



November Public Meeting

November 7, 2019

Massachusetts Gaming Commission

10:00AM



Public Meeting Slides and Packet- November 2019

November Public Meeting

Call to Order

Chair Hoffman

Intro Slides - Page 5

Approval of Minutes (see full text below)

6.25, 6.27, 10.10

Executive Director's Report

Shawn Collins

Licensing Data Slides - Page 7

Staff Recommendations on Licensure

Kyle Potvin

Changes of Ownership

COO Slide - Page 22

COO EXECUTIVE SUMMARY-ALTERNATIVE THERAPIES
GROUP INC.v1.docx - Page 23

Renewals

Renewals Slides - Page 25

ME RENEWAL EXECUTIVE SUMMARY-110719.v1.docx - Page
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MTC RENEWAL EXECUTIVE SUMMARY-110719.v1.docx - Page
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Final Licenses

Finals Slide - Page 31

FL EXECUTIVE SUMMARY-253 ORGANICS LLC-MC281258-
MP281302.v1.docx - Page 32

FL EXECUTIVE SUMMARY-MASSGROW, LLC-
MC281488.v1.docx - Page 35

FL EXECUTIVE SUMMARY-MAYFLOWER MEDICINALS, INC-
MC281343-MP281480.v1.docx - Page 38

FL EXECUTIVE SUMMARY-SLANG INC-MR281402.v1.docx -
Page 41

FL EXECUTIVE SUMMARY-SOLAR THERAPEUTICS INC-
MC281592.v1.docx - Page 44

MFL EXECUTIVE SUMMARY-ARL HEALTHCARE-
RMD1085.v1.docx - Page 47

MFL EXECUTIVE SUMMARY-THE GREEN HARBOR
DISPENSARY-RMD1305.v1.docx - Page 51

MFL EXECUTIVE SUMMARY-THE HEIRLOOM COLLECTIVE-

Provisional Licenses

Provisionals slides - Page 58

PL EXECUTIVE SUMMARY-APICAL, INC-MCN281385-MPN281333.v1.docx - Page 60

PL EXECUTIVE SUMMARY-APICAL, INC-MRN281246.v1.docx - Page 63

PL EXECUTIVE SUMMARY-BASK, INC-MCN282211-MPN281702.v1.docx - Page 66

PL EXECUTIVE SUMMARY-COMMUNITY GROWTH PARTNERS GREAT BARRINGTON OPERATIONS, LLC -MRN282695.v1.docx - Page 69

PL EXECUTIVE SUMMARY-COMMUNITY GROWTH PARTNERS NORTHAMPTON OPERATIONS, LLC -MCN282162-MPN281677.v1.docx - Page 72

PL EXECUTIVE SUMMARY-FOUR DAUGHTERS COMPASSIONATE CARE, INC-MCN282243-MPN281715.v1.docx - Page 76

PL EXECUTIVE SUMMARY-FOUR DAUGHTERS COMPASSIONATE CARE, INC-MRN281552.v1.docx - Page 79

PL EXECUTIVE SUMMARY-GREENSTAR HERBALS, INC-MRN282034.v1.docx - Page 82

PL EXECUTIVE SUMMARY-GREENSTAR HERBALS, INC-MRN282048.v1.docx - Page 85

PL EXECUTIVE SUMMARY-HVV MASSACHUSETTS, INC-MPN281693-MCN282198.v1.docx - Page 88

PL EXECUTIVE SUMMARY-JUST HEALTHY, LLC-MCN281866-MPN281559.v1.docx - Page 91

PL EXECUTIVE SUMMARY-JUST HEALTHY, LLC-MRN281863.v1.docx - Page 95

PL EXECUTIVE SUMMARY-OLD PLANTERS OF CAPE ANN, INC-MRN282588.v1.docx - Page 98

PL EXECUTIVE SUMMARY-THEORY FARMS, LLC-MCN281657.v1.docx - Page 101

Commission Discussion and Votes

Energy and Environment Guidance (see draft text below)

Commissioner
Kay Doyle

Energy Environment Guidance Slides - Page 104

Research Report: State of the Data

State of the Data Slides - Page 117

Executive Director Goals

Goals and Wrap up slides - Page 166

Executive Director Compensation

New Business that the Chairman did not anticipate at time of posting

Next Meeting Date

Minutes, Guidance, and Research Report Full Text

Meeting Minutes 6.25.19.pdf - Page 168

Meeting Minutes 6.27.19 - Page 175

Meeting- Minutes - 10.10.19 - Page 196

Energy Environment Compiled Guidance v2.docx - Page 222

RR5-Special Report-Evaluating the Impact of Cannabis Legalization in
MA- State of the Data-Nov 2019.pdf - Page 278

CANNABIS CONTROL COMMISSION
Public Meeting

November 7, 2019

10:00AM

Massachusetts Gaming Commission
101 Federal Street, 12 Fl.,
Boston, MA

Agenda

- 1) Call to Order
- 2) Chairman's Comments & Updates
- 3) Approval of Minutes
- 4) Executive Director's Report
- 5) Staff Recommendations on Change of Ownership
- 6) Staff Recommendations on Renewals
- 7) Staff Recommendations on Final Licenses
- 8) Staff Recommendations on Provisional Licenses
- 9) Commission Discussion and Votes
- 10) New Business that the Chairman did not anticipate at time of posting
- 11) Next Meeting Date

Licensing Applications | November 7, 2019

The totals below are applications that have submitted all four packets and are pending review.

Type	#
Craft Marijuana Cooperative	2
Independent Testing Laboratory	3
Marijuana Cultivator	113
Marijuana Microbusiness	10
Marijuana Product Manufacturer	92
Marijuana Research Facility	4
Marijuana Retailer	166
Marijuana Transporter with Other Existing ME License	1
Third Party Transporter	4
Total	395

Licensing Applications | November 7, 2019

The totals below are all license application received to date.

Type	#
Pending (All 4 packets submitted)	395
Withdrawn	389
Incomplete (Less than 4 packets submitted)	3,510
Denied	4
Approved	207
Total	4,505

Licensing Applications | November 7, 2019

The totals below are number of licenses approved by category.

Type	#
Craft Marijuana Cooperative	0
Independent Testing Laboratory	3
Marijuana Cultivator	64
Marijuana Microbusiness	4
Marijuana Product Manufacturer	53
Marijuana Research Facility	0
Marijuana Retailer	80
Marijuana Third Party Transporter	1
Marijuana Transporter with Other Existing ME License	2
Total	207

Licensing Applications | November 7, 2019

The totals below are number of licenses approved by stage.

Type	#
Provisionally Approved	8
Provisional License	108
Final License	14
Commence Operations	77
Total	207

Provisionally approved means approved by the Commission but has not submitted license fee payment yet – provisional license has not started

Licensing Applications | November 7, 2019

The totals below are distinct license numbers that have submitted all required packets.

The 606 applications represent 319 separate entities

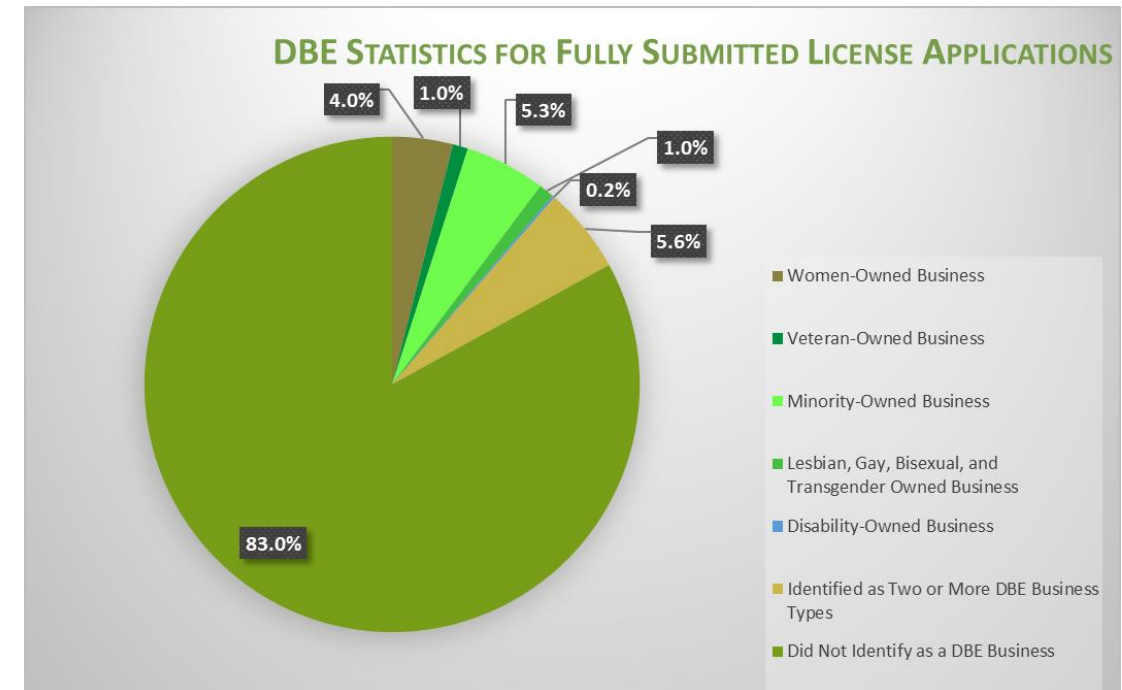
Type	#
RMD Priority	227
Economic Empowerment Priority	21
Expedited Review	26
General Applicant	332
Total	606

Licensing Applications | November 7, 2019

Disadvantaged Business Enterprise (DBE) Statistics

The totals below are distinct license numbers that have submitted all required packets.

Type	#	% of Group
Women-Owned Business	24	4.0
Veteran-Owned Business	6	1.0
Minority-Owned Business	32	5.3
Lesbian Gay, Bisexual, and Transgender Owned Business	6	1.0
Disability-Owned Business	1	0.2
Identified as Two or More DBE Business Types	34	5.6
Did Not Identify as a DBE Business	503	83.0
Total	606	100.0



Licensing Applications | November 7, 2019

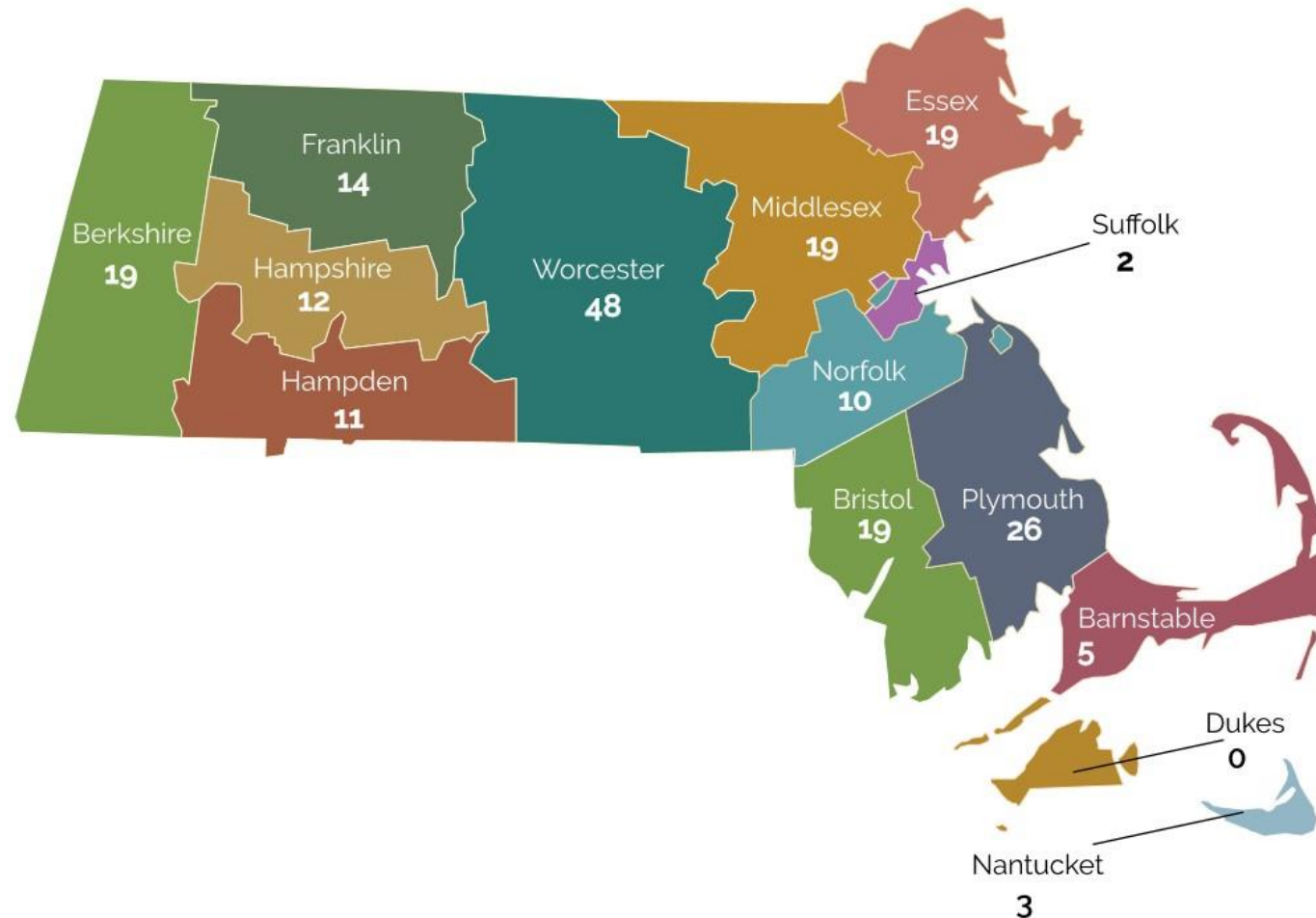
Status	#
Application Submitted: Awaiting Review	156
Application Reviewed: More Information Requested	156
Application Deemed Complete: Awaiting 3 rd Party Responses	63
All Information Received: Awaiting Staff Recommendation	20
Applications Considered by Commission	211
Total	606



Licensing Applications | November 7, 2019

The totals below are the total number of licenses by county.

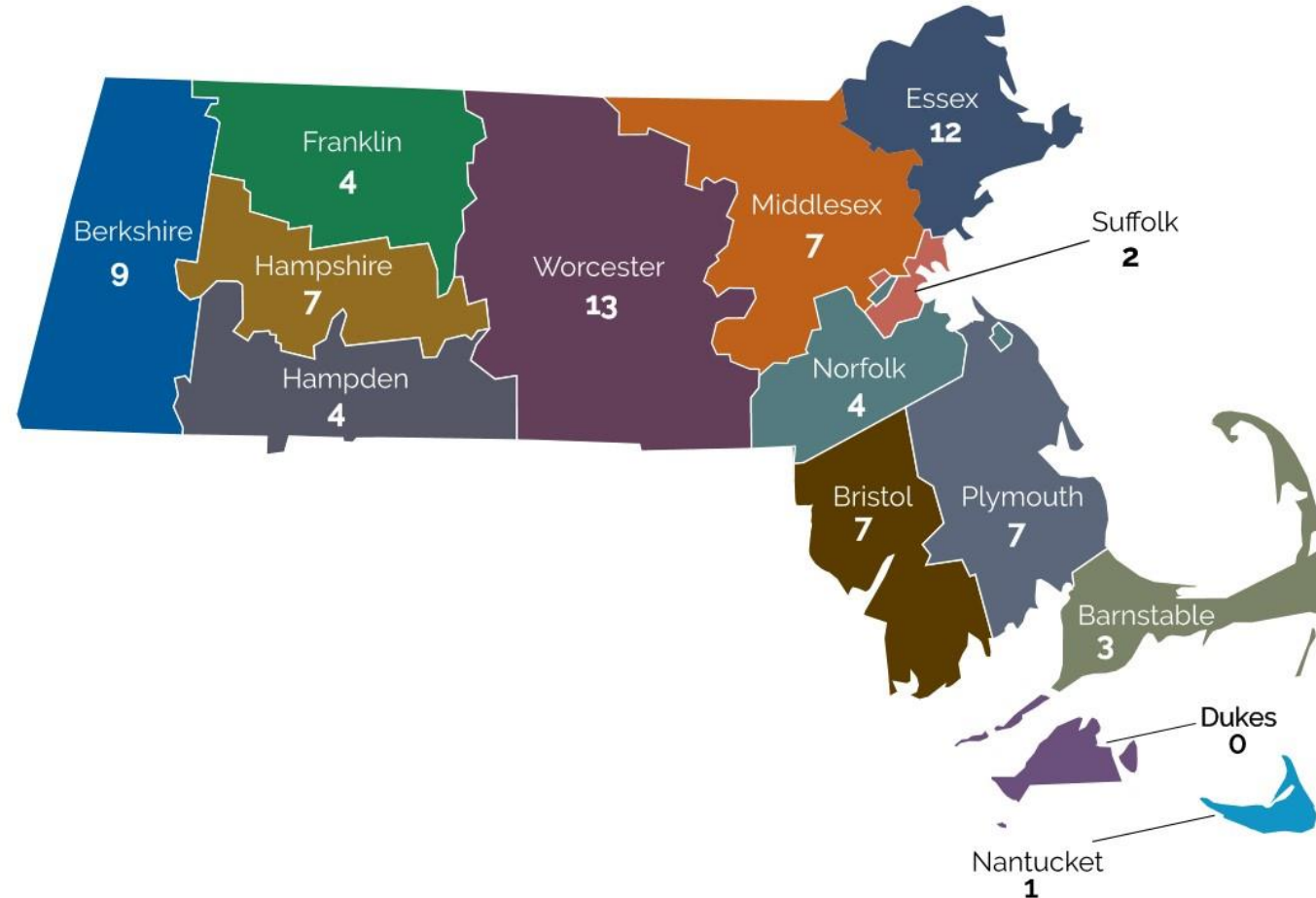
County	+/-
Barnstable	
Berkshire	+1
Bristol	
Dukes	
Essex	+2
Franklin	+3
Hampden	
Hampshire	+1
Middlesex	
Nantucket	
Norfolk	
Plymouth	+2
Suffolk	
Worcester	+2
Total	+11



Retail Applications | November 7, 2019

The totals below are the total number of retail licenses by county.

County	+/-
Barnstable	
Berkshire	+1
Bristol	
Dukes	
Essex	+2
Franklin	
Hampden	
Hampshire	
Middlesex	
Nantucket	
Norfolk	
Plymouth	
Suffolk	
Worcester	+1
Total	+4



Licensing Applications | November 7, 2019

TYPE	PENDING APPLICATION	INITIAL LICENSE DENIED	PROVISIONAL LY APPROVED	PROVISIONAL LICENSE	FINAL LICENSE	COMMENCE OPERATION	TOTAL
Craft Marijuana Cooperative	2	0	0	0	0	0	2
Independent Testing Laboratory	3	0	0	1	0	2	6
Marijuana Cultivator	113	2	4	33	6	21	179
Marijuana Microbusiness	10	0	1	2	1	0	14
Marijuana Product Manufacturer	92	1	2	27	4	20	146
Marijuana Research Facility	4	0	0	0	0	0	4
Marijuana Retailer	166	1	1	44	3	32	247
Marijuana Transporter with Other Existing ME License	1	0	0	0	0	2	3
Third Party Transporter	4	0	0	1	0	0	5
Total	395	4	8	108	14	77	606

Adult Use Agent Applications | November 7, 2019

9661 Total Agent Applications:

- 234
Total
- 225 Pending Establishment Agents
 - 9 Pending Laboratory Agents
 - 472 Withdrawn
 - 1,085 Incomplete
 - 8 Expired
 - 1147 Surrendered
 - 6,715 Active

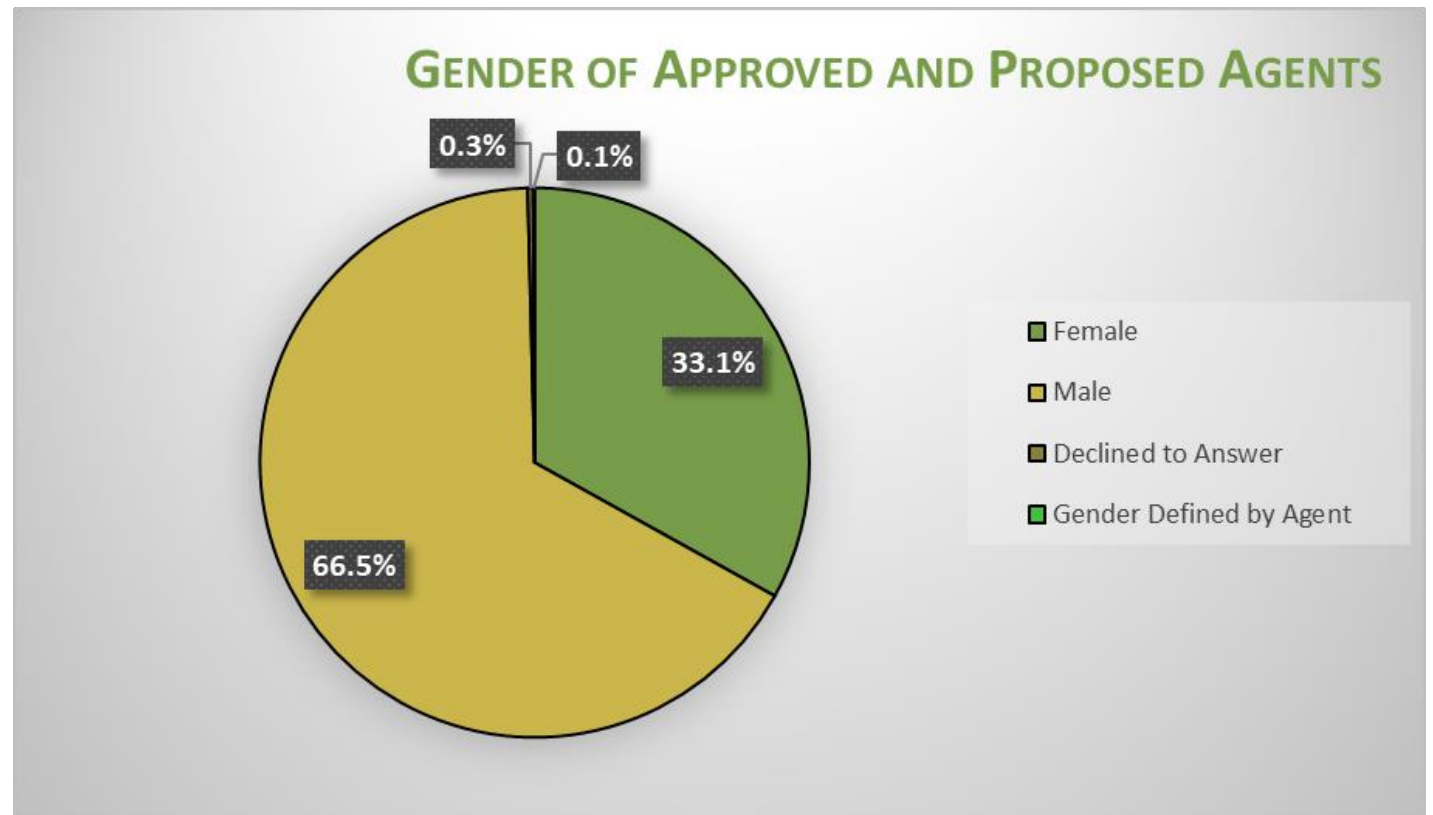
Of Total Pending:

- 102 not yet reviewed
- 125 CCC requested more information
- 7 awaiting third party response
- 0 Review complete; awaiting approval

Agent Applications | November 7, 2019

Demographics of Approved and Pending Agents

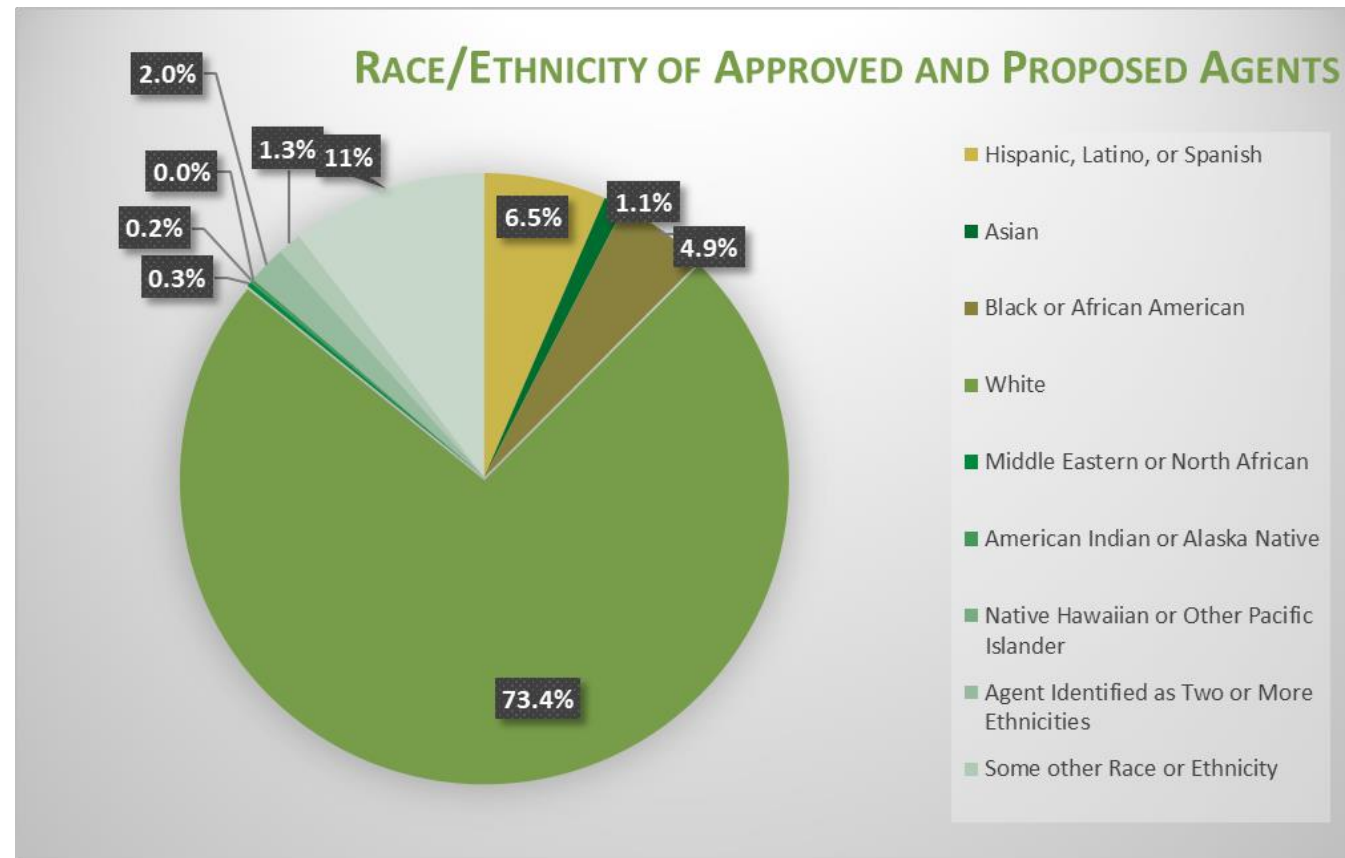
Gender	#	%
Female	2,298	33.1
Male	4,623	66.5
Declined to Answer	22	0.3
Gender Defined by Applicant	6	0.1
Total	6,949	100.0



Agent Applications | November 7, 2019

Demographics of Approved and Pending Agents

Race/Ethnicity	#	%
Hispanic; Latino; Spanish	450	6.5
Asian	77	1.1
Black; African American	339	4.9
White	5,098	73.4
Middle Eastern; North African	18	0.3
American Indian; Alaska Native	14	0.2
Native Hawaiian; Other Pacific Islander	3	0.0
Identified as Two or More Ethnicities	138	2.0
Other Race or Ethnicity	88	1.3
Declined to Answer	724	10.4
Total	6,949	100.0



MMJ Licensing Data | November 7, 2019

MTC License Applications	#
Pending-Application of Intent Stage	37
Pending-Management and Operations Profile Stage	17
Pending-Siting Profile Stage	5
Application Expired	100
Application Withdrawn	3
Total	162

MTC Licenses	#
Provisional	96
Final	5
Commence Operations	54
License Expired	10
Total	165

MMJ Agent and Program Data | November 7, 2019

The numbers below are a snapshot of the program for the month of October.

MTC Agent Applications	#
Pending-MTC Agent Applications	72
Pending-Laboratory Agents	1
Revoked	3
Surrendered	2445
Expired	401
Active	4775
Total	7697

MMJ Program	#
Certified Patients	67,222
Certified Active Patients	60,110
Active Caregivers	6,261
Registered Certifying Physicians	259
Registered Certifying Nurse Practitioners	64
Ounces Sold	39,607

6) Staff Recommendations on Change of Ownership

- a. Alternative Therapies Group, Inc.

ALTERNATIVE THERAPIES GROUP, INC.

ESTABLISHMENT OVERVIEW

1. Name, license number(s), and types of license(s) affected by the change in ownership and control request:

Alternative Therapies Group, Inc.

Cultivation, Tier 5 / Indoor (30,001 – 40,000 sq ft) (MC281255)

Product Manufacturing (MP281300)

Retail (MR281346)

Retail (MR281255)

Retail (MR281344)

MTC (RMD-65)

MTC (Provisional License)

MTC (Provisional License)

BACKGROUND OVERVIEW

2. The individual(s) requesting to acquire ownership or control interests over the license(s) include the following:

Michael Young – Director of Operations

3. There were no entities disclosed in the application as acquiring ownership or control interests over the licenses.
4. Background checks were conducted on the individual disclosed within the application. No suitability issues were discovered.
5. The individual that is requesting ownership and/or control over the licenses do not appear to have exceeded any ownership and control limits over any particular license type or cultivation canopy.

RECOMMENDATION

Commission staff recommend review and decision on the request for change of ownership and control, and if approved, request that the approval be subject to the following conditions:

Change in Ownership and Control Executive Summary 1



1. The licensee and the individual associated with this change in ownership and control may now effectuate any outstanding business agreements related to the change. The licensee will notify the Commission when the change in ownership and control has occurred.
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure;
4. The licensee shall cooperate with and provide information to Commission staff; and
5. The licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105(1) after effectuating the change in ownership and control, if applicable, and shall give Commission staff adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.



7) Staff Recommendations on Renewals

- a. 1620 LABS, LLC, (#MCR139847), Cultivation Renewal
- b. Atlantic Medicinal Partners, Inc., (#MCR139848), Cultivation Renewal
- c. Atlantic Medicinal Partners, Inc., (#MPR243500), Product Manufacturer Renewal
- d. Atlantic Medicinal Partners, Inc., (#MRR205546), Retail Renewal
- e. Gibby's Garden, LLC., (#MBR169263), Microbusiness Renewal
- f. Good Chemistry of Mass, Inc. (#MPR243497), Product Manufacturer Renewal
- g. Good Chemistry of Mass, Inc. (#MCR139840)., Cultivation Renewal
- h. Good Chemistry of Mass, Inc. (#MRR205543)., Retail Renewal
- i. Nova Farms, LLC F/K/A BCWC, LLC, (#MPR243484), Product Manufacturer Renewal
- j. Nova Farms, LLC F/K/A BCWC, LLC, (#MCR139829), Cultivation Renewal
- k. Revolutionary Clinics II, Inc. (#MCR139843), Cultivation Renewal
- l. Revolutionary Clinics II, Inc. (#MPR243494), Product Manufacturer Renewal

7) Staff Recommendations on Renewals

- m. Sanctuary Medicinals, LLC, (#MRR205544) Retail Renewal
- n. Temescal Wellness of Massachusetts, Inc., (#MCR139845), Cultivation Renewal
- o. Temescal Wellness of Massachusetts, Inc., (#MPR243496), Product Manufacturer Renewal
- p. Apothca, Inc., Vertically Integrated Medical Treatment Center Renewal
- q. Apothca, Inc., (#RMD1065), Vertically Integrated Medical Treatment Center Renewal
- r. Coastal Healing, Inc., Vertically Integrated Medical Treatment Center Renewal
- s. Cultivate Holding, Inc., (#RMD485), Vertically Integrated Medical Treatment Center Renewal
- t. Cypress Tree Management, Inc., Vertically Integrated Medical Treatment Center Renewal
- u. Garden Remedies, Inc., (#RMD1265), Vertically Integrated Medical Treatment Center Renewal

7) Staff Recommendations on Renewals

- v. Resinate, Inc., Vertically Integrated Medical Treatment Center Renewal
- w. Revolutionary Clinics II, Inc., (#RMD405), Vertically Integrated Medical Treatment Center Renewal
- x. Seven Point of Massachusetts, Inc., Vertically Integrated Medical Treatment Center Renewal
- y. Seven Point of Massachusetts, Inc., Vertically Integrated Medical Treatment Center Renewal

MARIJUANA ESTABLISHMENT RENEWALS EXECUTIVE SUMMARY COMMISSION MEETING: NOVEMBER 7, 2019

RENEWAL OVERVIEW

1. Name, license number, renewal application number, host community, and funds deriving from a Host Community Agreement allocated for the municipality for each Marijuana Establishment presented for renewal:

Marijuana Establishment Name	License Number	Renewal Application Number	Location	Funds
1620 LABS, LLC	MC281370	MCR139847	ATHOL	\$0.00
ATLANTIC MEDICINAL PARTNERS, INC.	MC281476	MCR139848	FITCHBURG	\$0.00
ATLANTIC MEDICINAL PARTNERS, INC.	MP281360	MPR243500	FITCHBURG	\$0.00
ATLANTIC MEDICINAL PARTNERS, INC.	MR281471	MRR205546	FITCHBURG	\$0.00
GIBBY'S GARDEN LLC	MB281347	MBR169263	UXBRIDGE	\$0.00
GOOD CHEMISTRY OF MASS, INC.	MP281410	MPR243497	BELLINGHAM	\$50,000.00
GOOD CHEMISTRY OF MASS, INC.	MC281557	MCR139840	BELLINGHAM	\$50,000.00
GOOD CHEMISTRY OF MASS, INC.	MR281702	MRR205543	WORCESTER	\$60,000.00
NOVA FARMS, LLC F/K/A BCWC, LLC	MP281325	MPR243484	ATTLEBORO	\$0.00
NOVA FARMS, LLC F/K/A BCWC, LLC	MC281263	MCR139829	ATTLEBORO	\$0.00
REVOLUTIONARY CLINICS II, INC.	MC281507	MCR139843	FITCHBURG	\$129,281.73
REVOLUTIONARY CLINICS II, INC.	MP281425	MPR243494	FITCHBURG	\$129,281.73
SANCTUARY MEDICINALS, LLC	MR281650	MRR205544	GARDNER	\$47,072.12
TEMESCAL WELLNESS OF MASSACHUSETTS INC.	MC281550	MCR139845	WORCESTER	\$180,000.00
TEMESCAL WELLNESS OF MASSACHUSETTS INC.	MP281402	MPR243496	WORCESTER	\$180,000.00

2. All licensees have submitted renewal applications pursuant to 935 CMR 500.103(4) which include the licensee's disclosure of their progress or success towards their Positive Impact and Diversity Plans.
3. All licensees have submitted documentation of good standing from the Secretary of the Commonwealth, Department of Revenue, and Department of Unemployment Assistance, if applicable.

Marijuana Establishment Renewal Executive Summary 1



4. All licensees have paid the appropriate annual license fee.
5. The licensees, when applicable, have been inspected over the previous year. Commission staff certify that, to the best of our knowledge, no information has been found that would prevent renewal of the licenses mentioned above pursuant to 935 CMR 500.450.

RECOMMENDATION

Commission staff recommend review and decision on the above-mentioned licenses applying for renewal, and if approved, request that the approval be subject to the licensee remaining in compliance with the Commission regulations and applicable law.



**MEDICAL MARIJUANA TREATMENT CENTER RENEWALS
EXECUTIVE SUMMARY
COMMISSION MEETING: NOVEMBER 7, 2019**

RENEWAL OVERVIEW

1. Name, license number, location(s), for each Medical Marijuana Treatment Center presented for renewal:

Medical Marijuana Treatment Center Name	License Number	Location (Cultivation & Processing)	Location (Dispensing)
APOTHCA, INC.	N/A	FITCHBURG	HOLYOKE
APOTHCA, INC.	RMD- 1065	FITCHBURG	LYNN
COASTAL HEALING, INC.	N/A	WESTPORT	WESTPORT
CULTIVATE HOLDING, INC.	RMD- 485	LEICESTER	LEICESTER
CYPRESS TREE MANAGEMENT, INC.	N/A	FITCHBURG	NEWTON
GARDEN REMEDIES, INC.	RMD- 1265	FITCHBURG	MARLBOROUGH
RESINATE, INC.	N/A	DOUGLAS	WORCESTER
REVOLUTIONARY CLINICS II, INC.	RMD- 405	FITCHBURG	SOMERVILLE
SEVEN POINT OF MASSACHUSETTS, INC.	N/A	AYER	MIDDLEBOROUGH
SEVEN POINT OF MASSACHUSETTS, INC.	N/A	AYER	GARDNER

2. All licensees have submitted renewal applications pursuant to 935 CMR 501.100(5).
3. All licensees have paid the appropriate annual license fee.
4. The licensees, when applicable, have been inspected over the previous year. Commission staff certify that, to the best of our knowledge, no information has been found that would prevent renewal of the licenses mentioned above pursuant to 935 CMR 501.405.

RECOMMENDATION

Commission staff recommend review and decision on the above-mentioned licenses applying for renewal, and if approved, request that the approval be subject to the licensee remaining in compliance with the Commission regulations and applicable law.



8) Staff Recommendations on Final Licenses

- a. 253 Organics, LLC. (#MC281258), Cultivation, Tier 4/Indoor
- b. 253 Organics, LLC. (#MP281302), Product Manufacturing
- c. MassGrow, LLC. (#MC281488), Cultivation, Tier 11/Indoor
- d. Mayflower Medicinals, Inc. (#MC281343), Cultivation, Tier 2/Indoor
- e. Mayflower Medicinals, Inc. (#MP281480), Product Manufacturing
- f. Slang, Inc. (#MR281402), Retail
- g. Solar Therapeutics, Inc. (#MC281592), Cultivation, Tier 5/Indoor
- h. ARL Healthcare (#RMD1085)
- i. The Green Harbor Dispensary (#RMD1305)
- j. The Heirloom Collective (#RMD825)

253 ORGANICS, LLC

MC281258

MP281302

ESTABLISHMENT OVERVIEW

1. Name and address of the Marijuana Establishment:

253 Organics, LLC
253 Miller Falls Road, Montague, MA 01376

2. Type of final license sought (if cultivation, its tier level and outside/inside operation):

Cultivation Tier 4 / Indoor (20,001 – 30,000 sq ft)
Product Manufacturing

3. The licensee is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Commenced Operations	Montague

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure for the above-mentioned license type on October 4, 2018.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional licenses.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional licenses.

INSPECTION OVERVIEW

Final License Executive Summary 1



8. Commission staff inspected the licensee’s facility on the following date: September 11, 2019.
9. The licensee’s facility was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 500.105 through 935 CMR 500.160 as applicable.
10. No evidence was discovered during the inspection(s) that indicated the Marijuana Establishment was not in compliance with all applicable state laws and local bylaws or ordinances.
11. Specific information from Commission staff’s inspection is highlighted below:

a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission’s regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

d. Product Manufacturing Operation



Enforcement staff verified that all manufacturing-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Proposed product compliance; and
- ii. Safety, sanitation, and security of the area and products.

e. Transportation

The licensee will not be performing transportation activities at this time.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, prepare, produce, and otherwise acquire marijuana, but shall not sell, or otherwise transport marijuana to other Marijuana Establishments, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure; and
4. The licensee shall cooperate with and provide information to Commission staff.
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105 (1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



MASSGROW, LLC
MC281488

ESTABLISHMENT OVERVIEW

1. Name and address of the Marijuana Establishment:

MassGrow, LLC
134 Chestnut Hill Avenue, Athol, MA 01331

2. Type of final license sought (if cultivation, its tier level and outside/inside operation):

Cultivation – Tier 11 / Indoor (90,001 – 100,000 sq ft)

3. The licensee is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
MPN281460 – Product Manufacturing	Provisional License	Athol

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure for the above-mentioned license type on May 30, 2019.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

INSPECTION OVERVIEW



8. Commission staff inspected the licensee's facility on the following date(s): September 26, 2019 and October 17, 2019.
9. The licensee's facility was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 500.105 through 935 CMR 500.160 as applicable.
10. No evidence was discovered during the inspection(s) that indicated the Marijuana Establishment was not in compliance with all applicable state laws and local bylaws or ordinances.

11. Specific information from Commission staff's inspection is highlighted below:

a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission's regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

d. Transportation

The licensee will not be performing transportation activities at this time.



RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, and otherwise acquire marijuana, but shall not sell, or otherwise transport marijuana to other Marijuana Establishments, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure; and
4. The licensee shall cooperate with and provide information to Commission staff.
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105 (1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



MAYFLOWER MEDICINALS, INC.

MC281343

MP281480

ESTABLISHMENT OVERVIEW

1. Name and address of the Marijuana Establishment:

Mayflower Medicinals, Inc.
89 October Hill Road, Holliston, MA 01746

2. Type of final license sought (if cultivation, its tier level and outside/inside operation):

Cultivation – Tier 2 / Indoor (5,001 – 10,000 sq ft)
Product Manufacturing

3. The licensee is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Provisional License	Worcester
Medical Marijuana Treatment Center	Commenced Operations	Boston
Medical Marijuana Treatment Center	Provisional License	Lowell

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure for the above-mentioned license types on May 16, 2019.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional licenses.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional licenses.

Final License Executive Summary 1



INSPECTION OVERVIEW

8. Commission staff inspected the licensee's facility on the following date: July 16, 2019.
9. The licensee's facility was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 500.105 through 935 CMR 500.160 as applicable.
10. No evidence was discovered during the inspection(s) that indicated the Marijuana Establishment was not in compliance with all applicable state laws and local bylaws or ordinances.
11. Specific information from Commission staff's inspection is highlighted below:

- a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

- b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

- c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission's regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

- d. Product Manufacturing Operation



Enforcement staff verified that all manufacturing-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Proposed product compliance; and
- ii. Safety, sanitation, and security of the area and products.

e. Transportation

Enforcement staff verified that all transportation-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Vehicle and staffing requirements;
- ii. Communication and reporting requirements; and
- iii. Inventory and manifests requirements.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, prepare, produce, and otherwise acquire marijuana, but shall not sell, or otherwise transport marijuana to other Marijuana Establishments, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure; and
4. The licensee shall cooperate with and provide information to Commission staff.
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105 (1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



SLANG, INC. D/B/A BLOOM BROTHERS

MR281402

ESTABLISHMENT OVERVIEW

1. Name and address of the Marijuana Establishment:

Slang, Inc. d/b/a Bloom Brothers
2 Larch Street, Pittsfield, MA 01201

2. Type of final license sought (if cultivation, its tier level and outside/inside operation):

Retail

3. The licensee is not an applicant or licensee for any other license type.

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure for the above-mentioned license type on March 7, 2019.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

INSPECTION OVERVIEW

8. Commission staff inspected the licensee's facility on the following dates: August 1, 2019 and October 2, 2019.
9. The licensee's facility was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 500.105 through 935 CMR 500.160 as applicable.

Final License Executive Summary 1



10. No evidence was discovered during the inspection(s) that indicated the Marijuana Establishment was not in compliance with all applicable state laws and local bylaws or ordinances.

11. Specific information from Commission staff's inspection is highlighted below:

a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

c. Retail Operation

Enforcement staff verified that all retail-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Verification of identifications for access;
- ii. Layout of the sales floor; and
- iii. Availability and contents of adult-use consumer education materials.

d. Transportation

The licensee will not be performing transportation activities.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may possess and otherwise acquire marijuana, but shall not dispense, sell, or otherwise transport marijuana to other Marijuana Establishments, or to consumers, until upon inspection, receiving permission from the Commission to commence full operations; 2



2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure; and
4. The licensee shall cooperate with and provide information to Commission staff.
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105 (1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



SOLAR THERAPEUTICS, INC.

MC281592

ESTABLISHMENT OVERVIEW

1. Name and address of the Marijuana Establishment:

Solar Therapeutics, Inc
1400 Brayton Point Road, Somerset, MA 02725

2. Type of final license sought (if cultivation, its tier level and outside/inside operation):

Cultivation Tier 5 / Indoor (30,001 – 40,000 sq ft)

3. The licensee is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Commenced Operations	Somerset
Retail	Application Submitted	Seekonk
Product Manufacturing	Provisional License	Somerset
Medical Marijuana Treatment Center	Provisional License	Somerset

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure for the above-mentioned license type on January 24, 2019.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

Final License Executive Summary 1



INSPECTION OVERVIEW

8. Commission staff inspected the licensee's facility on the following dates: September 25, 2019 and October 1, 2019.
9. The licensee's facility was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 500.105 through 935 CMR 500.160 as applicable.
10. No evidence was discovered during the inspection(s) that indicated the Marijuana Establishment was not in compliance with all applicable state laws and local bylaws or ordinances.
11. Specific information from Commission staff's inspection is highlighted below:

- a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

- b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

- c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission's regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

- d. Transportation

The licensee will not be performing transportation activities at this time.

2



RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, and otherwise acquire marijuana, but shall not sell, or otherwise transport marijuana to other Marijuana Establishments, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure; and
4. The licensee shall cooperate with and provide information to Commission staff.
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 500.105 (1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



ARL HEALTHCARE
RMD-1085

ESTABLISHMENT OVERVIEW

1. Name of the Medical Marijuana Treatment Center:

ARL Healthcare

2. Addresses of Medical Marijuana Treatment Center:

Cultivation: 177 John Vertente Boulevard, New Bedford, MA
Product Manufacturing: 177 John Vertente Boulevard, New Bedford, MA
Dispensary: 29 Harding Street, Middleborough, MA

3. The licensee is a licensee or applicant for other Medical Marijuana Treatment Center and/or Marijuana Establishment license(s):

Type	Status	Location
Cultivation Tier 4/Indoor (20,001-30,000 sq. ft.)	Application Submitted	New Bedford
Product Manufacturing	Application Submitted	New Bedford
Retail	Application Submitted	Middleborough
Medical Marijuana Treatment Center	Provisional License	Middleborough
Medical Marijuana Treatment Center	Provisional License	Norwood

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure on December 14, 2016.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

INSPECTION OVERVIEW

Final License Executive Summary 1



8. Commission staff inspected the licensee’s facilities on the following date(s): August 27, 2019 and August 29, 2019.
9. The licensee’s Medical Marijuana Treatment Center was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 501.000 as applicable.
10. No evidence was discovered during the inspections that indicated the Medical Marijuana Treatment Center was not in compliance with all applicable state and local codes, bylaws, laws, ordinances, and regulations.
11. Specific information from Commission staff’s inspection is highlighted below:

a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission’s regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

d. Product Manufacturing Operation



Enforcement staff verified that all manufacturing-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Proposed product compliance; and
- ii. Safety, sanitation, and security of the area and products.

e. Retail Operation

Enforcement staff verified that all retail-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Verification of identifications for access;
- ii. Layout of the sales floor;
- iii. Availability and contents of patient education materials; and
- iv. Policies to ensure dispensing limits are followed.

f. Transportation

Enforcement staff verified that all transportation-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Vehicle and staffing requirements;
- ii. Communication and reporting requirements; and
- iii. Inventory and manifests requirements.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, prepare, produce, and otherwise acquire marijuana, but shall not dispense, sell, or otherwise transport marijuana to other Medical Marijuana Treatment Centers, or to patients, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure;
4. The licensee shall cooperate with and provide information to Commission staff; and
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 501.105(1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.



As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



THE GREEN HARBOR DISPENSARY
RMD-1305

ESTABLISHMENT OVERVIEW

1. Name of the Medical Marijuana Treatment Center:

The Green Harbor Dispensary

2. Address of Medical Marijuana Treatment Center:

Cultivation: 29 Abbey Lane, Middleborough, MA
Product Manufacturing: 29 Abbey Lane, Middleborough, MA
Dispensary: 29 Abbey Lane, Middleborough, MA

3. The licensee is a licensee or applicant for other Medical Marijuana Treatment Center and/or Marijuana Establishment license(s):

Type	Status	Location
Medical Marijuana Treatment Center	Provisional License	Provincetown

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure on September 26, 2017.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.
7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

INSPECTION OVERVIEW

8. Commission staff inspected the licensee’s facility on the following date: September 23, 2019.



9. The licensee's Medical Marijuana Treatment Center was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 501.000 as applicable.
10. No evidence was discovered during the inspection that indicated the Medical Marijuana Treatment Center was not in compliance with all applicable state and local codes, bylaws, laws, ordinances, and regulations.
11. Specific information from Commission staff's inspection is highlighted below:

- a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

- b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

- c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission's regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and
- iii. Best practices to limit contamination.

- d. Product Manufacturing Operation

Enforcement staff verified that all manufacturing-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Proposed product compliance; and
- ii. Safety, sanitation, and security of the area and products.



e. Retail Operation

Enforcement staff verified that all retail-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Verification of identifications for access;
- ii. Layout of the sales floor;
- iii. Availability and contents of patient education materials; and
- iv. Policies to ensure dispensing limits are followed.

f. Transportation

The licensee will not be performing transportation activities at this time.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may cultivate, harvest, possess, prepare, produce, and otherwise acquire marijuana, but shall not dispense, sell, or otherwise transport marijuana to other Medical Marijuana Treatment Centers, or to patients, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure;
4. The licensee shall cooperate with and provide information to Commission staff; and
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 501.105(1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.

The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



THE HEIRLOOM COLLECTIVE, INC.
RMD-825

ESTABLISHMENT OVERVIEW

1. Name of the Medical Marijuana Treatment Center:

The Heirloom Collective, Inc.

