Rd Worden, MT	Original case dismissed by Municipal court - pursuing filing in district court to abate building	Court hearing June 2020 - Owner agreed to repair building - Status hearing scheduled for Dec 2020	**Dec 2016 & Jan 2020**
Number 4 --retired	Number 4	911 Terry	Open Storage of Junk and Junk Vehicles		Citation issued, court hearing allowed owners time to clean up back yard. Clean up completed by owner in Oct 2020	No progress since end of 2019. May cite owners in August	**June 2019**
Number 4	Not on list	309 S 28th St	Graffiti, Open Storage of Junk & Junk Vehicles	Jerome Kautzman - 2126 N 9th Rd Worden, MT	First Citation issued	First and second notices June 1 and June 16 2021	**June 2021**
Number 5	Not on list	2202 Canyon	Open Storage of Junk and Junk Vehicles	Freddie J. Kautz -2139 Canyon Dr	First Citation Issued	Final notice sent Oct 2020	**Oct 2020**
Number 6	Not on list	12 Monroe St	Open Storage of Junk and Junk Vehicles	Jerome Kautzman - 2126 N 9th Rd Worden, MT	Pending final inspection and citation	Final notice August 2021	**July 2021**
Number 7	Not on list	133 Adams	Dangerous Structure/Burned House	Jerome Kautzman - 2126 N 9th Rd Worden, MT	Pending final inspection and citation		**February 2021**
Number 8	Not on list	313 S 28th St	Open Storage of Junk and Junk Vehicles	Gary R. Weitz - 1841 Old Sorrel Trail Billings, MT	First citation issued	Final notice issued Aug 31 2021	**August 2020**
Number 9 --retired	Number 9	503 Cook	Dangerous Structure		Owner's relatives will secure building	No progress - may issue new appearance cite	**May 2019**
Number 9	Number 7	504 Hillview	Dangerous Structures, Open Storage	Donald (Deceased) and Delia Sheriff	No progress with relatives.	Delia is in Assisted Living, relatives trying to secure power of attorney to sell property	**Mar 2019**
Number 10 --retired	Number 10	114 Custer Ave	Dangerous Structure/Abandoned Decaying Structure		Court allowed owner to repair exterior - case closed June 2021	Citation issued for noncompliance - Appearance July 24 2020	
Number 10	Number 6	213/215 S 30th St	Dangerous Structures	Vilavong Keutla - 1311 Avenue F Billings, MT	Owner stated intention to obtain demo permit	Purchase and sale of property signed - Mr. Glock will turn over to new owner within the next 60 days.	**Dec 2016**
Number 11	Number 5	20 Washington	Dangerous Structures	Melvin Boyer - 4243 Stone St Billings MT	Sale of property not completed. Will re-start enforcement and compliance work with Mr. Boyer	Owner has purchase and sale signed to new owner. Should close in the next 30 to 60 days. Clean out and clean up of property progressing	**Oct 2016**
Number 12	Number 3	1015 McKenney Road	Abandoned Construction (started in 2007)	Bradley K Redlich - 2602 Enterprise Ave, Billings MT	Court status hearings - completing buidling exterior - 30 days continuance	Status hearing in July 2020. Building permit secured and work has started on the building	**June 2017**

City Council Work Session

Date: 09/20/2021
Title: City of Billings American Rescue Plan Funds
Presented by: Andy Zoeller, Finance Director
Department: Finance
Presentation: Yes

RECOMMENDATION

No council action is needed at this time. Staff will provide an update and introduction to Council on three projects staff is considering recommending, to be funded with ARPA funds. Future Council action related to ARPA funds will occur with the adoption of the Capital Improvement Plan, future Budgets, and Contract Awards.

BACKGROUND (Consistency with Adopted Plans and Policies, if applicable)

On July 6, 2021, Staff provided City Council with information relating to the American Rescue Plan Act (ARPA) dollars that have been awarded to the City. At that time Staff informed Council of 3 buckets of ARPA funds one was direct federal grant made to the City and the other two were State of Montana Grants for Water and Wastewater projects. The main focus of the presentation in July was on the State programs, specifically those that were time sensitive. The main focus of the presentation on September 20, will be to provide Council with information related to three projects that the staff are recommending be considered for funding with ARPA dollars. These projects are:

Radio Communication System

The system currently employed by the City of Billings is utilized to facilitate emergency response and operational traffic to the cities existing emergency services, some of their partner agencies, and several city departments to facilitate their respective business, such as public works, transit, and other services. It is the cities only source of reliable 2-way communication to facilitate emergency radio communications. There is no back-up system present.