2. Address(es) of Medical Marijuana Treatment Center:

Cultivation: 87 Northfield Road, Bernardston, MA 01337

Product Manufacturing: 87 Northfield Road, Bernardston, MA 01337

Dispensary: 457 Russell Street, Hadley, MA 01035

3. The licensee is a licensee or applicant for other Medical Marijuana Treatment Center and/or Marijuana Establishment license(s):

Type	Status	Location
Cultivation, Tier 2/Indoor (5,001-10,000 sq. ft.)	Provisional License	Bernardston
Product Manufacturing	Provisional License	Bernardston
Retail	Application Submitted	Hadley
Medical Marijuana Treatment Center	Provisional License	Greenfield

LICENSING OVERVIEW

4. The licensee was approved for provisional licensure on November 1, 2016. The licensee was given a final license for their cultivation and product manufacturing operations on October 9, 2018 and subsequently was given approval to commence operations related to these functions.
5. The licensee has paid all applicable license fees.
6. No new information has been reported to Commission staff regarding the organizational structure of the entity since the issuance of the provisional license.



7. No new information has been discovered by Commission staff regarding the suitability of the licensee or the individuals and entities previously disclosed since the issuance of the provisional license.

8.

INSPECTION OVERVIEW

9. Commission staff inspected the licensee’s facilities on the following dates: July 17, 2019, July 24, 2019, and August 13, 2019.

10. The licensee’s Medical Marijuana Treatment Center was inspected by Commission staff and found to be in full compliance with the requirements listed in 935 CMR 501.000 as applicable.

11. No evidence was discovered during the inspections that indicated the Medical Marijuana Treatment Center was not in compliance with all applicable state and local codes, bylaws, laws, ordinances, and regulations.

12. Specific information from Commission staff’s inspection is highlighted below:

a. Security

Enforcement staff verified that all security-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. The security of all entrances and exits;
- ii. Visitor procedures;
- iii. Limited access areas;
- iv. Verification of a primary and back-up security company;
- v. Presence of perimeter and duress alarms; and
- vi. All cameras complied with Commission requirements.

b. Inventory and Storage

Enforcement staff verified that all inventory-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Secure storage of marijuana and marijuana products;
- ii. Sanitation and pest control measures; and
- iii. Inventory controls and procedures.

c. Cultivation Operation

Enforcement staff verified that all cultivation operations were in compliance with the Commission’s regulations. Some of the requirements verified include the following:

- i. Seed-to-sale tracking;
- ii. Compliance with applicable pesticide laws and regulations; and

2



iii. Best practices to limit contamination.

d. Product Manufacturing Operation

Enforcement staff verified that all manufacturing-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Proposed product compliance; and
- ii. Safety, sanitation, and security of the area and products.

e. Retail Operation

Enforcement staff verified that all retail-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Verification of identifications for access;
- ii. Layout of the sales floor;
- iii. Availability and contents of patient education materials; and
- iv. Policies to ensure dispensing limits are followed.

f. Transportation

Enforcement staff verified that all transportation-related requirements were in full compliance with Commission regulations. Some of the requirements verified include the following:

- i. Vehicle and staffing requirements;
- ii. Communication and reporting requirements; and
- iii. Inventory and manifests requirements.

RECOMMENDATION

Commission staff recommend final licensure with the following conditions:

1. The licensee may continue to cultivate, harvest, possess, prepare, produce, transport, and wholesale marijuana to other Medical Marijuana Treatment Centers subject to Commission regulations, but shall not dispense marijuana to patients, until upon inspection, receiving permission from the Commission to commence full operations;
2. The licensee is subject to inspection to ascertain compliance with Commission regulations;
3. The licensee remains suitable for licensure;
4. The licensee shall cooperate with and provide information to Commission staff; and
5. Licensure is subject to notification to the Commission of any update to written operations plans required by 935 CMR 501.105(1) prior to the issuance of a commencement of operations and that Commission staff be given adequate opportunity to review said plans at the business location or the location where any such plans are maintained in the normal course of business.



The licensee has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the licensee is recommended for final licensure.

As part of the approval of final licensure, the Commission authorizes staff to take all necessary actions to review compliance with the above-referenced conditions and to approve the commencement of operations.



9) Staff Recommendations on Provisional Licenses

- a. Apical, Inc. (#MCN281385), Cultivation, Tier 6/Indoor
- b. Apical, Inc. (#MPN281333), Product Manufacturing
- c. Apical, Inc. (#MRN281246), Retail
- d. Bask, Inc. (#MCN282211), Cultivation, Tier 3/Indoor
- e. Bask, Inc. (#MPN281702), Product Manufacturing
- f. Community Growth Partners Great Barrington Operations, LLC. (#MRN282695), Retail
- g. Community Growth Partners Northampton Operations, LLC. (#MCN282162), Cultivation, Tier 3/Indoor
- h. Community Growth Partners Northampton Operations, LLC. (#MPN281677), Product Manufacturing
- i. Four Daughters Compassionate Care, Inc. (#MCN282243), Cultivation, Tier 4/Indoor

9) Staff Recommendations on Provisional Licenses

- j. Four Daughters Compassionate Care, Inc. (#MPN281715), Product Manufacturing
- k. Four Daughters Compassionate Care, Inc. (#MRN281552), Retail
- l. Greenstar Herbals, Inc. (#MRN282034), Retail
- m. Greenstar Herbals, Inc. (#MRN282048), Retail
- n. HVV Massachusetts, Inc. (#MPN281693), Product Manufacturing
- o. HVV Massachusetts, Inc. (#MCN282198), Cultivation, Tier 4/Indoor
- p. Just Healthy, LLC. (#MCN281866), Cultivation, Tier 7/Indoor
- q. Just Healthy, LLC. (#MPN281559), Product Manufacturing
- r. Just Healthy, LLC. (#MRN281863), Retail
- s. Old Planters of Cape Ann, Inc. (#MRN282588), Retail
- t. Theory Farms, LLC. (#MCN281657), Cultivation, Tier 2/Indoor

APICAL, INC.

MCN281385
MPN281333

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Apical, Inc.
77 Champion Drive, Chicopee, MA 01020

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation, Tier 6/Indoor (40,001 to 50,000 sq. ft)
Product Manufacturing

The applications were reopened once for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Easthampton
Medical Marijuana Treatment Center	Provisional License	Easthampton

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Kot Kasom	Executive
Leakhena Som	Board Member
Monica Keo	Board Member
Lar Teng	Board Member
Tiffanie Kim	Board Member
Anderson Green	Board Member

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
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Provisional License Executive Summary 1



Smartgreen, Inc.	Capital Holding Company for Apical, Inc.
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6. Applicant’s priority status:

MTC Priority Applicant

- 7. The applicant and municipality executed a Host Community Agreement on January 17, 2019.
- 8. The applicant conducted a community outreach meeting on March 15, 2019 and provided documentation demonstrating compliance with Commission regulations.
- 9. The Commission received a municipal response from the municipality on October 21, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
- 10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	40% of workforce from Holyoke, Springfield, or West Springfield.
2	50% of contractors, suppliers and vendors from Holyoke, Springfield, or West Springfield.
3	Donate \$10,000 annually to the Commissions Social Equity Training and Technical Assistance Fund.

SUITABILITY REVIEW

- 11. There were no concerns arising from background checks on the individuals or entities associated with the application.
- 12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

- 13. The applicant states that it can be operational January 2020.
- 14. The applicant’s proposed hours of operation are the following:

Monday-Saturday: 8:00 a.m. - 9:00 p.m.
Sunday: 10:00 a.m. - 6:00 p.m.
- 15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.



16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	50% of workforce will be female.
2	40% of workforce will be minorities, veterans, people with disabilities and people of all gender identities and sexual orientations.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission's regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Rosin
2	Hash
3	Ethanol derived concentrates
4	Vaporizer cartridges
5	Chocolate Bars
6	Chocolate Candies
7	Lozenges
8	Cookies
9	Brownies

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



APICAL, INC.
MRN281246

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Apical, Inc.
19 Wemelco Road, Easthampton, MA 01027

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened once additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Product Manufacturing	Application Submitted	Chicopee
Cultivation, Tier 6/Indoor (40,001-50,000 sq. ft.)	Application Submitted	Chicopee
Medical Marijuana Treatment Center	Provisional License	Easthampton

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Kot Kasom	Executive
Leakhena Som	Board Member
Monica Keo	Board Member
Lar Teng	Board Member
Tiffanie Kim	Board Member
Anderson Green	Board Member

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role

Provisional License Executive Summary 1



Smartgreen, Inc.	Capital Holding Company for Apical, Inc.
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6. Applicant’s priority status:

MTC Priority Applicant

7. The applicant and municipality executed a Host Community Agreement on April 19, 2018.

8. The applicant conducted a community outreach meeting on November 1, 2018 and provided documentation demonstrating compliance with Commission regulations.

9. The Commission received a municipal response from the municipality on August 12, 2019 stating the applicant was in compliance with all local ordinances and bylaws.

10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	40% of workforce from Holyoke, Springfield, or West Springfield.
2	50% of contractors, suppliers and vendors from Holyoke, Springfield, or West Springfield.
3	Donate \$10,000 annually to the Commissions Social Equity Training and Technical Assistance Fund.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.

12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within six months of receiving its provisional license.

14. The applicant’s proposed hours of operation are the following:

Monday-Saturday: 10:00 a.m. - 9:00 p.m.
 Sunday: 10:00 a.m. - 6:00 p.m.

15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.



16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	50% of workforce will be female.
2	40% of workforce will be minorities, veterans, people with disabilities and people of all gender identities and sexual orientations.

17. Plan for obtaining marijuana or marijuana products (if applicable):

Apical, Inc. plans to obtain marijuana from their cultivation and product manufacturing site in Chicopee, MA once licensed.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



BASK, INC.
MCN282211
MPN281702

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Bask, Inc.
7 Campanelli Drive, Freetown, MA 02702

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation, Tier 3/Indoor (10,001 to 20,000 sq. ft)
Product Manufacturing

The applications were reopened twice for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Fairhaven
Retail	Application Submitted	Taunton
Medical Marijuana Treatment Center	Commenced Operations	Fairhaven

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Melanie Dixon	Director
Timothy Keogh	Director
JoAnne Leppanen	Director
Chapman Dickerson	Close Associate

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
Pequod Principal Solutions, LLC	Parent Company

Provisional License Executive Summary 1



6. Applicant's priority status:
MTC Priority Applicant.
7. The applicant and municipality executed a Host Community Agreement on January 10, 2019.
8. The applicant conducted a community outreach meeting on December 28, 2018 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 18, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Participate in 4 community clean-up events in Fall River, Taunton, or New Bedford.
2	Host 2 cultivation and fundraising workshops for individuals with past drug convictions that are also from Fall River, Taunton, or New Bedford.
3	10% of Bask's workforce will be from Fall River, Taunton, or New Bedford.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised any suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within four months of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:
Monday-Sunday: 6:00 a.m. - 8:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission's regulations.



16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	10% of Bask’s workforce will be women, minorities, veterans, people with disabilities or people from all gender identities and sexual orientations.
2	5% of Bask’s management and executives will be women, minorities, veterans, people with disabilities or people from all gender identities and sexual orientations.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Rosin
2	Bubble hash
3	Live resin
4	Ginger lozenges
5	Chocolate chip cookies
6	Honey Sticks
7	Caramels
8	Chocolate-covered espresso beans
9	Sour raspberry fruit chews
10	Distillates
11	Tinctures
12	Alcohol-free, mojito-flavored infused beverages
13	Coffee-flavored infused beverages

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



COMMUNITY GROWTH PARTNERS GREAT BARRINGTON OPERATIONS, LLC
MRN282695

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Community Growth Partners Great Barrington Operations, LLC
783 South Main Street, Great Barrington, MA 01230

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened four times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

The applicant is not an applicant or licensee for any other license type. However, individuals and entities associated with this application are also associated with Community Growth Partners Northampton Operations, LLC.

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Charlotte Hanna	Owner / Partner
Marcus Williams	Owner / Partner

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
Community Growth Partners MA Real Estate, LLC	Entity with Indirect Authority
Community Growth Partners Holdings, LLC	Parent Company



6. Applicant’s priority status:
Economic Empowerment Applicant.
7. The applicant and municipality executed a Host Community Agreement on March 20, 2019.
8. The applicant conducted a community outreach meeting on January 31, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 25, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Applicant plans to be an accelerator for generational wealth building opportunities.
2	Offer monthly industry-specific educational seminars.
3	Commit 3% of its annual net profits to its criminal justice reform program.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within two months of receiving its provisional license.
14. The applicant’s proposed hours of operation are the following:
Monday – Wednesday: 9:00 a.m. – 7:00 p.m.
Thursday – Saturday: 9:00 a.m. – 9:00 p.m.
Sunday: 9:00 a.m. – 7:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:



#	Goal
1	Establish a diverse ownership and leadership team that exceeds 75% disenfranchised population and 51% equity ownership.
2	Recruit 75% of individuals from disenfranchised populations.
3	Utilize suppliers of goods and services that support diversity.

17. Summary of cultivation plan (if applicable):

Not Applicable.

18. Summary of products to be produced and/or sold (if applicable):

Not Applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

The applicant plans to obtain marijuana or marijuana products by contracting with other licensed establishments.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



COMMUNITY GROWTH PARTNERS NORTHAMPTON OPERATIONS, LLC

MCN282162
MPN281677

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Community Growth Partners Northampton Operations, LLC
20 Ladd Avenue, Northampton, MA 01060

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation – Tier 3 / Indoor (10,001 – 20,000 sq ft)
Product Manufacturing

The application was reopened two times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

This applicant is not an applicant or licensee for any other license type.

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Charlotte Hanna	Owner / Partner
Marcus Williams	Owner / Partner

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
Community Growth Partners MA Real Estate, LLC	Entity with Indirect Authority
Community Growth Partners Holdings, LLC	Parent Company



6. Applicant’s priority status:
Economic Empowerment Applicant.
7. The applicant and municipality executed a Host Community Agreement on April 26, 2019.
8. The applicant conducted a community outreach meeting on January 29, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 20, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Applicant plans to be an accelerator for generational wealth building opportunities.
2	Offer monthly industry-specific educational seminars.
3	Commit 3% of its annual net profits to its criminal justice reform program.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within eight months of receiving its provisional license.
14. The applicant’s proposed hours of operation are the following:
Monday – Sunday: 9:00 a.m. – 5:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:



#	Goal
1	Establish a diverse ownership and leadership team that exceeds 75% disenfranchised population and 51% equity ownership.
2	Recruit 75% of individuals from disenfranchised populations.
3	Utilize suppliers of goods and services that support diversity.

17. Summary of cultivation plan (if applicable):

The applicant submitted a detailed cultivation plan that demonstrated the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Hash distillates
2	Oils
3	Waxes
4	Shatters
5	Live resin
6	Rosin
7	Sauces
8	Bubble hash
9	Kief
10	Sauce cartridges (pending vape cartridge approval)
11	Vape cartridges (pending vape cartridge approval)
12	Dissolving tablets and strips
13	Tinctures
14	Oral sprays
15	Capsules
16	Fruit flavored gummies (strawberry, raspberry, passionfruit)
17	Nut brittle candies (pumpkin see, almond, peanut)
18	Fruit flavored hard candies (grape, sour cherry, green apple)
19	Salted caramel chews
20	Chocolate confections
21	Chocolate cookie bites

19. Plan for obtaining marijuana or marijuana products (if applicable):

Not applicable.

RECOMMENDATION



Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



FOUR DAUGHTERS COMPASSIONATE CARE, INC.

MCN282243

MPN281715

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Four Daughters Compassionate Care, Inc.
1200 General Edwards Highway, Sharon, MA 02067

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation – Tier 4 / Indoor (20,001 – 30,000 sq. ft.)
Product Manufacturing

The applications were reopened once for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Plymouth
Retail	Application Submitted	Sharon
Medical Marijuana Treatment Center	Provisional License	Sharon

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Brian Striar	Executive / Officer
Darren Henry	Executive / Officer
Samuel Dorf	Director
George Archos	Executive / Officer

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
Verano Four Daughters Holdings, LLC	Parent Company

Provisional License Executive Summary 1



Verano Holdings, LLC	Capital Contributor
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6. Applicant’s priority status:
MTC Priority Applicant.
7. The applicant and municipality executed a Host Community Agreement on June 19, 2018.
8. The applicant conducted a community outreach meeting on February 4, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 10, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Provide funds to expunge at least ten (10) felony records per year.
2	Donate \$5,000 to Equitable Opportunities Now (EON).
3	Participate in at least two job fairs per year.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within four (4) months of receiving its provisional license.
14. The applicant’s proposed hours of operation are the following:
Monday – Sunday: 10:00 a.m. – 8:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:



#	Goal
1	Recruit at least five (5) diverse individuals.
2	Conduct on-site diversity training once every quarter.
3	Sponsor general industry-specific training for veterans twice a year.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Flower
2	Vapes
3	Balms and salts
4	Tinctures
5	Tablets and mints
6	Edibles (Chocolates, lozenges, caramels, fruit chews, fruit leather) (Flavors: Mandarin, strawberry, peach, watermelon, banana, chocolate, gelato, purple punch, strawnana and papaya)

19. Plan for obtaining marijuana or marijuana products (if applicable):

Not applicable.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



FOUR DAUGHTERS COMPASSIONATE CARE, INC.
MRN281552

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Four Daughters Compassionate Care, Inc.
2 Merchant Street, Unit 1, Sharon, MA 02067

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened four times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Cultivation – Tier 4 / Indoor (20,001 – 30,000 sq.ft)	Application Submitted	Sharon
Product Manufacturing	Application Submitted	Sharon
Retail	Application Submitted	Plymouth
Medical Marijuana Treatment Center	Provisional License	Sharon

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Brian Striar	Executive / Officer
Darren Henry	Executive / Officer
Samuel Dorf	Director
George Archos	Executive / Officer

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
Verano Four Daughters Holdings, LLC	Parent Company
Verano Holdings, LLC	Capital Contributor

Provisional License Executive Summary 1



6. Applicant’s priority status:
MTC Priority Applicant.
7. The applicant and municipality executed a Host Community Agreement on June 19, 2018.
8. The applicant conducted a community outreach meeting on February 4, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 10, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Provide funds to expunge at least ten (10) felony records per year.
2	Donate \$5,000 to Equitable Opportunities Now (EON).
3	Participate in at least two job fairs per year.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within four (4) months of receiving its provisional license.
14. The applicant’s proposed hours of operation are the following:
Monday – Sunday: 10:00 a.m. – 8:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:



#	Goal
1	Recruit at least five (5) diverse individuals.
2	Conduct on-site diversity training once every quarter.
3	Sponsor general industry-specific training for veterans twice a year.

17. Summary of cultivation plan (if applicable):

Not applicable.

18. Summary of products to be produced and/or sold (if applicable):

Not applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

The applicant plans to obtain marijuana or marijuana products by contracting with other licensed establishments.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



GREENSTAR HERBALS, INC.
MRN282034

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

GreenStar Herbals, Inc.
200 Beachman Street, Chelsea, MA 02150

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened twice for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Dracut
Retail	Application Submitted	Maynard

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Thomas Morey	Owner/Partner/Capital Contributor
James Morey	Close Associate
John Herendeen	Close Associate
Napoleon Brito	Close Associate/Capital Contributor

5. List of all required entities and their roles in the Marijuana Establishment:

No other entity appears to have ownership or control over this proposed Marijuana Establishment.

6. Applicant's priority status:

Provisional License Executive Summary 1



General Applicant.

7. The applicant and municipality executed a Host Community Agreement on September 21, 2018.
8. The applicant conducted a community outreach meeting on September 20, 2018 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 23, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Hire 50% residents of Chelsea or another area of disproportionate impact.
2	Donate \$2,500.00 annually to GreenRoots, Inc.
3	Donate \$5,000.00 to Chelsea Chamber of Commerce .

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within a year of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:

Monday – Sunday: 9:00 a.m. - 9:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission's regulations.
16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
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2



1	Hire 20% of staff from Commission-approved areas of diversity
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17. Summary of cultivation plan (if applicable):

Not applicable.

18. Summary of products to be produced and/or sold (if applicable):

Not applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

The applicant plans to purchase marijuana and marijuana products from adult-use cultivators and product manufacturers.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

- 1. Final license is subject to inspection to ascertain compliance with Commission regulations;
- 2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
- 3. The applicant shall cooperate with and provide information to Commission staff; and
- 4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



GREENSTAR HERBALS, INC.
MRN282048

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

GreenStar Herbals, Inc.
76 - 100 Pleasant Street, Dracut, MA 01826

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened twice for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Chelsea
Retail	Application Submitted	Maynard

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Thomas Morey	Owner/Partner/Capital Contributor
James Morey	Close Associate
John Herendeen	Close Associate
Napoleon Brito	Close Associate

5. List of all required entities and their roles in the Marijuana Establishment:

No other entity appears to have ownership or control over this proposed Marijuana Establishment.

6. Applicant's priority status:

Provisional License Executive Summary 1



General Applicant.

7. The applicant and municipality executed a Host Community Agreement on November 6, 2018.
8. The applicant conducted a community outreach meeting on October 25, 2018 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 23, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Hire 50% residents of Chelsea or another area of disproportionate impact.
2	Donate \$2,500.00 annually to GreenRoots, Inc.
3	Donate \$5,000.00 to Chelsea Chamber of Commerce.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within a year (300+ days) of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:

Monday - Sunday, 8:00 a.m. - 11:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission's regulations.
16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	Hire 20% of staff from Commission-approved areas of diversity

2



17. Summary of cultivation plan (if applicable):

Not applicable.

18. Summary of products to be produced and/or sold (if applicable):

Not applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

The applicant plans to purchase marijuana and marijuana products from adult-use cultivators and product manufacturers.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



HVV MASSACHUSETTS, INC.

MCN282198

MPN281693

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

HVV Massachusetts, Inc.
2 Opportunity Way, Newburyport, MA 01950

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation, Tier 4/Indoor (20,001 to 30,000 sq. ft.)
Product Manufacturing

The applications were reopened four times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Cultivation, Tier 3/Indoor (10,001 to 20,000 sq. ft.)	Provisional License	Gloucester
Product Manufacturing	Provisional License	Gloucester
Retail	Provisional License	Gloucester
Medical Marijuana Treatment Center	Provisional License	Amherst
Medical Marijuana Treatment Center	Provisional License	Boston
Medical Marijuana Treatment Center	Provisional License	Gloucester

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Michael Reardon	Director
Edward Lauth	Director

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
	Provisional License Executive Summary 1

Provisional License Executive Summary 1



HV Ventures MA, LLC	Owner/Capital Contributor
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6. Applicant’s priority status:
MTC Priority Applicant.
7. The applicant and municipality executed a Host Community Agreement on April 25, 2019.
8. The applicant conducted a community outreach meeting on May 29, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on October 7, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Donate \$25,000.00 annually to Girls’ LEAP.
2	Provide a minimum of 40 hours volunteer time to Girls’ LEAP.
3	Hire 15% of individuals from designated areas of disproportionate impact.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were no disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within a few weeks of receiving their provisional license.
14. The applicant’s proposed hours of operation are the following:
Monday-Sunday: 7:00 a.m. - 11:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:



#	Goal
1	Hire 50% women and 25% minorities.
2	Work with 25% of businesses that are from Commission identified areas of diversity.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Vape oils and distillates
2	Gummies
3	Chocolates
4	Hard candies
5	Capsules
6	Bubble Hash
7	Rosin
8	Tinctures
9	Lotions
10	Roll-ons and transdermal patches

19. Plan for obtaining marijuana or marijuana products (if applicable):

Not applicable.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



JUST HEALTHY, LLC

MCN281866

MPN281559

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Just Healthy, LLC
1010 Ryan Road, Northampton, MA 01062

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation – Tier 7 / Indoor (50,001 – 60,000 sq. ft.)
Product Manufacturing

The application was reopened two times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Retail	Application Submitted	Northampton
Medical Marijuana Treatment Center	Provisional License	Northampton

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
William Phelan	Executive/Officer
Neil Phelan	Executive/Officer
Brett Sprau	Executive/Officer
Kent Kiffner	Close Associate
Peter Horvath	Executive/Officer
Brian Logan	Executive/Officer
Marc Lehmann	Board Member
Jean Schottenstein	Board Member
Stephen Stoute	Board Member
Timothy Moore	Board Member

Provisional License Executive Summary 1



Carli Posner	Board Member
Igor Galitsky	Board Member

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
GGB Massachusetts, LLC	Sole Owner of Just Healthy, LLC
Green Growth Brands, Inc.	Parent Company of GGB Massachusetts, LLC

6. Applicant's priority status:

MTC Priority Applicant.

7. The applicant and municipality executed a Host Community Agreement on January 9, 2019.
8. The applicant conducted a community outreach meeting on September 19, 2018 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 20, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Provide monetary donations to programs located in Holyoke.
2	Give hiring preferences to individuals who reside in Holyoke.
3	Create a mentorship program to assist aspiring cannabis business owners and operators in Holyoke.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within one (1) year of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:



Monday – Sunday: 6:00 a.m. – 12:00 a.m.

15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	Recruit diverse employees at all levels.
2	Develop and retain diverse employees by promoting an environment that values differences.
3	Increase the diversity of employees in senior and management positions.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

#	Product
1	Unflavored tablets
2	Tinctures
3	Sprays
4	Flower
5	Hash distillates
6	Oil
7	Waxes
8	Shatters
9	Live resins
10	Creams
11	Salves
12	Lotions
13	Dermal Patches
14	Capsules
15	Gummies (strawberry, grape, and orange)

19. Plan for obtaining marijuana or marijuana products (if applicable):

Not applicable.

RECOMMENDATION



Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



JUST HEALTHY, LLC
MRN281863

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Just Healthy, LLC
1010 Ryan Road, Northampton, MA 01062

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened two times for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Cultivation – Tier 7 / Indoor (50,001 – 60,000 sq.ft)	Application Submitted	Northampton
Product Manufacturing	Application Submitted	Northampton
Medical Marijuana Treatment Center	Provisional License	Northampton

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
William Phelan	Executive/Officer
Neil Phelan	Executive/Officer
Brett Sprau	Executive/Officer
Kent Kiffner	Close Associate
Peter Horvath	Executive/Officer
Brian Logan	Executive/Officer
Marc Lehmann	Board Member
Jean Schottenstein	Board Member
Stephen Stoute	Board Member
Timothy Moore	Board Member
Carli Posner	Board Member

Provisional License Executive Summary 1



Igor Galitsky	Board Member
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5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
GGB Massachusetts, LLC	Sole Owner of Just Healthy, LLC
Green Growth Brands, Inc.	Parent Company of GGB Massachusetts, LLC

6. Applicant's priority status:

MTC Priority Applicant.

7. The applicant and municipality executed a Host Community Agreement on December 7, 2018.
8. The applicant conducted a community outreach meeting on September 19, 2018 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 20, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Provide monetary donations to programs located in Holyoke.
2	Give hiring preferences to individuals who reside in Holyoke.
3	Create a mentorship program to assist aspiring cannabis business owners and operators in Holyoke.

SUITABILITY REVIEW

11. There were concerns arising from background checks on the individuals or entities associated with the application. None of the disclosures raised suitability issues.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within six (6) months of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:

2



Monday – Sunday: 8:00 a.m. – 10:00 p.m.

15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission’s regulations.
16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	Recruit diverse employees at all levels.
2	Develop and retain diverse employees by promoting an environment that values differences.
3	Increase the diversity of employees in senior and management positions.

17. Summary of cultivation plan (if applicable):

Not applicable.

18. Summary of products to be produced and/or sold (if applicable):

Not applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

The applicant plans to obtain marijuana from its affiliated licenses. If the need arises, the applicant will obtain marijuana or marijuana products by contracting with other licensed establishments.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



OLD PLANTERS OF CAPE ANN, INC.
MRN282588

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Old Planters of Cape Ann, Inc.
300 Newburyport Turnpike Unit 1, Rowley, MA 01969

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Retail

The application was reopened twice for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

Type	Status	Location
Medical Marijuana Treatment Center	Provisional License	Ipswich

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Spencer Kalker	Executive
James Sisolak	Director
Daniel Heiter	Director
Brian Shuman	Director
Warren Pratt	Executive
Gregory Stiden	Advisory Board

5. List of all required entities and their roles in the Marijuana Establishment:

Entity	Role
GGH, INC.	Capital Holding Company

6. Applicant's priority status:

Provisional License Executive Summary 1



MTC Priority Applicant.

7. The applicant and municipality executed a Host Community Agreement on April 22, 2019.
8. The applicant conducted a community outreach meeting on December 12, 2019 and provided documentation demonstrating compliance with Commission regulations.
9. The Commission received a municipal response from the municipality on September 16, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	25% of workforce will fall into areas of disproportionate impact.
2	20% of contractors, vendors, and suppliers will fall into areas of disproportionate impact.
3	Donate \$10,000 to the Commission's Social Equity Training and Technical Assistance Fund.

SUITABILITY REVIEW

11. There were no concerns arising from background checks on the individuals or entities associated with the application.
12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of these disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

13. The applicant states that it can be operational within three (3) months of receiving its provisional license.
14. The applicant's proposed hours of operation are the following:

Monday – Thursday: 10:00 a.m. - 8:00 p.m.
Friday – Saturday: 10:00 a.m. - 9:00 p.m.
Sunday: 11:00 a.m. - 6:00 p.m.
15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission's regulations.



16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
1	50% of workforce will be comprised of women.
2	30% of workforce will be minorities, veterans, people with disabilities, and people of all gender identities and sexual orientations.
3	35% of supplier/contractor will be women, minorities, veterans, people with disabilities, and people of all gender identities and sexual orientations.

17. Plan for obtaining marijuana or marijuana products (if applicable):

Old Planters of Cape Ann, Inc. will obtain marijuana from other licensed adult-use cultivators and product manufacturers.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



THEORY FARMS, LLC
MCN281657

BACKGROUND & APPLICATION OF INTENT REVIEW

1. Name and address of the proposed Marijuana Establishment:

Theory Farms, LLC
26 William Way, Bellingham, MA 02019

2. Type of license sought (if cultivation, its tier level and outside/inside operation) and information regarding the application submission:

Cultivation, Tier 2/Indoor (5,001 to 10,000 sq. ft.)

The application was reopened one time for additional information.

3. The applicant is a licensee or applicant for other Marijuana Establishment and/or Medical Marijuana Treatment Center license(s):

The applicant is not an applicant or licensee for any other license type. However, individuals associated with this application are also associated with Theory Wellness.

4. List of all required individuals and their business roles in the Marijuana Establishment:

Individual	Role
Brandon Pollock	Board Member
Nick Friedman	Board Member
Andrew Linegar	Board Member
Steven Derrey	Board Member
Benjamin Friedman	Capital Contributor

5. List of all required entities and their roles in the Marijuana Establishment:

No other entity appears to have ownership or control over this proposed Marijuana Establishment.

6. Applicant's priority status:

Provisional License Executive Summary 1



MTC Priority Applicant

- 7. The applicant and municipality executed a Host Community Agreement on September 11, 2018.
- 8. The applicant conducted a community outreach meeting on September 18, 2018 and provided documentation demonstrating compliance with Commission regulations.
- 9. The Commission received a municipal response from the municipality on August 30, 2019 stating the applicant was in compliance with all local ordinances and bylaws.
- 10. The applicant proposed the following goals for its Positive Impact Plan:

#	Goal
1	Donate \$5,000.00 annually to Massachusetts's Recreational Consumer Council.
2	Spend 10% capital expenditure on vendors based in Walpole.
3	Hire 10% of individuals from Walpole.

SUITABILITY REVIEW

- 11. There were no concerns arising from background checks on the individuals or entities associated with the application.
- 12. There were disclosures of any past civil or criminal actions, occupational license issues, or marijuana-related business interests in other jurisdictions. None of the disclosures raised suitability issues.

MANAGEMENT AND OPERATIONS REVIEW

- 13. The applicant states that it can be operational within six (6) to (7) seven months of receiving their provisional license.
- 14. The applicant's proposed hours of operation are the following:

Monday-Sunday: 6:00 AM - 6:00 PM
- 15. The applicant submitted all applicable and required summaries of plans, policies, and procedures for the operation of the proposed establishment. The summaries were determined to be substantially compliant with the Commission's regulations.
- 16. The applicant proposed the following goals for its Diversity Plan:

#	Goal
---	------



1	Have 30% of management compromised of Commission-approved diverse populations.
2	Hold annual training in Walpole to increase equity in the cannabis industry.

17. Summary of cultivation plan (if applicable):

The applicant submitted a cultivation plan that demonstrates the ability to comply with the Commission’s regulations.

18. Summary of products to be produced and/or sold (if applicable):

Not applicable.

19. Plan for obtaining marijuana or marijuana products (if applicable):

Not applicable.

RECOMMENDATION

Commission staff recommend provisional licensure with the following conditions:

1. Final license is subject to inspection to ascertain compliance with Commission regulations;
2. Final license is subject to inspection to ascertain compliance with applicable state laws and local codes, ordinances, and bylaws;
3. The applicant shall cooperate with and provide information to Commission staff; and
4. Provisional licensure is subject to the payment of the appropriate license fee.

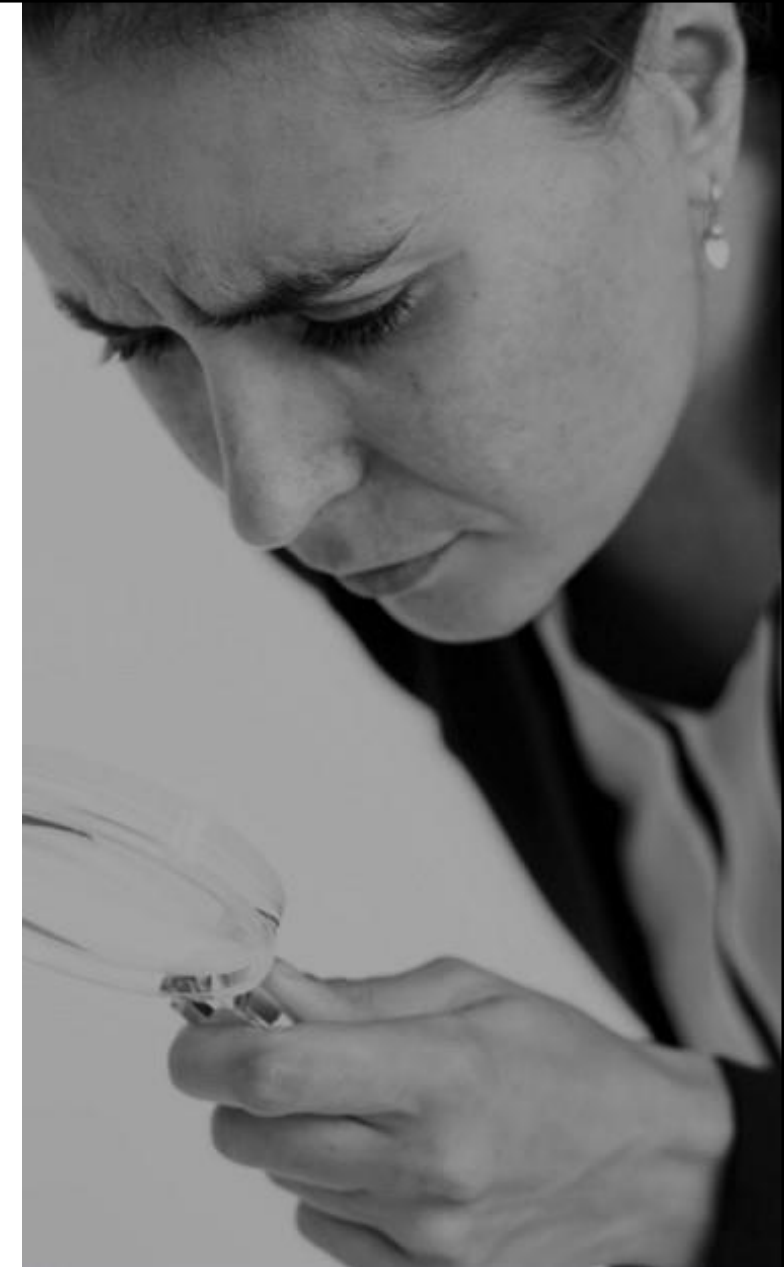
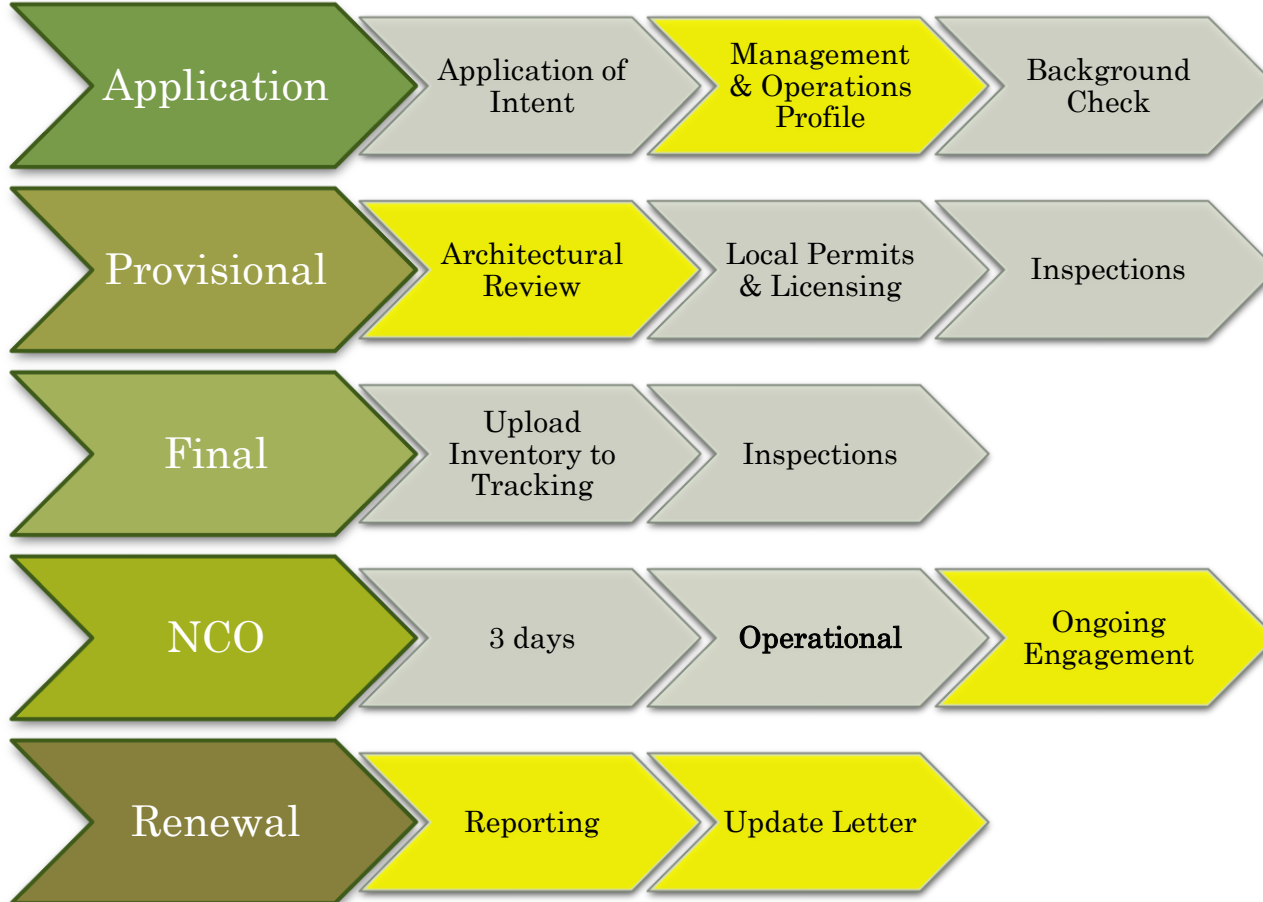
The applicant has demonstrated compliance with the laws and regulations of the Commonwealth and suitability for licensure. Therefore, the applicant is recommended for provisional licensure.



10) Commission Discussion and Votes

- a. Updated and New Guidance: Energy and Environment
- b. Research Presentation: State of the Data
- c. Executive Director Goals
- d. Executive Director Compensation

Licensing & Compliance



Preparation of Regulations & Guidance

- Initial Regulations Published in March 2018
 - Incorporated EEA comments regarding energy and environmental regulations
- Energy and Environment Working Group Convened June 2018
 - 2 public listening sessions
 - Written comment from stakeholders – September 2018
 - Multiple meetings of Working Group held to discuss development of guidances and best management practices
- Public listening sessions on regulatory amendments March, 2019
- Draft amended regulations published June, 2019
- Public hearings held in Boston and Springfield in August, 2019
- Draft amended regulations approved September 24, 2019
- Anticipated publication date is November 1, 2019

Regulatory Themes

- **Energy Efficiency** - Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;
- **Renewables** - Consideration of opportunities for renewable energy generation, including, where applicable, submission of building plans showing where energy generators could be placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable;
- **Demand** - Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage); and
- **Mass Save** - Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.



Basic Guidance: Applications & Architectural Review

Applicants (other than transporters or delivery operators) will be asked to describe their engagement on issues, timeline for implementation, and planning for upgrades or repairs regarding:

- Energy Efficiency
- Renewables
- Demand
- Energy Efficiency Programs (Mass Save, Municipal Light)

Guidance & Checklists provide detailed information regarding specific issues to be addressed.

Transporters or delivery operators will be asked to describe their consideration of alternative fuel vehicles and how they are addressing their energy and environmental impact at their base location.



Cultivation Facilities: Applications & Architectural Review

Cultivation Facilities must complete the information required in the Basic Guidance, but due to their increased impacts, they must provide additional information regarding:

- Building Envelope
- Horticultural Lighting
- HVAC and dehumidification systems
- Safety



Cultivator Requirements

Considerations for the Applications Process:

- How the cultivator will ensure on a regular basis that equipment is maintained, calibrated and operating properly, including:
 - maintaining operations manuals
 - maintaining operating procedures for all major energy using equipment, including, horticultural lighting, HVAC systems, dehumidification systems.



Cultivator Requirements

Considerations for Architectural Review Process:

- Letter from qualified professional
 - Energy Compliance Letter
 - Energy Compliance Exemption Letter
- Third Party Safety Certification



Cultivator Requirements

Who Can Sign Letters?

For Indoor Marijuana Cultivators & Medical Marijuana Treatment Centers

- Massachusetts Licensed Professional Engineer; or
- Massachusetts Licensed Registered Architect.

For Microbusiness or Craft Marijuana Cooperative with a cultivation location sized as Tier 1 or Tier 2, or such other Marijuana Cultivator meeting the requirements of 935 CMR 500.850 for a waiver could also:

- Certified Energy Auditor certified by the Association of Energy Engineers; or
- Certified Energy Manager certified by the Association of Energy Engineers.

BUT HVAC & dehumidification needs to be done by an ME or PE with a license covering mechanical engineering



Cultivator Requirements

Energy Compliance Letter

Lighting: 2 Pathways to Compliance

- Horticultural Lighting Power Density (HLPD)
 - Horticultural Lighting Power Density (HLPD): HLPD must not exceed 36 watts per gross square foot, except for Tier 1 and Tier 2 which must not exceed 50 watts per square foot.
 - HLPD is a measure of total watts of Horticultural Lighting Equipment per total Horticulture Lighting Square Footage, expressed as number of watts per square foot.

$$(HLE / HLSF = HLPD)$$

Horticultural Lighting Qualified Products List (HQPL)

All horticultural lighting used in a facility must be:

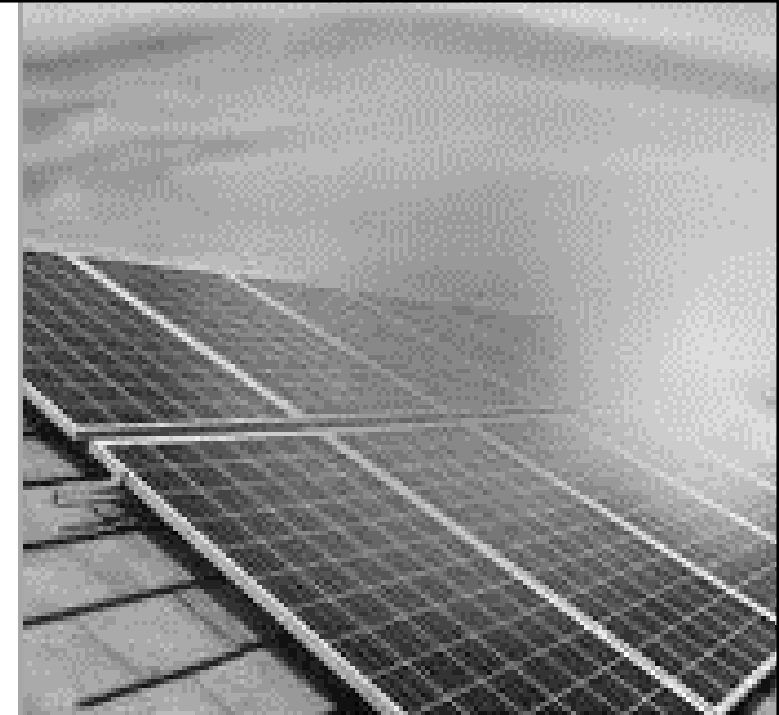
- listed on the current Design Lights Consortium Solid-State Horticultural Lighting Qualified Products List (HQPL) or other similar list approved by the Commission as of the date of license application, **AND**
- lighting Photosynthetic Photon Efficacy (PPE) is at least 15 percent above the minimum HQPL threshold rounded up to the nearest 0.1 $\mu\text{mol}/\text{J}$ (micromoles per joule).



Cultivator Requirements

Energy Compliance Exemption Letter

- Indoor cultivation facilities may be exempt from the regulatory requirements for horticultural lighting, HVAC and dehumidification systems if they are generating 80% or more of the total annual onsite energy use for all fuels (expressed on a MWh basis) from:
 - a clean or renewable generating source (renewable energy generating sources, M.G.L. c. 25A, § 11F, 225 CMR 14)
 - <https://www.mass.gov/guides/rps-class-i-and-class-ii-statement-of-qualification-application>)
 - renewable thermal generation (G.L. c.25A § 11F½, 225 CMR 16)
 - <https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application>)
- must document that renewable energy credits or alternative energy credits representing the portion of the Licensee's energy usage not generated onsite has been purchased and retired on an annual basis.



Cultivator Requirements

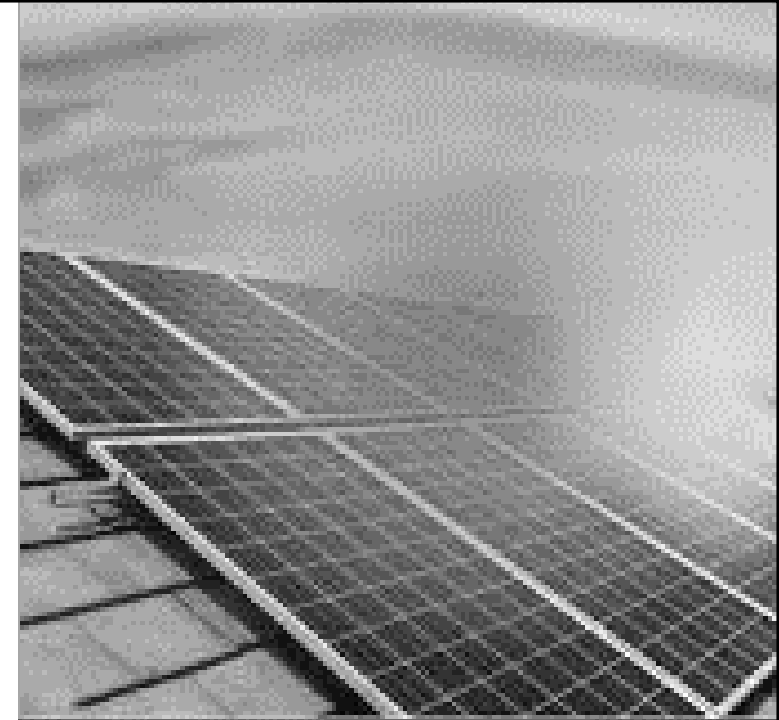
Energy Compliance Exemption Letter

Renewable Generation Unit

- Solar photovoltaic or solar thermal electric energy
- Wind energy
- Ocean thermal, wave or tidal energy
- Fuel cells using eligible RPS Class I renewable fuel
- Landfill methane gas
- Hydroelectric
- Low-emission, Advanced Biomass Power Conversion Technologies using Eligible Biomass Fuel
- Marine or hydrokinetic energy
- Geothermal energy

Renewable Thermal Generation Unit

- Air-Source Heat Pump
- Ground Source Heat Pump
- Deep Geothermal Heat Exchange
- Solar Thermal
- Woody Biomass
- Biogas
- Liquid Biofuels
- Compost Heat Exchange System



Cultivator Requirements

Renewal

- Provide Cannabis PowerScore Report
- Update Energy Compliance or Energy Compliance Exemption Letter



10) Commission Discussion and Votes

- a. Updated and New Guidance: Energy and Environment
- b. Research Presentation: State of the Data
- c. Executive Director Goals
- d. Executive Director Compensation

Special Report

Evaluating the Impact of Cannabis Legalization in Massachusetts: State of the Data

Public Meeting of the Cannabis Control Commission:
November 7, 2019

University of Massachusetts Amherst
Jennifer M. Whitehill, Ph.D.
Kimberley H. Geissler, Ph.D.

Cannabis Control Commission.
Samantha M. Doonan, B.A.
Julie K. Johnson, Ph.D.

Chapter 55: An Act to Ensure Safe Access to Marijuana

Section 17. (a) The commission shall develop a research agenda in order to understand the social and economic trends of marijuana in the commonwealth, to inform future decisions that would aid in the closure of the illicit marketplace and to inform the commission on the public health impacts of marijuana. The research agenda shall include, but not be limited to:

- (i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;
- (ii) incidents of impaired driving, hospitalization and use of other health care services related to marijuana use, including a report of the state of the science around identifying a quantifiable level of marijuana-induced impairment of motor vehicle operation and a report on the financial impacts on the state healthcare system of hospitalizations related to marijuana;
- (iii) economic and fiscal impacts for state and local governments including the impact of legalization on the production and distribution of marijuana in the illicit market and the costs and benefits to state and local revenue;
- (iv) ownership and employment trends in the marijuana industry examining participation by racial, ethnic and socioeconomic subgroups, including identification of barriers to participation in the industry;
- (v) a market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets;
- (vi) a compilation of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from marijuana use or possession of marijuana or marijuana products; and
- (vii) a compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.

Report Overview

- Purpose
- Methods
- Nine key research areas
 - Data sources
 - Limitations
 - Considerations
- Overall conclusions and potential next steps

Purpose

GOAL

- To help inform the Cannabis Control Commission as it seeks to fulfill its research requirements as outlined in *Chapter 55 of the Acts of 2017: An Act to Ensure Safe Access to Marijuana*.

OBJECTIVES

- To identify relevant sources of data from government and other publically-available sources
 - Describe key limitations
 - Raise considerations for additional data collection needed to address the Commission's obligations.

Methods

DATA IDENTIFICATION

- Reviewed government reports and websites
- Reviewed peer-reviewed literature
- Drew on our academic expertise
- Contacted relevant government agencies

DATA ASSESSMENT

- Evaluated (theoretical) representativeness of the Massachusetts population
- Assessed cannabis-related measures in the data
- Determined how far back in time relevant data goes
- Identified process for obtaining data

REPORTING

- Synthesized the information
- Summarized data sources, limitations, considerations/recommendations

Chapter 55: An Act to Ensure Safe Access to Marijuana

Section 17. (a) The commission shall develop a research agenda in order to understand the social and economic trends of marijuana in the commonwealth, to inform future decisions that would aid in the closure of the illicit marketplace and to inform the commission on the public health impacts of marijuana. The research agenda shall include, but not be limited to:

- (i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;

(i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;

- (v) a market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets;
- (vi) a compilation of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from marijuana use or possession of marijuana or marijuana products; and
- (vii) a compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.

Cannabis use patterns and perceptions: Summary of Available Data

- Limited our assessment to survey data
- Identified seven surveys with information about cannabis use patterns and perceptions of use
 - Three national surveys with an indicator for Massachusetts
 - Four Massachusetts-specific surveys
- Some of these data sources are partnerships between state and federal agencies

Cannabis use patterns and perceptions: Available Data

Population	No. of data sources	Specific sources
Adults	4	NSDUH; National Health and Nutrition Examination Survey (NHANES); Massachusetts Behavioral Risk Factor Surveillance System (MA BRFSS); Marijuana Baseline Health Study (MBHS)
Emerging adults (college and non-college attending)	1	NSDUH; NHANES; MA BRFSS
Youth	3	National Survey on Drug Use and Health (NSDUH); Youth Risk Behavior Surveillance Survey (YRBS); Massachusetts Youth Health Survey (MYHS)

Cannabis use patterns and perceptions: Key Limitations

- Data usually available with a two-year lag
- National surveys generally cannot be used to make estimates for smaller geographic areas (*e.g. counties*)
- No ongoing assessment of modes of cannabis consumption (*e.g. smoking, vaping, consuming edibles*) for MA population
- Over time, adult BRFSS asks only about problem use
 - MA does not participate in National BRFSS “marijuana module”
- MA Marijuana Baseline Health Study data collection only in 2017
 - Sample size supports very limited subgroup estimates
- Surveys do not distinguish between use of CBD products and THC products
- Lack of information about vulnerable populations (*e.g. pregnant women*)

Cannabis use patterns and perceptions: Overall assessment

- Existing data allows state-representative self-reported estimates of:
 - cannabis use (both current use and heavy use);
 - age of first use
 - perceptions of use
- Can get these estimates for youth, college students, and adults
- Mode of consumption is not being measured over time
- Source of purchase is not being measured over time for youth
- Sample size in most surveys is insufficient to conduct subgroup analyses to look at specific subpopulations or geographic areas

Cannabis use patterns and perceptions: Key Considerations

- 1 Consider adding questions on the BRFSS to better assess research agenda items
- 2 Conduct additional data collection for research agenda items not assessed in other sources
 - Could be done by following up on the MA Marijuana Baseline Health Study (MBHS) on regular intervals (*e.g. every 2 years*)
- 3 Conduct additional data collection for vulnerable or special populations
 - Consider expansion of the PRAMS or new data collection to monitor cannabis use in pregnant women

Chapter 55: An Act to Ensure Safe Access to Marijuana

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(i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;

(ii) hospitalization and use of other health care services related to marijuana use

(v) a market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets;

(vi) a compilation of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from marijuana use or possession of marijuana or marijuana products; and

(vii) a compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.

Healthcare use and impact on state health system: Summary of Available Data

- Examined both survey data and administrative data (*e.g. hospital records, health insurance claims*)
- Identified five surveys that may be used
 - Two national surveys with an indicator for Massachusetts
 - Three MA-specific surveys
- Identified 13 administrative datasets
 - Six national datasets with an indicator for MA
 - Seven MA-specific datasets

Healthcare use and impact on state health system: Available Data

Data Type	No. of data sources	Description of sources
Survey data	5	National drug use survey (NSDUH) Adult general health surveys (NHANES; MA BRFSS) Youth survey (MYRBS) MA Marijuana Baseline Health Study (MBHS)
Administrative data	13	Poison control data (NPDS; MA poison data) MA hospital and health insurance claims data (APCD; CaseMix Data; Trauma Registry) National hospital data (SEDD; SID) Substance use treatment discharges (TEDS; SAMIS) Medicare data Mental health treatment (MHIS) Special linked health data (PHDW) Commercial prescription data (IQVIA)

Healthcare use and impact on state health system:

Key Limitations

- Sample size of available survey data may make it difficult to evaluate rare occurrences
- Potential inaccuracy of self-reported healthcare utilization
- Changes in ICD-9 and ICD-10 codes and their use over time
- Clinicians may not code encounters involving cannabis due to:
 - Stigma, legal consequences, a perception that cannabis use is not clinically important, or limited time to look up cannabis-specific codes
- Health insurance claims may have redacted information for cannabis use disorder-related diagnoses
- Limited ability to identify or track certain vulnerable populations (e.g. pregnant women)

Healthcare use and impact on state health system:

Overall assessment

- Massachusetts has a large number of administrative datasets and several surveys that can be analyzed to examine the impact of cannabis policy on healthcare use and costs.
 - It takes significant time and expertise to procure these data because of data use agreements and Institutional Review Board (IRB) approval.
 - Analysis require specialized skills and research infrastructure.

- Understanding the potential sources and direction of bias is a critical step to properly interpreting analyses of hospital and claims data

- With proper partnerships, the Commission should be able to fulfill its research agenda in this area.

Healthcare use and impact on state health system: Key Considerations

- Consider conducting new data collection to better understand clinician testing and coding of cannabis related behaviors.
 - Assess the extent to which cannabis use and dependence is captured accurately in administrative data, and changes over time in this behavior.
- Determine extent to which cannabis use disorder claims may be redacted in available administrative data.
- Explore collaborative agreements that would allow analysis of the available healthcare data

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(i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;

(ii) incidents of impaired driving

(v) a market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets;

(vi) a compilation of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from marijuana use or possession of marijuana or marijuana products; and

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Incidents of impaired driving: Methods Note

- Measurement of driving **impairment** due to cannabis in non-experimental settings is an ongoing methodological challenge.
- We assessed available administrative data for indicators of cannabis **exposure** before driving.
 - Time of exposure cannot be inferred from biological data.
 - Cannabis exposure \neq Cannabis impairment.
- We assessed available survey data for indicators of self-reported **driving under the influence** of cannabis.

Incidents of impaired driving: Summary of Available Data

- We report here only data sources that at present allow identification, specifically, of cannabis involvement in a driving episode or crash.
- Identified three administrative datasets
 - One national dataset with an indicator for MA
 - Two MA-specific datasets
- Identified five surveys that may be used
 - One national survey with an indicator for MA
 - Three MA-specific surveys

Incidents of impaired driving

Available Data

Data Type	No. of data sources	Specific sources
Administrative data	3	National fatal crash data (FARS); Hospital trauma data (MA Trauma Registry) MA Drug Recognition Expert (DRE) data
Survey data	5	Adults (NSDUH; BRFSS; MBHS) Youth (NSDUH; YRBS; MYHS)

National Sources: FARS=Fatality Analysis Reporting System; NSDUH= National Survey on Drug Use and Health

MA Sources: MA Trauma Registry; MA DRE data; BRFSS= MA Behavioral Risk Factor Surveillance System; MBHS= MA Marijuana Baseline Health Study; MYHS=MA Youth Healthy Survey; YRBS= Youth Risk Behavior Survey

Incidents of impaired driving: Key Limitations

- In fatal crashes, a small proportions of surviving drivers are tested
- Reliance on cannabinoid testing indicates exposure to cannabis and not impairment by cannabis
- In trauma data, urine drug screening, the predominant form of testing for cannabis in hospitals, indicates cannabis exposure in approximately the past month
 - Knowledge in polysubstance cases (more than 6 drugs) is limited
- No field to report suspected cannabis involvement on the crash forms utilized by police to document crashes in MA
 - Similar problem with police arrest data that is limited to OUI-Drugs and non-specific for cannabis
- Surveys can be impacted by biases (*e.g. selection bias*)

Incidents of impaired driving: Overall Assessment

- Incidents of cannabis-**impaired** driving cannot be well tracked in Massachusetts at present
- Limited to measuring the following:
 - Drivers killed in fatal crashes (blood testing done by medical examiner)
 - Drivers seriously injured and treated as trauma patients (urine testing done during hospital care)
 - Drivers evaluated by Drug Recognition Experts
- Each of the above data sources has some significant limitations
- There are also several surveys that assess self-reported driving under the influence of cannabis

Incidents of impaired driving: Key Considerations

- Consider monitoring the presence of THC in crash-injured drivers, for both fatal and nonfatal collisions.
- Consider changing police crash report forms to include cannabis-specific items:
 - Standardized field for officer suspicion of cannabis involvement.
 - Information from any chemical, behavioral, or specialty testing conducted
- Consider changing arrest records to separate OUI-cannabis from OUI-drugs
- Consider additional and modified survey data collection:
 - Follow up the Marijuana Baseline Health Study with another wave of data that includes items on cannabis and driving
 - Modify the MA BRFSS to allow assessment, specifically, of DUI-Cannabis
- Invest in research towards determining reliable tests or combination of tests for cannabis impairment

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- (i) patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;
- (ii) incidents of impaired driving, hospitalization and use of other health care services related to marijuana use, including a report of the state of the science around identifying a quantifiable level of marijuana-induced impairment of motor vehicle operation and a report on the financial impacts on the state healthcare system of hospitalizations related to marijuana;
- (iii) economic and fiscal impacts for state and local governments including the impact of legalization on the production and
- (iv) ownership and employment trends in the marijuana industry examining participation by racial, ethnic and socioeconomic subgroups, including identification of barriers to participation in the industry;**
- (vii) a compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.

Ownership and employment trends: Available Data

- The Commission collects information this topic.
- These data include detailed racial/ethnic demographic information and business ownership by women, veterans, minorities, LGBT persons, and two or more of those categories.

Data Type	Specific sources
Business ownership and workforce	Business application process MassCIP portal
Barriers to entry	Mixed methods study on barriers to entry in the industry (procurement in process)

Ownership and employment trends: Limitations and Considerations

- The study of barriers to entry that is to be undertaken could encounter challenges recruiting and retaining a diverse sample of current and potential business applicants as participants
 - Providing monetary compensation for participants can help to address retention
- Next steps:
 - Additional modes of data collection
 - Focus on Social Equity Applicants

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Cannabis Markets: Available Data

- There are several data sources available to monitor cannabis markets
- It is difficult for research to accurately assess the scope of the illicit market

Data Type	Specific sources
Legal market	Seed-to-sale tracking system (Metrc) which includes: (A) agent registration, (B) Applications and Licensing, and (C) Sales and Product Distribution
Illicit market	Law enforcement seizures of cannabis (HIDTA; CrimeSOLV) Cannabis pricing websites (Budzu; Cannabis Price Index) Proprietary business analytics (BDS Analytics) International Cannabis Policy Study

Cannabis Markets: Limitations and Considerations

- The Commission collects detailed supply-side information on the legal cannabis market.
- Existing demand-side information comes from crowdsourcing and private firms and reliability of these data are unknown at present.
- In the future, demand-based information for 2018 and 2019 will become available through a new partnership the Commission has undertaken with researchers conducting the International Cannabis Study.
- We recommend the Commission consider partnering with academic and/or nonprofit firm researchers to undertake a robust market study.

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Cannabis-related incidents in schools: Summary of Available Data

- The Massachusetts Department of Elementary and Secondary Education (DESE) collects discipline data at the school level including “marijuana possession” and “marijuana use.”
- Data includes the disciplinary action taken (*e.g. suspension*)
- With a proper data use application and agreement, individual level data include demographic and geographic information can be accessed.

Cannabis-related incidents in schools: Limitations and Considerations

- Adequate data related to discipline in schools exist in Massachusetts that can be used to fulfillment of this aspect of the research agenda.
- Procurement of school data will require collaboration with researchers that have access to an Institutional Review Board (IRB).
 - We recommend such a collaboration towards procurement and analysis of these data.

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Chapter 94 C, *The Controlled Substances Act*



Doonan S, Johnson JK. 2019

Criminal justice encounters: Summary of Available Data

- All datasets in this area would be considered administrative data used by law enforcement agencies.
- We identified one national dataset with an indicator for Massachusetts.
- We identified four state-level sources.
- We also note that municipal level police data are relevant here (*e.g. Boston Police Department*).

Criminal justice encounters: Available Data

Data Topic	Specific sources
Arrests	National law enforcement incident data with municipal level-indicator (NIBRS) State law enforcement data (MSP arrest data; MSP's CrimeSOLV) High-intensity drug trafficking area data (HIDTA)
Sentencing	Trial Court Data
Incarcerations	State Department of Correction County-level House(s) of Correction

- Demographic information is generally collected to report on race/ethnicity, gender, and age.
- Arrest data include indication of country of origin.

Criminal justice encounters: Key Limitations

- Class D offenses group together cannabis and several other drugs, so data systems cannot easily export information about cannabis-specific offenses.
 - Manual review may be necessary which is very time consuming; would require partnership with state agencies and may require additional resources

- Data often cannot be combined across sources.

- There is no centralized data source for citations or fines paid for cannabis possession civil offenses

Criminal justice encounters: Overall Assessment

- Arrests, sentences, and incarceration related to cannabis are tracked by various agencies in Massachusetts
- Cannabis' classification as one of several Chapter 94C- Class D violations makes it challenging to identify cannabis specific offenses beside for cannabis possession and trafficking (*e.g. distribution of a class D substance*)
- Partnership with state agencies may allow assessment of sentences for cannabis-specific offenses if resources to support manual case review are available
- Compiling accurate incarceration data will require substantive effort across the Department of Correction and Houses of Correction

Criminal justice encounters: Key Considerations

1

- The Commission's Research Department has already procured, analyzed, and reported much of the available data on drug arrests in the Commonwealth

2

- Partnership with state agencies and securing Institutional Review Board (IRB) approval will be needed for obtaining sensitive data necessary towards fulfilling the research agenda

3

- The Commission, in partnership with the Executive Office of Public Safety and Security, should consider a mechanism to monitor civil penalties for cannabis possession, including tracking demographic information

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- (iii) economic and fiscal impacts for state and local governments including the impact of legalization on the production and distribution of marijuana in the illicit market and the costs and benefits to state and local revenue**
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Economic and fiscal impacts: Available Data, Limitations, Considerations

- ▶ Economic evaluation requires highly specialized research skills
- ▶ Many sources of data are brought together; this report can help inform such an analysis by enumerating many data sources
- ▶ The Marijuana Baseline Health Study included an economic model
- ▶ Data on the municipal level may be more difficult to collect across the 351 towns in Massachusetts
- ▶ A new economic model for state-level impacts, incorporating updated information, will be necessary now that retail cannabis sales have begun

Additional area of investigation

Energy

Energy: Available Data

- There are four main data sources for monitoring electricity use in Massachusetts:
 1. US Energy Administration data – state-level
 2. ISO New England – three geographic zones in MA
 3. Electricity suppliers – four electric companies and 40 municipal light plants
 4. Massachusetts Department of Public Utilities

Energy: Limitations & Considerations

Limitations








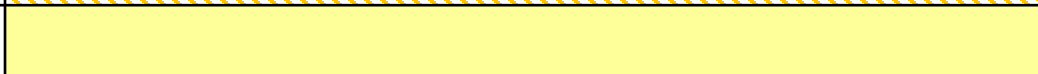

- Address-level information is not available.
- State level data are not necessarily granular enough to detect changes from the cannabis industry.

Considerations

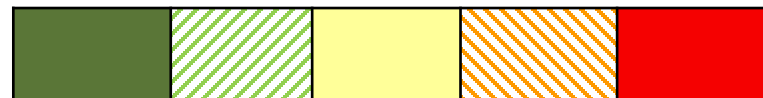
- Our primary recommendation aligns with that the Commission is already moving towards:
 - Consider collection of electricity use information from legal cultivators.
- The Commission could develop a partnership with electricity providers to obtain address-based or highly local level (e.g. census block) electricity consumption information.

Summary Assessment

- This table indicates the domains where existing data is readily available, or data is not available and additional data collection is needed

Data Domain	Data availability and ease-of-access
Cannabis use patterns and perceptions	
Healthcare use and costs	
Incidents of cannabis-impaired driving	
Ownership and employment trends	
Cannabis markets	
Cannabis-related incidents in school	
Criminal justice encounters	
Economic and fiscal impacts	
Energy	

Key:



Existing data readily available Data not available

Summary Conclusions

- The Commission has a large mandate from the legislation for its research agenda and needs appropriate partnerships to carry it out
 - These include partnerships to access data and additional research infrastructure (*e.g. Institutional Review Board*)
- The legislature should consider revising the annual reporting interval to a timeframe that allows the conduct of rigorous research.
 - A research roadmap could be developed by the Commission to lay out what timeline is appropriate and feasible for different areas
 - Areas that require new data collection take longer to complete
- The Commission should consider supporting innovative and important cannabis research
 - Experimental studies (*e.g. cannabis dose and driving simulator studies*)
 - Policy impact questions that harness “natural experiments”

Thank you

Questions?

Whitehill JM, Geissler KH, Doonan SM., Johnson JK., (2019, November). **Special Report: Evaluating the impact of cannabis legalization in Massachusetts—State of the Data.** Boston, MA: *Massachusetts Cannabis Control Commission.*

Executive Director Goals

1

- Improve efficiencies in the Commission’s licensing process to secure initial evaluation for completeness within 60 days of 4-packet submission.

2

- Develop mechanisms to intake, acknowledge, and assign inquiries from all constituents and stakeholders within 24 hours of receipt. Response, or at the very least update, to occur within next 24 hours.

3

- Patient registrations, including renewals, processed and evaluated within 1 week of submission.

4

- a) Develop, submit, and secure a Fiscal Year 2021 budget proposal that identifies and meets Commission’s mission statement, strategic goals, and needs of overseeing a safe and equitable industry.
- b) Develop and execute a spending plan, within the allotted appropriations, that maintains sufficient and adequate Commission operations.

5

- Successfully develop and deploy a complete, enterprise-wide case management system to record complete system records of applicants and licensees, including, but not limited to, field interactions, interview/discussion notes, licensee notices, and other filings.

6

- Implement a system for employee performance evaluations with identifiable goals and metrics while providing opportunities for periodic progress and feedback.

7

- In cooperation with relevant department heads, develop and execute against a 2-year staffing plan that meets the expected operational needs and growth of the Commission.

8

- Institute an annual survey to evaluate employee satisfaction.

9

- Develop and institute an employee handbook that balances the Commission’s mission of building a world-class agency and creating a great place to work while installing clear and manageable operational policies and procedures.

10

- Continue to anticipate and meet all legislatively mandated deadlines for filing and reporting.

Upcoming Public Meetings

December
19th

- 10AM
- Location in Worcester: TBD

January
16th

- 12PM
- Union Station, Worcester

Cannabis Control Commission Public Meeting Minutes

June 25, 2019

10:00 a.m.

State Transportation Building
Boston, MA 02110

Commission Members in Attendance:

Chairman Steven Hoffman
Commissioner Kay Doyle
Commissioner Jen Flanagan
Commissioner Britte McBride
Commissioner Shaleen Title

Commission Members Absent: None

List of Documents:

Chairman Hoffman called the Cannabis Control Commission to order at 10:00am. Chairman Hoffman put the public on notice that the meeting is being recorded. Chairman Hoffman reviewed the meeting agenda. Chairman gave an overview of the regulatory process.

General Counsel Christine Baily discussed the issue of ownership and control. Chairman Hoffman discussed the importance of clear definitions of ownership and control for Commission staff and cannabis industry guidance. Chairman Hoffman explained language regarding the definition of direct or indirect control of a licensee and how that is used consistently throughout the regulations. Commissioner McBride asked a question about how the changes jive with what is currently in the regulations, specifically the right to appoint more than 50% of directors – is there a component in here that addresses that qualification. Chairman said he thinks that is something that can be added back in. Commissioner Doyle noted the special regulations for the islands for ownership or control of independent testing labs. Commissioner Title suggested an edit to the definition of direct or indirect control to encompass potential different ways an establishment might be controlled, by “including but not limited to.” Chairman asked whether the specificity of an exhaustive list was better. Commissioner Title expressed the concern that unforeseen circumstances could arise that we do not fit the definition. Commissioner Title also discussed void marijuana establishment license language and recommended going back to the original language. Chairman Hoffman asked for a motion to approve the policy and language discussion, subject to edits.



Commissioner Title made a motion to approve, seconded by Commissioner McBride. The Commission unanimously approved the motion.

General Counsel discussed the topic of delivery and some of the ongoing questions with respect to operational requirements including period and scope of exclusivity. Commissioner Title suggested an edit to the language on delivery company ownership adding the phrase “controlled by.” Commissioner Title suggested an edit for consistency regarding the secure compartment in delivery vehicles. Commissioner Title suggested that data storage costs justify reducing the length of time that delivery establishments be required to retain body camera videos, unless there was an incident, in which case it is kept indefinitely. Commissioner McBride commented on the data storage amounts and costs of the proposed regulation. Commissioner Doyle noted that a minimum requirement is only setting a floor and that licensees could opt to keep video for longer than is required. Chairman Hoffman noted the discussion and said that the existing language would stay but would be re-examined after the public comment period. Commissioner Title proposed an edit to the language on retaining consumers’ personal information. Commissioner Title stated that she believed the geographical limitation on delivery-only companies’ delivery area and the requirement that medical-use delivery vehicles contain video cameras exceeded the Commission’s authority. General Counsel addressed the issues of the Commission’s authority to promulgate regulations and suggested that M.G.L. 94I § should be construed narrowly to apply only to medical use. Commissioner Doyle asked whether the security requirements for medical use delivery corresponded to adult use requirements. Enforcement Counsel Paul Payer responded that they did. Commissioner Doyle stated that colocated adult-use and medical-use facilities would need to follow the adult use regulations. Commissioner McBride asked whether the proposed medical-use regulations were consistent with current operational protocols used by medical-use delivery services. Enforcement Counsel responded that the current guidance on marijuana transportation for medical use does not meet the security requirements for adult use. Commissioner McBride then asked if any current marijuana delivery services utilized video cameras, to which Enforcement Counsel answered that he was not aware of any. Commissioner McBride asked if it would be a substantial change for medical-use delivery to add video capability to their vehicles. Commissioner Title expressed her view that the video requirements would add unnecessary costs and burdens to delivery businesses, given the lack of incidents to date and patients’ complaints with respect to the high cost of delivery. Chairman Hoffman said that he wanted a consistent approach to public safety concerns for both adult-use and medical-use deliveries. Commissioner Flanagan asked whether there were any reports of security breaches during medical-use deliveries, and Mr. Payer responded that while there were no reports, that may not mean that there was no diversion of marijuana. Commissioner Flanagan said that the Commission should err on the side of higher safety, given the Commission is a relatively new agency. Commissioner Doyle pointed out that the statute expressly provided for video cameras to monitor areas containing marijuana. Commissioner Title noted protections already in place for marijuana security. Commissioner McBride said that the security precautions served as a deterrent for bad actions and that deterrent effect should be a consideration as the Commission builds security measures.

Commissioner Title said that the ban on marijuana delivery to dorms, hotels, etc. should be lifted for patients who may need deliveries of medical marijuana in those places due to a



debilitation illness. General Counsel said that restrictions on patient access should be scrutinized carefully by the Commission during the regulatory review process. Commissioner Title said that the pre-verification process for patients to receive medical-use delivery was unnecessarily burdensome given the process they had gone through to receive a medical registration and requiring physical presence at an MTC would negate the purpose of medical delivery. Enforcement Counsel agreed that changes should be made to clarify alternative ways of verification for delivery that would be less burdensome to patients. Commissioner Flanagan pointed out that using the word “disabled” for medical-use consumers receiving an accommodation for pre-verification was narrowing the scope of that population because one could have a debilitating disease without technically being disabled. Commissioner McBride expressed support for an alternative method of pre-verification for medical patients other than in an in-person process at the physical location of an MTC, including a video pre-verification.

Chairman Hoffman summarized changes to the draft regulations proposed thus far and asked for motions to vote on three changes in particular. Commissioner Title made a motion to remove the requirement that medical-use marijuana delivery vehicles contain a video camera, seconded by Commissioner Flanagan. The motion was denied by a vote of one in favor (Title) and four opposed (Doyle, Flanagan, Hoffman, McBride.) Commissioner Title made a motion to remove the restrictions on medical-use delivery to hotels, motels, bed-and-breakfasts and other commercial hospitality locations, seconded by Commissioner Flanagan. The Commission unanimously approved the motion. Commissioner Title made a motion to remove the pre-verification requirement for medical-use delivery to patients, seconded by Commissioner Doyle. The motion was approved by a vote of three in favor (Doyle, Hoffman, Title) and two opposed (Flanagan, McBride.) Chairman Hoffman asked for a motion to approve the staff memo on marijuana delivery, subject to the changes from the Commission’s discussion. Commissioner Doyle made the motion to approve the staff memo, seconded by Commissioner Title. The motion was approved by a vote of four in favor (Doyle, Hoffman, McBride, Title) and one opposed (Flanagan.)

After a brief recess, the Commission turned to the topic of social consumption of marijuana. General Counsel presented a general overview of the issues involved. Commissioner Doyle made a motion to defer discussion of social-consumption event licenses to the fall regulatory meeting, while discussing brick-and-mortar social consumption locations in during the meeting. The motion was seconded by Commissioner Flanagan. The motion was approved by a vote of three in favor (Doyle, Hoffman, Flanagan) to two opposed (McBride, Title.)

Commissioner Doyle requested consistency of terminology throughout the regulations. Commissioner Doyle raised a question as to why “Third-Party Transporter” was included in the fee schedule. Enforcement Counsel said that it was only included with respect to fees, but Third-Party Transporters do not have other involvement. Commissioner Doyle brought up the changes in pre-certification and provisional certification and how to integrate those with the current application procedures, so that applicants are aware of how they should apply. Chairman asked Licensing and Enforcement whether they are comfortable with the changes. Enforcement Counsel responded that Licensing and Enforcement would be able to make those changes. Commissioner Doyle proposed consolidating required community certifications into a single



document and streamlining the provisional application process to avoid redundant submissions. Commissioner Doyle also suggested that the server training program for social consumption establishments be clarified as to whether it is different or the same as the responsible vendor training required in other parts of the regulations. Enforcement Counsel said it is part-in-parcel of the responsible vendor training but is geared specifically toward serving in the social consumption context. Commissioner McBride proposed additional language relating to possible overserved customers, requiring procedures for the inter-personal interaction with an overserved consumer. Commissioner Doyle proposed that edible marijuana products sold in social consumption establishments be pre-packaged and shelf-stable. Commissioner Doyle proposed that the regulations be clear that social consumption establishments could sell other items, such as baked goods so long as they are not infused with marijuana and make it clear that such establishments cannot sell alcohol or tobacco products, which can help establish a more sustainable business model. Commissioner Title proposed removing the condition that a majority of a social consumption licensee's revenue come from marijuana product sales. Commissioner Doyle stated that the separation of sales and consumption area should not apply to an establishment selling only edible marijuana products. Commissioner Title proposed that with respect to exclusivity, social consumption licensees "be controlled" by economic empowerment or social equity program participants. Commissioner Title suggested a change to clarify that applicants have 12 months to file an application for a provisional license following pre-certification rather than "upon" completing the pre-certification process. Commissioner Doyle suggested starting the 12-month clock "within 12 months of receiving notice" of completing the pre-certification process. Commissioner Title proposed that a card warning of the impairment effects of edible marijuana products be limited to edibles, not all marijuana products. Commissioner Doyle discussed the card design and to avoid it becoming too cluttered but does not see a problem with having one side about edibles and the other side giving other information. Commissioner McBride added that the non-edible side of the card could include a warning for impaired driving. Commissioner Flanagan suggested that consumer education is crucial.

Commissioner McBride asked a question about the pre-certification process for social consumption establishments, particularly with respect to determination of completeness and when is the commission determining the management and operation summaries are complete? Commissioner Doyle responded that the pre-certification and provisional licensing procedures would work in concert to determine when an application would be deemed complete. Commissioner McBride raised a concern about whether licensees who find someone smoking tobacco products or using alcohol on their premises should be required to notify the police as well as the Commission. Enforcement Counsel replied that if it is not a public safety issue, then the requirement could be modified. Commissioner McBride suggested we make such a modification. Commissioner Title commented that in both social consumption and delivery that the Commission did a good job of merging the goal of each commissioner. Commissioner Doyle asked that alcohol be added to the substances prohibited from being consumed at a Social Consumption Establishment.

Chairman Hoffman reviewed the proposed changes and added language from Commissioner McBride to the definition of responsible server training. Commissioner McBride made a motion to adopt the modifications to the proposed policy memorandum proposed,



seconded by Commissioner Doyle. The motion was unanimously approved by the Commission. Chairman Hoffman asked for a motion to approve the staff memo on brick-and-mortar social consumption establishments subject to the approved modifications. Commissioner Doyle made the motion to approve the modifications discussed with respect to brick and mortar social consumption and not event-licenses with the understanding that event licenses will be considered in the next round. The motion was seconded by Commissioner Title. The motion was approved by a vote of three in favor (Doyle, Hoffman, Title) and two opposed (Flanagan, McBride).

The Commission next turned to the topic of the suitability review process. General Counsel presented an overview of the policy memo and the role of the suitability review committee. She pointed out that the proposed regulations would apply to medical-use license applicants as well as adult-use applicants. Commissioner Title asked why the suitability process considered continuances without a finding (CWOFF) as equivalent to convictions. Enforcement Counsel replied that there was a language change that would define “offenses” as trial convictions, guilty pleas, pleas to sufficient facts and CWOFFs, but exclude any other non-conviction. Commissioner Title proposed that CWOFFs be removed from the definition of “offense.” Chief of Investigations Yaw Gyebi, Jr. responded that in cases such as an OUI proceeding, considering a CWOFF as equivalent to a conviction would be helpful to the suitability determination. Commissioner Title made a motion to remove CWOFFs from the definition of an offense, except for a CWOFF for impaired driving. The motion was seconded by Commissioner Doyle. The motion was voted down by a vote of one in favor (Title) and four opposed (Doyle, Flanagan, Hoffman, McBride). Commissioner McBride made a motion to approve the recommendations in the policy memo, seconded by Commissioner Flanagan. The motion was approved by a vote of four in favor (Doyle, Flanagan, Hoffman, McBride) and one opposed (Title).

The Commission next turned to the topic of removal of product. General Counsel presented an overview of the topic involving new tools for regulatory enforcement. Commissioner Doyle asked where seized products would be stored. Enforcement Counsel responded that the product would most likely be quarantined or destroyed, so the Commission would not hold it. Commissioner McBride said that an order of removal would involve removing the product from a marijuana establishments shelves, and then enforcement would determine what to do with the product at that point. Commissioner Doyle sought further information on how removal would differ from the existing quarantine order. Enforcement Counsel explained that the removal order was envisioned as applying to products potentially sold in multiple establishments, and having a permanent effect, as opposed to a temporary quarantine. Commissioner McBride asked about the process for ordering a single licensee to remove and potentially destroy a product. Enforcement Counsel described that process. Commissioner McBride then asked what the process would be to remove and destroy a product for multiple licensees; would each licensee be responsible for that or would the Commission take custody of the product. Chairman Hoffman agreed that the responsibility to comply would be with the individual licensees. Commissioner Doyle asked how this would differ from the existing regulations governing product recalls. Commissioner McBride discussed how the procedure might function to identify products that should be removed. Commissioner Title commented on the need for the Commission to deliberate before announcing a removal order. Commission



Flanagan expressed her view that a removal order would be an important tool for the Commission to protect public health and safety. Commissioner Title proposed an addition to the regulations to require hearing officers and adding language that requires a hearing officer would “have the expertise to evaluate scientific evidence.” Commissioner Title proposed further changes to the language of the regulation to read that “if credible and reliable evidence has been evaluated and found to meet the standard of a substantial risk” in order to ensure there is a standard being used. Commissioner Doyle asked if there would be discussion about the standard that the enforcement staff would use to determine whether a removal order would be necessary. Enforcement Counsel explained that the Commission could use existing quarantine capability prior to final resolution of a removal order. Commissioner Title proposed removed the term “franchise” from the regulation. Commissioner Title requested clarification on the distinction between “specific product type” and “category of product types.” Enforcement Counsel agreed that they could be combined. Commissioner McBride said that “category of product type” ought to be kept as the highest tier of what the Commission could remove. Commissioner Title responded that the examples of “category of product type” could be changed or deleted, but that as written the regulation was too broad. Commissioner Flanagan said that a broad classification could be necessary due to future potential marijuana products entering the market. Commissioner Doyle said that the ability to remove an entire category of products would be highly unlikely to use, but it does not fully limit the Commission to remove “category of product types.” Commissioner Title said that the ability to remove an entire category would be similar to un-passing the marijuana legalization law. Commissioner Doyle responded that preceding language in the regulation would protect against that possibility, because such future commission would have to back up a decision and that would be difficult to reverse legalization. Commissioner Flanagan said this category language gives the Commission a tool to keep communities safer. Commissioner Title said that a future Commission could use the broad language to roll back legalization. Commissioner McBride said that it is impossible to predict what new marijuana products may be developed within a category, so a broader view with a high standard of evidence and deliberation ought to be included. Chairman Hoffman allowed everyone one final comment. Commissioner Title posed the question of when it would be appropriate to use the removal process on a broad category such as edibles or beverages. Commissioner McBride put forward “flavored vape cartridges” as a possibility. Chairman Hoffman asked for a motion regarding the category of product type language. Commissioner Title made a motion to strike the “category of product type” language, with examples, seconded by Commissioner Flanagan. The motion was voted down by the Commission with two in favor (Hoffman, Title) and three opposed (Doyle, Flanagan, McBride). Commissioner Title made a motion to remove “marijuana seeds and marijuana clones” as examples of “category[ies] of product types,” seconded by Commissioner Doyle. The Commission approved the motion by a vote of four in favor (Doyle, Hoffman, McBride, Title) and one opposed (Flanagan). Commissioner Title made a motion to adopt the other proposed modifications, seconded by Commissioner Doyle. The Commission unanimously approved the modifications suggested. Commissioner Flanagan made a motion to approve the staff recommendation on removal of product, with modifications, seconded by Commissioner McBride. The Commission approved the motion by a vote of four in favor (Doyle, Flanagan, Hoffman, McBride) and one opposed (Title).



With no further business before the Commission, Chairman Hoffman noted the next Commission meeting will be June 27, 2019. Chairman Hoffman asked for a motion to adjourn. Commissioner Flanagan made the motion to adjourn seconded by Commissioner McBride. The motion was unanimously approved by the Commission. The Commission is adjourned as of 1:18 P.M.



CANNABIS CONTROL COMMISSION

**June 27, 2019
10:00AM**

**Massachusetts State House
Hearing Room B-1
24 Beacon Street
Boston, MA 02133**

PUBLIC MEETING MINUTES

1) Call to Order

Chairman called to order and put the public on notice that the meeting is being recorded.

2) Chairman's Comments & Updates

- Chairman gave an overview of the agenda and thanked Chairman Rogers for the use of the room.

3) Minutes May 16, 23, and 30

- Commissioner thanked Andrew Carter with respect to meetings and the legal staff and entire staff with respect to the regulations and preparing for meetings in quick succession.
- Three sets of minutes
 - May 16, 2019
 - Commissioner McBride: 4th page, first full paragraph, starting with “Mr. Potvin and director of enforcement Patrick Beyea” inserting after the sentence “Commissioner Title said she was seeking all documents related with this transfer of ownership” inserting “Chairman Hoffman said, ‘Obtaining an outside vendor has been discussed with the Executive Director and will be underway shortly.’”
 - Chair asked for additional changes to the May 16, 2019 minutes and then asked for a motion to approve the minutes subject to the change requested by Commissioner McBride.
 - Commissioner McBride moved to approve the minutes of the May 16, 2019 meeting subject to the changes Commissioner McBride requested.
 - Commissioner Flanagan seconded the motion.



- The Commission unanimously approved the minutes of the May 16, 2019 meeting subject to the change requested by Commissioner McBride.
- May 23, 2019
 - Chair asked for questions or comments then asked for a motion to approve the minutes from May 23, 2019.
 - Commissioner McBride moved to approve the minutes of the May 23, 2019 meeting.
 - Commissioner Flanagan seconded the motion.
 - The Commission unanimously approved the minutes from the May 23, 2019 meeting.
- May 30, 2019
 - Chair asked for questions or comments and then asked for a motion to approve the minutes from May 30, 2019.
 - Commissioner Doyle moved to approve the minutes of the May 30, 2019 meeting.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the minutes from the May 23, 2019 meeting.

4) Executive Director's Report

- Attempting to align the data presented with the data in the open data platform.
- 274 total applications that have all 4 packets and are therefore pending Commission review at this time.
- 297 have been withdrawn.
- 293 incomplete (not all four packets have been received).
- 1 denial.
- 174 considered and approved.
- Grand total of 3,679.
- Executive Director reviewed the 174 approved licenses and where they are in the licensing process.
 - 17 provisionally approved (fee has not been paid).
 - 91 provisional licenses (fee has been paid).
 - 14 final licenses that are in the process of being inspected in order to commence operations.
 - 52 that have commenced operations.
- Executive Director gave a breakdown of priority status applicants.
 - 190 that received RMD priority status.
 - 10 Economic Empowerment priority status
 - 294 general applicants.
- Disadvantaged Business Enterprise statistics received.
 - 86.2% have not identified as a Disadvantaged Business Enterprise.
- Overview of where applicants are in the process
 - 151 have not been reviewed by staff.

- 71 reopened and additional information was requested.
 - 36 awaiting third-party response, whether municipality or background check.
 - 8 are before the Commission today.
 - 175 have been considered by the Commission.
- Overview of geographic location of applicants pending before the commission.
 - Majority in Worcester County.
- Retail pending across the Commonwealth
 - Predominantly Worcester county.
- Total agent applications
 - 6,252 total applications.
 - 4,511 active agents.
 - 167 being reviewed.
 - 46 have not been reviewed.
 - 119 Have been reopened and require additional information.
 - 2 awaiting a third-party response (fingerprinting for laboratory agents).
- Agent Demographics
 - Gender
 - 66.9% identified as male.
 - 32.7% identified as female.
 - Race
 - 73.5% identified as white.
- Medical data (not currently in our portal).
 - 154 total registration applications pending for Medical Treatment Centers.
 - 164 registrations have been issued to date.
 - 106 are provisional registrations.
 - 5 final registrations.
 - 50 commenced operations.
 - 3 have expired.
- RMD/MTC Agent Registrations.
 - 6,177 total RMD/MTC agent applications.
 - 4,192 are active.
 - 75 pending.
- Certified Patients
 - Will be able to update those on July 1 given they are updated on a monthly basis.
- Social Equity Program.
 - 708 applicants to date.
 - 51 approved.

- 114 reopened and additional information to be submitted.
- 229 in the process in terms of being reviewed.
- 314 incomplete applications.
- Which track Social Equity Program applicants chose
 - Majority (162 applicants - 70%) of applicants selecting entrepreneurship.
 - Gender
 - Majority identify as male.
 - Race
 - Majority Black/African American
 - 24 selected Entry/Reentry
 - Race
 - Majority identify as male.
 - Gender
 - Majority identify as Black/African American.
 - 21 selected Core
 - Race
 - Majority identify as male.
 - Gender
 - Majority identify as Black/African American.
 - 22 selected Ancillary
 - Race
 - Majority identify as male.
 - Gender
 - Majority identify as Black/African American.
- Two additional updates for the Commission’s considerations.
 - Commission included temporary registration for patients, going live July 1. We are calling it “initial access.” Because of the way the terms were being used and confused, we are using the term “initial access” for a 14-day initial access to get medical marijuana while their permanent registration is processed.
 - Responsible Vendor Training is an application the Commission will launch July 1. That is an application that will have to come before the Commission for approval and consideration. That application will be done through the MassCIP. What we are looking to do is identify the vendors, review their courses, and make sure it meets the standards in the regulations, and capture sufficient information for Commission’s consideration. Commending the staff to pull this together, who collaboratively worked outside their job description to make this program happen.



- Commissioner McBride asked, with respect to responsible vendor training, are we anticipating some vendors that will present on the entire list of training, or will they be applying for one component?
 - Executive Director: suspicion that most will be able to do the entire program, but expect those with particular expertise to apply for that portion.
 - Commissioner Doyle: We have a base model, but hoping that in future, the base model will have the ability to specialize, but initially, it appears that vendors will apply to provide the whole suite of offerings.

5) Staff Recommendations on Final Licenses

- a. Caregiver-Patient Connection (#MC281254), Cultivation – Tier 2/Outdoor
 - Director of Licensing Kyle Potvin presented the application and staff recommendation for both the outdoor cultivation and indoor cultivation.
 - Chair asked for comments and questions and then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Doyle moved to approve the staff recommendation for final license.
 - Commissioner Flanagan seconded the motion.
 - The Commission unanimously approved the staff recommendation for final license.
- b. Nature’s Remedy of Massachusetts, Inc. (#MC281482), Cultivation – Tier 4/Indoor
 - Chair asked for comments and questions and then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Doyle moved to approve the staff recommendation for final license.
 - Commissioner Flanagan seconded the motion.
 - The Commission approved the staff recommendation for final license by a vote of four (Doyle, Flanagan, Hoffman, and McBride) with one abstention (Title).
- c. Nature’s Remedy of Massachusetts, Inc. (#MP281524), Product Manufacturing
 - Director of Licensing Kyle Potvin presented the application and staff recommendation.
 - Chair asked for comments and questions and then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Flanagan moved to approve the staff recommendation for final license.
 - Commissioner Doyle seconded the motion.
 - The Commission approved the staff recommendation for final license by a vote of four (Doyle, Flanagan, Hoffman, and McBride) with one abstention (Title).
- d. Nature’s Remedy of Massachusetts, Inc. (#MR281553), Retail
 - Director Potvin presented the application and staff recommendation.

- Chair asked for comments and questions and then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Doyle moved to approve the staff recommendation for final license.
 - Commissioner McBride seconded the motion.
 - The Commission approved the staff recommendation for final license by a vote of four in favor (Doyle, Flanagan, Hoffman, and McBride) with one abstention (Title).
- e. The Green Lady Dispensary, Inc. (#MP281345), Product Manufacturer
- Director Potvin presented the application and staff recommendation for both Product Manufacturer and Retail.
 - Chairman asked for a little more insight into the conversation and the unique requirements for testing protocols.
 - Investigator Armond Enos: The applicant has agreed to having post cultivation testing of soil to Proverde Labs in Milford and which will provide the results back. In the case of a failed test, we would be notified.
 - Commissioner Doyle asked about testing of finished product.
 - Investigator Enos – The applicant has on-site testing for finished products using a “petri dish” testing system for microbials and mycotoxins. The applicant has two ovens for the incubation periods. They have two ovens, one for 24 hours and one for 48 hours, to accommodate the varying incubation periods and temperatures required to clearly detect the presence of certain pathogens. Heavy metals are done in the soil sample sent to Proverde Labs. They also have on-site testing strips where a solution can be diluted and tested, giving test results within 5-10 minutes. As far as solvents, they will only be using CO2. For products that require winterization, they will use food grade residual ethanol and will run final tests to make sure the ethanol is completely removed. In their Standard Operating Procedures, they have included physical representations and visual cues to recognize microbial pathogens and they will provide pictures of products to share with Investigator Enos so he can match it up to that key.
 - Commissioner Doyle asked if applicant is aware that there will be a labeling requirement with respect to the limited testing of such products.
 - Investigator Ernos: Yes. All products coming out of the establishment will have that warning, with the pesticide testing in Milford. Pesticides are applied with either a sprayer or in the soil itself, so whichever application was used, the pesticides would be detected through the soil sampling, which is the next best thing to actually testing the plant, which we can’t do in this context.
 - Chair asked for additional questions or comments.
 - Chairman asked if other Nantucket retailers would use this lab as well.
 - Investigator Ernos: The one caution on that is that this lab is not ISO accredited.

- Chairman then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Doyle moved to approve the staff recommendation for final license considering the discussion had.
 - Commissioner Title seconded the motion.
 - The Commission unanimously approved the staff recommendation for final license.
- f. The Green Lady Dispensary, Inc. (#MR281427), Retail
- Chairman then asked for a motion to approve the staff recommendation for final license.
 - Commissioner Doyle moved to approve the staff recommendation for final license considering the discussion had.
 - Commissioner Title seconded the motion.
 - The Commission unanimously approved the staff recommendation for final license.
 - Chair acknowledged that this was the first retail establishment approved on the island of Nantucket.
- g. HVV Massachusetts, Inc. (#RMD1185), Vertically Integrated Medical Marijuana Treatment Center/RMD
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for comments and questions and then asked for a motion to approve the staff recommendation for final license.
 - Commissioner McBride moved to approve the staff recommendation for final license.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the staff recommendation for final license.
- 6) Staff Recommendations on Provisional License Applications
- a. BCWC, LLC (#MCN281970), Cultivation – Tier 1/Indoor
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for comments and questions.
 - Commissioner Title: The Diversity Plan only provides a goal that at least 55% of the work force will be made of women, minorities, veterans and people with disabilities. That is too low given that women make up 50% of the populations. Therefore, proposing that the Diversity Plan be revised and resubmitted.
 - Chairman asked for other questions and comments then asked for a motion to approve the staff recommendation for final license subject to the condition proposed by Commissioner Title.
 - Commissioner Flanagan moved to approve the staff recommendation for final license subject to the condition proposed by Commissioner Title.
 - Commissioner Doyle seconded the motion.

- The Commission unanimously approved the staff recommendation for final license, subject to the condition proposed by Commissioner Title.
- b. Blackstone Valley Naturals, LLC (#MBN281476), Microbusiness: Cultivation – Tier 1/Indoor
- Director Potvin presented the application and staff recommendation.
 - Commissioner Flanagan: Concerns with respect to the Positive Impact Plan. Expressed appreciation for having a microbusiness before the Commission, given the process and the difficulties for small businesses. The Positive Impact Plan discusses working with social service agencies in Worcester County, which is obviously geared toward adults 21 and over. Concern stems from advertising, if you want to attract 21 and over, you also push the boundary of advertising that 18-20 cohort, given those age groups congregate together. How do they intend to advertise? Second concern is with respect to their intention to partner with social service agency in an area of disproportionate impact. Not all social service agencies are physically located in an area of disproportionate impact, even if that agency would provide services to such an area. Therefore, hoping that can expand on their search. What is most troubling, is the as they have gotten further in the process, they would identify the social service agency and that's not done in the plan. Hoping that they could submit amendments with regards to which social service agency they will work with and how they will advertise to those 21 and over and who will host them. Will they be on site or off Premises.
 - Commissioner Title: Concerns about the Diversity Plan setting out programs and measurements but no measurable goes. Therefore, adding a condition to revise the Diversity Plan to include measurable goals and then be resubmitted.
 - Commissioner McBride: Impressed by electronic countermeasures and security plan. If folks are looking for something to model their plans after, this would be a good example.
 - Chairman asked for additional comments and questions and then asked for a motion to approve the staff recommendation for final license subject to the conditions proposed by Commissioners Flanagan and Title.
 - Commissioner Flanagan moved to approve the staff recommendation for final license subject to the conditions proposed by Commissioners Flanagan and Title.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the staff recommendation for final license subject to the conditions proposed by Commissioners Flanagan and Title.
- c. Ten-Ten, LLC (#MCN281734), Cultivation – Tier 3/Indoor
- Director Potvin presented the application and staff recommendation for all four Ten-Ten, LLC licenses.
 - Commissioner McBride: General comment for all four applications, given documents with respect to management and operations profile seemed to apply across all. There will be no

medical operations, so the first question is with respect to a statement in their business plan that they have legislative approval to sell both medical marijuana and adult use marijuana. Even though this statement is part of their business plan, and not management and operations program, it raises concerns as one goes through the other documents. In Shipping, receiving, and transportation portion of the plan, last paragraph reads: “The inventory manager must securely transmit a copy of the shipping manifest to the receiving facility and the regulatory agency on the business day prior to transport.” Question of whether the Commission requires such a submission.