This system will experience an "end-of-life" sequence beginning in the Spring of 2023 during which time our existing maintenance and service agreement will expire, and manufacturers will no longer be producing both hardware nor software for this system. This system, when purchased, relied heavily on a patchwork framing to facilitate its function and consequently, possesses numerous "fail-points" which currently exhibit age and maintenance needs routinely, often time to the point of failure. As we approach the spring of 2023, and the termination of the service and maintenance agreement of our existing system, the city will be left with much aged communications system of which its users and operators have little confidence in operating without sustain manufacturer support. The absence of a guaranteed method of communication link between the citizens and their responders, operated by an emergency communications center, represents a critical project in order to sustain emergency response service from our fire, medical, and law enforcement department respectively.
The request present represents entering a partnership with the State of Montana, Department of Justice, which is administered by the Montana Highway Patrol. This system is funded by the State and is intended to provide statewide interoperable communications to all manners of emergency service. While we often think of boundaries, it is becoming more common that the cities emergencies begin elsewhere and come here, while our emergencies may begin here but often end up in other jurisdictions. This system is present already inside of the City's communications center, housed by partnership and termed by MOU allowing the City to "hook" to this system and utilize it.

In order to utilize this system, the City must purchase both hardware and software and the corresponding elements of a dynamic communications system which would allow the cities departments with radio communications needs, to "hook" into the existing system and utilize it similar in nature as to if the City were to purchase and utilize its own, but at a much greater costs. For example, the state-owned "core", which is the computer operated brain of the radio system, would represent at least a cost of an additional $5-$7 Million to replicate something that is present now, for free.

A radio system suitable for a growing city such as Billings is dynamic and serves as the keystone system for numerous other compatible functionalities. The cost of the project includes all materials and equipment necessary to migrate the City from its current communications platform to that which would serve the city for the next 15-20 years.
An additional bonus of establishing this system inside of the City of Billings is the added interoperability and shared resource use established as a result of the technical capacity of the system. The City would experience an increase in the amount of radio communication coverage using other agencies physical sites, and the cities fire and law enforcement responders would, with prior planning, experience immediate and uninhibited radio communications with all existing other local, county, state, and federal responders both inside and outside of the city. This is a feature that is as of now, not possible with our current system.

Pursuing this purchase and forming the partnership with the State of Montana presents the City with a "force multiplier" option in which the City would establish elements of emergency response necessary for its proper function without experiencing the total cost of a complete system overhaul, and the added annual operations and maintenance costs.

Westend Water Treatment Plant Park Amenities

The Billings Water Treatment Plant (WTP) is the only source of potable drinking water for over 110,000 residents. If the WTP goes down in the summer, in approximately 4-5 hours pressure issues will begin in the distribution system. In approximately 8-10 hours, parts of the City will be without water. The addition of a water treatment plant and raw water storage reservoir will increase the amount of allowable downtime from hours to approximately 4 months. The West End Reservoir will be constructed after the water treatment plant. Failure to complete the raw water storage reservoir could result in the inability for the City of Billings to grow.

The project also includes approx. $7.5M of park land use items (trails, docks, picnic areas, beach, etc.) to create a premier recreational amenity that are not eligible expenses for the City's water fund.

Law and Justice Center Build-out Costs

The facility needs of the criminal justice system have been one of the critical components of our discussions to improve the safety of Billings. Prior to receiving CARES and ARPA dollars, the City planned to include a bond sale, along with the public safety levy, to resolve space deficiencies. The 2020 Center for Public Safety Police Department report emphasizes the effeciancy problems the city has with disjointed inadequate facilities. Each discussion the city has had regarding the purchase of the Stillwater building has included using ARPA dollars to complete the build out of the building. Based on the best information we have today, staff estimates we will need to use approximately $6.0M of ARPA funds to complete buildout of the Stillwater building as the City's law and justice center/city hall.

ALTERNATIVES

City Council may provide feedback to staff on the proposed projects, and may recommend that staff considers other projects for use with ARPA funds. No decision will be made at the City Council Work Session.

FISCAL EFFECTS

The Federal Government has awarded the City $15,940,314 in ARPA funds. The City of Billings has received 1/2 of the award, $7,970,157, and will receive the second half in May of 2022. The City Council will be asked to make decisions in the future (CIP & Budgets) about allocating and spending these funds on eligible projects.

SUMMARY

This discussion will not result in any final decisions. In fact, we are not looking to limit potential uses of the ARPA dollars at this time. Rather, the discussion is meant to introduce three critical projects that currently do not have adequate funds. Staff is working through the process of updating the City's Capital Improvement, Technology Replacement and Equipment Replacement plans. Each of these plans will be presented to the Council in November and December for the Council's consideration and will include recommended uses of ARPA funds.