- Director Potvin: It is not a requirement, though that information would be included in the Seed-to-Sale tracking system.
- Commissioner McBride: Perhaps there needs to be some clarification there. The third page of the same plan, the final paragraph on the third page starts: “When delivery delivering for patient or caregiving purposes.” Are they going to be authorized to deliver for patient and caregivers if they’re not authorized for medical?
- Director Potvin: No
- Commissioner McBride: That’s concerning, because it is unclear what regulations they were reading when they put together their plan, which is supposed to substantially comply with and reflect our regulations. In the Security Summary, under section (k) Ac and EACC issuance procedures, there is a discussion about temporary keys that will be issued for 24 ours or less but never to a restricted access area. It goes on to read, “CCC registered vendors and contractors may be authorized to have temporary loan keys, the security director will authorize and write temporary loan keys. Concerns with respect to temporary loan keys being issued to vendors and contractors. Not sure what the meaning of “CCC Registered vendors and contractors” means. That might be something that could be further delineated. But, generally speaking, are temporary loan keys something authorized by us?
- Director Potvin: No.
- Commissioner McBride: generally speaking, I have concerns about how some of these documents were put together. If we decide to move forward with a provisional license, then they need to be looking closer at these policies and our regulations and completely redrafting those policies. But there is a big concern about whether this entity understands the Commission’s regulations.
- Chairman Hoffman: Agree that these are substantive issues.
- Chairman asked for comments and questions, stated that there would be an individual vote on each of the four Ten-Ten licenses, and then asked Commissioner McBride whether she wanted to attach a condition.
- Commissioner McBride requested the condition that each of the policies be rewritten.

- Chairman, then asked for a motion to approve the staff recommendation for provisional license for the Tier 3 Indoor Cultivation License, subject to the condition requested by Commissioner McBride.
- Commissioner McBride moved to approve the staff recommendation for provisional license subject to the condition requested by Commissioner McBride.
- Commissioner Doyle seconded the motion.
- The Commission unanimously denied the staff recommendation for provisional license.

d. Ten-Ten, LLC (#MCN281745), Cultivation – Tier 3/Outdoor

- Chairman asked for a motion to approve the staff recommendation for provisional license subject to the condition suggested.
- Commissioner Flanagan moved to approve the staff recommendation for provisional license subject to the condition suggested by Commissioner McBride.
- Commissioner McBride seconded the motion.
- The Commission unanimously denied the staff recommendation for provisional license.
- Executive Director: As a matter of processing the denial, it would be helpful to have a statement as to the basis for the denial.
- General Counsel: It would be helpful if the Commission could articulate the licensure requirement that it believes is at issue in the denial and also identify what was submitted in support of that licensure requirement and if there was some issue with the information or how that information applied to the requirement. Also, if the Commission could vote on the basis of the denial.

Chairman: Commissioner McBride to read a rendering of the explicit concerns she raised in the discussion of the license application. Then the Commission will have a vote on the previous two considerations to apply those concerns as the rationale for the denial.

Commissioner McBride: The Commission has decided that the application for licensure should be denied. The application is not in compliance what the law. The licensure requirements at issue are regulatory in nature, specifically, including, but not limited to 935 500.101(1)(c)(9). “The Management and Operations Profile submitted in accordance this subsection shall demonstrate compliance with the operation requirements in 935 CMR 500.105-140, as applicable.” It does not. 935 CMR 500.105(13): The Transportation Between Marijuana Establishment Requirement, including, but not limited to, provision (f) on Manifests. 935 CMR 500.110 Security Requirements. It is impermissible to issue temporary keys. This is based on a review of the components of the application that included the Transportation, Shipping, and Receiving Plan, Security Plan, and the fact that the applicant is seeking licensure in the adult use program, not the medical use program, and the information they submitted does not clearly support the adult use requirements in the categories of licensure they seek.

Ten-Ten, LLC (#MCN281734), Cultivation – Tier 3/Indoor

- Chairman: Unless there are any comments on commissioner McBride’s rationale, I would like to ask for a motion to append the rationale to the vote to deny the provisional license for MCN281734.
- Commissioner Doyle moved to append the rationale provided by Commissioner McBride to the previous vote to deny the provisional license.
- Commissioner Flanagan seconded the motion.
- The Commission voted unanimously to append the rationale provided by Commissioner McBride to the vote to deny a provisional license for MCN281734.

Ten-Ten, LLC (#MCN281745), Cultivation – Tier 3/Outdoor

- Chairman: Asked for a motion to append the rationale provided by Commissioner McBride to the vote taken on the provisional license for the MCN281745.
- Commissioner Doyle moved to append the rationale provided by Commissioner McBride to the previous vote to deny the provisional license.
- Commissioner Flanagan seconded the motion.
- The Commission voted unanimously to append the rationale provided by Commissioner McBride to the vote to deny a provisional license for MCN281745.

e. Ten-Ten, LLC (#MPC281496), Product Manufacturing

- Chairman asked for a motion to approve the staff recommendation for provisional license.
- Commissioner McBride moved to approve the staff recommendation for provisional license.
- Commissioner Flanagan seconded the motion.
- The Commission unanimously denied the staff recommendation for provisional license.
- Chairman asked for a motion to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.
- Commissioner Doyle moved to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.
- Commissioner Flanagan seconded the motion.
- The Commission unanimously voted to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.

d. Ten-Ten, LLC (#MRN281924), Retail

- Chairman asked for a motion to approve the staff recommendation for provisional license.
- Commissioner Doyle moved to approve the staff recommendation for provisional license.
- Commissioner McBride seconded the motion.
- The Commission unanimously denied the staff recommendation for provisional license.



- Chairman asked for a motion to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.
- Commissioner Flanagan moved to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.
- Commissioner Doyle seconded the motion.
- Commission unanimously voted to append the rationale provided by Commissioner McBride to the vote to deny the provisional license.

e. The Haven Center, Inc. (#MRN281258), Retail

- Director Potvin presented the application and staff recommendation.
- Chairman asked for comments and questions and then asked for a motion to approve the staff recommendation for provisional license.
- Commissioner Doyle moved to approve the staff recommendation for provisional license.
- Commissioner Title seconded the motion.
- The Commission unanimously approved the staff recommendation for provisional license.

f. The Haven Center, Inc. (#MRN282481), Retail

- Director Potvin presented the application and staff recommendation.
- Chairman clarified that if the municipality does not get back to us within 60 days, there is a presumption that they do not have any objections. Have there been any communications between the Commission staff and the Town of Brewster?
 - Executive Director: Our outreach has been proactive. There was a previous applicant within Brewster, where there was a bylaw question, but under an interpretation of the Attorney General's Office, we are in compliance. Commission Staff has had a lot of interaction with the Town of Brewster but did not receive a formal response. We're not aware of any issue and are confident in their compliance.
- Chairman asked for comments and questions and then asked for a motion to approve the staff recommendation for provisional license.
- Commissioner Doyle moved to approve the staff recommendation for provisional license.
- Commissioner Title seconded the motion.
- The Commission unanimously approved the staff recommendation for provisional license.

7) Commission Discussion and Votes

a. Draft Adult Regulations

- Chairman: We will go through the regulations section by section, first adult then medical. The Commission will vote on each set of regulations as a whole. As the Commission goes through each section, commissioners will make suggested edits, but unless it rises to a change in policy,

those changes will be voted on as part of the regulations as a whole. As going through, Chairman will read the comments provided by the legal staff.

- Commissioner Title: Citizens Review Committee definition was deleted. There may be a reason to delete it, but if we're not going to have a conversation as to why, we should keep it in.
 - Executive Director: That is a group had some starts and stops with respect to meeting. The value add is as an accountability measure for the Commission, especially with respect to Social Equity Program. One of the challenges has been finding the space and establishing a quorum for that group. There has not been a plan to reconstitute the group, but perhaps reconsidering in the fall when a plan for the committee can be presented. In the meantime, there will be continued difficulty pulling that group together.
 - Chairman: If we agree that we will come back and discuss this in the fall, then there is no reason to take out the definition from the regulations. As conceived, it is important and vital, but it has not played out that way. Since we're going to have that conversation eventually, there is no point in taking that definition out of the regulations at this point.
 - Executive Director: we will add that definition back in.
- Commissioner Doyle: In the materials for initial roll out of initial access certification the word "clinician" was used instead of "healthcare provider" at the suggestion of a certifying physicians, happy to put this off to the fall if people would rather have additional time to think about it, but to make materials consistent and to listen to a certifying physician in our program, we may want to change "healthcare provider" to "clinician."
 - Executive Director: The Commission uses marijuana and cannabis interchangeably, perhaps the same approach in this case is the way to go and clean it up in the fall as a matter of efficiency and to ensure we do not miss anything.
 - Chairman: We will establish an additional definition for "clinician" that is the same as "healthcare provider."
 - Commissioner Doyle: Each of those definitions should reference the other.
- Commissioner Title: Suggestion for edit to definition of Precertification Application. Currently precertification would apply to a marijuana social consumption applicant. However, our equity workplan also lists the staff coming back in the fall with recommendations for precertification applications for social equity participants and economic empowerment applicants. I would recommend we expand this definition now to include both social equity applicants and economic empowerment applicants.
- Commissioner Doyle: On pre-verification, that is the process of a Marijuana Retailer examining the identification and collecting the information required by the regulations prior to a consumer being able to receive deliveries. I requested language to make sure it is consistent with the limitations established in the statute on what can be collected. After "dwelling" insert a comma

and the language: “provided that such information shall not be other than information that is typically required in a retail transaction.” Which is the language from the statute.

- Chairman pointed out that language was in an updated draft.
- Commissioner Title: With respect Social Equity Program Participant, in terms of benefits stemming from this designation, no one can fit it currently because no one has finished the program, since the Commission hasn’t completed developing the program. I would recommend leaving it as “have qualified to participate” or add to the definition, in order to account for people who have started the program, but hasn’t completed it, left the program, or had a certain number of absences, “someone who remains designated as a social equity program participant designated by the Commission.”
- Commissioner Doyle: Question with respect to Annual License Fees. Commission allowed a 50% reduction in the license fees for social equity program participants and economic empowerment applicants but did not anticipate an application process to qualify for that.
 - General Counsel: Staff would appreciate a point of clarification on this. If the commission would prefer the automatic process.
 - Commissioner Doyle: Given these applicants would already be so designated, a waiver application process is not necessary.
- Executive Director: For consistency sake, with respect to Change of Ownership and the fees required, there was an attempt to bifurcate that, if there is a total acquisition and a new entity being introduced, that is a per-entity per-license fee. If there is a board member being added, and therefore the review is less intensive review, it would be \$500 per pers, and to clarify that would be per-license as well.
- Commissioner McBride: Asked for a clarification with respect to the waiver application deletion that Commissioner Doyle requested and suggested the changes.
 - Commissioner Doyle: Intent to make the fee reduction automatic.
- Commissioner Doyle: question with respect to 500.029, referring to the level of CORI review.
 - General Counsel: This was added to reflect the current level of CORI review that background checks are following. There is an opportunity between draft and final regulations to touch base with DCJIS to discuss if there are alternatives. But currently, background checks are done under this standard of review.
 - Enforcement Counsel: Clarified that this CORI level access designation only applies to registered agents, which is being performed on site and not at the Commission level review.
- Commissioner Doyle: With respect to 500.050(1)(b)(2) regarding independent testing laboratory. Language about waivers from statutory requirements. That is not how we dealt with it under 500.800. Just need to reconcile those. In subsection (3)(H) dealing with craft cooperatives, there was language that may have caused confusion, but the new language may have caused more

confusion. The language says that a craft cooperative shall have control over any other marijuana establishment, except that they may have control in a Social Consumption Establishment.

Worried that the language as written will too strictly limit the ability to obtain other marijuana licenses. Suggested Language: “Members of a cooperative shall not be a person or entity having direct or indirect control in any other marijuana establishment. Such restriction shall not be construed to prohibit a craft marijuana cooperative from applying for a marijuana retailer, marijuana existing licensee transporter, marijuana research, or marijuana social consumption establishment licenses.”

- Commissioner Doyle: Restrictions on Marijuana Retailer license. MGL 94G 4(a)(1/2) has a prohibition against those under 21 entering adult use facilities, so would like language to the effect that a Registered Qualifying Patient under the age of 21 would not be allowed in an adult use only location, but could enter a colocated location.
- Commissioner Doyle: 500.101(2)(b), we reference section 500.103: renewal and licensure, but no connection with 500.102: action on applications. Question of whether this was on purpose or mistaken omission.
 - General Counsel: Legal and licensing efforts to capture that there is more action to be taken on an application after the initial application process.
 - Enforcement Counsel: Subsection (g)(5) references 102.
- Commissioner Doyle: subsection dealing with Management and Operation Profile, with respect to sanitary practices in compliance with 105 CMR 590. Want to flag that through out the regulations, with respect to the product manufacturing process, confirm whether 590 is the right reference or if it should be 500.
- Commissioner Doyle: 500.102(1)(e), concerns about the language used, request that Commission postpone the changes until fall unless staff says they’re urgently needed. The language covers extending the time allowed to take action on applications.
 - Enforcement Counsel: In terms of context, the provision contemplates a tolling period after an application is deemed complete, if new information or a suitability issue arises.
 - General Counsel: This language is consistent with the statutory requirements and the spirit of the legislature’s intent, which is that the Commission not delay the review of license applications. As I understand it, there are situations after a determination that an application is complete that Licensing and Enforcement figures out there is more information that needs to be reviewed and raises questions as to whether that application was actually complete.
 - Commissioner Title: based on conversations with staff and legal, comfortable with the change and agree that it captures the spirit of the law that the Commission not unnecessarily delaying applications.

- Commissioner McBride: Also, comfortable, but fine with waiting for fall to make the change.
 - Commission agreed to remove that change and discuss it in the fall.
- Commissioner Title: 500.103(4)(e), with respect to the accounting requirement, hoping to make the language mirror the language in the statute where it describes what shall be documented and considered a public record by adding the following after “renewal application,” “the marijuana establishment shall submit as a component of the renewal application documentation of any cost to the municipality by the operation of the Marijuana Establishment and.”
- Commissioner Doyle: 500.105(6)(a)(2) with respect to exit packaging and the new subsection (b) with respect to opening a package with scissors or knives if it might appeal to children. Clarifying if this is new language and what type of material it might be made of as a matter of environmentalism.
 - Commissioner Title: This language was added because the exit packaging is too easily opened with scissors to exposing a plainly wrapped chocolate bar or food product. As a matter of protection of children, wanted something more resistant to scissors.
 - Commissioner Doyle: Perhaps leaving it for the fall or leaving it in to generate comment.
- Commissioner Flanagan: 500.105(2)(b)(7), with respect to the curriculum for the training program. Subsection (a) gives the 4 key components training should include. Want to replace #1 with “scientific based evidence on the physical and mental health effects based on the type of marijuana product.”
 - Commissioner Title: Supports the change and sees it as an improvement. Clarifying that the authority for what “scientific basis” is from the Commission’s research department.
- Commissioner Title: 500.105(4) with respect t Marketing and Advertising requirements. The phrase “images appealing to persons younger than 21 years of age.” Images appealing to minors or children is a clear standard, but younger than 21 might be less clear. But if there is clear research that demonstrates what those images might be, then it may not be an issue. Do we feel comfortable about whether the Commission has a process to determine whether an image is geared toward a person under 21? But ultimately willing to leave it if others are comfortable.
 - Enforcement Counsel: With respect to product labeling, the Commission has reference points. But there may be questions about how the use of their name and logo.
- Commissioner Title: 105(8) and (9), suggesting a language change to clarify and read: “(8) Advertising on any billboards or any other public signage which fails to comply with all state and local ordinances and requirements and (9) installation of any illuminated neon signage or external signage”
- Commissioner Title: 105(13) recommending removing “if relevant” from the three places it appears with respect to “Directions for Use.”

- Commissioner Title 105(17) with respect to Social Equity Program, in the Equity Work Plan, Commissioner McBride brought up a good point that we should reconsider the income limitations. Under (1) adding “income does not exceed 200% of Area Median Income and.” Number 2 and 3 contain language with respect to conviction and continuance without a finding. Asking whether this is new and the basis for the change
 - General Counsel: This was suggestion from a constituent and Shekia Scott that we broaden the category to include CWOFS in order to bring more potential applicants into the program. Currently, folks with just a CWOFS can’t go through the program.
 - Commissioner Title: It was intentional to only include convictions here but given CWOFS will be considered convictions in a background check, as a matter of consistency, we can keep it in, but request revisiting the question after public comment. Also curious about how CWOFS were added to the background check aspect
 - General counsel: it was not clear in the original regulations as to whether the Commission was considering CWOFS in the same space as convictions, so it was an attempt to clarify, given staff was considering CWOFS with convictions.
 - Enforcement Counsel: In 802(e) there is revised language that was reviewed in the policy memorandum on June 25, new language whereby CWOFS was considered a “non-conviction offense” in the suitability table.
- Commissioner Doyle: 500.110(1)(p) with respect to sharing the floor plan or layout of a Marijuana Establishment, adding local police in addition to the fire department.
- Commissioner Doyle: 500.110(9)(a)(7) with respect to alarm activation or other events that require a response from public safety personnel. Recommend adding inspections services to that list.
 - Commissioner McBride: specify that it is municipal inspection services.
- Commissioner Doyle: Flag for the future, at some point if Federal Pesticide Standards apply to cannabis, this section will need to be revised, because it will become inconsistent if MDAR pesticide policies begin including pesticides that are not consistent with organic standards. In (11)(f) repeated word for word a section that should be a cross reference, which will be followed up with legal. In (11)(g), the energy deadline for medical is included in the adult use regs but should only be in the medical regs.
- Commissioner Title: Flag for security section, the phrase “power outage.” It was a requirement to remain open for 48 hours power outage. Wanted to invite public comment on how much it costs to comply with this.
- Commissioner Doyle: Question with respect to 500.141(2)(e) regarding a prohibition of consumers bringing their own accessories into a Social Consumption Establishment.
 - General Counsel: In staff discussions, in an abundance of caution, included marijuana accessories.

- Enforcement Counsel: this was a drafting error. The intent is that consumers may bring Marijuana Accessories into a Social Consumption Establishment, but the accessories themselves may not contain any Marijuana Products.
- Commissioner Doyle: 500.141(3)(c) – adding reference to “time and temperature control” when discussing perishable and refrigeration, given it is a legal/regulatory term and the same should be added in similar references to perishable and refrigerated products.
- Commissioner Doyle: Flagging a question for medical use, whether we intend to allow delivery retailers who are licensed for adult retail delivery will be able to contract with medical establishments.
 - Chairman: This topic should be discussed after public comment.
 - Commissioner Title: Support making it clear that an adult use delivery licensee can contract with an MTC/RMD.
 - General Counsel: Would want to see that we require a delivery only retailer to be collocated.
 - Executive Director: Food for thought, we need to work out a process for ensuring that such a licensee is satisfying the requirements of medical delivery, particularly with respect to patient supply limitations.
 - Commissioner McBride: Would like to insert language to prompt public comment but allows staff time to consider logistical concerns. Adding in the definition of “Deliver Only Retailer” after the word “consumers” – “Registered Qualifying Patients.”
- Commissioner Title 500.450(12), with the phrase “or conspired to commit,” is there an example or explanation of what would be included as to why this information was included.
 - General Counsel: This language was meant to get at people who aren’t necessarily principal actors, but those who supported the criminal action.
 - Commissioner McBride: An example might include a conspiracy to provide legal, packaged products outside the environment of the marijuana establishment that we might hear about in the course of inspections.
 - Commissioner Title: Comfortable with that example and would prefer to have the only example in the draft regulations be about diversion.
- Commissioner Doyle: 500.801(3), concerned the first sentence will be misunderstood and would prefer more active language to avoid people thinking they will be “deemed” suitable. “Licensees and Registered agents are required to maintain their suitability status at all times license or registration is in effect and suitability status is subject to reevaluation at any time.” If that same language repeats in regulations, then would like to replace similarly throughout.
- Commissioner Title: Under 820(1)(b) and (c), “all records to the extent they contain personal data.” Why wouldn’t it read “personal data.”

- General Counsel: a record could have more data in it than just personal data, we're saying that to the extent that a record contains personal data, it will not be disclosed.
- Commissioner Title: can the clarification be that a record that has personal data, but there is other information, the personal data shall be redacted.
- Chairman asked for a motion to approve the draft adult regulations granting staff the authority to make administrative changes, subject to the changes made in the discussion.
- Commissioner Doyle moved to approve the draft adult regulations granting staff the authority to make ministerial changes, subject to the changes made in the discussion.
- Commissioner McBride seconded the motion.
- The Commission unanimously approved the draft adult regulations, granting staff the authority to make ministerial changes, subject to the changes made in the discussion.

b. Draft Medical Regulations

- Commissioner Doyle: For consistency with Adult Use, the definition of Individual Order would preclude the opportunity for anyone other than an MTC to deliver to a patient, consistent with the discussion and vote on adult, evaluate the regs for consistency with respect to the ability for a non-MTC to deliver to patients.
- Executive Director: This draft does include the elimination of the patient fee. There are other fees, such as if there is a replacement card, but the \$50 registration fee has been removed.
- Commissioner Doyle: Want to make sure the “clinician/healthcare provider” change from adult makes it into Medical.
- Commissioner Doyle: 501.032(2)(b) worried that someone may be the subject to action by Commission when they got confused with respect to reaching their maximum supply.
 - Enforcement Counsel: Perhaps some language with respect to intentionality so that a mistake is not grounds for an enforcement action.
 - Commissioner McBride: adding “knowingly with the intention to subvert this regulation.
- Commissioner Title: 501.027(12) with respect to Hardship Cultivation, suggest that patient be able to receive notice prior to an inspection.
 - Enforcement Counsel: the concern would be a matter of diversion, so prior notice would be used in the ordinary course, but if there is a concern of criminal diversion.
 - Chairman: should we set out how much notice
 - Commissioner Title: Reasonable notice should be sufficient
 - Commissioner Flanagan: Oppose notice entirely, because in the case of diversion once one gets notice, its easier to hide bad behavior.
- Commissioner Doyle: 501.050(1)(h) includes language that MTCs “must” sell vaping products. Is this requirement still needed or can we allow MTCs to make their own decisions on what products to sell by removing (h) entirely?

- Commissioner Flanagan: Support for the removal of the requirements of subsection (h).
- Commissioner Doyle: 501.050(4)(b), an issue sprinkled throughout the regulations, there are a lot of references to “home deliveries” and institutional caregivers can only accept deliveries at their institution and not at their home, so would like to make sure that reference to “home delivery” is limited to Personal Caregivers and does not include Institutional Caregivers and ensure “home” is removed where delivery is allowed to an Institutional Caregiver.
- Executive Director: for point of clarification, attempting to capture the tier of MTCs. The licensing fee remains the same regardless of tier, but as a matter of data collection, we distinguish. In the case of a colocated establishment, the tier will count with respect to each adult and medical – i.e. 100,000ft canopy would not be split 50/50 between each adult and medical but counted fully for each.
- Executive Director: 501.101, for clarification, we are optimistic that we can bring the medical application into the portal, with a date in the regs on or after September 30 of this year. Until the portal is set up for that, we will follow the old process. And when this change occurs, the fee structure will be changed as well.
- Chairman: 501.102, will the same tolling issue have raised in adult carry through here?
 - General Counsel: we will make it carry over from Adult.
- Chairman: 501.104 – making sure consistent with Adult.
- Commissioner Flanagan: 501.140 would like to have some sort of language to receive public comment for reciprocity for medical licenses from other states. This may not be the place but would like to get feedback in public comment on this topic.
 - Commissioner McBride: would suggest putting language under (2)(a)(2) by inserting “in the Commonwealth or an Other State with legalized medical marijuana.”
 - Commissioner Doyle: This is sprinkled through the regulations and is willing to help legal staff consistently carry this change through.
 - Chairman: expressed support for the idea but wants to make sure it’s done right, but if Commission does not think an in-depth discussion is required, willing to move forward.
 - Commissioner Doyle: Want to make sure that this idea does not conflict with M.G.L. 94I.
 - Commissioner Title: commends Commissioner Flanagan for raising the issue and Commissioners McBride and Doyle for finding logistical solutions to carry this out.
- Chairman: 501.145 – Making sure changes made in adult will be carried through.
- Commissioner Title: Clarifying that there is no requirement for body cameras for medical home delivery.
 - General Counsel: The decision at the previous meeting that there would be a requirement to wear body cameras. And staff will ensure that they will remain the same.
- Commissioner Doyle: Comment on Delivery in general for municipalities, on the adult side Commission only allowing delivery in the locations that have retail establishments, so it is crucial for

municipalities to respond to our requests for information with respect to ordinances and bylaws to make sure what we know what is allowed in each of 351 municipalities in the Commonwealth.

- Commissioner Flanagan: 501.150 – Is it possible to align the prohibited forms of edibles listed in adult use and what is in medical with respect to appealing with children.
 - Commissioner Title: We should leave room for patients with appetite issues, but otherwise ok with the change for now.
- Commissioner Title: Going back to the requirement of body cameras for medical delivery personnel, the policy memo provided did not include that requirement
 - Commissioner McBride: the discussion had was with respect to cameras in the vehicles.
 - Commissioner Title: Recommend putting it off until the fall discussion, but if that is going to be a requirement the Commission is implementing in this round, it should be a discussion.
 - Chairman: agrees that this is not a conversation that has been resolved.
 - Commissioner McBride: Suggest saving it for fall and being informed by the discussion of body cameras in Adult.
- Chairman asked for a motion to approve the draft medical regulations granting staff the authority to make administrative changes, subject to the changes made in the discussion.
- Commissioner Flanagan moved to approve the draft medical regulations granting staff the authority to make ministerial changes, subject to the changes made in the discussion.
- Commissioner Doyle seconded the motion.
- The Commission unanimously approved the draft adult regulations, granting staff the authority to make ministerial changes, subject to the changes made in the discussion.

8) New Business that the Chairman did not anticipate at time of posting.

Chairman: no new business.

9) Next Meeting Date

July 17, 2019

Chairman asked for a motion to adjourn.

Commissioner Flanagan moved to adjourn the meeting.

Commissioner Doyle seconded.

The Commission unanimously voted to adjourn the meeting.





COMMONWEALTH OF MASSACHUSETTS

October 10, 2019

In accordance with Sections 18-25 of Chapter 30A of the Massachusetts General Laws, notice is hereby given of a meeting of the Cannabis Control Commission. The meeting will take place as noted below.

CANNABIS CONTROL COMMISSION

October 10, 2019 10:00AM

Western New England University School of Law
1215 Wilbraham Road
Springfield, MA 01119

PUBLIC MEETING MINUTES

- Call to Order
 - Chairman called to order and recognized quorum and
 - Gave notice that meeting is being recorded.

- Chairman's Comments & Updates
 - Thanked Western New England School of Law, Dean Setty and, Professor Steiner for hosting and gave an overview of the day.
 - Gave overview of the agenda and plan for the day.

- Approval of Minutes
 - Chairman noted that there were two sets of minutes for discussion and vote
 - September 12-13, 2019. Chairman noted that there was no adjournment on the 12th, so this is one set of minutes.
 - September 24, 2019
 - Chairman asked if had a chance to review.
 - Commissioner Doyle
 - On 9.12, when Commissioner Doyle reviewed section on expedited policy, bottom of page 9, didn't think the minutes properly reflected her comments. Commissioner Doyle felt that the minutes made it sound like the Commission was adding things to the Priority program, which we cannot do under the statute. Therefore, Commissioner Doyle watched the video of the meeting and put together a rough transcript. Commissioner Doyle recommends taking out first four sentences of paragraph replacing with the following:
 - Commissioner Doyle said the Commission received feedback throughout the



regulatory process requesting that groups not designated priority in the statute be given priority status. Commission Doyle said that the Commission could not do that but, within the remaining general pool of applicants, she requested that the Commission vote to adopt a policy of expediting review of applications for groups that the Legislature has directed us to promote: farmers, small businesses and communities affected by the War on Drugs. Specifically, she requested that the Commission expedite the pending applications of social equity program participants, outdoor cultivators, craft cooperatives, microbusinesses, as well as independent testing laboratories, in the interest of public health. She proposed that the policy sunset on December 31, 2020 and during its effectiveness, that the Commission staff collect data regarding its impact on the licensing process and present a recommendation to the Commission in December 2020 as to whether the expedition policy should be extended.

- Commissioner McBride
 - September 12, page 4 (page 111 in meeting presentation).
 - Starts out with “500.105 General Operating Procedures for Marijuana Establishment, commissioner McBride brought up 500.105(4) about marketing and advertising requirements.”
 - Commissioner Flanagan made that comment rather than Commissioner McBride.
- Chairman asked for any other comments to the September 12-13, 2019 meeting and then asked for a motion with those changes
- Commissioner Doyle moved approve the minutes subject to the changes requested.
- Commissioner Flanagan seconded the motion.
- The Commission unanimously approved the minutes of the September 12-13, 2019 meeting, subject to the changes discussed.

- 9.24.19

- Commissioner McBride
 - Page 2, second paragraph “turning to 500.145” commissioner Flanagan brought up the cash handling procedures.”
 - Commissioner McBride made the comment rather than Commissioner Flanagan.
- Chairman asked for additional comments and then asked for motion to approve the minutes subject to that change.
- Commissioner McBride moved to approve the minutes subject to the change requested.
- Commissioner Flanagan seconded the motion.
- The Commission unanimously approved the minutes of the September 24, 2019 public meeting, subject to the changes discussed.

- Executive Director’s Report

- Licensing slides:
 - Went over the information in the portal, noting that this covers only Adult Use, but due to the regulatory changes, will include medical in the future.
 - 377 applications currently pending
 - Applicants have submitted all 4 packets.
 - This represents the current workload before the Commission.



- 374 applications have been withdrawn.
 - There are 3,379 applications that have not submitted all 4 packets, and therefore are not complete applications.
 - There were 196 applications that have been approved by the Commission
- There were 4 applications that were denied by Commission.
 - Total of 4,330 applications.
- Highlighted breakdown of 196 approved license by type
- Covered breakdown of 196 approved applications based on where they are in the process.
 - Provisionally Approved
 - 106 Provisional Licenses
 - 23 Final Licenses
 - 66 entities have commenced operations
- Explained the difference between provisionally approved and a provisional license
 - Provisionally approved means approved by the Commission, but applicant has not paid all of the fees.
 - Provisional License means applicant paid the fee.
- Went over the priority status applicants
 - 221 have indicated they received RMD Priority Status.
 - 14 indicated they received Economic Empowerment Priority Status.
 - 342 general applicants
 - These 577 applicants represent 304 separate entities.
- Went over Disadvantaged Business Enterprise information
 - Majority of 479 have not identified as a DBE Business.
- Went over queue and status
 - 184 Applications awaiting review
 - 127 More information requested
 - 55 Awaiting 3rd Party Responses
 - 11 Awaiting Staff Recommendation
 - 200 applications considered by the Commission.
- Covered regional/county dispersion of licenses – majority from Worcester county
 - 7 new applications
 - Majority of 46 of applications from Worcester county
- Went over retail applications
 - 3 new applications since last meeting
 - 12 coming from Worcester County.
- Went over license types by where they are in the process.
 - 377 Pending Application.
 - 4 initial License Denied.
 - 1 Provisionally Approved.
 - 106 Provisional Licenses Approved.
 - 23 Final License.
 - 66 Commenced operations.

- Went over agent registrations including active and pending.
 - Total of 8,893 applications received.
 - 6,211 are active.
 - 259 Pending.
 - 154 need to be reviewed. 0 awaiting approval.
 - 100 reopened for additional information
 - 5 pending third-party response.
 - Applications are considered by staff on a rolling basis.
 - There are zero waiting for approval.
- Agent demographics
 - Gender
 - 66.3% identified as male;
 - 33.3% female.
 - Race: 73.2% identified as white.
- Next covered Medical marijuana program statistics
 - Total of 162 entity applications
 - 7,509 agent applications 4,632 are active
 - 67,480 Certified Patients
 - 318 Registered Certifying Clinicians
- Introduction of new staff
- a. Fall River Correspondence
 - Commission staff has been corresponding with the City of Fall River and representatives of Fall River
 - Commission received a letter from legislative delegation requesting the Commission to consider a moratorium on applications in Fall River
 - Commission asked the City of Fall River to recertify existing certifications for entities within Fall River. To date, no response on those requests.
 - There are 12 applications and licenses in Fall river in both medical and adult-use marijuana establishments licensed in Fall River.
- b. Update on Financial Due Diligence
 - Gave overview of the financial due diligence procurement process and purpose.
 - Seeking to bring expertise to review applications and building out internal resources.
 - 8 responses received.
 - 3 vendors were invited to present.
 - Procurement Management Team (PMT) indicated that there was a great deal of professionalism and expertise in each of the presentations.
 - PMT recommended Citrin Cooperman.
 - Next phase would be contract negotiation and then bringing the contract to the Commission to approve engagement of Citrin Cooperman for financial investigations.
 - Not asking for a vote today but giving full update.
 - Chairman commented that we try to share all materials that will be used in the meeting. Thanked Chief of Staff for doing so. One exception is that we did not circulate information with respect to which bidder the PMT chose so that bidders did not hear the decision through public meeting notice.



- Wanted to thank the PMT – Commissioner Britte McBride, Michael Yee, Patrick Beyea, and Eddie Guardiola.
- Chairman asked for any questions with respect to the financial investigation procurement.
- Executive Director followed up with an update
 - Re: Commissioner Doyle’s minutes comment:
 - Digging into the most appropriate, expeditious process for priority review.
 - Policy was to prioritize the review of certain priority applications.
 - Those applicants self-identify in the portal, then they will be put in a first-come-first-serve basis in an expedited line
 - If the individual is applying for a different license, the expediting process will not expedite all applications, but only the ones qualifying for expedition.
 - This includes applicants that are women, minority and vet owned business.
 - Executive director thanked the Supplier Diversity Office.
 - Reviewed that the data produced in the current process is a matter of self-identification for collection purposes only. Commission staff will use this information to reach out to folks who identify this way and help them get into the expedited process.
 - Microbusiness/craft cooperative/outdoor cooperative, CNB will automatically include for expedition
 - Chairman asked when that would be done.
 - Executive Director said aspirational goal of next week.

5) Staff Recommendations on Renewals –

- Chairman said we will normally consider them as rosters, unless there is a request to consider otherwise, but given the number of individual considerations requested, we will go one by one. Chairman then turned to Director of Licensing Kyle Potvin.
- a. Late Spring, Inc d/b/a Gage Cannabis (#MRR205540), Retail Renewal
- Commissioner Title – In this case licensee noted in their diversity plan that they would do an annual review of certain data that would be conducted through staff interviews and HR records. That report was not included in the or mentioned in the progress update on its diversity plan.
 - Proposed condition: Within 60 days, submit more information about diversity training and submit annual data review as described in submitted diversity plan (*Gage will conduct annual reviews of data that will inform a reevaluation of the diversity strategy. This data will be collected through staff surveys and HR records. Major points will include demographic of applicant pools, current employees, past employees, changes in employment status (promotions, conversions to full time, raises, etc.), and any feedback from personnel, especially underrepresented groups.*)
 - Chairman asked for other questions or comments and then asked for a motion to approve the renewal subject to Commissioner Title’s suggested condition.
 - Commissioner Flanagan moved to approve the renewal subject to the condition suggested by Commissioner Title.
 - Commissioner McBride seconded the motion.
 - Commission unanimously Approved the renewal, subject to condition suggested by Commissioner Title.
- b. Central Ave Compassionate Care, Inc. (#MCR139830), Cultivation Renewal



- Commissioner Title proposed the same condition as previous licensee: Within 60 days, submit more information about diversity training and submit annual data review described in submitted diversity plan (*Central Ave will conduct annual reviews of data that will inform a reevaluation of the diversity strategy. This data will be collected through staff surveys and HR records. Major points will include demographic of applicant pools, current employees, past employees, changes in employment status (promotions, conversions to full time, raises, etc.), and any feedback from personnel, especially underrepresented groups.*)
 - Chairman asked for other issues and then asked for a motion to approve the renewal subject to Commissioner Title’s suggested condition.
 - Commissioner Doyle moved to approve the renewal subject to condition suggested by Commissioner Title.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved subject to condition suggested by Commissioner Title.
- c. Central Ave Compassionate Care, Inc. (#MPR243488), Product Manufacturer Renewal
- Commissioner Title’s proposed condition: Within 60 days, submit more information about diversity training and submit annual data review as described in submitted diversity plan (*Gage will conduct annual reviews of data that will inform a reevaluation of the diversity strategy. This data will be collected through staff surveys and HR records. Major points will include demographic of applicant pools, current employees, past employees, changes in employment status (promotions, conversions to full time, raises, etc.), and any feedback from personnel, especially underrepresented groups.*)
 - Chairman asked for other issues and then asked for a motion to approve the renewal subject to commissioner Title’s suggested condition.
 - Commissioner Flanagan moved to approve the renewal subject to condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal subject to the condition suggested by Commissioner Title.
- d. Northeast Alternatives, Inc. (#MRR205534), Retail Renewal
- Executive Director suggested and recommends applying the same condition previously included relative to an investigation and determination as to licensees continued suitability given their location.
 - Chairman asked for other issues and then asked for a motion to approve the renewal subject to Executive Director’s suggested condition.
 - Commissioner McBride moved to approve the renewal subject to condition suggested by the Executive Director.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved subject to condition suggested by Executive Director.
- e. Theory Wellness, Inc. (#MRR205537), Retail Renewal
- Chairman asked for questions or comments. None were given.
 - Chairman asked for a motion to approve the renewal.
 - Commission Doyle moved to approve the renewal.
 - Commissioner McBride seconded the motion.
 - Commission unanimously approved the motion to renew.
- f. Curaleaf Massachusetts, Inc. (#MRR205542), Retail Renewal



- Commissioner Title –section for progress made to the diversity plan did not have any progress noted but was all written in future tense.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers. Everything submitted was in future tense.
 - Chairman asked for other comments and a motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner McBride moved to approve the renewal subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal subject to condition suggested by Commissioner Title.
- g. Curaleaf Massachusetts, Inc. (#MCR139839), Cultivation Renewal
- Commissioner Title –section for progress made to the diversity plan did not have any progress noted but was all written in future tense.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers. Everything submitted was in future tense.
 - Chairman asked for additional comments and asked for a motion to approve the renewal subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan seconded the motion.
 - The Commission unanimously approved subject to condition suggested by Commissioner Title.
- h. Curaleaf Massachusetts, Inc. (#MPR243492), Product Manufacturer Renewal
- Commissioner Title –section for progress made to the diversity plan did not have any progress noted but was all written in future tense.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers. Everything submitted was in future tense.
 - Chairman asked for additional comments and a motion to approve the renewal license subject to the condition suggested by commissioner title.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan seconded the motion.
 - The Commission unanimously approved the renewal license subject to the condition suggested by Commissioner Title.
- i. 253 Organic, LLC (#MCR139831), Cultivation Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Doyle moved to approve the renewal license.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved the renewal license.

- j. Caroline’s Cannabis, LLC (#MRR205536), Retail Renewal
 - Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Doyle moved to approve the renewal license.
 - Commissioner McBride seconded the motion.
 - Commission unanimously approved the renewal license.
- k. 253 Organic, LLC (#MPR343487), Product Manufacturer Renewal
 - Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license.
- l. 253 Organic, LLC (#MRR205539), Retail Renewal
 - Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Doyle moved to approve the renewal license.
 - Commissioner McBride seconded the motion.
 - Commission unanimously approved the renewal license.
- m. Commonwealth Cultivation, Inc. (#MCR139832), Cultivation Renewal
 - Commissioner Title – In this case there was no update submitted with regard to the diversity plan or positive impact plan, but there was a statement that said there was no progress made this time. And because there are a number of similar proposals in the same condition, and asks the staff that we consider for future renewals that some progress be required
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chairman asked for other comments and then asked for a motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner McBride seconded the motion
 - The Commission unanimously approved subject to the condition suggested by Commissioner Title.
- n. East Coast Organics, LLC (#MCR139833), Cultivation Renewal
 - Commissioner Title – Same condition as Commonwealth Cultivation Inc.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- o. East Coast Organics, LLC (#MPR243489), Product Manufacturer Renewal
 - Commissioner Title – Same Condition as previous two renewal applications.



- Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chari asked for additional comments and a motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- p. Ashlis Farm, Inc. (#MCR139841), Cultivation Renewal
- Commissioner Title – same condition as previous several renewal applications.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- q. Ashli’s Extract, Inc. (#MPR243495), Product Manufacturer Renewal
- Commissioner Title – Same condition as previous several renewal applications.
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- r. Ashli’s, Inc. (#MRR205541), Retail Renewal
- Commissioner Title – Same condition (update)
 - Proposed condition: Provide an update on progress made relative to diversity plan, for example regarding staff training, consultants, vendors, contractors, or suppliers and progress made relative to positive impact plan. There was no update submitted.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner McBride seconded the motion.



- The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- s. Sanctuary Medicinals, LLC (#MCR139835), Cultivation Renewal
- Commissioner Title – In this case the licensee noted in its diversity plan said it would be auditing the plan and would submit data, including employment and contract/subcontractor. This info was not included in update.
 - Proposed condition: Within 60 days, submit more information about diversity training and submit annual data review as described in submitted diversity plan (The CEO at Sanctuary will be responsible for auditing the Diversity Plan. The audit report setting forth the Company’s performance in fulfilling the goals of the Plan will contain:
 - Employment data, including information on minority, women, disabled, and veteran representation in the workforce in all job classifications; average salary ranges; recruitment and training information (all job categories); and retention and outreach efforts;
 - The total number and value of all contracts and/or subcontractors awarded for goods and services;
 - An identification of each subcontract actually awarded to a member of a diverse group and the actual value of such subcontract;
 - A comprehensive description of all efforts made by Sanctuary to monitor and enforce the Diversity Plan;
 - Information on diverse group investment, equity ownership, and other ownership or employment opportunities initiated or promoted by Sanctuary;
 - Other information deemed necessary or desirable by the Commission to ensure compliance with the rules and regulations governing marijuana establishments in Massachusetts; and
 - When available, a workforce utilization report including the following information for each job category at Sanctuary:
 - The total number of persons employed
 - The total number of men employed
 - The total number of women employed
 - The total number of veterans
 - The total number of service-disabled veterans
 - The total number of members of each racial minority employed)
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner McBride moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- t. Theory Wellness, Inc. (#MCR139842), Cultivation Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.

- Commission unanimously approved the renewal license.
- u. Theory Wellness, Inc. (#MPR243493), Product Manufacturer Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license.
- v. Sanctuary Medicinals, LLC (#MPR243490), Product Manufacturer Renewal
- Commissioner Title – same as previous Sanctuary Medicinals.
 - Proposed condition: Within 60 days, submit more information about diversity training and submit annual data review as described in submitted diversity plan (The CEO at Sanctuary will be responsible for auditing the Diversity Plan. The audit report setting forth the Company’s performance in fulfilling the goals of the Plan will contain:
 - Employment data, including information on minority, women, disabled, and veteran representation in the workforce in all job classifications; average salary ranges; recruitment and training information (all job categories); and retention and outreach efforts;
 - The total number and value of all contracts and/or subcontractors awarded for goods and services;
 - An identification of each subcontract actually awarded to a member of a diverse group and the actual value of such subcontract;
 - A comprehensive description of all efforts made by Sanctuary to monitor and enforce the Diversity Plan;
 - Information on diverse group investment, equity ownership, and other ownership or employment opportunities initiated or promoted by Sanctuary;
 - Other information deemed necessary or desirable by the Commission to ensure compliance with the rules and regulations governing marijuana establishments in Massachusetts; and
 - When available, a workforce utilization report including the following information for each job category at Sanctuary:
 - The total number of persons employed
 - The total number of men employed
 - The total number of women employed
 - The total number of veterans
 - The total number of service-disabled veterans
 - The total number of members of each racial minority employed)
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Title.
- w. Health Circle, Inc., Vertically Integrated Medical Treatment Center Renewal
- Commissioner Doyle – she sees that this is an RMD. See some progress to getting

operational, but they have not updated their own timeline.

○ Proposed condition – update proposed timeline within sixty days.

- Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Doyle.
- Commissioner McBride moved to approve the renewal license subject to the condition suggested by Commissioner Doyle.
- Commissioner Doyle seconded the motion.
- The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Doyle.

x. M3 Ventures, Inc. (#RMD-806), Vertically Integrated Medical Treatment Center Renewal

- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Doyle moved to approve the renewal license.
- Commissioner McBride seconded the motion.
- Commission unanimously approved the renewal license.

y. M3 Ventures, Inc. (#RMD-465), Vertically Integrated Medical Treatment Center Renewal

- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Doyle moved to approve the renewal license.
- Commissioner McBride seconded the motion.
- Commission unanimously approved the renewal license.

z. Mission MA, Inc. (RMD-1125), Vertically Integrated Medical Treatment Center Renewal

- Commissioner Title recused herself from this consideration.
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Flanagan moved to approve the renewal license.
- Commissioner Doyle seconded the motion.
- Commission approved the renewal license by voice vote with for votes in favor (Doyle, Flanagan, Hoffman, McBride) and one recusal (Title).

aa. Apothca, Inc. (#RMD-345), Vertically Integrated Medical Treatment Center Renewal

- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Flanagan moved to approve the renewal license.
- Commissioner Doyle seconded the motion.
- Commission unanimously approved the renewal license.

bb. Mass Wellspring, LLC (#RMD-665), Vertically Integrated Medical Treatment Center Renewal

- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Flanagan moved to approve the renewal license.
- Commissioner Doyle seconded the motion.
- Commission unanimously approved the renewal license.

cc. The Heirloom Collective, Inc. (#RMD-825), Vertically Integrated Medical Treatment Center Renewal

- Chairman asked for questions and comments then asked for motion to approve the renewal license.
- Commissioner Doyle moved to approve the renewal license.
- Commissioner Flanagan seconded the motion.
- Commission unanimously approved the renewal license.

dd. HVV Massachusetts, Inc., Vertically Integrated Medical Treatment Center Renewal



- Doyle asked for clarification with respect to the two HVV Massachusetts, Inc. applications
 - Director Potvin said that there is currently not a license for the one under current consideration, but has dispensary in Amherst
 - Subject to ministerial correction – Doyle – This is another applicant that is progressing toward commencing operations, but their timeline is about three years off in terms of our materials.
 - Proposed condition – update proposed timeline within sixty days.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner Flanagan seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Doyle.
- ee. HVV Massachusetts, Inc. (#RMD-1185), Vertically Integrated Medical Treatment Center Renewal
- Commissioner Doyle - Same Condition
 - Proposed condition – update proposed timeline within sixty days.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Doyle.
- ff. Theory Wellness, Inc. (#RMD-525), Vertically Integrated Medical Treatment Center Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Doyle moved to approve the renewal license.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved the renewal license.
- gg. Bask, Inc. (#RMD-445), Vertically Integrated Medical Treatment Center Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license.
- hh. MassMedicum Corp. (#RMD-945), Vertically Integrated Medical Treatment Center Renewal
- Commissioner Doyle – request that the same condition with respect an update of a timeline and she asked that it be a “robust” update.
 - Proposed condition – update proposed timeline within sixty days.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner Flanagan moved to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner McBride seconded the motion.

- The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Doyle.
- ii. Patriot Care Corp. (#RMD-265), Vertically Integrated Medical Treatment Center Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license.
- jj. Patriot Care Corp. (#RMD-727), Vertically Integrated Medical Treatment Center Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Doyle moved to approve the renewal license.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved the renewal license.
- kk. The Botanist, Inc. (#RMD-1145), Vertically Integrated Medical Treatment Center Renewal
- Commissioner Doyle – Same condition as MassMedicum.
 - Proposed condition – update proposed timeline within sixty days.
 - Chairman asked for additional comments then motion to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner Doyle moved to approve the renewal license subject to the condition suggested by Commissioner Doyle.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the renewal license subject to condition suggested by Commissioner Doyle.
- ll. Altitude Organic Corporation of Massachusetts, Vertically Integrated Medical Treatment Center Renewal
- Chairman asked for questions and comments then asked for motion to approve the renewal license.
 - Commissioner Flanagan moved to approve the renewal license.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the renewal license.

6. Staff Recommendations on Changes of Location

- Chairman asked Director of Licensing, Kyle Potvin to bring the Commission through the Change of Location applications.
- a. ARL Healthcare, Inc., MTC Provisional License, Cultivation and Processing
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the change of location.
 - Commissioner Flanagan moved to approve the change of location.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the change of location.
- b. Bask, Inc., MTC Provisional License, Cultivation and Processing
- Director Potvin presented the application and staff recommendation.



- Chairman asked for questions and comments then asked for motion to approve the change of location.
 - Commissioner Doyle moved to approve the change of location.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved the change of location.
- d. Mayflower Medicinals, Inc., MTC Provisional License, Dispensing
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the change of location.
 - Commissioner Flanagan moved to approve the change of location.
 - Commissioner McBride seconded the motion.
 - Commission unanimously approved the change of location.
- e. Nature’s Remedy of Massachusetts, Inc., MTC Provisional License, Dispensing
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the change of location.
 - Commissioner Flanagan moved to approve the change of location.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the change of location.

7. Staff Recommendations on Final Licenses

- a. CommCan, Inc. (#MR282205), Retail
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the final license.
 - Commissioner Doyle moved to approve the final license.
 - Commissioner McBride seconded the motion.
 - Commission approved the final license by a vote of four (Doyle, Flanagan, Hoffman, McBride) with one abstention (Title).
- b. CommCan, Inc. (#RMD-565), Vertically Integrated Medical Treatment Center
- Director Potvin presented the application and staff recommendation – noting that this is the medical operation of the same entity just approved for final license.
 - Chairman asked for questions and comments then asked for motion to approve the final license.
 - Commissioner Doyle moved to approve the final license.
 - Commissioner Title seconded the motion.
 - Commission unanimously approved the final license.
- c. I.N.S.A., Inc (#MR281892), Retail
- Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the final license.
 - Commissioner Doyle moved to approve the final license.
 - Commissioner McBride seconded the motion.
 - Commission approved the final license by a vote of four (Doyle, Flanagan, Hoffman, McBride) with one abstention (Title).



Took a break to reconvene at 11:25

- Chairman called meeting back to order

8. Staff Recommendations on Provisional Licenses

a. Haverhill Stem, LLC (#MRN281327), Retail

- Director Potvin presented the application and staff recommendation.
- Chairman asked for questions and comments then asked for motion to approve the provisional license.
- Commissioner Title moved to approve the provisional license.
- Commissioner Doyle seconded the motion.
- Commission unanimously approved the Provisional license.

b. JustinCredible Cultivation, LLC (#MCN281313), Cultivation – Tier 1 / Indoor

d. Director Potvin presented the application and staff recommendation.

- Commissioner Flanagan – Have a lot of concerns with the Positive Impact Plan. There are lofty goals, it is going to be difficult to implement given lack of advertising involved.
 - Proposed Condition – Applicant will rework their Positive Impact Plan as a condition of licensure.
- Commissioner McBride – has concerns about security plan and prevention of diversion plan.
 - Plan reads “will ensure our product does reach underage individuals. Probably typo.
 - In the prevention of diversion plan refers to 500.300 as section relevant to storage of cannabis. Not proper citation. 500.110 are the better provision to reference.
 - In security procedure plan – wrong section for transportation. May be a typo but concerned about detail and level of proficiency with CCC regulations reflected in the plan.
 - In security plan – program policy and procedures # 10 states “emergency personal may enter the cultivation facility when necessary to perform their duties upon cleared background check.” This is not accurate.
 - Overall concern with respect to proficiency of the regulations.
 - Proposed Condition - Plans need to be rewritten and ensuring that it restricts access to consumers 21 years or older.
- Commissioner Title – minor condition on diversity plan – first metric is a minimum 45% employment, job creation, and expansion from target demographics
 - What does expansion mean?
 - Proposed Condition – applicant will revise the plan to (i) clarify what Expansion means and (ii) 45% is not an adequate number to include women and other groups.
- Chairman asked for questions and comments then asked for motion to approve the provisional license, subject to the conditions suggested by Commissioners Flanagan, McBride, and Title.
- Commissioner Doyle moved to approve the provisional license, subject to the conditions suggested by Commissioners Flanagan, McBride, and Title.
- Commissioner Title seconded the motion.
- Commission approved the provisional license subject to the conditions suggested by



Commissioners Flanagan, McBride, and Title by a vote of three in favor (Doyle, Hoffman, McBride) and to against (Flanagan, Title)

- c. Alternative Compassion Services, Inc. (#MCN282054), Cultivation – Tier 2 / Indoor
 - Director Potvin presented the application and staff recommendation for each Cultivator and Product Manufacturer.
 - Commissioner Title
 - Proposed Condition – Add quantifiable, measurable goals to the diversity plan.
 - Chairman asked for additional questions and comments then asked for motion to approve the provisional license, subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the provisional license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the Provisional license subject to the condition suggested by Commissioner Title.
- d. Alternative Compassion Services, Inc. (#MPN281628), Product Manufacturer
 - Commissioner Title would like same condition as other ACS, Inc.
 - Proposed Condition – Add quantifiable, measurable goals to the diversity plan.
 - Chairman asked for additional questions and comments then asked for motion to approve the provisional license, subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle moved to approve the provisional license subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan seconded the motion.
 - Commission unanimously approved the Provisional license subject to the condition suggested by Commissioner Title.
- e. Liberty Market, LLC (#MRN281804), Retail
 - Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the provisional license.
 - Commissioner Doyle moved to approve the provisional license.
 - Commissioner McBride seconded the motion.
 - Commission unanimously approved the Provisional license.
- f. Good Chemistry of Massachusetts, Inc. (MRN282554), Retail
 - Director Potvin presented the application and staff recommendation.
 - Chairman asked for questions and comments then asked for motion to approve the provisional license.
 - Commissioner Doyle moved to approve the provisional license.
 - Commissioner Title seconded the motion.
 - Commission unanimously approved the Provisional license.
- g. Native Sun Wellness, Inc. (#MCN281599), Cultivation – Tier 5 / Indoor
 - Director Potvin presented the application and staff recommendation.
 - Commissioner Title would like same condition as other ACS, Inc.
 - Proposed Condition – Add quantifiable, measurable goals to the diversity plan.
 - Commissioner Doyle – applicant that received MTC priority?
 - Director Potvin – They are an MTC but did not avail themselves of priority status.



- Chairman asked for additional questions and comments then asked for motion to approve the provisional license, subject to the condition suggested by Commissioner Title.
 - Commissioner Flanagan moved to approve the provisional license subject to the condition suggested by Commissioner Title.
 - Commissioner Doyle seconded the motion.
 - Commission unanimously approved the Provisional license subject to the condition suggested by Commissioner Title.
- h. ACK Natural, Inc, Vertically Integrated Medical Treatment Center
- Director Potvin presented the application and staff recommendation.
 - Commissioner McBride –
 - Proposed condition – provide more information about chocolates, more specifically the types and forms of baked goods they will make and sell.
 - Commissioner Title – adding on to Commissioner McBride’s comment
 - Proposed condition – specify what they mean by “terpene juice”
 - Commissioner Title – Confirming whether applicants are demonstrating that if they use body cameras in home deliveries that they will be giving notice to consumers of such.
 - Director Potvin confirmed that.
 - Commissioner McBride confirmed that because this is an MTC applicant, any home deliver use of body cameras.
 - Chairman clarified that use of body cameras is voluntary on the part of MTCs.
 - Chairman asked for additional comments and asked for a motion to approve the provisional license subject to the conditions suggested by Commissioners McBride and Title.
 - Commissioner Doyle moved to approve the provisional license subject to the conditions suggested by Commissioners McBride and Title.
 - Commissioner McBride seconded the motion
 - The Commission unanimously approved the provisional license subject to the conditions suggested by Commissioners McBride and Title.
- i. TDMA Orange, LLC. (#MCN281982), Cultivation – Tier 2 / Indoor
- Chairman says Co-located with next – one discussion, two votes.
 - Director Potvin presented the application and staff recommendation for both cultivation and product manufacturer applications.
 - Commissioner Doyle –
 - Proposed Condition – not the application seeking here, rather they availed themselves of the priority MTC status, have not seen discernable movement on MTC licenses, so update the MTC timeline within 60 days.
 - Commissioner Title – supporting Commissioner Doyle’s condition –
 - Proposed Condition and quantifiable, measurable goals for both diversity and positive impact plans.
 - Chairman asked for additional comments and a motion to approve the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
 - Commissioner Doyle moved the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
 - Commissioner Flanagan seconded the motion
 - The Commission unanimously approved the provisional license for the provisional application



(Cultivation), subject to the conditions suggested by Commissioners Doyle and Title.

- j. TDMA Orange, LLC. (#MPN281616), Product Manufacturer
 - Commissioner Doyle – Same as other
 - Proposed Condition – not the application seeking here, rather they availed themselves of the priority MTC status, have not seen discernable movement on MTC licenses, so update the MTC timeline within 60 days.
 - Commissioner Title – supporting Commissioner Doyle’s condition –
 - Proposed Condition and quantifiable, measurable goals for both diversity and positive impact plans.
 - Commissioners McBride – same as others.
 - Proposed Condition – provide more information about gummies, specifically flavors and form.
 - Chairman asked for additional questions or comments and then asked for a motion to approve the provisional application subject to the condition requested by Commissioners Doyle, Title, and McBride.
 - Commissioner Flannagan moved to approve the provisional application subject to the condition requested by Commissioners Doyle, Title, and McBride.
 - Commissioner Doyle seconded.
 - The Commission unanimously approved the provisional application (Product Manufacturer) subject to the condition requested by Commissioners Doyle, Title, and McBride.

- k. TDMA Orange, LLC. (#MCN282031), Cultivation – Tier 5 / Indoor
 - Director Potvin presented the application and staff recommendation.
 - Commissioner Doyle –
 - Proposed Condition – not the application seeking here, rather they availed themselves of the priority MTC status, have not seen discernable movement on MTC licenses, so update the MTC timeline within 60 days.
 - Commissioner Title –
 - Proposed Condition and quantifiable, measurable goals for both diversity and positive impact plans.
 - Chairman asked for additional comments and a motion to approve the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
 - Commissioner Doyle moved the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
 - Commissioner McBride seconded the motion
 - The Commission unanimously approved the provisional license for the provisional application, subject to the conditions suggested by Commissioners Doyle and Title.

- l. TDMA Orange, LLC. (#MRN282376), Retail
 - Director Potvin presented the application and staff recommendation.
 - Commissioner Doyle – Same as others.
 - Proposed Condition – not the application seeking here, rather they availed themselves of the priority MTC status, have not seen discernable movement on MTC licenses, so update the MTC timeline within 60 days.
 - Commissioner Title – Same as others.



- Proposed Condition and quantifiable, measurable goals for both diversity and positive impact plans.
- Chairman asked for additional comments and a motion to approve the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
- Commissioner Doyle moved the provisional license for the Cultivation application, subject to the conditions suggested by Commissioners Doyle and Title.
- Commissioner McBride seconded the motion
- The Commission unanimously approved the provisional license for the provisional application, subject to the conditions suggested by Commissioners Doyle and Title.

Chairman gave a break – reconvene at 1p after lunch.

Chairman reconvened the meeting.

9. Responsible Vendor Accreditation

- Executive Director gave an overview of the Responsible Vendor Accreditation.
- Thanked Dr. Julie Johnson, Matt Giancola, and Patrick Beyea
- To date we've received 12 applications.
 - 4 applications before commission today for consideration.
 - Those not before the commission today are still in a back and forth with staff and will be before the commission in the future.
- Chairman asked for a timeline with respect to implementation once an application is approved.
 - Executive Director said that it's hard to say given the work of making sure they have facilities and the curricula are in order.
- These licensees will be able to provide services upon licensure to other entities
- These may not be related to the any other licensee.
- Executive Director went over the information provided to Commission and was reviewed, including types of programs and the structure and examination.
- Chairman suggested going through applications one by one.

a. Quality Control Analytics

- Executive Director gave an overview of the application and staff recommendation.
- Chairman asked for comments and questions then a motion to approve the application to provide responsible vendor training.
- Commissioner Doyle moved to approve the application to provide responsible vendor training.
- Commissioner McBride seconded the motion.
- The Commission unanimously approved the application to provide responsible vendor training.

b. Cannabis Trainers

- m. Executive Director gave an overview of the application and staff recommendation.
- Commissioner Flanagan asked whether there are a lot of out of state applicants.
 - Dr. Johnson said she believed that 2 of the 12 were out of state providers but she would



confirm.

- Chairman asked for comments and questions then a motion to approve the application to provide responsible vendor training.
 - Commissioner Doyle moved to approve the application to provide responsible vendor training.
 - Commissioner McBride seconded the motion.
 - The Commission unanimously approved the application to provide responsible vendor training.
- c. Stoker Consulting, LLC
- Executive Director gave an overview of the application and staff recommendation.
 - Chairman asked for comments and questions then a motion to approve the application to provide responsible vendor training.
 - Commissioner Flanagan moved to approve the application to provide responsible vendor training.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the application to provide responsible vendor training.
- d. Anthony Bartucca
- Executive Director gave an overview of the application and staff recommendation.
 - Chairman asked for comments and questions then a motion to approve the application to provide responsible vendor training.
 - Commissioner Flanagan moved to approve the application to provide responsible vendor training.
 - Commissioner Doyle seconded the motion.
 - The Commission unanimously approved the application to provide responsible vendor training.
-
- Chairman confirmed that there were 8 more applicants in the process and what the timeline will be for putting those before the Commission.
 - Dr. Johnson said that they emailed all other applicants with requests for additional information, so they will be considered in next round of reviews.
 - Chairman asked how many trainers will be needed to support the entire industry.
 - Dr. Johnson said she was unsure.
 - Commissioner McBride asked by what date Marijuana Establishments will need to have these trainings completed
 - Executive Director and Chairman each said January 1, 2020.
 - Executive Director suggested that the application process is still open, so others should still apply.
 - Chairman asked to follow up on numbers needed to support the entire industry.
 - Commissioner McBride asked how we make sure materials are up to date as the Commission revises its regulations.
 - Executive Director said once we get new updates to the regs, trainers will get a circulated change, and the regs require updated materials to be submitted to the Commission.
 - Commissioner McBride confirmed that when we review changes to materials, we'll ensure conformity to the regulations
 - Dr. Johnson confirmed this and talked about a "secret shopper" type arrangement in which Commission staff would attend vendor training to ensure the curriculum is accurate.
 - Commissioner Title – Thanked all involved and stated that she received a lot of emails from disappointed applicants. Wanted to raise for consideration at another time, allowing for expedited



review from groups such as minority-, women-, and veteran-owned businesses, or businesses owned by Social Equity Program participants, similar to other license types.

- Executive Director said in this case it is difficult to do that, given these applications, and the small numbers of applicants, are considered as a group, rather than individually, and therefore there is no way to expedite any in relation to another.
- Executive Director said he would like to staff this effort with an individual given those doing it now have other job responsibilities and work toward the goal of including the types of businesses that the Commission encourages. Having a variety of folks involved throughout the commission is important, but also important to have a single person who's accountable for its implementation.

10. Commission Discussion and Votes

a. Next Regulatory Cycle: Scope of Foreseeable Topics (Subject to Change)

- Chairman - Thanks to General Counsel. We just finished a regulatory review. Agreed that issues that couldn't be addressed in the recent review will be addressed in the next. We've set a tentative start of the next round for January 2020. We need some time in between to implement recent changes and prepare for the next one. The point of this discussion is not to finalize the items to work on in next round but give some guidance to staff so that we can start doing the necessary background work. General Counsel met with each Commissioner and worked with Executive Director to come up with a list of initiatives for the next round of regulatory review.
- Chairman asked each Commissioner if anything is missing or mis stated on the list.
- Commissioner Flanagan wants to talk about edibles – wants to look at entire section – doesn't want to run into the situation where the public hasn't been told we'll be looking into something, so wants to give notice that we may make changes and will work with staff to do that.
- Commissioner McBride – would like to consider changes with respect to research licenses – no specifics.
- Commissioner Doyle – Wants to make sure that sampling discussion will pertain to both medical and adult, on list under just adult, so wanted to clarify.
- Commissioner Title – clarifications
 - What is meant by “impairment” under operational requirements?
 - General Counsel said it goes to concerns raised about the ability of certain retail locations, in most cases social consumption, to evaluate the impairment of individuals.
 - Vaping – early September meeting, discussed both short and long-term plan with respect to coordinating with other regulators. Can we move forward with those plans despite the ban?
 - Executive Director – yes, we can.
 - Labeling – i.e. edibles – there is new research in the past few years about how customers read edibles labels. Prefer it to be a conversation generally about labeling and not just about edibles.
 - General Counsel said generally this will be a discussion of labeling and packaging generally.
- Chairman said this should be a “living list” and General Counsel will be repository for additional items on the list.

b. Priority RMD Status

- Chairman defers to Commissioner Doyle
- Commissioner Doyle – Want to have a discussion about priority RMD status, in particular how RMDs have been progressing since provisional license toward commencing operations, especially



those enjoying priority RMD status. In discussion with staff members, Commissioner Doyle has discovered that there is not necessarily the same view of priority RMDs within the Commission. This discussion is to clarify policy. The idea was to help RMD applicants get through the adult process faster if they held RMD license.

- Commissioner Doyle's view that RMD priority would be given to applicants who have already gone through DPH application and/or inspection process. And legislature made it so that RMDs would have been automatically authorized to commence adult operations if the Commission didn't pass its regulations July 1, 2017, which it did. Believed that RMD status that were already well on their way to commencing operations could easily add adult operations to those operations already in process or operating.
- To carry this logic through, Commissioner Doyle thought priority RMD status should be limited to locations that have a provisional or approved medical licenses and should get a priority as they move into the adult space for that specific medical license type. But if they have priority for a license type for which they are seeking an adult equivalent, priority should only apply to license types for which the applicant already holds a medical equivalent and not all of the licensee's applications.
- Commissioner Doyle wants to make sure that is the correct interpretation.
- Chairman asks for other comments/thoughts.
- Commissioner Title – confirms Commissioner Doyle's interpretation and thanks her for raising it.
- Chairman and Commissioner Doyle to ask Executive Director for information that may inform the discussion.
 - Executive Director shared statistics with respect to applications
 - Information may not be the most recent, but of 214 applications surveyed in the portal all 214 have received initial review, 151 (70%) are proposed co-located. 58 (27%) are not proposed to be co-located. 5 license types that do not have a parallel license type in across both programs. 34 have been reviewed based on the their RMD priority certification that are not co-located but have not yet been considered by the Commission for licensure. These 34 are the universe effected.
- Chairman asked about precedent and fairness.
 - Commissioner Doyle says the downside to her proposal is that some applicants are well prepared to open new locations that they do not currently have medical locations associated but have experience that other applicants may not have. Struggle is whether or not they should get priority or be general applicants.
 - Chairman is concerned about treating people differently than in the past.
 - Commissioner Doyle said the Commission can change policy proactively.
- Chairman asks for additional comments then a motion.
- Commissioner Doyle moved that the Commission request the Executive Director to implement the changes necessary to ensure that priority RMD status is limited to those who qualified in April 2018, limited to the location and activities for which the applicants have RMD licensure and require that RMD licensure must be maintained to be eligible for priority treatment for adult licenses of the same type for that location.
- Commissioner Title seconded the motion.
- The Commission passed the motion with a vote of 4 in favor (Doyle, Flanagan, McBride and Title) and one opposed (Hoffman)

- Executive Director: believes notice would be required for applicants that will be affected
 - Also applying to all of this is license limitations – 3 per license per entity
 - Staff will get working on this in earnest – 34 have received initial review.
 - Some potential RMD priority and have been reopened with the intention to maintain that status and this will apply prospectively.
 - Commissioner Doyle trying to figure out how many applicants in the known universe that may have an RMD PCR/FCR that are potentially given RMD priority status.
 - Commissioner Doyle says we might need to revisit this because if everyone entitled to priority have been reviewed, and others can be in the future, and none come in, then this policy would be moot.
 - Executive Director says there will still be folks who can avail themselves of priority status and there are others that may have had priority status but will not now.
 - Chairman asks Executive Director if he has what he needs.
 - Executive Director says he'll work with staff and if we need clarification, he will bring to the Commission at that time
- Commissioner McBride – Once asks that once we determine the applicants that this policy will affect, that Executive Director share that information

c. Considerations for Social Equity Applicants

- Chairman defers to Commissioner Title
 - This Commission has made significant consistent progress with recent decisions and regulations toward social equity mandates. Therefore, it seems like a prudent time to give some consideration to those folks as they are being approached by unscrupulous investors trying to manipulate the program.
 - Talked with other states and issues they're seeing in their jurisdictions' social equity programs.
 - Purpose of this document – without substituting commission judgement or any over a Social Equity applicant's or affecting their autonomy, Title wants to give red flags and warning signs to keep an eye out for these tactics.
 - Chairman asked how this information would be disseminated.
 - Commissioner Title – Would leave it to staff to determine.
 - Commissioner Flanagan – People who are the target of scams don't see it when it is right in front of them, so it's very important. And what are other states doing in this area would think this is something for the Attorney General's office.
 - Commissioner Title says she's being cautious, so that she's not stepping on other states' toes, but we are the right body to issue this guidance because we see it so close up, but also there are links in the document to other resources, including the AG for criminal behavior.
 - Commissioner Doyle – Would like to see some disclaimers for “this is not legal advice, etc.” Another issue – maintaining status – there was a 2018 discussion about maintaining Economic Empowerment status – may be helpful to explain how to maintain that status in case the deal points would void their Social Equity status.
 - Commissioner Title says excellent point about maintaining status and will include greater disclosures with respect to legal advice.
 - Commissioner McBride – in some instances, applicants rely on advice from folks giving bad advice – maybe this is good vehicle to include language about doing your own research and

knowing who you're contracting with because the applicant/licensee is ultimately responsible.

- Chairman says we should have a motion which should include the comments from each commissioner and delegation to staff.
 - Commissioner Flanagan asked about dissemination and format/medium. Will it be a pamphlet? Will the Social Equity team give them out? Can we put this in something that looks attractive and shared at various events?
 - Commissioner Title – Weighing in without be prescriptive, wanted to leave it up to the staff – agrees the dissemination and outreach is crucial as well. Language is written such that it is plain English, so having an appealing look its important too.
 - Executive Director says for agility sake – we may want to leave wiggle room for changes as we work through, so perhaps a Commission vote should not be taken as to not “lock” the document.
 - Chairman says will follow Executive Director’s suggestion
 - Executive Director reviews comments and says that this could be a versatile document to be used in many ways – a living document.
 - Commissioner Flanagan asked that the document is dated so that as it is a “living and breathing” but people know they have the most up to date version.
- d. Annual Activities Report to the Legislature
- Chairman says it’s an annual activities report – doesn’t know who to thank.
 - Executive Director says culmination of a lot of staff work – primarily David Lakeman
 - Each Department head contributed their portions.
 - Chairman asks for suggestions or comments or changes to document then asks for a motion to approve the Annual Activities Report.
 - Commissioner Flanagan moved to approve the Annual Activities Report.
 - Commissioner McBride seconded the motion.
 - The commission unanimously approved Annual Activities Report.
- e. Research Presentation: Positive Impact Plan Special Report
- Executive Director introduced Jessica – special report.
 - Jessica joined commission as Rapaport Fellow.
 - Jessica is a Master of Divinity candidate at BU.
 - Jessica presented her baseline review of positive impact plans.
 - Commissioner Flanagan thanked Jessica expressed her belief that this report fits within the Section 17 mandate and that she agrees with the concept that some Areas of Disproportionate Impact are missing and are not properly designated as such.
 - Commissioner Title asked what the Commission could do to help continue this work and encourage better positive impact plans?
 - Jessica said discussions at meetings and guidance from the Commission.
 - Commissioner Title asked for recommendations with respect to the type of measurements applicants should use in their Positive Impact Plan
 - Jessica said giving detailed metrics that applicants know they want to complete.
 - Jessica liked plans that had phased and specific and focused plans (e.g. in year one, we will accomplish [X], in year two...).



- Commissioner Title asked whether companies with multiple licenses should have multiple plans.
 - Jessica said no, as long as the substance of the plan is strong and is concrete, specific, and measurable.
- Commissioner Title – Did you have suggestions for a new name for the positive impact plan?
 - Jessica - Equity Plan or Social Justice (based on the idea of repairing harm).
- Commissioners Title and Flanagan have volunteered to take on the recommendations of Jessica’s report.
- Jessica says she’s so grateful to have been a part of the team. Thinks Commission does thoughtful and engaging work.

11) New Business that the Chairman did not anticipate at time of posting

- No additional issues

12) Next Meeting Date

November 7, 2019 at 10a - location TBD

Chairman asked for a motion

- Commissioner Flanagan moved to adjourn the meeting.
- Commissioner Doyle seconded the motion.
- The Commission unanimously voted to adjourn the meeting.



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I. Overview and Applicability

This guidance is not legal advice. It is meant to assist licensed Marijuana Establishments with developing best practices in water management and to comply with state laws and regulations. Please consult an attorney if you have any questions regarding the legal requirements that apply.

II. Energy

a. Guidance on Basic Energy Efficiency Practices & Reporting for Marijuana Establishments

The following guidance is provided to assist applicants seeking to be licensed as an adult use Marijuana Establishment (ME) under 935 CMR 500.000: Adult Use of Marijuana. This guidance also applies to Medical Marijuana Treatment Centers (MTCs), seeking to be licensed under 935 CMR 501.000: Medical Use of Marijuana. Please note that Cultivation Facilities, whether licensed as a ME or MTC (ME/MTC), must also comply with additional requirements set forth in *Guidance on Energy Efficiency Standards & Reporting for Cultivation Facilities* [\[insert link\]](#).

All applications submitted on or after January 1, 2020, if they are not otherwise exempted, must comply with the energy efficiency standards and reporting requirements described in this guidance. This guidance is not legal advice. If you have questions regarding the legal requirements for licensure in the Commonwealth, you are encouraged to consult an attorney. An ME/MTC is responsible for complying with any revisions to this guidance that may be issued if legal or regulatory requirements change.

Applicants

Consideration of energy efficiency and conservation should occur during the application process and throughout the operational life of a facility. During the application process, an ME/MTC must submit a summary of their written operating procedures regarding energy efficiency and conservation as part of their Management and Operation Profile in accordance with 935 CMR 500.101(1)(c)10. and 500.105(15), or 935 CMR 501. 101(1)(c)10. and 501.105(15). As part of



the Architectural Review process, additional information should be submitted at the same time as building plans after receipt of a Provisional License. Please note that applicants seeking a Transporter or Delivery license have different issues, which are addressed in a separate section below. An ME/ MTC is required¹ to engage in:

- (1) *Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;*
- (2) *Consideration of opportunities for renewable energy generation, including, where applicable, submission of building plans showing where energy generators could be placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable;*
- (3) *Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage); and*
- (4) *Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.*

The guidance will go through each item above.

Identification of potential energy use reduction opportunities and a plan for implementation of such opportunities

There are many opportunities in an ME/MTC to reduce energy usage and costs through energy efficient equipment and operations. Lighting is a major energy user in everything from retail spaces, to cultivation, and back office operations. Heating and air conditioning are also large drivers of energy use for all buildings in the Northeast. It is recommended that the design team for an ME/MTC include energy professionals who will review facility and equipment needs and make recommendations for optimal facility equipment choices based on energy usage.

¹ 935 CMR 500.105(1)(q) & 500.105(15); 935 CMR 501.105(1)(q) & 501.105(15).



The applicant must address how its written operating procedures in the Management and Operations Profile packet will incorporate the following elements:

- Description of how the ME/MTC will monitor energy consumption and make adjustments to operations based on energy usage data;
- Procedures for identifying energy savings opportunities as part of any facility upgrades, renovations, or expansions; and
- Procedures for identifying energy savings opportunities when equipment fails and needs to be replaced.

At the Architectural Review stage, further information should be submitted to demonstrate actual consideration of energy reduction opportunities, including a list of energy reduction opportunities that were considered. Information should include whether opportunities are being implemented, will be implemented at a later date, or not planning to be implemented. An ME/MTC should also include a summary of information that was considered to make the decision (i.e. costs, available incentives, and bill savings). As a general matter, submission of a Mass Save® or municipal light plant (MLP) audit report or rebate applications should suffice to demonstrate compliance with this item.

Consideration of opportunities for renewable energy generation, including, where available, submission of building plans showing where energy generators could be placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable.

Renewable energy such as solar panels, wind turbines, and renewable thermal can reduce and stabilize energy costs for an ME/MTC. The applicant must address how its written operating procedures in the Management and Operations Profile packet will incorporate the following elements:

- Description of how the ME/MTC will make energy supply decisions and regularly evaluate renewable options;
- Procedures for identifying renewable or alternative energy opportunities as part of any facility upgrades, renovations, or expansions; and



- Procedures for identifying renewable or alternative energy opportunities when equipment fails and needs to be replaced.

At the Architectural Review stage, further information should be submitted to demonstrate actual consideration of renewable energy generation opportunities, including a list of renewable or alternative energy reduction opportunities that were considered. Information should include whether opportunities:

- are being implemented;
- will be implemented at a later date; or
- are not planned to be implemented.

An ME/MTC should include a summary of information that was considered to make a decision (i.e. costs, available incentives, and bill savings). ME/MTCs should consider incentives through programs which can help offset costs of renewable and alternative energy installation, such as:

- Department of Energy Resources' SMART (<http://masmartsolar.com/>);
- Renewable Portfolio Standard (<https://www.mass.gov/guides/rps-class-i-and-class-ii-statement-of-qualification-application>); and
- Alternative Portfolio Standard (<https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application>; <https://www.mass.gov/guides/apply-to-the-aps-chp-flywheel-storage-and-fuel-cells>).

Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage)

Demand is how much electricity an ME/MTC can use at a given time in its facility – more demand means more electricity capacity is needed, and an ME/MTC pays for this capacity on electricity bills.

The applicant must address how its written operating procedures in the Management and Operations Profile packet will incorporate the following elements:

- Description of how the ME/MTC will monitor energy demand and make adjustments to operations based on data; and



- Procedures for participation in load curtailment, energy storage, or other active demand management programs (as applicable).

At the Architectural Review stage, further information should be submitted to demonstrate actual consideration of demand reduction opportunities, including whether opportunities are being implemented, will be implemented at a later date, or not planning to be implemented. Include a summary of information that was considered to make a decision (i.e. costs, available incentives, and bill savings). As a general matter, submission of a Mass Save® or municipal light plant (MLP) audit report or rebate applications should suffice to demonstrate compliance with this item.

Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.

The Mass Save® programs (<https://www.masssave.com/en/saving/business-rebates/>) provide financial incentives for energy efficiency and demand reduction measures, including efficient lighting, HVAC, and other equipment. These programs are available to homes and businesses across the Commonwealth. For communities where Mass Save® is not available, please engage with the local Municipal Light Plant (MLP) (<http://www.mmwecgoprogram.org>, <https://www.ene.org/energy-efficiency/>).

The applicant must address how its written operating procedures in the Management and Operations Profile packet will incorporate regular engagement with energy efficiency programs (account representative, vendors, etc.) to ensure awareness of new opportunities and incentives.

At the Architectural Review stage, further information should be submitted to demonstrate actual engagement with energy efficiency (Mass Save® or MLP) programs and any financial incentives received. As a general matter, submission of a Mass Save® or MLP audit report or rebate applications should suffice to demonstrate compliance with this item.

Transporters and Delivery

Transporters and delivery operators are different from other license types because their energy use is derived primarily from vehicles instead of buildings.



Vehicles that use alternative fuels, such as biodiesel, electricity, and natural gas help to reduce carbon emissions and increase our energy security. In the Management and Operations profile, the applicant must describe how it will make fleet decisions and affirm that it will regularly evaluate alternative fuel vehicle options. At the Architectural Review stage, the applicant must submit a narrative describing the process the Transporter or Delivery operation used to select vehicles to be used in operations, and if alternative fuel vehicles are not being used, a detailed explanation of why other vehicle fuel sources were selected. A description of any other energy and water conservation strategies employed at the physical facility for the transporter and delivery (e.g. garage, dispatch) should also be included.

Conclusion

Application sections pertaining to energy are reviewed for compliance with 935 CMR 500.000 & 501.000 and for completeness. The regulations and guidance are designed to ensure that an ME/MTC considers how to optimally use energy early in the facility design process, and continually assess new opportunities for reduced energy usage and costs. Licensees should use best management practices to reduce energy and water usage, engage in energy conservation and mitigate other environmental impacts. Licensees are also required to meet all applicable environmental laws, regulations, permits and other applicable approvals, including those related to water quality and solid and hazardous waste management, prior to obtaining a final license. At this time, the Commission deems compliance with the operational requirements of the regulations, as described above, to constitute best management practices as related to energy usage and conservation. Cultivation facilities should maintain policies and procedures addressing all efforts to mitigate environmental impacts, as required under 935 CMR 500.120(12)(e) and 935 CMR 501.120(13)(e). Applicants will be responsible for complying with any revisions to this guidance that may be issued if legal or regulatory requirements change.

Other Helpful Resources

License applicants can use this guidance to learn more about how to comply with the energy usage requirements set forth in the following sections of 935 CMR 500.000 and 501.000:

- 935 CMR 500.040(3)(c) – Energy and Environmental Leader Award
- 935 CMR 500.103(1)(b) & 501.103(1)(a) – Architectural Review, Energy Letters



- 935 CMR 500.103(1)(f) & 501.103(1)(e) – Provisional License, Energy Letters
- 935 CMR 500.103(4)(c),(d) & 501.103(4)(c),(d) -- Renewal, Energy Letters
- 935 CMR 500.105(1)(q) & 501.105(1)(q) – Written Operating Procedures
- 935 CMR 500.105(13)(h) & 501.105(13)(h) – General Operating Requirements / Transporters
- 935 CMR 500.105(15) & 501.105(15) – General Operating Requirements / Energy Efficiency and Conservation
- 935 CMR 500.120(11) – Marijuana Cultivators
- 935 CMR 501.120(11) – Additional Operational Requirements for the Cultivation, Acquisition, and Distribution of Marijuana
- 935 CMR 500.130(3) & (5)(e) – Marijuana Product Manufacturers
- 935 CMR 501.130(3) – Additional Operational Requirements for Handling and Testing Marijuana and for Production of MIPs

b. Guidance on Energy Efficiency Standards & Reporting for Cultivation Facilities

The following guidance is provided to assist indoor cultivation facilities, whether they are licensed as a Craft Cooperative, Microbusiness, or Marijuana Cultivator under 935 CMR 500.000: *Adult Use of Marijuana*, or as a Medical Marijuana Treatment Center (MTC) (formerly known as a Registered Marijuana Dispensary (RMD)) to cultivate cannabis under 935 CMR 501.000: *Medical Use of Marijuana*. All relevant entities are referenced as “Cultivation Facilities” in this guidance. Indoor operations associated with outdoor cultivation are also subject to these requirements. Please note that Cultivation Facilities must also meet the requirements in the *Guidance on Basic Energy Efficiency Standards for Marijuana Establishments* [\[insert link\]](#).

This guidance, in conjunction with applicable regulations, establish the requirements for licensure in the Commonwealth. This guidance is not legal advice. If you have questions regarding the legal requirements for licensure in the Commonwealth, you are encouraged to



consult an attorney. Cultivators are responsible for complying with any revisions to this guidance that may be issued if legal or regulatory requirements change.

Applicability

All applications for initial licensure or renewal submitted on or after January 1, 2020, if they are not otherwise exempted, must comply with the energy efficiency standards and reporting requirements described in this guidance. A co-located ME and MTC with a final Certificate of Licensure before November 1, 2019 shall have until January 1, 2020 to comply with 935 CMR 500.120(11), except that any additions to or renovations to a facility must comply with 935 CMR 500.120(11). An MTC with a final Certificate of Licensure before November 1, 2019 and that is not co-located with an ME shall have until January 1, 2021 to comply with 935 CMR 501.120(11), except that any additions to or renovations to a facility must comply with 935 CMR 501.120(11). An ME or MTC may apply for an additional six-month extension beyond the date applicable to it, if it agrees to install meters to monitor energy usage, water usage and other data determined by the Cannabis Control Commission (Commission), as well as provide reports on energy usage, water usage, waste production and other data in a form and manner determined by the Commission.

Overview

Cannabis cultivation uses significant energy, primarily because of three energy uses: (i) horticultural lighting; (ii) dehumidification; and (iii) heating ventilation and air conditioning (HVAC). To mitigate the impact of increased energy usage, and associated costs and greenhouse gas emissions, specific operational requirements have been adopted for Cultivation Facilities in the adult-use and medical-use marijuana regulations.²

To document compliance with the energy efficiency requirements of the regulations, materials must be submitted at three different points in the licensure/renewal process and be maintained throughout operations:

² 935 CMR 500.120 (11) & (12); 935 CMR 501.120 (11) & (12).



- Application: a Cultivation Facility must maintain written operating procedures that demonstrate compliance with the energy efficiency standards in the regulations. A summary of such procedures must be submitted as part of the Management and Operations Profile;³
- Architectural Review: as part of the Architectural Review process, building and equipment information should be submitted at the same time as building plans after receipt of a Provisional License;⁴ and
- Operations & Renewal: a Cultivation Facility must continue to maintain written operating procedures on energy usage for the duration of its operations. When it comes time for renewal, a Cultivation Facility must provide information regarding its energy and water consumption usage.⁵ This information must be included every year that a renewal application is submitted.

Application: Demonstrating Compliance with Energy Efficiency Standards in the Management and Operations Profile

Cultivation Facilities must, in addition to the other materials submitted as part of the Management and Operations Profile, submit a summary of their written operating procedures that demonstrate compliance with energy efficiency standards.⁶ Please complete the basic summary required in the *Guidance on Basic Energy Efficiency Standards for Marijuana Establishments* [\[insert link\]](#). In addition to the basic summary required of all Marijuana Establishments, a Cultivation Facility must address how its written operating procedures will incorporate the following additional elements:

1. How the cultivator will ensure on a regular basis that equipment is maintained, calibrated and operating properly, including maintain operations manuals and operating procedures for all major energy using equipment, including, but not limited to horticultural lighting, HVAC systems, dehumidification systems.

³ 935 CMR 500.101(1)(c)(10) & 500.120(12)(e); 935 CMR 501.101(1)(c)(10) & 501.120(13)(e).

⁴ 935 CMR 500.103(1); 935 CMR 501.103(1).

⁵ 935 CMR 500.103(4)(c) & 120(11); 935 CMR 501.103(4)(c) & 120(11).

⁶ 935 CMR 500.101(1)(c)(10) & 500.120(12)(e); 935 CMR 501.101(1)(c)(10) & 501.120(13)(e).



2. How the cultivator regularly assesses opportunities to reduce energy and water usage, which should include:
 - a. Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;
 - b. Consideration of opportunities for renewable energy generation, including, where applicable, identification of building plans, available upon inspection, showing where energy generators could be placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable;
 - c. Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage); and
 - d. Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.

Architectural Review: Letters and Supporting Documentation

As part of the Architectural Review process, Cultivation Facilities must document compliance with the energy requirements by submitting an energy compliance letter prepared by a Massachusetts Licensed Professional Engineer or Massachusetts Licensed Registered Architect with supporting documentation, together with submission of building plans.

For a Microbusiness or Craft Marijuana Cooperative with a cultivation location sized as Tier 1 or Tier 2, or such other Cultivation Facilities meeting the requirements of 935 CMR 500.850: *Waivers*, there are additional options. They may demonstrate compliance with any of the requirements of 935 CMR 500.120(11) through an energy compliance letter or updated energy compliance letter prepared by one or more of the following energy professionals:

1. A Certified Energy Auditor certified by the Association of Energy Engineers;
2. A Certified Energy Manager certified by the Association of Energy Engineers;
3. A Massachusetts Licensed Professional Engineer; or
4. A Massachusetts Licensed Registered Architect.

In addition, all facilities regardless of compliance path shall provide third-party safety certification for lighting products by an Occupational Safety and Health Administration (OSHA)



Nationally Recognized Testing Laboratory (NRTL) or **Standards Council of Canada (SCC)** recognized body, which shall certify that the products meet a set of safety requirements and standards deemed applicable to horticultural lighting products by that safety organization.

The following paragraphs provide guidance regarding the necessary components of the contents of the Energy Compliance Letter.

Building Envelope

A building envelope is what separates the outside from the inside of a building. Building envelope items include insulation, roofs, windows, doors, walls, etc. Having a tight building envelope is fundamental to good energy performance. Poor performing building envelopes results in wasted energy, increase energy costs, and may have ancillary impacts like neighbor smell complaints.

The regulations identify specific ways to demonstrate compliance regarding a Marijuana Establishment's building envelope as follows:⁷

The building envelope for all facilities, except greenhouses, must meet minimum Massachusetts Building Code requirements and all Massachusetts amendments (780 CMR: State Building Code), International Energy Conservation Code (IECC) Section C.402 or The American Society of Heating, Refrigerating and Air-conditioning Engineers (ASHRAE) Chapters 5.4 and 5.5 as applied or incorporated by reference in 780 CMR: State Building Code, except that facilities using existing buildings may demonstrate compliance by showing that the envelope insulation complies with code minimum standards for Type Factory Industrial F-1, as further defined in guidelines issued by the Commission.

An Energy Compliance Letter submitted as part of the Architectural Review must include a narrative confirming compliance with the building envelope requirements and the output from

⁷ 935 CMR 500.120(11)(a); 935 CMR 501.120(12)(a).



COMcheck™ software used to show building envelope compliance with Massachusetts Building Code, 780 CMR.

Lighting

When discussing horticultural lighting, it is helpful to be aware of the following definitions in the regulations:⁸

Canopy means an area to be calculated in square feet and measured using clearly identifiable boundaries of all areas(s) that will contain mature plants at any point in time, including all of the space(s) within the boundaries, Canopy may be noncontiguous, but each unique area included in the total Canopy calculations shall be separated by an identifiable boundary which include, but is not limited to: interior walls, shelves, Greenhouse walls, hoop house walls, garden benches, hedge rows, fencing, garden beds, or garden plots. If mature plants are being cultivated using a shelving system, the surface area of each level shall be included in the total Canopy calculation.

Horticultural Lighting Equipment (HLE) means any lighting equipment (e.g. fixtures, bulbs, ballasts, controls, etc.) that uses energy for the cultivation of plants, at any stage of growth (e.g. germination, cloning/mother plants, propagation, vegetation, flowering, and harvest).

Horticulture Lighting Square Footage (HLSF) means Canopy.

Horticulture Lighting Power Density (HLPD) is a measure of total watts of Horticultural Lighting Equipment per total Horticulture Lighting Square Footage, $(HLE / HLSF = HLPD)$ expressed as number of watts per square foot.

Indoor and some greenhouse cultivators use Horticultural Lighting Equipment to grow plants. These lights are very powerful and have significantly higher energy use and light intensity compared to typical screw-in light bulbs. As there are numerous horticultural lighting technology

⁸ 935 CMR 500.002, 500.120(11)(h) and 501.120(12)(g).



options, the regulations set forth two lighting compliance options to provide flexibility for Cultivators to make technology decisions that meet the requirements.⁹

It is important to note that long term exposure to horticultural lighting may impact vision. Eye safety protocols must be established prior to the time of initial operations and regularly updated and implemented as part of the Cultivation Facility's detailed written operating procedures.

These eye protection requirements are in addition to any other safety protocols required under state, federal, or local law (e.g. OSHA).

Cultivators must demonstrate compliance with either: (1) the Horticultural Lighting Power Density standard; or (2) the Horticultural Lighting Qualified Product List:

1. Horticultural Lighting Power Density (HLPD): HLPD must not exceed 36 watts per gross square foot, but for Tier 1 and Tier 2 which must not exceed 50 watts per square foot.

HLPD is a measure of total watts of Horticultural Lighting Equipment per total Horticulture Lighting Square Footage, expressed as number of watts per square foot.

$$(HLE / HLSF = HLPD)$$

2. Horticultural Lighting Qualified Products List (Horticultural QPL): All horticultural lighting used in a facility must be:
 - a. listed on the current Design Lights Consortium Solid-State Horticultural Lighting Qualified Products List (Horticultural QPL) or other similar list approved by the Commission as of the date of license application, AND
 - b. lighting Photosynthetic Photon Efficacy (PPE) is at least 15 percent above the minimum Horticultural QPL threshold rounded up to the nearest 0.1 $\mu\text{mol}/\text{J}$ (micromoles per joule).

⁹ 935 CMR 500.120 (11)(b); 935 CMR 501.120 (12)(b).



The HLPD Energy Compliance Letter submitted as part of the Architectural Review must contain the following regarding horticultural lighting:

1. The letter must include the calculations that show compliance with the HLPD requirements;
2. Narrative explanation of how the facility complies with 935 CMR 500.120(11)(b) or 501.120(12)(b), supported by copies of the facility lighting schedule, square footage of canopy, description of horticultural lighting equipment, number, type and wattage of all Horticultural Lighting Equipment;
3. Cutsheets for all Horticultural Lighting Equipment to be submitted as part of the Architectural Review;
4. Detailed identification of the stamped plans showing the layout of all Horticultural Lighting Equipment, which means any lighting equipment (e.g. fixtures, bulbs, ballasts, controls, etc.) that uses energy for the cultivation of plants, at any stage of growth (e.g. germination, cloning/mother plants, propagation, vegetation, flowering, and harvest), such plans must be available immediately upon inspection and 2 copies of the plans must be available for immediate surrender upon request;
5. Detailed identification of the stamped plans showing the areas considered as Horticulture Lighting Square Footage, such plans must be available immediately upon inspection and 2 copies of the plans must be available for immediate surrender upon request;
6. Description of an eye safety plan that includes the following:
 - a. Safety protocols related to eye safety for those exposed to horticultural lighting;
 - b. Communication plan for how eye safety protocols will be communicated to employees;
 - c. Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights
 - d. Description of signage that will be used to remind workers of eye safety;



- e. Affirmation that the safety protocols will be reviewed and updated by the Cultivation Facility on an annual basis.

The Horticultural QPL Energy Compliance Letter submitted as part of the Architectural Review must contain the following regarding horticultural lighting:

1. Narrative explanation of how the facility complies with 935 CMR 500.120(11)(b) or 501.120(12)(b), supported by copies of the facility lighting schedule, square footage of canopy, description of horticultural lighting equipment, number, type and wattage of all Horticultural Lighting Equipment;
2. Cutsheets for all Horticultural Lighting Equipment to be submitted as part of the Architectural Review;
3. Description of an eye safety plan that includes the following:
 - a. Safety protocols related to eye safety for those exposed to horticultural lighting;
 - b. Communication plan for how eye safety protocols will be communicated to employees;
 - c. Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights
 - d. Description of signage that will be used to remind workers of eye safety;

Affirmation that the safety protocols will be reviewed and updated by the Cultivation Facility on an annual basis.

Heating Ventilation and Air Conditioning (HVAC) & Dehumidification Systems

HVAC as well as dehumidification are primary drivers of energy use in a Cultivation Facility. Air conditioning is used to cool the air to offset heat generated from lighting. Dehumidification is necessary to remove water, used by plants, from the air.



The regulations¹⁰ require HVAC and dehumidification systems to meet Massachusetts Building Code requirements, 780 CMR, which in turn incorporates Chapter 403 of the International Energy Conservation Code (IECC) and Chapter 6 of the American Society of Heating, Refrigerating and Air-Conditioning Engineers Handbook. To demonstrate compliance, a Cultivation Facility must provide a certification from a Massachusetts Licensed Mechanical Engineer that the HVAC and dehumidification systems meets Massachusetts Building Code as specified in the regulations and that such systems have been evaluated and sized for the anticipated loads of the facility.

The Professional Engineer (PE) providing the Energy Compliance Letter may also serve as a Licensed Mechanical Engineer, if the PE license covers mechanical engineering. The letter must include the following information:

- Certification from a MA Licensed Mechanical Engineer that the HVAC and dehumidification systems meet Massachusetts building code, and that HVAC and dehumidification equipment have been evaluated and sized for the loads of the facility;
- Total of tons of refrigeration (TR), thousands of BTUs per hour (MBH), and a listing of all HVAC equipment to be installed. The information provided in the letter must be supported by equipment data sheets available immediately upon request.
- Total of tons of dehumidification (TD), and a listing of all dehumidification equipment to be installed, supported by equipment data sheets.
- Details about energy recovery equipment installed as part of the ventilation system.
- A listing of all odor mitigation equipment to be installed. The information provided in the letter must be supported by equipment data sheets available immediately upon request.

Exemptions

¹⁰ 935 CMR 500.120(11)(c); 935 CMR 501.120(12)(c).



Indoor cultivation facilities may be exempt¹¹ from the regulatory requirements for horticultural lighting, HVAC and dehumidification systems if they are generating 80% or more of the total annual onsite energy use for all fuels (expressed on a MWh basis) from:

1. a clean or renewable generating source; or
2. renewable thermal generation.

A “clean or renewable resource” should be understood to refer to renewable energy generating sources, as provided in M.G.L. c. 25A, § 11F and regulations promulgated thereunder, or renewable thermal generating sources, as provided in M.G.L. c. 25A, § 11F½ and regulations promulgated thereunder.

As of September 2019, acceptable renewables technologies include the following:

1. Renewable Generation Unit as defined by 225 CMR 14
<https://www.mass.gov/guides/rps-class-i-and-class-ii-statement-of-qualification-application>
 - a. Solar photovoltaic or solar thermal electric energy
 - b. Wind energy
 - c. Ocean thermal, wave or tidal energy
 - d. Fuel cells using eligible RPS Class I renewable fuel
 - e. Landfill methane gas
 - f. Hydroelectric
 - g. Low-emission, Advanced Biomass Power Conversion Technologies using Eligible Biomass Fuel
 - h. Marine or hydrokinetic energy
 - i. Geothermal energy
2. Renewable Thermal Generation Unit as defined by 225 CMR 16

¹¹ 935 CMR 500.120(11)(e); 935 CMR 500.120(12)(e).



<https://www.mass.gov/guides/aps-renewable-thermal-statement-of-qualification-application>

- a. Air-Source Heat Pump
- b. Ground Source Heat Pump
- c. Deep Geothermal Heat Exchange
- d. Solar Thermal
- e. Woody Biomass
- f. Biogas
- g. Liquid Biofuels
- h. Compost Heat Exchange System

Additionally, the Cultivation Facility must document that renewable energy credits or alternative energy credits representing the portion of the Licensee's energy usage not generated onsite has been purchased and retired on an annual basis.

In order to demonstrate eligibility for the exemption, a Cultivation Facility must submit an Energy Compliance Exemption Letter, demonstrating exemption as part of Architectural Review. The letter must be provided by someone with the same qualifications as for the Energy Compliance Letter and include:

1. Description of clean or renewable energy system, including an attestation that system meets eligibility requirements above. This requirement can be satisfied by providing an RPS or APS Conditional Statement of Qualification approved by the Department of Energy Resources.
2. Energy usage calculations for the facility, supported by building plans and energy models, including inputs and outputs by end use.
3. Clean or renewable energy generation calculations for the facility, supported by building plans and energy models, including inputs and outputs by end use.
4. Written plan on how Renewable Energy Certificates (RECs) or Alternative Energy Credits (AECs) will be generated and retired on at least an annual basis.



Note that the option of retiring RECs and AECs is available only to demonstrate the portion of energy usage *not* generated for onsite use (maximum of 20% of total onsite energy usage).

5. HVAC information, including:
 - a. Certification from a MA Licensed Mechanical Engineer that the HVAC and dehumidification systems meet Massachusetts building code, and that HVAC and dehumidification equipment have been evaluated and sized for the loads of the facility.
 - b. Total of tons of refrigeration (TR), thousands of BTUs per hour (MBH), and a listing of all HVAC equipment to be installed. The information provided in the letter must be supported by equipment data sheets available immediately upon request.
 - c. Total of tons of dehumidification (TD), and a listing of all dehumidification equipment to be installed, supported by equipment data sheets.
 - d. Details about energy recovery equipment installed as part of the ventilation system.
 - e. A listing of all odor mitigation equipment to be installed. The information provided in the letter must be supported by equipment data sheets available immediately upon request.
6. Description of an eye safety plan that includes the following:
 - a. Safety protocols related to eye safety for those exposed to horticultural lighting;
 - b. Communication plan for how eye safety protocols will be communicated to employees;
 - c. Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights
 - d. Description of signage that will be used to remind workers of eye safety;



Affirmation that the safety protocols will be reviewed and updated by the Cultivation Facility on an annual basis.

Operations & Renewal

A Cultivation Facility shall continue to maintain written operating procedures on energy usage for the duration of its operations. Cultivation facilities should continuously re-evaluate opportunities for energy conservation and the mitigation of their environmental impact as their operations are ongoing.

A Cultivation Facility, whether operated by a Marijuana Cultivator or a Medical Marijuana Treatment Center, must provide energy and water reporting as part of the annual license renewal requirement.¹² All Cultivation Facilities are subject to this requirement, regardless of whether they file a Letter of Compliance or a Letter of Compliance Exemption. This guidance document outlines the steps that Cultivation Facilities should take to be in compliance with this reporting requirement.

Requirements: based on the previous 12-month period, a Cultivation Facility must provide energy consumption by fuel (monthly, including consumption and demand), water consumption (gallons per month), on-site energy generation (monthly), and cannabis yield by weight (annual)

Timing: The required information must be included as part of the licensee's completed renewal application as outlined in 935 CMR 500.103(4)(c) and 935 CMR 501.103(4)(c). This information must be included every year that a renewal application is submitted. Please note that if a Cultivation Facility has filed its renewal application prior to January 31, 2020 without complying with the documentation requirements for renewal as described in the regulations and this guidance or applying for an Energy Reporting Extension (if eligible), a condition will be placed on its renewal that the documentation must be filed within sixty days. All applications for renewal filed on or after February 1, 2020 must include the required documentation.

Annual Energy and Environmental Reporting

¹² 935 CMR 500.103(4) and 935 CMR 501.103(4).



1. Facilities should use Cannabis PowerScore for annual reporting for electricity consumption. If non-electric fuels, such as natural gas consumption, other delivered fuels or clean or renewable energy generation are not yet available on the Cannabis PowerScore at the time of renewal, facilities may submit monthly usage information in a separate format.
2. It is recommended to create an account on <https://www.cannabispowerscore.org> by clicking the “sign up” link, this will allow you to save work and return to it later. Creating an account is not required.
3. Complete information about your facility. The more information provided the more you will learn in comparing to other facilities.
4. On the annual totals page, a Cultivator will provide the following information:
 - a. Monthly
 - i. Electricity consumption (kWh and KW)
 - ii. Natural gas consumption (Therms) *(if available)*
 - iii. Other delivered fuels (specify fuel, gallons) *(if available)*
 - iv. Water consumption (gallons)
 - v. Clean or renewable energy generation (kWh) *(if available)*
 - b. Annual
 - i. Total cannabis flower and byproduct (grams)
5. Complete your submission.
6. Print final PowerScore report and include as part of renewal application. Please ensure the following information is included on the printed submission:
 - a. PowerScore Report Number
 - b. Production Efficiency – grams per kwh
 - c. Monthly energy consumption/generation and water usage breakdown

Update Energy Compliance Letter or Energy Compliance Exemption Letter

If any information reflected in the Energy Compliance Letter or Energy Compliance Exemption Letter, including plans or other technical information, has changed, an updated letter and any required supporting documentation must be filed together with the renewal application.



NOTE: Cultivation Facilities that did not submit an Energy Compliance Letters or an Energy Compliance Exemption Letter as part of initial licensure must submit these letters and any other required documentation explained in this guidance at the time of the renewal application, subject to the timing allowances explained above.

Conclusion

Application sections pertaining to energy are reviewed for compliance with 935 CMR 500.000 or 935 CMR 501.000, as applicable, and for completeness. The regulations and guidance are designed to ensure that Cultivation Facilities consider how to optimally use energy early in the facility design process, and continually assess new opportunities for reduce energy usage and costs. Current regulations¹³ require that Cultivation Facilities use best management practices to reduce energy and water usage, engage in energy conservation and mitigate other environmental impacts. At this time, the Commission deems compliance with the operational requirements, as described above, to constitute best management practices as related to Cultivation Facilities. Cultivation facilities should maintain policies and procedures addressing all efforts to mitigate environmental impacts, as required under 935 CMR 500.120(12)(e) and 501.120(13)(e). Applicants will be responsible for complying with any revisions to this guidance that may be issued if legal or regulatory requirements change.

Other Helpful Resources

License applicants can use this guidance to learn more about how to comply with the energy usage requirements set forth in the following sections of 935 CMR 500.000 and 501.000:

- 935 CMR 500.040(3)(c) – Energy and Environmental Leader Award
- 935 CMR 500.103(1)(b) & 501.103(1)(a) – Architectural Review, Energy Letters
- 935 CMR 500.103(1)(f) & 501.103(1)(e) –Provisional License, Energy Letters
- 935 CMR 500.103(4)(c),(d) & 501.103(4)(c),(d) -- Renewal, Energy Letters
- 935 CMR 500.105(1)(q) & 501.105(1)(q) – Written Operating Procedures

¹³ 935 CMR 500.120(11) and 935 CMR 501.120(11) & (12).



- 935 CMR 500.105(13)(h) & 501.105(13)(h) – General Operating Requirements / Transporters
- 935 CMR 500.105(15) & 501.105(15) – General Operating Requirements / Energy Efficiency and Conservation
- 935 CMR 500.120(11) – Marijuana Cultivators
- 935 CMR 501.120(11) – Additional Operational Requirements for the Cultivation, Acquisition, and Distribution of Marijuana
- 935 CMR 500.130(3) & (5)(e) – Marijuana Product Manufacturers

935 CMR 501.130(3) – Additional Operational Requirements for Handling and Testing Marijuana and for Production of MIPs

c. Grandfathering & Energy Extension

III. Best Management Practices

a. Guidance on Best Management Practices for Water Use

Cannabis, whether in the form of industrial hemp or marijuana, has varying requirements in water and nutrient levels based on the method of cultivation. This document aims to compare the water needs and differences between all methods of cultivation, including removing the plant entirely from natural systems and growing in sealed indoor environments, and the considerations that a grower should be taking into account when locating their facility and establishing watering operations for plant growth and facility maintenance.

***It should be noted that given the lack of research on hemp and marijuana growth in the United States, there is conflicting information on cultivation practices, and the vast differences between methods leads to high amounts of variability. The following numbers are cited but subject to change upon the release of more current regional data.*

Location of Facility and Source of Water



An important consideration for siting of a facility is the availability of water for production. Typically, water for a greenhouse or indoor facility would come from local municipal water or from a regional water supplier like the Massachusetts Water Resources Authority (MWRA). In the case of local municipal water, attention should be paid to whether the water supplier has enough capacity to supply the water both from a source and infrastructure perspective.

Depending on the watershed and the specific town the facility is located in, the additional volumes may not be available within the town's registered or permitted amounts, or an Interbasin Transfer¹⁴ approval may be required.

Increased demand on the system may cause a community to seek a new permitted volume which may have additional mitigation requirements. If a grower chooses to develop their own local water supply such as a new well, it is recommended that they contact the local Massachusetts Department of Environmental Protection (MassDEP) office for guidance on new source approval. A marijuana cultivation facility could trigger the Water Management Act's permitting requirements if it pumps from its own water sources more than an average of 100,000 gallons per day or more for three consecutive months of the year, or more than nine million unregistered gallons over any three-month period. In addition, a marijuana establishment that is supplying its own potable water and has a restroom that is accessible to 25 or more people 60 or more days per year is considered a Public Water System and would need to obtain an approval. A permit application will need to be filed with MassDEP before operations commence.

Water Use

It is also important to know and understand that prior to establishing your facility you will need to consider how much water you may use. If your water source is public then you must consider that the city or town you are operating in has a limited amount of water it is allocated to use per year¹⁵. This information may be useful when you are preparing for and going through the state licensing process and local permitting and/or licensing process.

¹⁴ For information about the Interbasin Transfer Act and Application materials: <https://www.mass.gov/interbasin-transfer-act>

¹⁵ <https://www.mass.gov/lists/massdep-water-management-act-laws-regulations-policies-and-guidance>



Seeds vs. Clones

Literature does not currently provide an in-depth analysis of the water necessities of an individual plant, but there is significant evidence to indicate that seeds require less water than clones regardless of the cultivation setting. Seeds are hardier and more resistant to stress and disease, and even though they need more water initially, the growing period for seeds is shorter than that of clones. Clones, while providing insurance for an exact chemical profile upon maturity, require more nutrients which are usually mixed in a water solution.

Outdoor Cultivation

Water requirements for outdoor cultivation vary widely by region, variety, and planting date. As outdoor large-scale cultivation of cannabis is new to Massachusetts, there is no data yet to confirm exact amounts of water required. Studies have shown, however, that the ranges can vary between 12-15” in British Columbia to 20-30” in Europe¹⁶. This equates to about 6 gallons per plant per day¹⁷, which is about twice as much as is required by grapes in California, but not as much as cotton in Georgia (10 gallons/day).¹⁸

Notably, cannabis requires that most of its water be received by the plant within the first six weeks of cultivation, while metrics generally list watering averages over the lifespan of the plant. Flowering of the plant significantly decreases water uptake. Within that six-week period, it is critical that the plant experience neither drought nor flooding. Dry conditions hasten maturity and stunt the growth of the plant, whereas puddled areas of a field will kill seedlings within two days if not drained appropriately. Soil composition and conditions play a critical role in this.

It should also be noted that varieties respond differently across agricultural regions, with variability in height, biomass, and chemical composition. It has been found that it may take up to

¹⁶ Nelson, R. A. (2000). *Hemp Husbandry*, <https://www.hempbasics.com/hhusb/hh2cul.htm>

¹⁷ Bauer S, Olson J, Cockrill A, van Hattem M, Miller L, et al. (18 March 2015) Impacts of Surface Water Diversions for Marijuana Cultivation on Aquatic Habitat in Four Northwestern California Watersheds. *Plos One* 10(9): e0138935. <https://doi.org/10.1371/journal.pone.0137935>

¹⁸ Bednarz, C., et. al. (2003). *Cotton crop water use and irrigation scheduling*, <http://www.ugacotton.com/vault/rer/2003/p72.pdf>



three years to develop a localized strain that is acclimatized to the conditions set forth in the region.

Indoor Cultivation

Indoor cannabis cultivation is generally referred to as the process of removing the crop completely from natural conditions such as sunlight, soil, and air and substituting those elements with artificial alternatives. The benefit of indoor growing lies in being able to control the elements of the plant's environment and be able to produce multiple harvests in a year. This method of growing is much more intensive in its usage of energy, water, and chemicals. There are many different methods of cultivating the plants themselves. These methods include:

- Hydroponics (water medium)
- Pots/trays (soil medium)
- Aeroponics (plant suspended on wall, not as common)

In the more typical methods of cultivation (namely soil and hydroponics) medical marijuana studies have estimated that indoor grows require watering in quantities of 98⁷/room-year, or 40 gallons/room-day (one room = 250 sq. ft.).¹⁹ Hydroponically grown cannabis is much more water intensive than other crops. When grown indoors, however, facilities have the capacity to set up recycling systems that clean and filter used water to be recycled back into irrigation; which helps negate the amount of fresh water input into the system. Treating water and reusing treated water are activities that are regulated by MassDEP and require permits²⁰. This water would need to be changed periodically, and nutrient levels can reach unusable points for the plants if not applied correctly.

¹⁹ O'Hare, M., et. al. (7 September, 2013). *Environmental Risks and Opportunities in Cannabis*, https://lcb.wa.gov/publications/Marijuana/SEPA/5d_Environmental_Risks_and_Opportunities_in_Cannabis_Cultivation.pdf

²⁰ <https://www.mass.gov/lists/massdep-wastewater-discharge-and-reuse-regulations>



Generally, for non-cannabis crops, indoor cultivation facilities with natural sun and/or ventilation present appear to provide a more balanced method of cultivation, as they are less energy and water intensive than a sealed indoor facility.

Monitoring and Reporting

Water is a crucial resource in the growth of cannabis and in the functioning and operations of cannabis growing facilities. In addition to plant needs, water is also used for heating, processing, sanitary purposes and landscaping on the property. Minimizing water loss from leaks as well as monitoring total water use as a compliment to instituting best management practices help advance the water conservation goals of the Commonwealth.

Growers should:

- install water meters,
- conduct regular water audits to determine the amount and location of water use,
- develop and implement a water savings strategy, and
- repair all leaks as quickly as possible.

Water Application Methods

Several different methods of water application are used as standards in the horticultural industry. Whereas outdoor fields rely mostly on rainfall or irrigation in cases of drought, indoor facilities must install their own application systems. The most commonly used methods are as follows:

Flood Tables utilize large, shallow tables that flood usually on an automated system and provide a layer of water and/or nutrients to plants growing in hydroponic mediums. Large amounts of water are used for this method but the water can be recycled through the system and used again after treatment via filtration and cleaning.



Drip watering involves irrigation systems that feed directly to each plant through thin drip tubes. The amount of water can be controlled directly or on an automated schedule and virtually eliminates excess water waste or runoff from the plants.

Wick systems employ a reservoir that provides water and nutrients for a plant via capillary action through wicking material. Seedlings and newly vegetating plants are occasionally watered with this method since it is a simple system that does not require machinery or electricity. However, it is insufficient in supplying large plants with greater water needs.

Hand watering is one of the most common practices used since it requires relatively little equipment and expense initially or in maintenance. However, the amount of applied water varies greatly between applicators and there is a much larger potential for water being wasted through either over application or by missing the plant root systems. If hand watering is being used, the facility should have a good operating procedure on how to hand water.

Aeroponics uses spray nozzles to mist the stem or roots with nutrients. Larger operations will put the stem/root in a channel and have the spray nozzles line the channel, while others may use the bucket system in which the nitrified water and air are maintained in buckets

NFT Systems use very shallow nutrient solution that runs downward in a tube or tray toward the reservoir where it is reused. It is best used on smaller plants with short crop cycle.

Water Culture Systems are systems where plants are suspended so roots hang down in nutrient solution and the reservoir is continually aerated.

Waste Water Disposal

Many indoor facilities utilize water recapture methods to save money and energy in their operations. Depending on the system in place this could be done through drain pipes and lines, ditches, dehumidifiers or condensation recapture modules. The recaptured water requires treatment if it is to be reapplied to plants to prevent the growth and spread of microbial pathogens and to reduce the amount of ionic and toxic elements that can be introduced to the water through the addition of nutrients. Common practices include carbon filtration, which neutralizes salinity and other inorganic materials in the water, and reverse osmosis, which allows



for close to 97% reuptake but produces a brine that is difficult to dispose of. Other chemicals may be added to clean the water before reapplication to reduce microbe levels. Facilities may also employ the use of an aerobic treatment unit to reduce chemical and microbial levels in the returned water to a satisfactory level²¹. Studies have shown that there is no significant difference in plant growth between the use of recycled water versus the use of fresh water.

Even with recapture methods, however, systems need to be flushed on occasion and new water introduced, especially in the event of pathogen outbreaks or from the presence of high levels of salts or ions that could be detrimental to crop growth and development. Water which is not reused must be discharged to a sewer or collected and stored in a certified holding tank for disposal at an approved facility. Note that water which is being disposed of cannot be discharged to an on-site septic system. If wastewater is being discharged out of the facility (e.g., to a Title 5 system, a sewer system, the ground or surface waters), the proponent must contact their local MassDEP office to determine if a discharge permit is required. If wastewater is being stored, it must be kept in a holding tank that is permitted by MassDEP (Transmittal Form DEP01).

In other states, this waste has traditionally been disposed through landfills (often with unused cannabis waste material such as leaves and stems chopped up and mixed in to form a slurry) or is considered industrial waste, depending on the method the waste was created and the definition of industrial/hazardous waste by law. In Massachusetts, however, this waste may not be disposed in a landfill. If the waste is combined with unused cannabis waste, it may be composted or sent to an anaerobic digester. As a last resort, if such slurry is sufficiently dewatered, it may be disposed at a landfill so long as the remaining sludge does not contain free-draining liquids and contains a minimum of 20% solids. (Note that the disposal facility will need advance notice in order to submit the required documentation to MassDEP.) If wastewater is being discharged out of the facility (e.g., to a Title 5 system, a sewer system, the ground or surface waters), the proponent must contact their local MassDEP office to determine if a discharge permit is required. If wastewater is being stored, it must be kept in a holding tank that is permitted by MassDEP

²¹ Oyama, N. (2005). Recycling of treated domestic effluent from an on-site wastewater treatment system for hydroponics, <https://www.ncbi.nlm.nih.gov/pubmed/16104424>



(Transmittal Form DEP01). For more information on waste disposal, please refer to the Commission's Guidance on Cannabis Waste Management Requirements.

Best Management Practice Guides

Water use on a crop should strike an appropriate balance between both agricultural needs for water and the need to conserve water. Examples of conservation approaches include proper irrigation scheduling in both timing (daily and seasonal) and volume, control of runoff, the uniform application of water, irrigation technologies, such as drip irrigation (where appropriate), and automated irrigation systems. The Massachusetts Water Conservation Standards²² (WCS) outline many approaches and best management practices that an agricultural entity should adopt that are environmentally and economically appropriate for their specific operation and site conditions. In addition, the WCS also outlines standards and best approaches for indoor water use to ensure high levels of efficiency in structural items such as toilets and other water fixtures.

Based on the information gathered above, there are three best management practice categories, listed below that are considered high priority and should be implemented, to the greatest extent practicable, by all cannabis growers. These practices along with some others can help reduce or mitigate strains to disposal and environmental systems and improve water and energy efficiency as a whole.

1. Soil Health

- Determine the soil needs and develop a soil health management system to improve the health and function of the soil. Soils are an ecosystem that can be managed to provide nutrients for plant growth, absorb and hold rainwater for use during drier periods, filter and buffer potential pollutants from leaving fields, serve as a firm foundation for agricultural activities, and provide habitat for soil microbes to flourish.
- Consider using compost to help promote the health of the soil.

²² Massachusetts Water Conservation Standards (2018), Water Resources Commission.
<https://www.mass.gov/massachusetts-water-conservation-standards>



- Maintain adequate soil moisture based on crop needs for optimum plant growth without causing excessive water loss, erosion, or reduced water quality.
2. Watering Methods
 - Use water in a targeted, planned, and efficient manner with appropriate amounts and frequency to meet the needs of the crop without excessive water loss.
 - Automation of watering systems is critical to reducing water waste and decreasing variability in plant health through overwatering. If automation is not financially feasible, water nozzles and other flow reducing systems should be put in place to monitor and check flow rates.
 - Micro-irrigation systems, such as subsurface drip irrigation, should be adopted if the facility is designed to be compatible for it.
 - Establish an irrigation schedule based on the specific needs of the crop.
 - Irrigation system efficiency should be evaluated on an annual basis.
 - Where sprinkler systems are used for irrigation, the systems should be capable of uniform application of water with minimal evaporative loss and minimal surface run-off.
 3. Water Capture and Reuse
 - A water recapturing system should be used to recycle and reuse water so as to reduce the total amount of water used. Systems can include ones that capture water from watering the plant and reusing and/or capturing water condensation from the HVAC system.
 - Explore the options of capturing and using rainwater.
 4. Other
 - Be knowledgeable of the municipal and state laws relative to water use.
 - Choose a site that is capable of managing the amount of water that will be used and will not impact other water users.
 - Cultivators should consider utilizing greenhouses and outdoor settings to reduce the amount of energy and water required to maintain plant health.
 - Monitor and document your water use.
 - If cultivating outdoors, growers should be mindful of all other relevant agricultural and environmental protection regulations in



- place regarding watershed areas, buffer zones, irrigation runoff, erosion control, and soil amendments.
- Ensure that the appropriate dilution rates and application schedules are followed for any nutrients or cleaning solutions that are being used during cultivation or in treating water. Over application can lead to unnecessary contaminant levels in the water or poor plant health and require further treatment, more frequent system flushes, and loss of expensive chemicals.

b. Guidance on Best Management Practices for Waste Management

Managing Solid Waste Materials

Like any other business, Marijuana Establishments generate a variety of common waste materials. While some materials need to be disposed of in the trash, others should be recycled or composted. Massachusetts has waste disposal ban regulations (310 CMR 19.017, available at <https://www.mass.gov/regulations/310-CMR-19000-solid-waste-facility-regulations>) that ban the disposal of certain materials in the trash. Commonly-generated waste that is banned from disposal include cardboard, bottles and cans, paper, and leaves and yard waste. You can see more information on the waste bans and what materials are banned from disposal at

Under the waste ban regulations, the Massachusetts Department of Environmental Protection (MassDEP) considers cannabis plant material to be “commercial organic material.” This material is banned from disposal in the trash if a business generates one ton or more per week for disposal. If a Marijuana Establishment generates 1 ton or more of commercial organic material per week for disposal, it would need to divert this material from disposal, typically to a compost or anaerobic digestion operation. If a Marijuana Establishment generates less than 1 ton of plant material per week, the material may be disposed of in the trash, although MassDEP still encourages this material to be composted where possible.

Composting or Anaerobic Digestion



According to 935 CMR 500.105(12) cannabis plant parts and associated materials sent for composting or anaerobic digestion (AD) must first be ground and mixed with other organic materials such that the cannabis material is rendered unusable. Other organic materials may include growing media, soil, mulch, food waste, or agricultural material such as manure or other plant materials.

There are no unique requirements for hauling this material to a compost or anaerobic digestion facility. MassDEP does not license or grant permits to waste haulers. The best place to start is to check with the haulers that currently services businesses in the area, though ideally a marijuana establishment should work with a hauler that has experience hauling other similar organic materials. If you need to find a new hauler, you can search for haulers by material type and location at [Recycling Works Massachusetts](#).

Once on the webpage, select the material type “Food-Waste/Compostables” for cannabis plant materials. (Note: you can also use this webpage to search for recycling service providers.) A hauler can help you determine which facility to deliver your material to, as well as the number and size of containers you need to meet your needs. You can also search for compost or AD facilities that can accept that material using that same link, or by referring to MassDEP’s list of [sites accepting diverted food material](#).

On-site Composting: In some cases, it may work well for a Marijuana Establishment to compost materials on site. Composting on site requires sufficient space to construct and maintain a compost pile, as well as additional materials to mix with cannabis plant material to compost successfully. For general guidance on composting practices, please refer to the Massachusetts Department of Agricultural Resources [Composting Guidebook](#). Under MassDEP’s regulations, a business can compost up to 20 cubic yards of material per week on site, but must complete and submit a [one-time notification form](#) to MassDEP and your local Board of Health. If you are interested in composting on site, you can receive free assistance and guidance through the RecyclingWorks in Massachusetts [Compost Site Technical Assistance Program](#).

Solid Waste Disposal: The requirements under 935 CMR 500.105(12) for disposing of cannabis wastes are similar to those for sending it to composting or anaerobic digestion. The cannabis waste must be ground and mixed with other solid wastes so that the material is rendered unusable. Suitable materials for mixing cannabis wastes for disposal include food waste, coffee



grounds, manure, sawdust, or growing media. The best approach is to work with your existing waste hauler to provide this collection service. Cannabis wastes mixed with other solid waste can be brought to any permitted [transfer station, landfill](#), or [municipal waste combustion facility](#) for disposal. Your solid waste hauler will typically determine the best nearby facility to deliver the waste to for disposal. A hauler can also help you determine what number and size of containers you need to meet your needs.

Storage, Documentation, and Recordkeeping: cannabis wastes should be stored in a secure and locked container and location prior to collection. Under 935 CMR 500.105(12), at least two Marijuana Establishment agents must witness and document how the marijuana waste is handled. The same regulation requires your business to develop and maintain records for at least three years that include:

1. How the cannabis waste is secured prior to collection;
2. The date the material is sent for composting, anaerobic digestion, or disposal;
3. The type and amount of material managed;
4. The name, location and type of facility to which the material was delivered;
 - (The facility can provide a scale or load ticket that includes all of this information.)
5. The manner of disposal or handling; and
6. The names and signatures of the two agents who witness the material management.

This three-year period is extended for the duration of any enforcement action and also may be extended by an order of the Commission.

Hazardous Waste Management: Marijuana Establishments may also generate some wastes that need to be managed as hazardous wastes. This may include: spent lighting, pesticides, solvents, used oil, or other chemicals used in facility operation and maintenance.

Massachusetts hazardous waste regulations ([314 CMR 30.000](#)) include provisions governing storage (how much material and for how long), labeling, manifest, transportation, and final



management and disposal. If you generate hazardous waste, you will need an [EPA ID](#). Your [hazardous waste generator status](#) determines how much waste you may accumulate at your site at one time, and how quickly you need to ship it off site for recycling or disposal. Please see the MassDEP Hazardous Waste Generation [web page](#) for more information and guidance.

Managing Liquid Wastes: Liquid waste containing marijuana or by-products of marijuana processing shall be disposed of in compliance with all applicable state and federal requirements. These requirements will depend on how liquid waste from a facility is being managed, whether discharged via a sewer connection, holding tank, or to groundwater or surface water. For more information on the applicable regulations and points of contact for each, please see the links in the Regulation Links and Contacts section below.

Packaging: It is recommended that recyclable and compostable packaging be used for marijuana products. Existing resources relative to packaging include the following:

- For recycling, MassDEP maintains a website with educational guidance: www.RecycleSmartMA.Org. This website summarizes what types of packaging are recyclable at our recycling facilities. For general guidance, see <https://recyclesmartma.org/smart-recycling-guide>. For more specific questions, you can search the “recyclopedia” using the search bar at the top of the page.
- For compostable packaging, search the internet for organizations that certify compostable packaging. Specifications relative to labeling are available at:
 - <https://www.astm.org/Standards/D6400.htm>
 - <https://www.astm.org/Standards/D6868.htm>

Regulation Links & Contacts

For any facility-specific permitting questions, please contact your MassDEP regional office. You can find which MassDEP region you are in using [MassDEPs list of environmental protection locations](#). Links to relevant regulations are as follows:

[Massachusetts Waste Ban Regulations](#) – 310 CMR 19.017



[Massachusetts Hazardous Waste Regulations](#) - 314 CMR 30.000

[Surface Water Discharge Permit Program](#) – 314 CMR 3.00

[Groundwater Discharge Program](#) –314 CMR 5.00

[Operation, Maintenance and Pretreatment Standards for Wastewater Treatment Works](#) – 314
CMR 12.00

[Sewer System Extension and Connection Permit Program](#) – 314 CMR 7.00

[Industrial Wastewater Holding Tanks and Containers](#) – 314 CMR 18.00

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Other Resources

For assistance with recycling, running a compost operation, and solid waste management, please contact the RecyclingWorks in Massachusetts Program at (888) 254-5525, by email at Info@RecyclingWorksMA.com, or visit the program website at www.RecyclingWorksMA.com. RecyclingWorks in Massachusetts is funded by MassDEP and administered under contract with MassDEP by the Center for EcoTechnology. The program provides free assistance to Massachusetts businesses on waste reduction, recycling, composting, and best management practices.

c. Guidance on Best Management Practices for Integrated Pest Management

Licensed marijuana cultivators must comply with 935 CMR 500.120(9), which states:

The cultivation process shall use best practices to limit contamination including, but not limited to, mold, fungus, bacterial diseases, rot, pests, pesticides not in compliance with 500.120(5) for use on marijuana, mildew, and any other contaminant identified as posing potential harm.

To help licensed cultivators establish best practices in preventing pests and contamination, this guidance serves to assist growers in creating an integrated pest management plan.

The Plant - *Cannabis sativa* L²³.

Cannabis can be grown outdoors as a field crop, indoors in greenhouses, or in grow rooms. Each cultivation method has specific pest and disease problems that may arise due to the different conditions presented by each setting. For example, the high humidity environment of a grow room provides ideal conditions for fungal pathogens. Cannabis grown outdoors may be susceptible to vertebrate pests such as deer and mice as well as larger insect pests, such as stem borers. Whether the cannabis crop is grown indoors or outdoors, cultivators should be prepared with the knowledge to prevent, identify, and control pests using Integrated Pest Management.

²³ Hemp and marijuana are different varieties of the same plant species, *Cannabis sativa* L. For the purposes of this document, the term *Cannabis* refers to marijuana only.



Integrated Pest Management (IPM)

Integrated pest management (IPM) is an approach to pest control that applies a combination of methods to manage pest problems. The primary objective of IPM is to prevent, reduce, or maintain pest populations at non-damaging levels by utilizing mechanical, physical, and biological controls to reduce the need for reliance on chemical pesticides. In Massachusetts, IPM is defined under 333 CMR 14.02 as:

A comprehensive strategy of pest control whose major objective is to achieve desired levels of pest control in an environmentally responsible manner by combining multiple pest control measures to reduce the need for reliance on chemical pesticides; more specifically, a combination of pest controls which addresses conditions that support pests and may include, but is not limited to, the use of monitoring techniques to determine immediate and ongoing need for pest control, increased sanitation, physical barrier methods, the use of natural pest enemies and a judicious use of lowest risk pesticides when necessary.

IPM takes advantage of all available pest management strategies. It does not rely on a single pest control method, but rather establishes a way of evaluating the situation and determining the most environmentally safe or ecological solution.

The basic concepts that comprise an effective IPM strategy include:

1. Knowledge
 - Identify the pests: accurate identification of pests is critical in determining the proper methods of control.
 - Establish thresholds to determine when and if action is required to control pests before they reach damaging levels.
2. Prevention
 - Inspect/quarantine plants entering closed environments to ensure you are not bringing in pests.
 - Maintain controlled environments to inhibit growth of plant pathogens.
 - Reduce habitat for potential pests such as poor drainage, standing water, or overgrown vegetation/weeds.
3. Monitoring



- Scout crops for evidence of pest damage. Use pest traps (like pheromone traps or yellow sticky cards) to determine presence and levels of insect pests.
4. Intervention
- If intervention is required to control pests, evaluate all the options to determine the least risky and most effective controls available, including cultural, mechanical, biological, and/or chemical methods.

This document is not intended to provide comprehensive IPM recommendations for every cannabis pest; rather, it should serve as a basic guideline and assist cultivators with development of an IPM plan for their crop.

Pesticide Use in Cannabis

As cannabis remains prohibited by federal law, the United States Environmental Protection Agency (EPA) does not allow for the use of any registered pesticides in cannabis. Massachusetts pesticide laws follow federal laws, and thus registered pesticides cannot be applied to cannabis in Massachusetts. The Massachusetts Department of Agriculture has published an [advisory](#) regarding the use of pesticides on cannabis. As a result, cannabis cultivators must rely more heavily on other methods of management, as they have fewer available tools for use in pest control.

Indoor *Cannabis* Pest Prevention

Growing cannabis indoors is unique from other cultivation practices in that environmental factors such as ventilation and light are not naturally occurring. Instead, these inputs are produced and controlled by equipment. As with other crops, however, IPM starts with pest prevention. It is recommended to design and operate facilities to prevent the introduction and spread of pests.

Recommendations for indoor pest prevention include:

1. Keeping plants healthy: healthy plants are more readily able to fight off pests or infections.



2. Sanitation: keep your facility clean and organized. Seal potential points of entry for pests including cracks, crevices and voids. Establish protocols to prevent pests from entering the facility on workers' clothing, shoes or equipment.
3. Quarantine: inspect all new plant material entering your facility for signs of infestation. Keep new plant material in a separate space for several days to ensure that signs of infestation do not present.
4. Maintain environmental conditions to minimize optimal pest habitat: ensure humidity levels are appropriate and do not promote pathogen growth. Prevent standing water from forming and ensure that any reservoirs are sealed and filtered.
5. Inspections/Monitoring: regularly inspect plants for signs or symptoms of pest infestations. Place traps like yellow sticky cards in strategic locations to help detect early infestations of flying insect pests.

Outdoor *Cannabis* Pest Prevention

Cannabis grown outdoors is susceptible to a wide variety of pests including deer, insects, and fungi. Outdoor environments, by nature, are not as well controlled as indoor, and exclusion/prevention practices may be less effective against certain pests. In addition, the use of chemical controls is restricted, so cultural, mechanical, and biological controls have increased importance.

Recommendations for outdoor *Cannabis* pest prevention include:

1. Keeping plants healthy: Healthy plants are more readily able to fight off pests or infections.
2. Exclusion: Use fencing or netting to keep out unwanted pests like deer or birds.
3. Sanitation: Inspect all new plant material for signs of infestation. Keep new plant material in a separate location for several days to ensure that signs of infestation do not present.
4. Maintain field conditions to minimize optimal pest habitat: Remove any overgrown vegetation that may harbor insect pests. Prevent standing water and promote plant health.



5. Inspections/Monitoring: Regularly inspect the crop for signs or symptoms of pest infestations. Place traps like yellow sticky cards in strategic locations to help detect early infestations of flying insect pests like moths or aphids.

Cannabis Pest Control Actions

Even with a solid preventative program implemented, it is still possible for a cannabis crop to develop a pest problem. The first step once you've discovered a pest problem is to identify your pest. Proper identification of the pest is vital to determining the most effective control strategy.

There are four primary strategies available in a pest management program:

1. Cultural Controls: Cultural controls modify the environment to make the cultivation operation an unaccommodating habitat for pests. They involve practices such as adjusting the irrigation schedule to combat root disease, reducing humidity to make the environment less hospitable to pathogenic fungus and shaping the canopy to facilitate superior airflow, or companion plantings to boost the populations of beneficial insects.
2. Mechanical Controls: mechanical controls use physical methods to trap, exclude, and remove pests, such as putting filters on air intakes, placing sticky traps in strategic locations to trap flying pests, removal of diseased plant material, or removal of weeds.
3. Biological Controls: biological controls utilize natural enemies (predators and parasites that deplete the health of a pest population) to directly attack pests. Biological control organisms can be extremely effective at maintaining pest populations below economic thresholds, and preventing infestations from reaching damaging levels.
4. Chemical Controls: chemical controls should be used judiciously in any IPM program. *Cannabis* cultivators are limited in their options for chemical controls since Massachusetts prohibits the use of any pesticide with an EPA registration number. While there are minimum-risk (25(b)) pesticides available for use in cannabis cultivation, pesticides in general should not be used as a primary pest control method in cannabis.



IV. Appendices

a. Appendix A: Checklists for Energy Compliance

Checklists for Energy Compliance

I. APPLICATION

A. Basic Requirements for Applicants Other than Transporters & Delivery

1. Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;
 - Description of how the ME/MTC will monitor energy consumption and make adjustments to operations based on energy usage data;
 - Procedures for identifying energy savings opportunities as part of any facility upgrades, renovations, or expansions; and
 - Procedures for identifying energy savings opportunities when equipment fails and needs to be replaced.

2. Consideration of opportunities for renewable energy generation, including, where applicable, submission of building plans showing where energy generators could be placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable;
 - Description of how the ME/MTC will make energy supply decisions and regularly evaluate renewable options;
 - Procedures for identifying renewable or alternative energy opportunities as part of any facility upgrades, renovations, or expansions; and
 - Procedures for identifying renewable or alternative energy opportunities when equipment fails and needs to be replaced.



3. Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage); and
 - Description of how the ME/MTC will monitor energy demand and make adjustments to operations based on data; and
 - Procedures for participation in load curtailment, energy storage, or other active demand management programs (as applicable).

4. Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.
 - Description of how the applicant will incorporate regular engagement with energy efficiency programs (account representative, vendors, etc.) to ensure awareness of new opportunities and incentives.



B. Basic Requirements for Transporters & Delivery

- Applicant must describe how it will make fleet decisions and affirm that it will regularly evaluate alternative fuel vehicle options.

C. Additional Requirements for Cultivation Facilities

- How the cultivator will ensure on a regular basis that equipment is maintained, calibrated and operating properly, including maintain operations manuals and operating procedures for all major energy using equipment, including, but not limited to horticultural lighting, HVAC systems, dehumidification systems.

II. ARCHITECTURAL REVIEW

A. Basic Requirements for Applicants Other than Transporter & Delivery

1. Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;
 - Information demonstrating actual consideration of energy reduction opportunities, including a list of energy reduction opportunities that were considered.
 - Information about whether opportunities are being implemented, will be implemented at a later date, or are not planned to be implemented.
 - Summary of information that was considered to make the decision (i.e. costs, available incentives, and bill savings). NOTE: submission of a Mass Save® or municipal light plant (MLP) audit report or rebate applications sufficient to demonstrate compliance
2. Consideration of opportunities for renewable energy generation, including, where applicable, submission of building plans showing where energy generators could be



- placed on the site, and an explanation of why the identified opportunities were not pursued, if applicable;
- Information should be submitted to demonstrate actual consideration of renewable energy generation opportunities, including a list of renewable or alternative energy reduction opportunities that were considered.
 - Information about whether opportunities are being implemented; will be implemented at a later date; or are not planned to be implemented.
 - A summary of information that was considered to make a decision (i.e. costs, available incentives, and bill savings).
3. Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage);
- information should be submitted to demonstrate actual consideration of demand reduction opportunities
 - Information about whether opportunities are being implemented, will be implemented at a later date, or not planning to be implemented.
 - A summary of information that was considered to make a decision (i.e. costs, available incentives, and bill savings). NOTE: submission of a Mass Save® or MLP audit report or rebate applications sufficient to demonstrate compliance
4. Engagement with energy efficiency programs offered pursuant to M.G.L. c. 25, § 21, or through municipal lighting plants.
- Information should be submitted to demonstrate actual engagement with energy efficiency (Mass Save® or MLP) programs and any financial incentives received. NOTE: submission of a Mass Save® or MLP audit report or rebate applications is sufficient to demonstrate compliance

B. Basic Requirements for Transporter & Delivery

- Narrative describing the process the Transporter or Delivery operation used to select vehicles to be used in operations;



- If alternative fuel vehicles are not being used, detailed explanation of why other vehicle fuel sources were selected.
- A description of any other energy and water conservations strategies employed at the physical facility for the transporter and delivery (e.g. garage, dispatch) should also be included.

C. Additional Requirements for Cultivation Facilities: Energy Compliance & Energy Compliance Exemption Letters

1. Who Needs to Sign the Letter?

For Indoor Marijuana Cultivators, Medical Marijuana Treatment Centers

The letter must be signed by a:

- Massachusetts Licensed Professional Engineer; or
- Massachusetts Licensed Registered Architect.

For Microbusiness or Craft Marijuana Cooperative with a cultivation location sized as Tier 1 or Tier 2, or such other Marijuana Cultivator meeting the requirements of 935 CMR 500.850 for a waiver

The letter must be signed by a:

- Massachusetts Licensed Professional Engineer;
- Massachusetts Licensed Registered Architect;
- Certified Energy Auditor certified by the Association of Energy Engineers; or
- Certified Energy Manager certified by the Association of Energy Engineers.

PLEASE NOTE: the HVAC & dehumidification systems portion of the letter must be separately completed and signed by:

- a Massachusetts Licensed Mechanical Engineer; or



- a Professional Engineer with license that covers mechanical engineering.

2. What Needs to Be in the Letter?

Energy Compliance Letters or Energy Compliance Exemption Letters must include, at a minimum, the information required below.

- Letter Demonstrating HLPD Compliance
The letter must include the following information:
 - Building Envelope*
 - Narrative confirming compliance with 935 CMR 500.120(11)(a) or 935 CMR 501.120(11)(a), as applicable; and
 - the output from COMcheck™ software used to show building envelope compliance with State Building Code, 780 CMR.
 - HLPD Lighting (you should select either HLPD or HQPL, not both)*
 - If the applicant chooses the HLPD compliance path, the letter must include the calculations that show compliance with the HLPD requirements;
 - Narrative explanation of how the facility complies with 935 CMR 500.120(11)(b) or 501.120(12)(b), supported by copies of the facility lighting schedule, square footage of canopy, description of horticultural lighting equipment, number, type and wattage of all Horticultural Lighting Equipment;
 - Cutsheets for all Horticultural Lighting Equipment to be submitted as part of the Architectural Review;



- Detailed identification of the stamped plans showing the layout of all Horticultural Lighting Equipment, which means any lighting equipment (e.g. fixtures, bulbs, ballasts, controls, etc.) that uses energy for the cultivation of plants, at any stage of growth (e.g. germination, cloning/mother plants, propagation, vegetation, flowering, and harvest), such plans must be available immediately upon inspection and 2 copies of the plans must be available for immediate surrender upon request;
- Detailed identification of the stamped plans showing the areas considered as Horticulture Lighting Square Footage, such plans must be available immediately upon inspection and 2 copies of the plans must be available for immediate surrender upon request;
- Description of eye safety plan that includes the following:
 - Safety protocols related to eye safety for those exposed to horticultural lighting;
 - Communication plan for how eye safety protocols will be communicated to employees;
 - Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights;
 - Description of signage that will be used to remind workers of eye safety; and
 - Affirmation that the safety protocols will be reviewed and updated by the Marijuana Cultivator or MTC on an annual basis.
- HQPL Lighting (you should select either HLPD or HQPL, not both)*



- Narrative explanation of how the facility complies with 935 CMR 500.120(11)(b) or 501.120(12)(b), supported by copies of the facility lighting schedule, square footage of canopy, description of horticultural lighting equipment, number, type and wattage of all Horticultural Lighting Equipment;
- Cutsheets for all Horticultural Lighting Equipment to be submitted as part of the Architectural Review;
- Description of eye safety plan that includes the following:
 - Safety protocols related to eye safety for those exposed to horticultural lighting;
 - Communication plan for how eye safety protocols will be communicated to employees;
 - Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights;
 - Description of signage that will be used to remind workers of eye safety; and
 - Affirmation that the safety protocols will be reviewed and updated by the Marijuana Cultivator or MTC on an annual basis.
- HVAC & Dehumidification Systems*
 - Certification from a MA Licensed Mechanical Engineer that the HVAC and dehumidification systems meet Massachusetts building code, and that HVAC and dehumidification equipment have been evaluated and sized for the loads of the facility;



- Total of tons of refrigeration (TR), thousands of BTUs per hour (MBH), and a listing of all HVAC equipment to be installed, supported by equipment data sheets;
 - Total of tons of dehumidification (TD), and a listing of all dehumidification equipment to be installed, supported by equipment data sheets;
 - Details about energy recovery equipment installed as part of the ventilation system; and
 - A listing of all odor mitigation equipment to be installed, supported by equipment data sheets.
- Letter Demonstrating Compliance Exemption
- Eligible Technologies*
 - Renewable Generation Unit as defined by 225 CMR 14:
 - Solar photovoltaic or solar thermal electric energy;
 - Wind energy;
 - Ocean thermal, wave or tidal energy;
 - Fuel cells using eligible RPS Class I renewable fuel;
 - Landfill methane gas;
 - Hydroelectric;



- Low-emission, Advanced Biomass Power Conversion Technologies using Eligible Biomass Fuel;
- Marine or hydrokinetic energy; or
- Geothermal energy.
- Renewable Thermal Generation Unit as defined by 225 CMR 16:
 - Air-Source Heat Pump;
 - Ground Source Heat Pump;
 - Deep Geothermal Heat Exchange;
 - Solar Thermal;
 - Woody Biomass;
 - Biogas;
 - Liquid Biofuels; or
 - Compost Heat Exchange System
- Narrative Contents of Letter*
 - Description of clean or renewable energy system, including an attestation that system meets eligibility requirements above. This requirement can be satisfied by providing an RPS or APS Statement of Qualification approved by the Department of Energy Resources.



- Energy usage calculations for the facility, supported by building plans, energy models, and energy model outputs, including inputs and outputs by end use;
- Clean or renewable energy generation calculations for the facility, supported by building plans and energy models, including inputs and outputs by end use; and
- Written plan on how Renewable Energy Certificates (RECs) or Alternative Energy Credits (AECs) will be generated and retired on at least an annual basis. Note that the option of retiring RECs and AECs is available only to demonstrate the portion of energy usage *not* generated for onsite use (maximum of 20% of total onsite energy usage).
- Description of eye safety plan that includes the following:
 - Safety protocols related to eye safety for those exposed to horticultural lighting;
 - Communication plan for how eye safety protocols will be communicated to employees;
 - Description of how protective eyewear will be provided for anyone coming in to contact with active horticultural lights;
 - Description of signage that will be used to remind workers of eye safety; and
 - Affirmation that the safety protocols will be reviewed and updated by the Marijuana Cultivator or MTC on an annual basis.



- ❑ *HVAC & Dehumidification Systems*
 - ❑ Certification from a MA Licensed Mechanical Engineer that the HVAC and dehumidification systems meet Massachusetts building code, and that HVAC and dehumidification equipment have been evaluated and sized for the loads of the facility;
 - ❑ Total of tons of refrigeration (TR), thousands of BTUs per hour (MBH), and a listing of all HVAC equipment to be installed, supported by equipment data sheets;
 - ❑ Total of tons of dehumidification (TD), and a listing of all dehumidification equipment to be installed, supported by equipment data sheets;
 - ❑ Details about energy recovery equipment installed as part of the ventilation system; and
 - ❑ A listing of all odor mitigation equipment to be installed, supported by equipment data sheets.

D. Additional Requirements for Cultivation Facilities: Third-party Safety Certification

- ❑ Third-party safety certification for lighting products by an OSHA NRTL or SCC-recognized body, which shall certify that the products meet a set of safety requirements and standards deemed applicable to horticultural lighting products by that safety organization.

III. RENEWAL

- ❑ Cannabis PowerScore



- Update Energy Compliance Letter or Energy Compliance Exemption Letter

DRAFT



Special Report: Evaluating the Impact of Cannabis Legalization in Massachusetts: State of the Data

November 2019

Massachusetts Cannabis Control Commission:

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Purpose

This report has been prepared to inform the Massachusetts Cannabis Control Commission (“Commission”) as it seeks to fulfill its research requirements as outlined in *Chapter 55 of the Acts of 2017: An Act to Ensure Safe Access to Marijuana*. The purpose of the report was to identify relevant sources of data, describe key limitations, and raise considerations for additional data collection needed to address the Commission’s obligations. The legislation includes, but is not limited to, the following text which informed the scope of this report:

Section 17. (a) The commission shall develop a research agenda in order to understand the social and economic trends of marijuana in the Commonwealth, to inform future decisions that would aid in the closure of the illicit marketplace and to inform the commission on the public health impacts of cannabis (“marijuana”). The research agenda shall include, but not be limited to:

1. patterns of use, methods of consumption, sources of purchase and general perceptions of marijuana among minors, among college and university students and among adults;
2. incidents of impaired driving, hospitalization and use of other health care services related to marijuana use...and a report on the financial impacts on the state healthcare system of hospitalizations related to marijuana;
3. economic and fiscal impacts for state and local governments including the impact of legalization on the production and distribution of marijuana in the illicit market and the costs and benefits to state and local revenue;
4. ownership and employment trends in the marijuana industry examining participation by racial, ethnic and socioeconomic subgroups, including identification of barriers to participation in the industry;
5. market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets;
6. compilation of data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from marijuana use or possession of marijuana or marijuana products; and
7. compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.

(b) The commission shall incorporate available data into its research agenda, including the baseline study conducted pursuant to Chapter 351 of the acts of 2016...The commission shall annually report on the results of its research agenda and, when appropriate, make recommendations for further research or policy changes.

This report addresses publicly available data for the enumerated items above. Additional items, by request from Commissioners, have been included but this report, but it should not be considered exhaustive.



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I. Executive Summary

This report was prepared to inform the Massachusetts Cannabis Control Commission (“Commission”) in its research duties as outlined in *Chapter 55 of the Acts of 2017: An Act to Ensure Safe Access to Marijuana*. We addressed eight domains outlined by the legislation (cannabis use patterns and perceptions; healthcare utilization and costs; impaired driving; ownership and employment trends; cannabis markets; cannabis-related incidents in schools; criminal justice encounters; and economic and fiscal impacts) and energy usage.

For each of the legislatively mandated domains, we reviewed relevant sources of national and state government-collected data and other publicly available data (*i.e. commercially collected data*) to identify sources representative of the Massachusetts population. We consulted the peer-reviewed literature and spoke with key informants from relevant Massachusetts agencies. We also reviewed documents and reports from the first states to legalize and commercialize cannabis for adult use (*e.g. Colorado, Washington State*) to ascertain how other states addressed some of the issues related to monitoring and evaluating this policy change. Finally, we assessed the key limitations of the available data and raise key considerations that can be acted upon to improve existing data collection practices and additional data collection towards the goal of strengthening the Commonwealth’s capacity to monitor the impacts of cannabis legalization.

Our assessment suggests that the Commission is well-poised to monitor broad trends related to cannabis, but lacks the capacity, at present, to monitor some important indicators. We provide a summary assessment of the availability and ease-of-access to the necessary data to fulfil the legislative mandate for each domain in the table below. Industry-related data represents an area of strength for the Commission in terms of access to needed data. Cannabis use, impaired driving, and criminal justice domains, on the other hand, present challenges. For example, while existing survey data permit monitoring of the prevalence of past-year and past 30-day cannabis use among youth and adult cohorts over time, data on methods of consumption (*e.g. vaping, edible products*) among Massachusetts residents is limited to one survey conducted in 2017.¹ Similarly, data to quantify the overall number and rate of fatal and non-fatal motor vehicle crashes is readily available, but additional data collection is necessary to monitor cannabis exposure and impairment in crash-involved drivers. A similar pattern is true for arrests for operating under the influence (OUI) and criminal justice system involvement for violations of M.G.L c. 94C Class D drug possession and distribution offenses. In these domains, cannabis-specific incidents cannot be disentangled from incidents involving other drugs. For the Commission to fulfill its research mandate, modifications to coding practices by law enforcement agencies (*e.g. creating a separate code for OUI-Cannabis*) may be needed to allow for collection of cannabis-related data. Of additional importance is a focus on increasing capacity to monitor policy impacts among specific, vulnerable subpopulations.






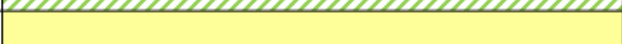



The procurement and rigorous analysis of the many data sources needed to best understand the potentially wide-ranging impacts of cannabis legalization requires significant investment of time, expertise, and resources. We suggest that a portion of funds generated by cannabis sales are



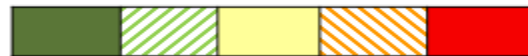
earmarked for research. We further suggest that the legislature consider revising the requirement for annual reporting on the *Chapter 55* indicators and instead require the creation of a longer term (*e.g. five-year*) research roadmap with reporting at intervals that reflect the time needed to develop and undertake rigorous research.

The Commission, in collaboration with external researchers and stakeholders, must undertake rigorous research to evaluate cannabis policy and inform action towards ensuring that the benefits of cannabis legalization are realized most fully, and potential harms are mitigated.

Table. Research domains and availability of existing data for monitoring purposes

Data Domain	Data availability and ease-of-access
Cannabis use patterns and perceptions	
Healthcare use and costs	
Incidents of cannabis-impaired driving	
Ownership and employment trends	
Cannabis markets	
Cannabis-related incidents in school	
Criminal justice encounters	
Economic and fiscal impacts	
Energy	

Key:



Existing data readily available Data not available

II. Methods

The data that can be used for monitoring the impact of cannabis legalization at the state level fall, generally, into four categories: 1) survey data; 2) administrative data; 3) special government-compiled datasets; and 4) commercially collected data. The focus of this report is to identify and assess data that can be used to generate estimates that are representative of the Massachusetts population and/or certain sub-populations within it. There are also data collected at the local or regional level within the Commonwealth and data collected as part of ongoing academic or other research studies. A systematic review of those sources was beyond the scope of this report.

To identify sources of data relevant to our purpose, we drew upon government reports from the federal government, Massachusetts, and other states with legal adult-use cannabis markets. We also examined peer-reviewed research studies. We contacted government or commercial database employees to ask about data sources that may be collected, but not regularly reported or to obtain information beyond what is available on public websites or in journal articles. We endeavored to identify and assess the key data sources within each content area. A list of agencies we communicated with is in Appendix B.

Data sources are rarely static over time. Our general approach when we identified a potentially-relevant data source was to evaluate 1) whether it can be used to monitor trends over time for Massachusetts; and 2) the extent to which the data can be applied to address the focal areas of this report. For survey data, we identified the population covered, age range, application process for obtaining data, and date range availability. We determined the information available in these surveys over time for our date range of interest (*i.e.* 2011-2019). For administrative and other data, we sought to understand how to access data, how far back in time data is generally available, as well as any important changes in data systems or coding over time that could influence analyses. We describe the datasets we evaluated that do have cannabis-specific indicators in the tables (Appendix A). Based on the available data and its limitations, we made suggestions for actions the Commission should consider in order to best address the research areas.

We also assessed some national data without indicators that can be used to uniquely identify Massachusetts residents or institutions. Although such data are unlikely to be useful for analyzing the impacts of cannabis legalization in the Commonwealth, they helped to inform our set of considerations and recommendations about potential expansion of data collection in the future.



III. Data Sources, Limitations, and Considerations

A. Cannabis use patterns and perceptions

Monitoring cannabis* use is a key aspect of the Commission’s research mandate. We examined available data sources to measure cannabis use patterns, perceptions of cannabis and methods of consumption for youth and adults, including high school and college students. We limited this assessment to survey data, as it is currently the most reliable method of assessing these topics. We assessed availability with a goal of understanding utility of the data for making comparisons of “before versus after” adult-use cannabis legalization enactment and implementation. As many data collection methods and specific survey questions have changed over time, we focused on data sources for the time period of 2011-2019 that were available to evaluate marijuana use at the state level, limited to datasets that were able to measure indicators for the Commonwealth.

We identified seven surveys that might be used for this purpose. Of these seven surveys, three are national surveys with the ability to identify Massachusetts residents in the data. The other four surveys are Massachusetts-specific, conducted by state entities, sometimes in conjunction with federal agencies (Table 1).

Summary of Available Data

The national surveys that can be used to monitor cannabis use patterns, perceptions, and methods of use and consumption for adults and children are the National Survey on Drug Use and Health (NSDUH),² National Health and Nutrition Examination Survey (NHANES),³ and the Youth Risk Behavior Surveillance Survey (YRBSS).⁴ All except the YRBSS are conducted annually. The YRBSS is conducted every other year in odd years. State-specific surveys, conducted in conjunction with the national surveys, are available over time as well. The Massachusetts Behavioral Risk Factor Surveillance System (MA BRFSS),⁵ Massachusetts Youth Health Survey (MYHS),⁶ and Massachusetts Youth Risk Behavior Survey (MYRBS)⁷ are available for monitoring and evaluation. Most of the surveys are available with an approximately two-year delay, meaning that as of June 2019, the most recent version available is 2017.

* Note: The words cannabis and marijuana are used throughout this report. The term “marijuana” has historically been used to refer to the dried flower of the cannabis plant and has been used to associate the drug, negatively, with certain ethnic groups. While the Commission and the authors of this report condemn the racism behind the word and its etymology, most survey questions on U.S. surveys and most state policies about psychoactive forms of the drug use the term marijuana. Alternatively, the term “cannabis” is used to refer to the cannabis plant and its derivative products. This more scientifically accurate terminology is used more often in recent years. This report uses both terms, with the choice depending on the context and an effort to be consistent with surveys and legislation.



Table 2 provides information on availability of specific indicators (ever used marijuana; age of first use; frequency of use; location of use; method of use; source of marijuana; perceptions of marijuana; and reason for use) over time in these datasets.

The NSDUH collects data on adults, emerging adults (college and non-college attending adults age 18-22) and youth (age 12-18 years). The NSDUH is a valuable source that addresses many of the legislatively mandated items and is available over time. The NSDUH is a nationally representative survey of youth and adults age 12 years and over; participants are sampled in proportion to their representation within the state. It has several detailed questions on the use of marijuana, including frequency, source, perceptions of risk, and marijuana use that results in individual or family problems. The NSDUH includes an indicator of college student status for emerging adults between age 18 and 22 years. State-level indicators are available through a restricted use process, and there are an adequate number of observations to conduct statistical analysis over one- to two- year periods that can represent the population of Massachusetts. Additional data sources that can be used to understand marijuana use among adults are the MA BRFSS, NHANES, and the Massachusetts Marijuana Baseline Health Study (MBHS).¹ The MA BRFSS asks a number of detailed questions that may help to identify problematic marijuana use.

It is not possible, however, to monitor frequency of non-problematic marijuana use, method of consumption, and perceptions of use via the MA BRFSS. The NHANES can be used to make state estimates, but a small number of adults are interviewed in each year, meaning that small samples are likely to be problematic for statistical analysis. If repeated over time, the Massachusetts Marijuana Baseline Health Study¹ population survey conducted by the Massachusetts Department of Public Health (DPH) may provide a useful source for monitoring legislatively mandated priorities, as items on method of use were assessed in that survey that are not available in other data sources. Each of these data sources use survey weights to make results representative of the full Massachusetts civilian, non-institutionalized adult population. For youth — particularly for high school students — other data sources are available to address cannabis use. The combination of the national YRBSS, the MYHS, and the MYRBS collectively can be used to monitor many but not all of the legislatively required indicators. For example, these surveys can be used to monitor cannabis use, age at first use, frequency of use, location of use (*i.e., school grounds*), and perceptions of marijuana. The Commission has utilized the YRBSS to report on lifetime marijuana use, current use, and heavy use.⁸

The YRBSS, MYHS, and MYRBS lack detailed information on the methods of use, source, and reason for use. The NSDUH captures youth ages 12 and over, and is potentially a good source of information, particularly for adolescents who are not attending public schools. Additionally, NHANES is available for youth as well, but with similar limitations to adults. The NSDUH and NHANES are designed to be representative of the population within given age ranges (*e.g. adolescents; emerging adults*). The YRBSS, MYHS, and MYRBS are only administered to students in school on the day the survey is conducted and thus are not designed to be representative of the adolescent population who are not in public middle and/or high schools.⁸



There are also several data sources that are potentially useful for some indications, but that did not meet inclusion criteria, either because they did not ask appropriate questions or cannot be used to develop estimates that are representative of the target population (*e.g. high school students; college students*) residing in the Massachusetts.

Other data sources of note that did not meet inclusion criteria include: Monitoring the Future (MTF)⁹ and the American College Health Association National College Health Assessment (ACHA-NCHA)¹⁰ and locally conducted surveys. MTF and ACHA-NCHA are national surveys of high school and college students, respectively. MTF includes multiple detailed questions that pertain to cannabis use including ever use, age of first use, frequency, vaping of marijuana, location, and reason for use, as well as the perceptions and source of marijuana. However, data from Massachusetts-based participants cannot be used to construct estimates at the state level; combinations of states can be used to answer policy questions at the national level (*e.g., states with legal cannabis versus states without*) but Massachusetts estimates cannot be reported separately. The ACHA-NCHA is a survey administered to more than 1.4 million college students age 18 years or older at over 740 colleges and universities across the country, including the University of Massachusetts Amherst. The ACHA-NCHA includes several detailed questions on the use of cannabis, including frequency of use and perceptions of use among peers. Most uses of the ACHA-NCHA for research purposes are limited to examining the results from a single campus, although (non-representative) data are available for very large regions (*e.g., Northeast plus Mid-Atlantic*). In addition to these two surveys, some schools and local substance abuse prevention coalitions in communities throughout Massachusetts conduct independent school-based surveys of middle and/or high school students using instruments that may be linked to prevention programming, such as the Communities that Care¹¹ survey. Such surveys are not administered in all schools or counties and cannot be aggregated to produce state-level estimates. For evaluation of impact on specific communities, more detailed data may be available in these surveys compared to state or national sources.

Limitations

Collectively, the data available to measure cannabis use patterns, methods of consumption, and general perceptions of cannabis are adequate in some respects, but there is substantial room for improvement. Comparisons to other states suggest that the Commonwealth lags in collection of cannabis-specific information for the general population and for specific subpopulations (*i.e. pregnant women; parents*). One valuable data source that is available in some other states, but not in Massachusetts, is nationally comparable questions related to cannabis use asked as part of the Behavioral Risk Factor Surveillance System (BRFSS).¹² In 2016, the Centers for Disease Control and Prevention (CDC) developed a cannabis (“marijuana”) module with questions about the drug that states could add to their state BRFSS survey, but Massachusetts has not added this module. The module includes items on mode of marijuana consumption and the reason for cannabis use (*i.e. medical versus non-medical use*). Instead, the MA BRFSS has added state-specific questions, including questions added prior to 2016, related to cannabis use that are detailed above, but are not comparable to questions asked in the optional national module. This



condition limits the utility of BRFSS data in Massachusetts for making comparisons to other states for this period.

Key limitations of the existing datasets are: 1) inadequate sample size in the primary datasets that can be used to monitor these indicators; 2) not assessing patterns, perceptions, and methods of cannabis use in sufficient detail; and 3) inadequacy of these data to monitor specific vulnerable populations.

Regarding sample size, the best sources to monitor a wide variety of indicators as legislatively mandated include national data sources that have Massachusetts specific indicators. These have adequate sample size at the state level. They are not, however, designed to be representative of smaller areas (*e.g. counties*) and likely have an insufficient number of observations to be useful in monitoring use among most vulnerable groups and/or minority groups.

The second major limitation is regarding the extent to which available data can be used to assess the patterns, perceptions, and methods of consumption in a detailed fashion that are representative of the Massachusetts population. For example, for the general adult population, there are no state-representative population surveys that monitor the method of use (*e.g. smoking, vaping, consuming edibles*) or location of use over time. For youth, there are no Massachusetts-representative, general population surveys that monitor the method of use, location of use (*i.e. beyond school grounds*), or reason for use (*i.e. medical versus non-medical*). The Massachusetts Marijuana Baseline Health Study¹ population survey may be a useful data source towards monitoring methods of use among adults if the survey is repeated and if data are made available for analysis.

Relatedly, the terminology used in many surveys questions about cannabis leave open the potential for ambiguity about what is measured. Most surveys use the term “marijuana,” which has historically referred to the dried flower from the cannabis plant and to THC-containing products. Given the proliferation of cannabidiol (CBD) products that are low in THC, there is a possibility that some individuals would respond to survey items about “marijuana” by indicating CBD use and not THC use. The existing surveys do not ask respondents to distinguish between use of or perceptions of CBD products and THC products. In order to ensure comparable data from year to year, additional empirical research into how individuals understand survey items about “marijuana” or “cannabis” may be useful in conjunction with additional items that classify cannabis use as use of THC with and without CBD and/or other cannabinoids.

The third limitation is a lack of data sources used to monitor use for specific vulnerable populations, including pregnant women, veterans, and individuals with serious or co-occurring mental health disorder and/or substance use disorders. For example, the national Pregnancy Risk Assessment Monitoring System (PRAMS)¹³ survey has a set of optional questions regarding cannabis use before, during, and after pregnancy. Massachusetts has not adopted these questions in the ongoing wave of the PRAMS, which limits the ability to monitor marijuana use in this group. Several other surveys (*e.g. NHANES*) ask respondents about their military service, but it is unknown whether there is sufficient sample size within this group to monitor effects of cannabis legalization on veterans. Individuals with serious mental health disorder and/or substance use



disorder may be differentially affected by cannabis legalization;¹⁴ several of the surveys have measures to assess the presence of current or past mental illness and/or substance use disorder, but it is unknown whether they have sufficient detail or sample size to assess impacts on these groups in Massachusetts in particular.

We limited this assessment to survey data, but there may be other administrative data that could be used to assess use patterns at the state and local level, including medical cannabis patient registries and adult use cannabis sales. Better understanding the utility of these data sources to understand broad patterns of use and methods of use may be an important component of ongoing evaluation.

Considerations

Major changes to existing survey data collection would improve the use of secondary data towards fulfilling the legislative mandate: 1) using consistent wording for existing MA BRFSS questions about cannabis over time and adding questions related to cannabis patterns of use, modes of consumption, and other related behaviors; 2) additional primary data collection to assess priority subpopulation groups and/or specific questions not otherwise addressed, such as patterns of substance co-use; and 3) the addition of cannabis questions to the MA PRAMS survey to monitor use among pregnant women.

Massachusetts has not adopted the optional BRFSS marijuana module offered by the CDC and used in other states. The MA BRFSS includes state-specific questions related to problematic cannabis use, but these questions are not consistent over time and have not been asked of the full sample, limiting usefulness and sample size. Additional questions could be added to the BRFSS conducted in Massachusetts, including but not limited to the CDC's marijuana module, to better assess overall cannabis use for the general adult population and monitor specific aspects related to the legislatively mandated priorities. These may include more general questions about cannabis use, method of use, source of purchase, and location of use. Although the MA BRFSS is a powerful data source that may be leveraged to gather additional information with the addition of specific questions, it is limited in its ability to focus on specific subpopulations (*i.e. pregnant women*) based on the overall goal of being representative of the state population.

If there are particular questions that are of importance based on legislative and agency priorities that cannot be added to the MA BRFSS, additional primary data collection may be of interest to the Commission. For example, the MBHS assessed legislatively mandated items not available from other sources. The continuation of this survey would be appropriate to collect data over time on, for example, methods of use for adults in the Commonwealth. Additional primary data collection by the Commission to assess methods of use and source of purchase for youth is encouraged.

The third consideration is to expand the PRAMS survey to be monitor cannabis use among pregnant women. This would allow the Commission to evaluate the impacts of cannabis



legalization on this population and further assess potential and experienced impacts on pregnant women and infants.

B. Healthcare use and financial impacts on the state healthcare system

The authorizing legislation requires the Commission to monitor incidents of hospitalization and use of other healthcare services related to cannabis use and the financial impacts on the state healthcare system for hospitalizations related to cannabis. We assessed availability of data to address health outcomes, healthcare utilization, and financial impacts on the state healthcare system by identifying and examining survey and administrative data.

We focused on data available nationally with an indicator for Massachusetts and on Massachusetts-specific data sources. We identified key datasets that can be used for monitoring the mandated priority areas. Below, we describe in detail the datasets we determined to be the most comprehensive and potentially useful for this purpose.

Summary of Available Data

Survey Data

First, we note the availability of survey data that may be useful in simultaneously identifying self-reported cannabis (“marijuana”) use and health and healthcare outcomes (Table 3). These surveys can be used – based on the information available within – to assess two types of questions: 1) comparing healthcare utilization such as utilization of mental health services for cannabis users (or, for example, frequent users) versus non-users; and 2) assessing healthcare utilization specifically reported to be related to cannabis use. The National Health and Nutrition Examination Survey (NHANES)³ and National Survey on Drug Use and Health (NSDUH),² ask about cannabis use and a variety of questions related to self-reported health and certain healthcare utilization outcomes; the NSDUH also includes items specifically related to health services used for cannabis use.

There are three Massachusetts-specific surveys that contain information about healthcare use and cannabis (“marijuana”) use. Since 2015, the Massachusetts Behavioral Risk Factor Surveillance System (MA BRFSS) has asked questions about past-year use of emergency department (ED), medical, or professional counseling services for adverse effects of cannabis use. The Marijuana Baseline Health Study (MBHS) specifically assessed ED or urgent care visits related to cannabis use. The third survey, the Massachusetts Youth Risk Behavioral Survey (MYRBS) contains information about cannabis use and frequency and about suicide attempts that required medical treatment.

Administrative Data

We identified a large number of national and state-level administrative datasets that can be used to monitor the impacts of cannabis legalization on health outcomes, healthcare utilization, and



financial impacts on the state healthcare system (Table 4). These data sources may be valuable in measuring the impact of cannabis legalization on the healthcare system, allowing for detailed empirical analysis around cannabis use and related problems. A number of these data sources contain *International Classification of Diseases – Ninth Revision (ICD-9-CM)* and *ICD-10-CM* (hereafter called ICD-9/10 codes) that indicate cases of cannabis-related disorders with codes for cannabis use, cannabis abuse, and cannabis dependence. The presence of such codes will allow analysis of the prevalence of those conditions in the populations covered by the datasets, described below. These data can be used to examine changes in health system use due to potential secondary impacts of increased marijuana use such as comorbid physical and behavioral health conditions (*e.g., other substance use disorders*) or involvement in a motor vehicle crash.

National individual-level data for prescription drugs ([IQVIA prescription data](#))¹⁵ and Medicare health insurance claims¹⁶ are available with significant costs and application processes. The IQVIA prescription data cover a substantial proportion of outpatient prescriptions, but do not include other linked healthcare utilization. Medicare health insurance claims are a valuable way to analyze impacts of cannabis legalization using linked health insurance claims with inpatient, outpatient, and (potentially) prescription drug information; Medicare is the primary health insurer for the elderly (65+) and those with disabilities. To measure acute care utilization, including ED visits and inpatient stays, the [State Emergency Department Data \(SEDD\)](#) and [State Inpatient Database \(SID\)](#)¹⁷ available from the Agency for Healthcare Research and Quality may be of potential interest if regional or national comparisons are of interest. Two other national data sources are the [National Poison Data System \(NPDS\)](#) and the [Treatment Episode Data Set \(TEDS\)](#).^{18,19} These sources measure calls to poison control centers for information and exposure and admissions/discharges from state-funded substance abuse treatment centers, respectively. Both sources can be limited to information on cannabis exposure and abuse.

There are limitations of the national data sources, both in the time frame of availability (*e.g., SEDD, SID, and NPDS*) and in the contents of the data (*e.g., TEDS*). Massachusetts has additional and overlapping data available from state government sources. For example, the Massachusetts [CaseMix](#) data²⁰ provides similar data to that which is distributed through the SID and SEDD, but has more recent years of data available in the Massachusetts-specific version. Similarly, the Massachusetts Department of Public Health, Bureau of Substance Abuse Services (BSAS) maintains the [Substance Abuse Management Information System \(SAMIS\)](#)²¹ with admissions and discharge data similar to what is in TEDS. However, SAMIS includes more detailed information, such as both lower level geographic identifiers (*e.g. ZIP code*) and an indicator of veteran status. The [Massachusetts and Rhode Island Regional Center for Poison Control and Prevention \(RPC\)](#)²² deposits data for calls from Massachusetts and Rhode Island to the NPDS and has worked with state agencies and researchers to analyze Massachusetts-specific data. Poison data are of use for evaluating impacts of cannabis exposure resulting and not resulting in a healthcare visit. The [Massachusetts State Trauma Registry](#)²³ contains information at the state level; states are not identifiable in the national version of this registry. The Department of Mental Health (DMH) Mental Health Information System (MHIS) records information about treatment records for those receiving services from DMH. Primary diagnoses



in these data pertain to mental health conditions and secondary diagnoses, which may include substance use disorders (*e.g. cannabis use disorder*) are available.

Finally, the Massachusetts Center for Health Information and Analysis maintains three Massachusetts-specific data sources that may be of particular interest to the Commission for monitoring cannabis-related health system impacts: 1) the Massachusetts All Payer Claims Data (MA APCD);²⁴ 2) Massachusetts CaseMix Data;²⁰ and 3) the Massachusetts Public Health Data Warehouse (MA PHDW).²⁵

Massachusetts All Payer Claims Data

The MA APCD includes health insurance enrollment and claims data — both medical claims and pharmacy claims — from commercial insurers and Medicaid.[†] It includes claims from inpatient and outpatient settings, with associated procedure codes and detailed diagnosis data. Data are generally available for a five-year period (currently 2013-2017), which supports time-series analyses. The APCD data are available to government and academic applicants, with varying restrictions related to data privacy and varying costs.

In the MA APCD, procedure codes and National Drug Codes allow for analysis of health system utilization (*e.g. inpatient admissions, emergency department visits, outpatient visits*) and pharmaceutical use. Diagnosis codes can identify primary and secondary diagnoses related to cannabis use, cannabis abuse, and cannabis dependence. Analyses of total healthcare spending and spending on a particular episode of care are possible at the individual level with some limitations. Individuals can be followed over time and across plans, which allows for detailed individual level analysis, as well as for specific population groups including groups by age, sex, and geography (*e.g. 5-digit ZIP Codes*) with some restrictions based on protecting patient privacy. Importantly, though, there may be some limitations to the availability of claims with procedures and diagnoses related to substance use disorders (including, but not limited to, cannabis use disorder). The MA APCD can be used to determine total healthcare spending for most individuals in the dataset.

Massachusetts CaseMix Data

Massachusetts CaseMix data includes the Hospital Inpatient Discharge Database (HIDD), Outpatient Observation Database (OOD), and the Emergency Department Database (EDD).

[†] The inclusion of Medicaid data requires additional application materials and undergoes an additional review process. Medicare Advantage and secondary Medicare plans (“Medigap”) are included, as these are generally private insurance. Medicare fee-for-service claims are not included; they are available to government users, but are not combined into the main dataset. We discuss Medicare fee-for-service and Medicare Advantage claims available directly from the Centers for Medicare and Medicaid Services separately. Changes in reporting requirements for self-insured employers were impacted by a Supreme Court ruling in 2016. These self-insured employers can now optionally contribute to the APCD, and the proportion of these insurers who contribute their data has been falling over time. At the end of 2017, only about 25% of members covered by self-insured employers were included in the APCD.



Combined, these data include all hospital and ED discharges from Massachusetts acute care hospitals, along with associated charges. These data include discharges for both insured and uninsured individuals. The CaseMix data are available to government and academic applicants, with associated costs.

Similar diagnosis codes to examine cannabis related diagnoses are available as for the MA APCD. Additionally, detailed individual level analysis is possible. The data can be sorted for specific population groups by age, sex, and geography. In contrast to the MA APCD, hospital encounters related to substance use disorder diagnoses are included and all insurance types, such as self-pay, are included over time. The primary specific limitation of the CaseMix data is that it can only measure hospital utilization; it is not possible to calculate total healthcare spending.

Massachusetts Public Health Data Warehouse

The Massachusetts PHDW, maintained by the Massachusetts Department of Public Health (DPH), is a unique resource that links a large number of government data sources at the individual level for residents of the Commonwealth. This includes the MA APCD, CaseMix data, mortality and medical examiner data, SAMIS and DMH data, ambulance data, housing data, criminal justice encounters, and data from the Veterans Administration. The expanded list includes more than twenty data sources, with annual updates, planned in the final version. This data warehouse is impressive in size and scope. It was originally developed to monitor the ongoing impact of the opioid epidemic in Massachusetts, and it has significantly improved knowledge of the health costs of the epidemic through joint research projects with DPH and academic researchers. As of June 2019, DPH is still working with data providing partners, with the goal of having data available in the early fall 2019. The availability of the PHDW will be for researching public health priorities that impact morbidity and mortality in the Commonwealth as identified by DPH. The PHDW will be available through the posting of Notices of Opportunity, which will focus on very specific topics such as health equity and social determinants of health.

Other data sources

In addition to the sources detailed above, there are a number of other data sources that may be of interest for analyzing impacts of cannabis legalization, including administrative data linked to survey data, other health insurance claims data, and electronic health records from specific healthcare entities. Although they may not be representative of the Massachusetts population, and were thus not included for in-depth review in this report, these data sources may be of interest for the analysis of special populations or to fill gaps in knowledge due to restrictions on data use or limitations of the data.

Additional data sources available from state government agencies may be of interest, but at present have limitations that likely outweigh their value for the Commission's work. Specifically, we assessed data on deaths ([Massachusetts Registry of Vital Records and Statistics](#)), ambulance trips ([Massachusetts Ambulance Trip Records Information System](#)),²⁶ prescription drugs (e.g., *Medicaid, Medicare Part D*), and the prescription drug monitoring



program ([Massachusetts Prescription Monitoring Program](#)). Due to the very small number of incidents with cannabis involvement (*e.g., deaths*) and restrictions on the ability to separate cannabis from other drugs (*e.g., Massachusetts Ambulance Trip Records Information System*),²⁶ we consider these of limited utility.

There are also several surveys linked to administrative data that are used by researchers to assess impacts of policy changes on healthcare utilization. These are potentially useful because they allow evaluation of national trends in healthcare utilization and spending across settings; however, based on the relatively small sample sizes and small proportion of individuals expected to receive diagnostic codes related to cannabis use, we anticipate they will not have sufficient sample sizes to be useful for the purposes of this analysis. These surveys do not include specific questions about marijuana use. These data include the [Medical Expenditure Panel Survey \(MEPS\)](#),²⁷ [National Ambulatory Medical Care Survey \(NAMCS\)/ National Hospital Ambulatory Medical Care Survey \(NHAMCS\)](#),²⁸ and [National Health Interview Survey \(NHIS\)](#).²⁹

Additional private sources of health insurance claims data target populations of interest but have different limitations on their use. We include links to a selection of these datasets here for those who may be interested in learning more about these sources: [FairHealth](#),³⁰ [Health Care Cost Institute](#),³¹ [IBM MarketScan Research Databases](#),^{32,33} [IQVIA National Disease and Therapeutic Index \(NDTI\)](#),¹⁵ [OptumLabs](#), [Veteran's Health Administration \(VHA\) Corporate Data Warehouse](#),^{34,35} and [VHA National Patient Care Database](#).³⁶

There are some sources of electronic health records that are available in Massachusetts from different healthcare systems. We do not enumerate them here due to substantial differences in availability, usefulness, information available, and size of health system. This type of data may be an important consideration in validating use of ICD-9/10 codes as a method of identifying impacts of cannabis legalization on the healthcare system.

Limitations

The Commonwealth has substantial data available to monitor impacts of cannabis legalization on the healthcare system. Understanding the limitations of these resources is important to optimize their use and develop recommendations to improve their suitability for this purpose. Due to differences in data collection methods and use cases, we examine the limitations of survey and administrative data separately.

Survey data

The primary limitations of survey data for evaluating impacts on health outcomes, healthcare utilization, and financial impacts on the healthcare system are in the sample size of available surveys and in the accuracy of self-reported healthcare utilization. The sample sizes of these datasets make it difficult to evaluate the impacts of rare occurrences (*e.g., cannabinoid hyperemesis syndrome*) on health outcomes. However, these survey data sources can allow for the evaluation of self-reported cannabis (“marijuana”) use and self-reported health and other



general health outcomes that are not available in administrative data. Some surveys contain questions about acute care utilization specifically related to cannabis use. Depending on prevalence, this information may not be captured accurately by surveys with small to moderate sample sizes.

Administrative data

The administrative data available in the Commonwealth are particularly rich, with available data spanning hospital utilization; an APCD with extensive information about outpatient, inpatient, and prescription drug utilization; and a linked data warehouse combining many government data sources linked at the individual level. These data support measurement of policy impacts on the state Medicaid system and state funded substance use treatment, which are of importance for state healthcare costs. These administrative data do have significant limitations, however, which if not resolved will severely impact their utility for monitoring the impact of cannabis legalization on the healthcare system of the Commonwealth.

Several limitations impact most of these administrative data, which rely on ICD-9 and ICD-10 codes to identify cannabis related encounters: 1) changes in diagnostic codes and use over time; 2) clinician coding of cannabis use; and 3) availability of claims with substance use disorder diagnoses; and 4) limitations of data sources that may be of high value to evaluating public health in the Commonwealth; and 5) ability to identify vulnerable populations of special interest to the Commission.

The first limitation in the use of administrative data relying on diagnosis codes is that there were required changes from the use of ICD-9 to ICD-10 codes in 2015 and changes in mapping of codes from the *Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5)* to ICD-10 codes beginning in 2018. Both changes in coding may affect the use of these datasets over longer time series for analyses related to cannabis.

The second limitation is related to the clinician coding of cannabis related conditions. Clinicians may not code cannabis related disorders due to stigma and/or legal consequences, a perception that cannabis use is not clinically important, limited time to look up cannabis-specific codes, and underuse of codes that do not contribute to payment and/or health severity calculators.

The third limitation, which is based on different interpretations of laws related to healthcare privacy, is that administrative data that contain health insurance claims may have redacted information for substance use disorder related diagnoses and procedures (*e.g. methadone administration*). The availability of claims with substance use disorder diagnoses within these administrative data are uneven and inconsistent among applicants and over time, which may make it difficult to fully assess impacts of cannabis legalization.

The fourth limitation is related to the innovative Massachusetts Public Health Data Warehouse, which is a unique resource in the Commonwealth. This dataset was originally developed to monitor statewide impacts related to opioid use – and in particular – opioid overdoses but is



being reconstructed to address much broader set of public health priorities. The individual level linkage among datasets is a particularly powerful tool for longitudinal analyses. However, there is not currently a process to gain access to the data outside of DPH Notice of Opportunities, which limits access to research questions that are of particular interest to DPH. As such, there may be significant limitations for the evaluation of cannabis legalization without formal collaboration between DPH and the Commission.

The fifth limitation of the available administrative data is the ability to identify and monitor impacts on the healthcare system related to vulnerable populations. For pregnant women, college-aged adults, and individuals with serious mental illness and/or substance use disorder the administrative data are likely to contain indicators of these conditions and ages and thus will likely be appropriate ways of monitoring. These individuals will appear in the data proportional to their use of the healthcare system. For veterans, these data sources may not be adequate to monitor the impacts of cannabis legalization on their healthcare utilization; many veterans, particularly those with service-related disability, use the Veterans Administration healthcare system, which has separate administrative data that is not recorded in the civilian healthcare system. To monitor impacts on this specific population, partnerships with the Veterans Administration to access their rich healthcare utilization and electronic health records is likely to be necessary. A large proportion of veterans may also use healthcare in the general healthcare system through private or public insurance, but we are unable to identify their veteran status in the administrative data.

Considerations

Our assessment of available data yields several key considerations. Considerations surround better understanding how important several of the limitations we have identified are in evaluating impacts of cannabis legalization on the healthcare system. The four priorities include: 1) understanding clinician coding of cannabis related behaviors in administrative data; 2) understanding the importance of substance use disorder redactions in administrative data for research purposes; 3) potential collaboration with DPH for use of the PHDW to analyze impacts of cannabis legalization; and 4) understanding the work of other states and regions in monitoring impacts of cannabis legalization and the opioid epidemic and development of new data sources for this purpose.

First, understanding clinician testing and coding of cannabis related behaviors in administrative data will help to understand links between healthcare use and whether full information is available in administrative data. For example, prior to legalization, clinicians may not have entered cannabis use into electronic health records unless it was directly clinically relevant for a specific encounter due to concerns around legality and stigma. After legalization, there may be changes in clinician behavior and/or recording of this information. Additionally, administrative data primarily come from billing information, so understanding how diagnosis codes are being applied based on clinician observation will be important. This recommendation may include comparison of electronic health records and administrative data, or primary data collection to



better understand the extent to which cannabis use and dependence may or may not be captured accurately, and changes over time in this behavior.

Second, understanding exact methods of substance use disorder redaction in available datasets and whether these change over time is of importance. For example, the most recent information available suggested that users may be able to obtain non-redacted substance use disorder claims from the MA APCD, but other identifying information (*e.g.*, *service dates*) would not be available simultaneously. This factor limits the ability of researchers to better understand causal relationships by analyzing, for example, the timing of dispensary openings and changes in healthcare utilization in a small geographic area.

Third, better understanding ongoing plans for the issuance of targeted Notices of Opportunity to use the PHDW may be of strategic importance to the Commission. This data source may be a powerful resource to examine a holistic set of health outcomes, but currently has major limitations to its use for cannabis-related monitoring and research.

Fourth, similar to the MA PHDW, researchers studying the opioid epidemic in other states and nationally have extensively explored the question of linked datasets to monitor and evaluate impacts of the epidemic and identifying ways to improve public health.^{37,38} To evaluate the impacts of cannabis on the healthcare system, different types of data may need to be linked and monitored than are currently under consideration. For example, cannabis legalization is less likely to impact mortality than changes to public health strategies targeting opioid use disorder, and thus the inclusion of death data may be less critical in data warehouses. However, other items may be of more strategic value including items such as medical cannabis licenses, and dispensary sales.

C. Incidents of impaired driving

The authorizing legislation requires research on incidents of impaired driving. In field settings (*e.g.* *at the roadside, in a hospital*), measurement of cannabis-related driving impairment from biological measures alone is limited by the current state of the science^{1,39} and Massachusetts does not have a *per se* limit for delta-9-tetrahydrocannabinol (THC) that can be used as legal evidence of driving impairment. Nonetheless, several different types of data are available that relate to the issue of driving under the influence of cannabis, each with strengths and limitations.

Summary of available data

Massachusetts has a number of state-complied data sources that are relevant to cannabis and driving, including administrative data that address motor vehicle crashes, crash-related injuries, and law enforcement stops and arrests. Survey data are also available that address self-reported incidents of driving under the influence of cannabis. We identified three national data sources that allow identification of cannabis exposure among Massachusetts drivers and five available Massachusetts-specific data sources (Table 5).



Crash and incident related data

We considered data relevant to impaired driving along a continuum of decreasing severity of the incident: fatal crashes, injury-causing crashes requiring medical care, crashes involving minor injuries or property damage, and incidents when no crash occurs but law enforcement suspects impaired-driving.

The primary national data source that can be used to monitor indicators related to cannabis and driving in Massachusetts is the Fatality Analysis Reporting System (FARS).⁴⁰ FARS is a census of police-reported fatal injuries suffered in motor vehicle crashes in the United States. FARS includes more than 140 data elements characterizing the details of each crash as well as the vehicles and people involved.⁴¹ This data can be readily downloaded from the National Highway Traffic Safety Administration's website and is currently available from 1975 to 2017.

Information available includes whether the person was tested for alcohol and/or drugs, the test type(s), and the test results, including specific drug types found. A general code for cannabinoids as well as specific codes for THC are included, though FARS does not provide quantitative toxicology results for drugs. State-level trends in both the proportion of fatal crash-involved drivers tested for drugs and the proportion of tested drivers with a positive result for THC or its metabolites can be monitored over time within a state. However, the presence of THC or other cannabinoids does not mean the driver was *impaired* by cannabis use and variations in testing procedures over time and a low number of surviving drivers being tested are key limitations.^{1,42}

The National Incident-Based Reporting System (NIBRS)⁴³ is a national data source that includes incident-level data for crimes that include driving under the influence and the data are available for Massachusetts from the Executive Office of Public Safety and Security (EOPSS). However, alcohol and drug related offenses are grouped together under a single code for driving under the influence; cannabis-specific incidents cannot be identified.

Cannabis-specific information is limited or lacking in most existing datasets, but for monitoring crashes that cause serious nonfatal injury or involve drivers that survive crashes that are fatal for another person, state-level data sources must be used and the Massachusetts Trauma Registry likely provides the best information of the existing sources. Data from Massachusetts Drug Recognition Expert (DRE) program contains the findings from evaluations of individuals suspected by law enforcement of being under the influence of one or more drugs made by specially trained law enforcement officers; such evaluations can occur both after a crash and when a driver is stopped at the roadside and no crash has occurred.

The Massachusetts Trauma Registry is overseen by the Massachusetts Department of Public Health (DPH). All Massachusetts hospitals operating as a designated trauma center are required to submit data to the State Trauma Registry. There are required data elements that collect information on the cause and severity of trauma, as well as demographic information. Starting in 2017, drug and alcohol screenings, if known, became required elements.^{23,44} Diagnosis codes that reflect the mechanism of the traumatic injury allow identification of persons involved in motor vehicle collisions, although the extent to which codes identify drivers versus other vehicle occupants needs additional assessment. The data include patient demographic information. With



IRB-approval and an application process, DPH makes trauma registry data available for analysis by qualified researchers. Hospital claims and discharge datasets (e.g. *APCD*, *CaseMix*) described above (*Section B: Healthcare utilization and financial impacts on the state healthcare system*) may also have some utility for identifying the co-occurrence of ICD-9/10 codes for motor vehicle collisions and diagnoses related to cannabis use (e.g. *cannabis use disorder*; *cannabis intoxication*). Such analyses would be subject to similar limitations as described above.

Drug Recognition Experts (DREs) are specially trained law enforcement officers who receive specialized training to be able to administer several types of assessments and render an expert opinion on whether an individual is under the influence of specific drugs. DREs are frequently called upon to differentiate unsafe driving behaviors stemming from drug (“substance”) influence and medical and/or mental health conditions, which makes them an important part of the process of assessing cannabis-impaired driving.³⁹ The state DRE coordinator is required to collect and submit an annual report for the International Association of Chiefs of Police (IACP) that include the number and percent of all DRE evaluations resulting in the DRE’s judging that cannabis was the impairing substance.³⁹ These data, which are available starting in 2010, have been made available to the Commission and included in previous reports.³⁹

Available datasets that are relevant to impaired driving but do not systematically include indicators of cannabis-specific involvement in crashes are: The Massachusetts Ambulance Trip Record Information System (MATRIS),²⁶ the Crash Data System (CDS) owned by the Massachusetts Department of Transportation Registry of Motor Vehicles (RMV) Division; the Massachusetts State Police data on operating under the influence (OUI) offenses. All these data are available via an application process or partnership with the relevant state agency.

MATRIS includes data on alcohol or drug use indications, but there is no specific code to indicate suspected or admitted cannabis.⁴⁵ The RMV’s CDS tracks all crashes in which a person operating a motor vehicle is killed or injured or in which there is damage in excess of \$1,000 to a vehicle or other property.⁴⁶ At present, CDS data could be used to track overall number of crashes in Massachusetts and in specific counties or geographic areas, but it does not include information on cannabis involvement in a standardized way. Some information may be available through searching the free text fields for cannabis-related words (i.e. *marijuana*, *weed*, *pot*) but this would not provide a systematic assessment.

The Massachusetts State Police collect data on the incidents of operating under the influence (OUI), including “OUI-Alcohol” and “OUI-Drugs”, and “OUI-Unknown Substance” by recording violations of M. G. L. c. 90, § 24., *Driving while under influence of intoxicating liquor, etc.*).³⁹ However, the data does not distinguish between different classes of drugs or between specific drug(s). These data include information on: county in which the incident took place; action taken by the Massachusetts State Police law enforcement (arrest, citation, no action, protective custody, summons, or under investigation); whether the incident resulted in a crash or not; and information about driver race/ethnicity, gender, and Massachusetts residency. The Commission’s Research Department has analyzed and reported on these data previously.³⁹ Municipalities may collect data that allow identification and tracking of cannabis-related incidents of OUI-Drugs, but this is not required and is not systematically implemented across



Massachusetts. The Commission has analyzed and reported on such data from Boston Police Department.³⁹

After an individual is arrested for OUI-Drugs, the case may result in charges filed in court. The Massachusetts Executive Office of the Trial Court maintains a database of records made in connection with a case or proceeding.⁴⁵ This statewide database collects data on charges filed in District and Municipal courts for drug-related OUI charges including charges first offenses, repeated offenses, offenses that cause serious injury, and those that involve recklessness or negligence. Like the Massachusetts State Police data, OUI-Drug charges are not categorized by the specific substance or drug. Thus, the number or percentage of charges that are related to driving under the influence cannot be tracked without a manual review of data. Such an undertaking may be possible in partnership with the Executive Office of the Trial Court, which makes records available for scholarly, educational, journalistic, and governmental purposes. Specific requests are fulfilled based on the discretion of the Court Administrator, in consultation with the Chief Justice of the Trial Court. The trial court does not provide data on an individual, case-level basis, though it works with data requestors to prepare and provide aggregated statistics. Even in aggregate, location of the offense and demographic information may be suppressed to protect the privacy rights of individuals.

Survey data

The Substance Abuse and Mental Health Services Administration's (SAMHSA) National Survey on Drug Use and Health (NSDUH) is an annual, national survey of youth (age 12-18 years) and adults (18 years and older). The NSDUH data can be used to generate population estimates that are representative at the state level.⁴⁷ In 2016, the NSDUH added a question about the number of times in the past 12 months the respondent has driven a vehicle while under the influence of marijuana.⁴⁷ These data could be used to estimate self-reported driving under the influence of marijuana from 2016 to the present among youth, emerging adults (*i.e. individuals age 18-24 years*), and adult cohorts.

Population-level survey data pertaining to adults driving under the influence includes the Massachusetts Behavioral Risk Factor Surveillance System (MA BRFSS), the Massachusetts Marijuana Baseline Health Study (MBHS). The MA BRFSS is a modified version of the national BRFSS survey that collects data on health risk factors among Massachusetts residents and has over 7,000 residents annually.⁴⁸ Starting in 2015, the Massachusetts survey has asked respondents if there were "times in the past year when you were under the influence of marijuana in situations where it could cause you or others harm? For example, when you were driving a car or operating a machine?"⁴⁹ Because the survey item asks about two behaviors, it is not possible to disentangle them to estimate the prevalence of driving under the influence of marijuana alone.

The Massachusetts Marijuana Baseline Health Study (MBHS) included a survey fielded in 2017 that was designed to represent Massachusetts adults. Adults who reported past 30-day cannabis ("marijuana") use were asked to provide information on past 30-day driving under the influence of cannabis.¹ These data could provide valuable information on trends over time if the survey is repeated.



The Youth Risk Behavior Survey (YRBS), conducted in partnership with CDC and the Department of Elementary and Secondary Education, includes an item on cannabis (“marijuana”) and driving. This survey is administered every other year in a representative sample of Massachusetts high schools. It includes a question that asks respondents if in the past 30 days they have driven a car after using cannabis. The Massachusetts Youth Health Survey (MYHS) uses the same question on past 30-day driving after using cannabis and it is administered to middle and high school students.^{7,50} Analysis of these surveys would allow self-reported driving after marijuana use to be tracked across the time for school-attending youth.

Special data sources

In addition to the data described above, there may be information available from specialty surveys from state entities. In 2018, the Commission sent a survey to all of the 351 municipality Law Enforcement Agencies (LEAs) in the state of Massachusetts and Massachusetts State Police to obtain information on existing procedures and resources available for assessing cannabis-impaired driving, including access to DREs and number of officers with Advanced Roadside Impairment Driving Enforcement (ARIDE).³⁹ The MSP and 84 municipalities responded to the survey (24% response rate). If repeated, this survey could be useful for monitoring changes over time. The Commission also participated in the development of a Public Awareness Campaign, *More About Marijuana*, which included information related to cannabis-impaired driving. The methodology the Commission relied on to evaluate *More About Marijuana* included an online panel survey weighted to represent the Massachusetts adult population. This survey presents an opportunity to assess self-reported information about driving under the influence and knowledge about its risks and related law.

In Washington State, roadside studies of alcohol and drug use have been useful sources of information about cannabis use among drivers.⁵¹ Roadside studies typically include random selection of drivers who voluntarily agreed to participate, during various days and times, and provide researcher with anonymous oral fluid and/or blood samples for testing as well as self-reported information on alcohol and drug use. Drivers were not subject to criminal penalty if the oral and blood samples revealed the presence of drugs or alcohol. Several MA counties participated in the 2013-2014 National Roadside Study of Alcohol and Drug.⁵²⁻⁵⁴ This study could provide a useful baseline reference if Massachusetts is able to conduct a future roadside survey.

Limitations

Crash and incident related data

The limitations of the crash and incident related data fall into several main categories: 1) reliance on cannabinoid testing indicates exposure to cannabis and not impairment by cannabis; 2) coding inconsistencies; and 3) lack of inclusion of cannabis-specific indicators.



Data that rely on toxicology testing for THC or its metabolites are subject to important limitations. After inhalation or ingestion, THC can accumulate at different rates in different individuals based on variables that include adiposity, amount and method of use, and frequency of use.^{1,39} The presence of THC in biological samples (e.g. *blood, oral fluid, urine*) does not indicate impairment.⁵³ Extensive discussion of the state of the science for quantifying cannabis exposure in different fluid matrices are presented elsewhere.³⁹ While FARS data include a comprehensive collection on many aspects of fatal motor vehicle crashes, drug related variables are relatively limited and are often not reported, especially for surviving drivers.⁵⁵ FARS data only records up to three drugs for each driver and does not include the amount of each drug detected. In instances when four or more drugs are detected, the first three drugs are reported based on a hierarchy.⁵⁵ FARS does not include quantitative drug levels. Furthermore, there is considerable variation between laboratories across and within state lines with regard to equipment, procedures, and training of personnel in conducting drug testing.⁵⁶

Other crash-related data sources have important limitations. Like FARS, the Massachusetts Trauma Registry Data drug screen results are based on toxicology testing. Urine drug screening is the predominant form of testing for cannabis in routine emergency department care, and this measure indicates cannabis exposure in approximately the past month.⁵⁷ Only five positive drug screening results are included in the data, and no coding hierarchy is provided. Thus, in polysubstance cases, cannabis may be present but not reported. There also may be variation and non-adherence to submission guidelines, including incomplete or erroneous data^{58,59} and challenges due to different coding practices (see further discussion of this issue above in *Section B. Healthcare use and financial impacts on the state healthcare system*).

A key challenge of other existing data sources on crashes and most law enforcement data is that there is not a specific indicator for cannabis-involvement. There is no field in which to report suspected cannabis involvement on the crash forms utilized by police to document crashes in Massachusetts. This impacts the CDS. It is technically possible to search the narrative information which may include mention of cannabis, but there are likely inconsistencies in whether suspected cannabis-involvement is documented. Further, the many terms that may be used (e.g. *marijuana, weed, or pot*) present additional challenges. There may be inconsistencies across entities contributing to the CDS.

At present, Massachusetts State Police data on OUI offenses includes a category for “OUI-Drugs” that does not differentiate between types of drug. Thus, incidence of cannabis-involved crashes cannot be accurately assessed at present.³⁹ Similarly, Massachusetts Courts are not statutorily mandated to categorize drug-related OUIs based on the specific drug or substance involved. For the Commission to obtain insights into charges filed, sentencing, convictions, and incarcerations for cannabis-related motor vehicle offenses in Massachusetts, it would involve an iterative process with the Executive Office of the Trial Court to identify whether it is possible to establish a suitable dataset.

And additional limitation of police and other justice system administrative data is that the extent to which polysubstance incidents — defined, for our purposes, as incidents that involve cannabis



and alcohol or cannabis and another drug — are not well tracked. Typically, if someone is found to have a blood alcohol level above the *per se* limits, investigation of other sources of impairment stops there because an arrest can be made on a charge of OUI-Alcohol. Thus, measurement of the polysubstance impairment drugs and alcohol together is likely subject to significant underreporting in the presently data collected.³⁹

Survey data

Population survey data, in general, has limitations stemming from the fact that it is self-reported and not corroborated by testing of biological samples. Surveys also can be impacted by selection bias if individuals who use marijuana are more or less likely to complete the survey compared to others. Survey data are also subject to recall bias and the possibility of social desirability bias.⁶⁰ Additionally self-reported data are subject to individual interpretation of what it means to be “under the influence” of a drug. No existing population survey puts, for example, a time frame (*e.g. 2-3 hours*) into the question of driving after cannabis use. In addition, no adult survey asks about riding as a passenger with a driver under the influence of cannabis, or whether this behavior occurs with children or other passengers in the vehicle.

Each survey has certain strengths and weaknesses. That the MA BRFSS has only one question encompassing both driving under the influence of cannabis and all other potentially harmful situations is a key limitation. The Massachusetts Baseline Health Study survey data may provide a valuable resource for the Commonwealth, having been designed specifically to address the potential impacts of cannabis legalization. However, it is unclear if the survey will be repeated, and if so, on what time interval.

Considerations

Due to the limitations of the data sources described above, no single dataset currently compiled in Massachusetts can track all incidents of cannabis-impaired driving in the Commonwealth. In addition to analysis of several different existing sources to establish the best sense of patterns in cannabis involvement in motor vehicle crashes and in driving under the influence of cannabis, we suggest: 1) new data collection; 2) modifications to improve existing data collection; 3) detailed assessment of datasets to inform potential for modifications to datasets; and 4) funding research that will help to advance the science of detecting cannabis impaired driving.

We recommend monitoring the presence of THC in crash-injured drivers, for both fatal and nonfatal collisions is encouraged, despite the notable limitation that the presence of THC is not indicative of impairment.⁶¹ Nonetheless, such data can be useful for making comparisons over time (assuming testing methods do not change or that change is accounted for) or across different locations, and for making comparisons to roadside studies of non-crash injured drivers (a method for estimating crash risk).⁶² According to the most recent Massachusetts Strategic Highway Safety Plan,⁶³ the Highway Safety Division is planning to examine the possibility of conducting a Massachusetts Roadside Study of Alcohol and Drug Use by Drivers, as noted in its 2018 recommendations. We support acting on this recommendation as a way to monitor the proportion



of THC-positive drivers on Massachusetts roadways over time. Querying drivers about the recency of substance use would also prove useful, and in combination with testing of crash-injured drivers, a roadside study would permit rigorous estimation of crash risk from cannabis.

With regard to modifications to existing data collection efforts, we note that police records from motor vehicle crashes would be strengthened for purposes of tracking cannabis-involvement if there were standardized fields in which to report officer suspicion of cannabis involvement, and to provide information from any chemical, behavioral, or specialty (*i.e. DRE*) testing conducted.

Data compiled by the Massachusetts State Police and local police departments on incidents involving OUI-Drugs cannot be used to monitor cannabis-involved offenses, specifically, unless a change to reporting requirements and practices is made. This may require a change to the OUI laws and inclusion of a specific category for OUI-Cannabis. Such a change would be of great benefit to monitoring OUI-Cannabis, although there is room for debate around how a determination of could be made since a single chemical or behavioral test does not exist for cannabis-impairment at present. Such issues are discussed at length in the Commission's January 2019 Public Safety Report.³⁹

Although the NSDUH may be useful for tracking self-reported driving under the influence of cannabis in adults and youth, we recommend partnership with independent researchers and/or DPH regarding state-specific surveys that would allow estimation at the regional level not possible in NSDUH. Specifically, we suggest a new wave of data collection to follow up on the Massachusetts MBHS survey items on cannabis and impaired driving. The MYHS could be improved regarding impaired driving if the survey included additional questions that asked about riding in a vehicle with a driver who was under the influence of cannabis or other social norms related to cannabis marijuana and driving. Efforts to test the reliability and validity of self-reported items measuring driving under the influence are suggested including efforts to partner with national entities addressing this issue (*e.g. Centers for Disease Control and Prevention; Council of State and Territorial Epidemiologists.*)

Regarding further assessment of data sources, we recommend evaluation of the extent to which some of the possible limitations to the FARS dataset exist for Massachusetts. Although the FARS data is available from the National Highway Traffic Safety Administration (NHTSA) we recommend partnership with Massachusetts Department of Transportation, the agency that compiles and reports to FARS to assess consistency of over time (*i.e. laboratory reporting of THC specifically vs. grouping into a general code for cannabinoids*). This may necessitate further collaboration with the Office of the Chief Medical Examiner, as drug information in FARS data is compiled from medical examiner toxicology reports.

Assessment of the extent to which ICD-9/10 codes and specific drug use variables in the Massachusetts Trauma Registry dataset can be utilized for monitoring cannabis-related cases is a recommended next step. Massachusetts DPH's Injury Surveillance Program is examining impaired driving crashes, as well as the impact of mixing illicit and licit drugs and alcohol, by utilizing a variety of data sources to better understand the magnitude and characteristics of such crashes. Partnership with the ISP on their current effort to link hospital data with crash data and



providing support for analyses specific to cannabis would be an appropriate way to improve knowledge of the types of crashes that involve cannabis, where they occur, and costs.

D. Ownership and Employment trends

The authorizing legislation requires the Commission’s research agenda to address “*ownership and employment trends in the cannabis industry examining participation by racial, ethnic and socioeconomic subgroups, including identification of barriers to participation in the industry.*” The Commission collects data on a number of indicators related to monitoring ownership and employment in the cannabis industry. In addition, the Commission established an Economic Empowerment Priority Review Program that was designed to help support cannabis business ownership by individuals from demographic and geographic groups that have borne a disproportionate share of negative consequences (*e.g. arrests, incarceration*) from marijuana prohibition and enforcement policies.⁶⁴ There is also a Social Equity Program designed to “*build a pathway for individuals and businesses that wish to build, enter, and support a robust adult-use cannabis marketplace regardless of their desired level of involvement or area of specialty.*”⁶⁵ The social equity program provides training, and technical assistance to support cannabis industry participation by people from communities that have previously been disproportionately harmed by marijuana prohibition and enforcement.

Summary of available data

Business ownership and workforce

Cannabis industry workforce data is collected by the Commission via the application process⁶⁶ and the Massachusetts Cannabis Industry Portal (Mass CIP).⁶⁶ All owners and controlling parties of Marijuana Establishments and Medical Marijuana Treatment Centers and individuals working in the cannabis industry are considered Marijuana Establishment “Agents.” Detailed demographic information is collected including: residential address, gender, age and race/ethnicity.[‡] Additionally, disadvantaged business enterprise (DBE) data are collected on a voluntary basis, which includes: 1) Women-owned businesses; 2) Veteran-owned businesses; 3) Minority-owned businesses; 4) Lesbian, Gay, Bisexual, Transgender-owned business; and 4) two or more DBE business types. These data can be used to assess trends in cannabis business ownership and evaluate the impact of specific programs that may be implemented to support diversity of cannabis business ownership.

[‡] Native Hawaiian or Other Pacific Islander (Native Hawaiian, Samoan, Chamorro, Tongan, Fijian, Marshallese), American Indian or Alaska Native, Middle Eastern or North African (Lebanese, Iranian, Egyptian, Syrian, Moroccan, Algerian), Asian (Chinese, Filipino, Asian Indian, Vietnamese, Korean, Japanese), Black or African American (of African Descent, African American, Nigerian, Jamaican, Ethiopian, Haitian, Somali), Hispanic, Latino, or Spanish (Mexican or Mexican American, Puerto Rican, Cuban, Salvadoran, Dominican, Colombian), White (German, Irish, English, Italian, Polish, French), Some Other Race or Ethnicity, Identified as Two or More Ethnicities, or Declined to answer.



Barriers to entry

The Commission will pursue research on barriers to entry into Massachusetts' legal cannabis market. This mixed methods project will include experienced and anticipated barriers to enter the cannabis industry for current and potential entrants, demographic cohorts, and entities. The results of this work would inform further research and provide insights for policymaking. In October 2019, the Commission assessed Positive Impact Plans based on a review of Social Equity Program applications and other materials.⁶⁷ Consequently, the Commission is undertaking efforts to revise guidance on the Positive Impact Plan and ensure its purpose is understood by all applicants and the public.

Limitations

Because participants voluntarily self-report demographic characteristics, the information may be incomplete. Additional anticipated limitations of the planned research design include potential challenges with recruitment and retention of study participants, which will be necessary to fully assess the varying barriers to entry of diverse current and potential applicants.

Considerations

Through existing data collection by the Commission, the some of the geographic and demographic composition of cannabis business owners, including controlling entities, and agents can be monitored. Providing monetary compensation for study participants, a standard practice in academic research, could increase the likelihood of enrolling and maintaining a diverse study population and lead to higher post-baseline retention rates.

E. Cannabis markets

The authorizing legislation calls for “*a market analysis examining the expansion or contraction of the illicit marketplace and the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets.*” There are two general approaches to estimating drug market size: 1) supply side (*i.e. production-based and seizure-based*); and 2) demand side (*e.g. consumption-based and expenditure-based*) estimates. These can be applied to both legal and illegal markets. In Colorado and Washington, the first states to implement legal, adult-use marijuana regulations, teams of academic, government, and nonprofit firm researchers conducted market analyses.^{68,69} Methodology of these analyses included internet surveys to estimate expenditures and details of cannabis products utilized. Since that time private sector market analysis firms have expanded their practices to include legal marijuana markets and firms specializing on marijuana market intelligence have begun publishing materials.



Summary of available data

Legal market

Supply side estimates of the legal market can be obtained through Metrc, the seed-to-sale tracking system utilized by the Commission.⁷⁰ Implemented on April 1, 2018, and updated in real time, this data collection allows monitoring the legal marketplace. The data maintained by the Commission includes three categories of data for the adult-use industry: 1) agent registration; 2) applications and licenses; and 3) sales and product distribution. The applications and licenses data include varying licensing timelines and mechanisms, including: 1) application and license review; 2) status of applications opened; 3) total applications under review by type; and 4) licenses awarded by type. As different license types are added, these categories will change. The sales and product distribution category contains indicators of sales in dollars and units of different types of products sold. Market data is published on the [Commission's website](#) and the raw data can be used by the Commission to fulfill its research agenda.

Broadly speaking, demand side estimation of cannabis markets has been done utilizing estimates of the number of cannabis users and frequency of cannabis use from general population surveys and combining this with information about expenditures.^{68,69,71} Population surveys described previously in this report, such as the National Study on Drug Use and Health, and Massachusetts Behavioral Risk Factor Surveillance Survey⁵ are available for can be used towards estimating the number of cannabis users and frequency of use, but do not include detailed information on expenditures nor stratify out by market where cannabis and/or cannabis products were obtained (*i.e. licit or illicit market*). Use of these sources towards market estimation would require them to be combined with information on pricing or expenditures from other sources. The Massachusetts Marijuana Baseline Health Study¹ assessed the number of cannabis users, frequency of use, and expenditures, but did not directly assess whether cannabis users obtained cannabis via the licit or illicit market.

Illegal market

Researchers sometimes use information on cannabis seizures by law enforcement to help estimate the size of illicit markets,⁷² but this data does not provide a comprehensive picture. Several websites have developed cannabis price indices which could potentially be used towards estimating the size of the illicit market. [Price of Weed](#), a global price index, crowdsources the street value of cannabis.⁷³ The [Budzu](#) website also provided crowdsourced information about cannabis prices, with prices in dollars (\$) per gram.⁷⁴ Prices are broken down into four categories for purchase location (dispensary medical, dispensary recreational, street medical, street recreational) and provided for low, medium, and high quality cannabis. On a near daily basis, these sites list new submissions documenting self-reported location (at the city/town level), price, quantity, and quality. Seedo,⁷⁵ which sells a hydroponic growing device, and ABCD,⁷⁶ a public relations firm, have created a [Cannabis Price Index](#)⁷⁷ utilizing Google Maps search results and crowdsourced city surveys. They provide estimates of the price of cannabis per gram, in U.S.



dollars, for 120 large cities, including some U.S. cities. Their methodology is included in the website.

Legal and illegal markets

BDS Analytics,⁷⁸ a company based in Boulder, Colorado is the official data partner of the National Cannabis Industry Association⁷⁹ and currently documents sales in both legal and illegal markets in Arizona, California, Colorado, and Oregon. The cannabis industry data company provides “data-driven insights, market intelligence, and complete consumer understanding.”⁷⁸ BDS Analytics had made predictions about cannabis (“marijuana”) sales in Massachusetts for 2019, suggesting that 76.3% of marijuana sales are through the illicit marketplace.⁸⁰ The methods utilized to generate this estimate are proprietary.

The Commission’s Research Department is collaborating on *The International Cannabis Policy Study* (Principle Investigator, Dr. David Hammond, University of Waterloo), an ongoing epidemiologic study conducted in Canada and the United States surveilling varying cannabis use patterns and outcomes, including: problem use, and legal and illicit market sourcing.⁸¹ This ongoing study will provide information for 2018 and 2019 about Massachusetts markets that allows for a preliminary assessment of “the expansion or contraction of the legal marketplace, including estimates and comparisons of pricing and product availability in both markets.” These data will be incorporated into future reports by the Commission.

Limitations

Data needed for demand side estimates of expenditures are not routinely collected by the state, but would be an important part of market analyses, especially those that seek to address the illicit market. The *International Cannabis Policy Study* may help to address this challenge.

Reliable data to inform supply side estimates pricing, product availability, and potency in illicit markets is also not available, due to the nature of the illicit marketplace. Information on the illicit market is limited to that which could be obtained from industry analysts and crowdsourced information. Industry analysts may have valuable data, but assessment of costs and potential biases is necessary before use of such data could be recommended. Crowdsourced data is subject to selection bias. Because of this, we do not recommend the use of such data unless efforts to evaluate its reliability through comparison to a survey-based demand side information and supply side information.

Considerations

A market size study including monitoring changes over time would be needed to meet these legislative requirements. The robust seed-to-sale data maintained by the Commission is helpful towards this end, but monitoring of the illicit market will take additional data and support from



law enforcement agencies. We suggest Massachusetts take a multidisciplinary approach to developing market studies, similar to the approaches by Washington and Oregon.^{68,69}

F. Cannabis-related incidents in schools

The authorizing legislation calls for the Commission to “*compile data on the number of incidents of discipline in schools, including suspensions or expulsions, resulting from cannabis (“marijuana”) use or possession of marijuana or marijuana products.*”

Summary of available data

The Department of Elementary and Secondary Education (DESE) collects discipline data from school districts, charter schools, and virtual schools, per M.G.L. c. 71, §37H and 603 C.M.R. 53.14. Schools are required to report all incidents involving drugs, violent, or crime-related offenses on school property and any resulting suspensions or removals imposed on the student offender(s). Reportable disciplinary actions include in-school suspension lasting more than ½ a school day, out of school suspension, expulsion, removal by an impartial hearing officer or by school personnel to an alternative setting, and emergency removal. Reportable offenses that relate to cannabis include “marijuana use” and “marijuana possession.”

The information collected by DESE include the date of incident, school name/code, first and last name of disciplined student, date of birth of disciplined student, offense indicator (whether it is reportable), whether the incident resulted in disciplinary action and if so what type, start and end of discipline, days of school missed as a result of discipline, type of education services provided to student during discipline. They also gather information about school-related arrests including type of offense, the number of student victims, number of school personnel victims, number of non-school personnel victims, number of offenders (both student and non-student), description of offense, and whether the incident resulted in injury.⁸² Much of this information is publicly available for 2001-2017 via the online [Student Discipline Data Report](#) which allows assessment—at the district and school level—for marijuana use and marijuana possession by race/ethnicity, gender, special education, economic advantage, limited English proficiency (LEP), and high need status. The online reports do not allow assessment of more than one category (*i.e. Black girls in Andover*). Confidential student level data, however, can be accessed by qualified researchers working under appropriate data sharing agreements.

Limitations

DESE compiles valuable information about the incidents of student discipline, including suspension and expulsion resulting from cannabis (“marijuana”) use or possession at school. One limitation of these data are that data may be censored to protect student anonymity when reports are requested at the school district-level and there are fewer than six offenses reported in a given time period. Additionally, student-level data to support analyses that incorporate multiple



variables (*i.e. demographic information and gender and location*) is needed assess whether students from minority groups are disproportionately impacted by school discipline related to cannabis. Procurement of these within the disciplinary data for purposes of the research agenda will require collaboration with external researchers with Institutional Review Board (IRB) capabilities.

Considerations

Through a more research-intensive collaboration with DESE or a collection of new data, exploration of the demographic and other factors associated with cannabis-related discipline at school would provide insights into whether and how changing cannabis policies may impact different student subpopulations regarding discipline. We suggest a formal collaboration with researchers with IRB capabilities to ensure adequate data procurement and analyses.

G. Criminal justice encounters

The Commission’s research mandate includes “*the compilation of data on the number of civil penalties, arrests, prosecutions, incarcerations and sanctions imposed for violations of Massachusetts General Law (M.G.L.) Chapter 94C for possession, distribution or trafficking of marijuana or marijuana products, including the age, race, gender, country of origin, state geographic region and average sanctions of the persons charged.*” The Commission’s April 2019 report provided a baseline assessment in this topic area based on readily available data and literature review.

Summary of available data

The present State of the Data assessment included review of the Commission’s April 2019 report and identification of additional data sources that may be relevant to cannabis-related prosecutions, incarcerations, sanctions imposed, average sanctions of the persons charged for violations of M.G.L. c. 94C, and civil penalties.⁸³ Including those previously described by Doonan and Johnson,⁸³ we identified one national data source with a state indicator and six Massachusetts-specific sources that can be utilized to address these indicators (Table 6).

Arrests

At the federal level, the Uniform Crime Reporting program, run by the Federal Bureau of Investigation, is a valuable resource for monitoring indicators in Massachusetts relevant to this topic. It encompasses the National Incident Based Reporting System (NIBRS), which provides individual and aggregate data on crime incidents, including data on both perpetrators and victims. Data about cannabis-related incidents are included such as cultivating or manufacturing; transporting, transmitting, and importing; distributing or selling; possessing or concealing; buying or receiving; and using or consuming.⁸³ At present, a majority of Massachusetts



municipalities contribute data to NIBRS. The Boston Police Department (BPD) does not contribute to NIBRS. Key demographic information is included in NIBRS (*e.g. age, race, ethnicity, gender, and residency status*), which is important when measuring inequities between and among groups. Such analyses were undertaken by the Commission’s Research Department and previously reported for the baseline period before the widespread implementation of retail cannabis sales for adult use.⁸³

At the state level, The Massachusetts State Police tracks data on cannabis (“marijuana”) and Class D violations (a class that encompassed cannabis and several other drugs) across the state, in accordance with M.G.L. c. 94C. Data from MSP encompass violations for: cannabis trafficking into the state, cannabis possession greater than and less than two ounces, cultivation/manufacturing a Class D substance, distributing or intention to distribute a Class D substance, possession of a Class D substance, and drug violations near a school or park.⁸³ Key demographic information, as described above, are also included here. Additionally, the Massachusetts’ State Police CrimeSOLV is a statewide database that collects crime statistics such as cannabis or hashish law enforcement seizures and compiles them into tables and charts.⁸³

Data are also collected on the municipality-level across the state of Massachusetts on violations of M.G.L. c. 94C-Class D violations including: distribution of Class D substances; possession with intent to distribute a Class D substance; cannabis possession; and cannabis trafficking. Obtaining municipal level data, if not provided via NIBRS, requires coordination with municipal authorities (*e.g. Boston Police Department*).

The New England High Intensity Drug Trafficking Area (HIDTA) is a program administered by the Office of National Drug Control Policy and aims to reduce drug trafficking in New England by disrupting drug trafficking organizations and improving the efficiency and effectiveness of law enforcement organizations.⁸⁴ The New England HIDTA program employs a team of analysts who have access to several state and national databases that can be used to assess cannabis-related crimes. Statewide databases include data from the Massachusetts State Police and on the federal level, the New England HIDTA has access to the FBI Sentinel database which includes investigative, intelligence, personnel, and administrative data collected by the FBI,⁸⁵ the Domestic Highway Enforcement Initiative which includes data about highway enforcement, and the National Search and Seizure Database. Collaboration with the HIDTA is needed to produce reports on cannabis trafficking and other highway enforcement activities. Data from HIDTA has been used for monitoring purposes in other states to legalize cannabis.⁸⁶

Sentencing

The Massachusetts Executive Office of the Trial Court (EOTC) maintains a Trial Court Case Management Database which provides access to court records such as court papers, documents, exhibits, orders, recordings, and dockets made in connection with a case or proceeding. Requests can be submitted for data from all courts across the state (*e.g. superior, district, juvenile, trial, appeals*) on sentencing, conviction, and incarceration related to cannabis offenses. The EOTC



can provide compiled (*i.e. aggregate*) statistics on charges filed in District and Municipal courts for drug-related charges. Data can be requested that includes demographic information such as county, age, gender, and race/ethnicity; however, these specifications might be withheld if the sample size is too small in order to protect the anonymity of offenders. The categories of cannabis offenses that can be compiled include those related to “marihuana possession (+1 oz)”, “marijuana trafficking” with various categories by weight, as well as Class D offenses that may be related to cannabis (*e.g. possession of a class D drug; distribution or possession with intent to distribute a Class D drug*). Standard data fields do not permit separation of Class D violations by the specific drug or substance involved. Requests are fulfilled based on the discretion of the Court Administrator, in consultation with the Chief Justice of the Trial Court.”⁸⁷

Incarcerations

The Massachusetts Department of Correction (DOC) is a data source for information on incarcerations including on length of sentences, length of time served, and conditions of release (*i.e. parole supervision, probation supervision, no post release supervision*). The information compiled includes information from inmates such as gender, race/ethnicity, age, and governing offense. Offenses are classified according to the M.G.L c 94C categories and mirror those maintained by municipal law enforcement and the trial court (*i.e. Distribution of Class D substance; Possession with intent to distribute a Class D substance; marijuana possession; and marijuana trafficking.*) Researchers and state agencies can submit proposals that seek to access data from the Department of Correction per the [Research Proposal Policy 103 CMR 180](#).⁸⁸ All proposals are approved on a case by case basis. Most cannabis-related convictions result in sentences of fewer than 2.5 years and these offenders are sent to the Massachusetts House of Correction (which is managed at the county level), rather than the Department of Correction which oversees incarceration of persons who are sentenced to 2.5 years or longer. For data on cannabis-related convictions resulting in sentences of fewer than 2.5 years, the individual county-based House of Correction must be contacted about data access. Every county-based House of Correction has their own process for requesting research data, as well as the types of data available.

Limitations

The NIBRS has several limitations with regard to tracking cannabis-related offenses, including the fact that submitting data is voluntary and not all states or law enforcement agencies provide data.⁸³ In addition, Boston, the largest city in the state of Massachusetts, does not submit data to the NIBRS, limiting the ability of this dataset to accurately capture statewide cannabis-related offences.⁸³ The MSP data on cannabis-related offenses is valuable, but it is worth noting that race/ethnicity is collected by law enforcement based on both asking individuals directly and by officer inference, which could result in inaccurate assumptions about race.⁸³ The Massachusetts State Police (MSP) CrimeSOLV is a limited resource because it does not include all cities and towns in the state of Massachusetts and cannot be used to generate statewide statistics.⁸³



The HIDTA data has several limitations with regard to monitoring cannabis related offenses. First, New England HIDTA has prioritized their efforts around combatting the opioid epidemic, as well as the increase in trafficking of fentanyl, crack, cocaine, and methamphetamine. Cannabis has not been a priority area. There may be overlap with data available from the Massachusetts State Police. Access to data maintained by this agency would require development of partnerships; the sharing of individual-level data outside the agency may not be possible.

Categorization of cannabis-related offenses in existing databases with information about arrests, prosecutions, incarcerations and sanctions maintained by the MSP, municipal police departments, the Executive Office of the Trial Court, The Massachusetts Department of Correction and Massachusetts Houses of Correction are limited by the way that the statutes regarding cannabis and class D offenses are framed. It may not be possible to separate Class D violations related to cannabis from Class D violations pertaining to other drugs without extensive partnership and individual-level case review.

The data provided by the MA EOTC from the Trial Court Case Management Database may provide critical insights into sentencing and convictions for cannabis-related offences in the state of Massachusetts, but these data are not released at the case level. In partnership with the EOTC, the Commission can access such information for future reports. A codebook or listing of data elements is not available, thus obtaining trial court data will likely involve an iterative process with the agency to establish a suitable dataset.

Regarding incarceration, because most individuals who serve time for cannabis-related offenses would do so in a county house of correction, the data is decentralized and held within each county. Procurement of that data would involve requests to each county separately.

Considerations

Data to assess violations of M.G.L. c94C are available from different state agencies and will require several different steps and a considerable amount of time to obtain the information needed to address the research mandate. The Commission's Research Department has already begun these processes, but additional steps will be needed to address the full scope of the legislation. The Commission will likely need to partner with researchers operating under an Institutional Review Board (IRB) to develop proposals for submission to criminal justice agencies for the purpose of procuring relevant data. In some cases, only aggregate statistics may be provided and collaboration with the other state agencies may be needed to ensure adequate staff time to respond to requests that involve manual data abstraction.

There is no mechanism in place to track payment of fines associated with civil penalties for cannabis possession. We recommend that the Commission consider tracking these incidents in partnership with the Executive Office of Public Safety and Security (EOPSS) and local municipalities, so that the extent of civil penalties can be monitored. Ideally, basic demographic



information would be compiled to allow monitoring of potential inequities in the distribution of who receives civil penalties.

H. Economic and fiscal impacts

As specified in the legislation, the research duties of the Commission include monitoring the economic and fiscal impacts for state and local governments including the impact of legalization on the production and distribution of marijuana in the illicit market and the costs and benefits to state and local revenue.

The reliable estimation of economic impacts requires specialized research skills and estimation of impacts at the state level requires different models than impacts for local jurisdictions. The Marijuana Baseline Health Study¹ included development of an economic model to assess state-level costs.[§] The model, completed in 2018, incorporated data from a combination of sources including those described in other sections within this report. It is a starting point for development of a new model to reflect hypothetical and observed impacts.

Development of a new economic model would encompass many data sources which are described throughout this report and would combine estimates of the impact on key indicators in the domains described here with fiscal information from state agencies, and previously established cost estimates.

The cannabis tax rate is key to the calculation of the benefits to revenue. At present, Massachusetts cannabis sales are subject to a regular state sales tax of 6.25% in addition to a 10.75% excise tax. The law allows municipalities to solicit a local sales tax of up to 3% of annual revenue earned through commercial cannabis sales. However, this ruling does not prohibit cities and towns from crafting “benefit pacts” with prospective adult-use cannabis businesses that can result in additional revenue to the municipality. There are 351 municipalities in Massachusetts. Assessment of impacts on local revenue must be done in partnership with the municipal entities. To assess the extent to which such activities are revenue-neutral for municipalities would require comparison of funds expended on policing in/around cannabis businesses with funds obtained from those businesses. Significant data-gathering efforts to obtain municipal-level information may be needed to assess local impacts. Some information is likely contained within applications submitted by business applicants to the Commission as part of the licensing and regulatory process.

To assess the fiscal impact of legalized adult-use cannabis, updated estimates and new models with assumptions based on the observed changes since retail, adult-use cannabis sales begin are

[§] We refer the reader to Task 3, Chapter 1 (p. 235) in the Marijuana Baseline Health Study final report for detailed information on the key domains for economic modeling and sources of data for estimates of costs and benefits to state funds.



needed. We suggest that the Commission consider establishing a partnerships with qualified researchers and experts in cannabis policy to fulfil this legislative mandate.

I. Energy

Although not included in the authorizing legislation, there is interest in the energy implications of cannabis legalization. Cannabis cultivation is energy intensive. Indoor growing facilities require high intensity lighting, fans, ventilation, cooling, water pumps, and dehumidifiers. A recent report from the Massachusetts Department of Energy Resources (DOER) noted that the energy use intensity per square foot in a cannabis cultivation facility was orders of magnitude higher than other commercial and industrial uses. Accordingly, monitoring the impact of cannabis legalization on energy, and particularly electricity, use is of importance to the Commission as the Commonwealth works towards emission reduction targets.⁸⁹

The total size of the New England electric market at retail prices is about \$19 billion annually and the Massachusetts market is almost \$9 billion.⁹⁰ Prior analyses in other cities and regions have shown that a small fraction of overall electricity consumption is due to cannabis cultivation,⁹¹ but the impact of cultivation may be larger for smaller geographical units (i.e. municipalities).

Summary of available data

Using a combination of document and website review and contact with key stakeholders, we identified key indicators, potential data sources, and limitations of these sources. The key indicators for monitoring electricity consumption related to cannabis legalization in the Commonwealth are usage and pricing. We identified four potential primary data sources for electricity consumption in the Commonwealth, which we detail below: U.S. Energy Information Administration, ISO New England,⁹² electricity suppliers, and Massachusetts Department of Public Utilities (DPU).

In considering empirical analyses that might be conducted to identify changes in electricity use at the regional or state level, other data sources would need to be incorporated. The majority of year-to-year fluctuation in electricity consumption is driven by changes in weather patterns, and particularly summer weather both in average temperatures and in multi-day weather events; this includes humidity, with the dew point being an important indicator to consider. Long-term trends in electricity consumption relate to economic activity, changes in energy efficiency regulation, electric vehicles, manufacturing, demographics, and other factors. Two types of potential analyses seem possible using available data: 1) If individual address level data can be obtained (discussion below) then electricity generation related to cannabis cultivation could be calculated; or 2) Changes in state-level energy consumption related to cannabis legalization using comparisons pre and post legalization and Massachusetts versus New England states. It is difficult to draw conclusions about cause-and-effect these analyses because of data quality and



the extent to which analyses, particularly changes in state-level energy consumption, can control for non-cannabis cultivation related factors.

U.S. Energy Information Administration

The U.S. Energy Information Administration provides the official energy statistics of the U.S. government. They aggregate several data sources to produce monthly estimates of electricity retail sales, which are a proxy for end-use consumption. These estimates are available at the state level and the distribution company level, annually, but are not available at the five-digit ZIP code level or more granular geographic areas.

ISO New England

ISO New England (ISO-NE) is a regional entity that has three major roles in the electricity sector: operating the power system of New England, administering wholesale electricity markets, and power system planning.⁹² ISO-NE has publicly available data at the load zone level for the three zones in Massachusetts (*i.e.*, *Northeast Massachusetts, Southeast Massachusetts, and Western/Central Massachusetts*). These data capture the total energy usage in terms of consumption and wholesale prices. They include electricity delivered to residential and commercial customers by electricity suppliers as well as wholesale market participants. These data exclude “behind the meter” production and consumption, which includes methods such as rooftop solar panels and a hospital generator where power might be produced and consumed simultaneously and would not be reported in these data. This lack of behind the meter data may underestimate total electricity consumption in the state.

Electricity Suppliers

Another potential source of electricity data is electricity suppliers, who may be able to supply information related to consumption and spending on electricity at retail prices and may potentially be able to see behind the meter production/consumption. Commercial and residential customers in Massachusetts can receive their electricity from a number of suppliers, depending on their address location.

There are four electric companies serving residential and commercial customers in Massachusetts: Eversource Energy East; Eversource Energy West; National Grid; and Unitil. We were not able to get in contact with all these suppliers; our limited interactions suggest that customer privacy would be a deterrent to obtaining information at the account or address level.

In addition to these four electric companies, there are 40 communities with municipal light plants (MLP) that serve 50 municipalities in the Commonwealth. For example, the City of Holyoke is served by Holyoke Gas and Electric. These MLPs are generally not regulated by the Department of Public Utilities in the same way as other entities.⁹³

There is a trade organization of MLPs – Massachusetts Municipal Wholesale Electric Companies (MMWEC) – representing about half of the MLPs. MMWEC is subject to public records



requests in Massachusetts. MMWEC maintains data on the electric loads (consumption) at the municipality level for their 20 members, and they are able to release these data for research purposes. However, they neither receive nor release address level data; each MLP is likely to have a different policy or process by which address/account level data are or are not available.

Large commercial entities that consume a significant amount of electricity may participate in the wholesale market; if they participate directly in the wholesale market, then their consumption information is not available from any of the electric suppliers or MLPs, but may be available from the wholesale participant directly. An example of a company that participates directly in the wholesale market that may be relevant for the cannabis industry is Shipyard Brewing Company in Portland, ME.

Massachusetts Department of Public Utilities

The DPU oversees the reliability and costs of electricity provided in Massachusetts and oversees and implements clean and renewable energy initiatives. DPU also regulates retail delivery service provided by electric utility companies. DPU collected a significant amount of detailed information regarding conservation efforts through the MassSave program.⁹⁴ However, it does not appear that they obtained address/account level data on electricity consumption through the extensive implementation and ongoing evaluation process.

Limitations

There are two primary limitations to the data available to monitor electricity consumption: 1) availability of address level information; and 2) changes in data included in each source over time.

To calculate changes in electricity consumption associated with legalization of cannabis in the Commonwealth, the two potential analysis methods are discussed above. Limitations of calculating changes at the state level using comparisons over time include fluctuations in electricity consumption based on weather and economic factors. It would be difficult to attribute changes in electricity consumption to cannabis legalization, particularly given the small size of cannabis electricity consumption relative to the overall market. For example, a one million square foot cannabis cultivation facility is expected to have electricity consumption at wholesale prices of approximately \$600,000 annually, although this potentially varies substantially depending on the lighting type, insulation level, and location.⁸⁹

This suggests that the collection of address level information for legal cultivators is necessary to adequately assess electricity consumption. The main potential sources of these data that we identified are the electricity suppliers in Massachusetts. Getting address and account level information is likely to be difficult for research purposes without intense cooperation between the Commission and suppliers and/or new regulations related to the release of these data. Suppliers cited confidentiality concerns regarding individual level data, and MMWEC does not maintain the information meaning that data would have to be collected from each of the 40 MLPs individually if available.



The second limitation is changes in what data are available from each source over time, with changes in renewable energy penetration and retail versus wholesale distribution. For example, the data from ISO-New England excludes “behind the meter” electricity production and consumption. As solar panels become more common, more electricity production and consumption falls into this category, which may impact the use of these data for analyses over time. Accounting for this would also be important even with information from electric suppliers, as accurately accounting for the full amount of power consumed (whether from traditional electric sources or from solar panels) is important to fully understand the impact of cannabis legalization. Additionally, understanding the role of wholesale distribution and any changes over time in the market is important; this is available in some data sources and not others, and may be an important component of overall electricity use.

Considerations

Two primary considerations related to data available to monitor impacts of cannabis legalization on electricity use include the following: 1) mandated or voluntary collection of electricity use from legal cultivators; and/or 2) collection of address or highly local (*e.g., census block*) electricity consumption by a state agency.

Our primary suggestion is to obtain address/account level information for electricity consumption by legal cultivators through a mandated request for cannabis cultivators to make their account information available to the Commission as part of the licensing process. If cultivators, for example, submitted their electric bills on a quarterly basis to the Commission or other government entity, analysis could be conducted on total electricity consumption by legal cultivators. Understanding whether these accounts are primarily through electricity suppliers versus wholesale markets, and the related role of behind the meter electricity production/use in these data is particularly important in understanding the role of renewable energy sources. One major limitation of mandated provision of electric information is that this is unlikely to capture electricity use by home growers and/or unlicensed cultivators (either before or after legalization).

A second consideration if cultivators are not mandated to provide electricity information is to have a state agency collect highly local (*e.g., address level or census block level*) electricity consumption data to match with licensing information. This could then be used to determine electricity consumption. Additional legislation authorizing the collection of this information is likely to be necessary given current data limitations. Potential state agencies that might be of interest for the collection of this information are the DPU, which regulates electric suppliers and retail delivery service, and the DOER, which uses data to determine state energy use and progress towards clean energy goals. Further exploring the capacity of these public entities to collect and securely administer this information may be of strategic value.










Revised regulations from the Commission require cannabis cultivators to submit electricity and water usage information with all renewal applications.⁹⁵ This is an important step towards measuring impacts of cannabis legalization on energy usage and will help towards meeting emission reduction targets.

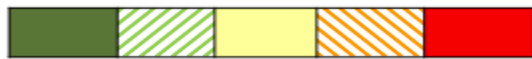


IV. Conclusions

A substantial number of data sources exist for evaluating and monitoring the potential impacts of cannabis legalization in the Commonwealth of Massachusetts pursuant to the legislative mandate in *Chapter 55 of the Acts of 2017: An Act to Ensure Safe Access to Marijuana*. Findings for the state of the data of the nine domains evaluated in this report are summarized below.

Table. Research domains and availability of existing data for monitoring purposes.

Data Domain	Data availability and ease-of-access
Cannabis use patterns and perceptions	
Healthcare use and costs	
Incidents of cannabis-impaired driving	
Ownership and employment trends	
Cannabis markets	
Cannabis-related incidents in school	
Criminal justice encounters	
Economic and fiscal impacts	
Energy	



Existing data readily available Data not available

For each domain, we highlight several key conclusions:

Cannabis use patterns and perceptions

- Data from existing population surveys are available to monitor cannabis use.
- Detailed information on patterns of use, locations of use, cannabis storage practices are only available for certain populations and certain timeframes.
- Data pertaining to specific subpopulations (*i.e. pregnant women and individuals with mental illness*) or priority populations (*i.e. emerging adults*) are also limited.
- Additional data collection is should be considered.

Healthcare use and financial impacts on the state healthcare system

- Massachusetts has a number of datasets that can contribute to monitoring this area.
- It will be important to assess and acknowledge the impact of potential changes in reporting/coding of cannabis-related incidents related to its changing legal status and stigma as well as limitations to data availability.



Incidents of cannabis-impaired driving

- There are significant limitations to the available data to measure cannabis involvement in motor vehicle crashes, especially non-fatal crashes.
- While self-reported incidents of driving under the influence of marijuana are measured in several data sources, co-use of marijuana and other substances (*i.e. alcohol*) is also of concern and cannot be tracked over time with existing data.
- Changes to data collection practices for police crash reports and when officers arrest someone for operating under the influence to ensure that OUI-cannabis is recorded separately from other drugs would improve monitoring in this area.
- Recognizing that it does not indicate impairment directly, assessment of THC in crash-injured drivers and roadside survey data collection should be explored. Additional research into measurement of cannabis impaired driving should be considered.

Cannabis-related incidents in schools

- Existing data on education is an area of strength.
- Working in partnership with researchers that have access to an IRB and with the DESE, the Commission can evaluate cannabis-related incidents in schools.

Ownership and employment trends; cannabis markets

- Data in these areas are collected by the Commission and available for monitoring.

Criminal justice encounters

- Many cannabis-related interactions with the criminal justice system are generally not tracked in ways that allow cannabis-related cases to be separated from cases related to other drugs.
- Changes to coding of cannabis-related encounters in criminal justice system data should be considered.
- Centralized tracking of civil offenses related to cannabis should be considered.

Economic and Fiscal Impacts

- Specialized research skills are needed to assess economic and fiscal impacts.
- Many of the data sources reviewed in this report, and additional data collection that may be undertaken based on the considerations raised here, could inform such analyses.

Energy

- Existing data sources, at the time of publication of this report, are not available to meet the Commission's interest regarding electricity use.
- As the most recent set of regulations are implemented, the Commission will be better poised to monitor this issue.



Additional considerations and conclusions

For some data sources, the extent to which certain limitations impact the usability or generalizability of the data cannot be known until data is obtained, cleaned, and evaluated. Research to understand the data quality and its limitations, which may involve both qualitative and quantitative analysis, should be considered.

Massachusetts was a leader among states in the development of provisions for social equity licensing. However, research needed to effectively evaluate the impact of such a licensing structure on communities of disproportionate impact lag behind because of data collection practices that do not allow the unique identification of indicators such as cannabis-involved incidents of impaired driving or criminal justice system involvement for specific cannabis-related offense types. Steps to address may require additional research and changes to existing laws; these are both appropriate steps to consider.

The annual requirement for reporting on the indicators in the authorizing legislation may be incompatible with the time and effort it takes to conduct high quality research. Revision of the annual reporting requirement to allow for the creation of a longer-term research agenda for the Commission and reporting on intervals that are consistent with conduct of research on par with peer-reviewed academic work would benefit the Commonwealth.

Based on this assessment of the state of the data, significant resources may be needed to support rigorous research that would allow the Commission to evaluate changes in the key areas that will inform the Commonwealth on the impact of cannabis legalization and actions needed to maximize benefits and reduce harms. There are opportunities for Massachusetts to be a leader among states with regard to understanding the impacts of cannabis legalization if research activities and regulatory activities are better coordinated with a goal of evaluating regulatory changes.

It is worth noting that obtaining, cleaning, analyzing and reporting on such data is a time-consuming and sometimes costly process. The Legislature may wish to consider a revision or clarification of the annual reporting such that only priority indicators likely to change significantly from year-to-year (*e.g. cannabis sales*) are reported annually. A less frequent reporting interval would be appropriate for indicators likely to change more slowly over time (*e.g. rate of cannabis use among adolescents*), those for which data collection is conducted less frequently (*e.g. survey conducted every other year*), and those requiring formidable data acquisition processes and complex analysis. There may also be special studies needed to address certain key topics that take longer time intervals to conduct. The Commission should consider developing a five-year research roadmap that outlines a plan for reporting that balances providing necessary information to the public and providing the highest quality evidence on which the Commonwealth can base future cannabis regulation and policy. Finally, efforts to harmonize and coordinate surveillance with other neighboring states and states that have legalized cannabis for adult use may allow comparisons and deeper insights into this significant social policy shift than what is possible from a single state alone.



V. Appendices

Appendix A. Tables

[Tables start on next page.]



Table 1. Summary of survey data available to monitor cannabis use patterns, perceptions, and modes of consumption

Data Name	Source	Population Included	Age Range	Number of individuals	Years / Frequency	Access and cost	Website
National data with Massachusetts indicator							
National Health and Nutrition Examination Survey (NHANES)	Centers for Disease Control and Prevention (CDC)	U.S. residents (civilian, non-institutionalized)	All	5,000 per year	1999-2016, annually (with two-year panels)	Public use, free *Limited use at Research Data Center required for state indicators and drug use questions for children	NHANES
National Survey on Drug Use and Health (NSDUH)	Substance Abuse and Mental Health Services Administration (SAMHSA)	U.S. civilian, non-institutional population	12+	65,000 per year	1971-2017, annually	Public use, free *Restricted use at Research Data Center required for state indicators	NSDUH
National Youth Risk Behavior Surveillance Survey (YRBSS)	CDC	Middle and high school students *Massachusetts high schools only	11-18	15,000 per year	1990-2017, odd years	Public use, free *State data requires application process	YRBSS



Data Name	Source	Population Included	Age Range	Number of individuals	Years / Frequency	Access and cost	Website
Massachusetts data							
Massachusetts Behavioral Risk Factor Surveillance System (BRFSS)	CDC and Massachusetts Department of Public Health (MA DPH)	Massachusetts residents (civilian, non-institutionalized)	18+	7,000	1984-2017, annually	Limited use, free *requires application process	MA BRFSS
Massachusetts Marijuana Baseline Health Study	MA DPH	Massachusetts adults (non-institutionalized)	18+	3,000	2017, one time	No information available	MBHS
Massachusetts Youth Health Survey (MYHS)	MA DPH	Massachusetts middle and high school students	11-18	5,500	2007-2017, odd years	Limited use, free *requires application process	MYHS
Massachusetts Youth Risk Behavior Survey (MYRBS)	MA DPH and CDC	Massachusetts high school students	13-18	3,300	2007-2017, odd years	Limited use, free *requires application process	MYRBS



Table 2. Detailed information for survey data to monitor cannabis use, 2011 to most recent available year

Data Name	Ever used marijuana	Age of first use of marijuana	Frequency of use	Location of use	Method of use	Source of marijuana	Perceptions of marijuana	Reason for use (e.g., medicinal)
National data with Massachusetts indicator								
National Health and Nutrition Examination Survey (NHANES)	2011-2016	2011-2016	2011-2016	N/A	N/A	N/A	N/A	N/A
National Survey on Drug Use and Health (NSDUH)	2011-2017	2011-2017	2011-2017	N/A	N/A	2011-2017	2011-2017	2013-2017
National Youth Risk Behavior Surveillance Survey (YRBSS)	2011-2017	2011-2017	2011-2017	2011	2015	N/A	N/A	N/A
Massachusetts data								
Massachusetts Behavioral Risk Factor Surveillance System (BRFSS) (state-specific questions) *	2015-2017**	N/A	N/A***	N/A	N/A	N/A	N/A	2015-2017
Massachusetts Marijuana Baseline Health Study	N/A	N/A	2017	N/A	2017	N/A	2017	2017
Massachusetts Youth Health Survey (MYHS)	2011-2017 (odd years)	2011-2017 (odd years)	N/A	N/A	N/A	N/A	2011-2017 (odd years)	N/A



Data Name	Ever used marijuana	Age of first use of marijuana	Frequency of use	Location of use	Method of use	Source of marijuana	Perceptions of marijuana	Reason for use (e.g., medicinal)
Massachusetts Youth Risk Behavior Survey (MYRBS)****	2013-2017 (odd years)	2013-2017 (odd years)	2013-2017 (odd years)	2013-2017 (odd years)	N/A	N/A	2017	N/A

Note: * MA BRFSS contains other questions about marijuana use over time, but does not ask questions consistently outside of the noted periods. **MA BRFSS does not explicitly ask about ever using marijuana, but asks about use in past year. *** MA BRFSS asks about problematic use, but not about frequency of use. ****MYRBS questionnaires from 2013-2017 available online.



Table 3. Survey data to monitor impacts of cannabis legalization on the health system

Data Name	Source	Population Included	Age Range	Number of individuals	Years / Frequency	Outcomes Measured	Marijuana Use Measures	Access and cost	Website
National data with Massachusetts indicator									
National Survey on Drug Use and Health (NSDUH)	Substance Abuse and Mental Health Services Administration (SAMHSA)	U.S. residents (civilian, non-institutionalized)	12+	65,000 per year	1971-2017, annually	Emergency department visits; treatment or counseling	Specific questions about treatment related to marijuana (treatment/counseling) and other drugs, including marijuana (emergency department visits)	Public use, free *Restricted use at Research Data Center required for state indicators	NSDUH
National Health and Nutrition Examination Survey (NHANES)	Centers for Disease Control and Prevention (CDC)	U.S. residents (civilian, non-institutionalized)	All	5,000 per year	1999-2016, annually (with two-year panels)	Self-reported health outcomes, healthcare utilization, health indicators (e.g., blood pressure, diet, etc.)	Marijuana use and frequency, specific questions about treatment or rehabilitation for marijuana use	Public use, free *Limited use at Research Data Center required for state indicators and drug use	NHANES



								questions for children	
Massachusetts data									
Massachusetts BRFSS	CDC and Massachusetts Department of Public Health (MA DPH)	Massachusetts residents (civilian, non-institutionalized)	18+	7,000	1984-2017, annually	Emergency department visits	Specific questions about medical treatment, emergency department visits, or counseling for marijuana use	Limited use, free *requires application process	<u>MA BRFSS</u>
Massachusetts Marijuana Baseline Health Study	MA DPH	Massachusetts adults (non-institutionalized)	18+	3,000	2017, one-time	Emergency department and urgent care visits	Specific questions about emergency department and urgent care visits for marijuana use	No information available	<u>MBHS</u>
Massachusetts Youth Risk Behavior Survey (MYRBS)	MA DPH and CDC	Massachusetts high school students	13-18	3,300	2007-2017, odd years	Suicide attempt that required treatment	Marijuana use and frequency	Limited use, free *requires application process	<u>MYRBS</u>



Table 4. Administrative data to monitor impacts of cannabis legalization on the health system

Data Name	Source	Population Included	Age Range	Number of individuals	Years Available	Outcomes Measured	Cannabis Use Measures	Access and Cost	Website
National data with Massachusetts indicator									
IQVIA Prescription Data	IQVIA	85% of all outpatient prescription (all payers except Veterans Administration)	All	Hundreds of millions	2010-2017	Prescription drug health insurance claims	No specific codes	Limited use, significant costs associated *requires application process	IQVIA
Medicare Data	Centers for Medicare and Medicaid Services (CMS)	Individuals covered by Medicare fee-for-service and Medicare Advantage insurance, eligibility due to disability and/or age	18+ (mostly 65+)	44 million (5-20% files commonly available for research)	1999-2017 (Medicare fee-for-service) 2015 (Medicare Advantage)	Healthcare utilization from health insurance claims including inpatient and outpatient services, prescription drug coverage	ICD-9/10 codes related to cannabis	Limited use, significant costs associated *requires application process	RESDAC



Data Name	Source	Population Included	Age Range	Number of individuals	Years Available	Outcomes Measured	Cannabis Use Measures	Access and Cost	Website
National Poison Data System (NPDS)	American Association of Poison Control Centers	All poison-related calls managed by poison control centers	All	Millions annually	2012-2019, near real-time	Poison exposure and information calls	Type of poison, including cannabis	Limited use, substantial costs associated for some applicants *state level data require application	NPDS
State Emergency Department Data (SEDD)	Agency for Healthcare Research and Quality (AHRQ)	All ED discharges, comparable to other available states	All	2.5 million discharges annually (MA)	2002-2016, annual	Emergency department visits and associated charges	ICD-9/10 codes related to cannabis	Limited use, costs associated *requires application process	SEDD
State Inpatient Database (SID)	AHRQ	All inpatient discharges, comparable to other states	All	800,000 discharges annually (MA)	2002-2016, annual	Inpatient discharges and associated charges	*ICD-9/10 codes related to cannabis	Limited use, costs associated *requires application process	SID



Data Name	Source	Population Included	Age Range	Number of individuals	Years Available	Outcomes Measured	Cannabis Use Measures	Access and Cost	Website
Treatment Episode Data Set (TEDS)	SAMHSA	Client-level data for substance abuse treatment admissions/ discharges from State Agency	12+	2 million admissions per year	1992-2017, annually	Substance abuse treatment data	Primary substance for which individual is receiving treatment is cannabis	Public use, free	TEDS
Massachusetts data									
Massachusetts All Payer Claims Data	Massachusetts Center for Health Information and Analysis (CHIA)	All insured individuals covered by reporting insurers	All	Millions annually	2013-2017	All healthcare utilization (inpatient, outpatient, pharmaceutical) and associated paid amounts	*ICD-9/10 codes related to cannabis*	Limited use, costs associated *requires application process	APCD
Massachusetts Substance Abuse Management Information System (SAMIS)	Massachusetts Department of Public Health (DPH)	Individuals admitted into addiction treatment programs in Massachusetts	15+	109,000 annually	2008-2017	Treatment admissions	Primary substance for which individual is receiving treatment is cannabis	Limited use, free *requires application process	SAMIS



Data Name	Source	Population Included	Age Range	Number of individuals	Years Available	Outcomes Measured	Cannabis Use Measures	Access and Cost	Website
Massachusetts CaseMix Data	Massachusetts Center for Health Information and Analysis (CHIA)	All inpatient, ED, and outpatient observation discharges	All	Millions annually	2000-2017	Inpatient discharges, ED discharges, and outpatient observation discharges and associated charges	+ICD-9/10 codes related to cannabis	Limited use, costs associated *requires application process	CaseMix
Massachusetts Mental Health Information System (MHIS)	MA Department of Mental Health (DMH)	Individuals admitted into DMH facilities and program	All	Thousands annually	2004-2018	Mental illness admissions	Secondary +ICD-9/10 codes related to cannabis	Limited use, free *requires application process	DMH
Massachusetts Public Health Data Warehouse (PHDW)	MA DPH	All individuals in Massachusetts	All	Millions annually	Unknown	Healthcare utilization (inpatient, outpatient, prescription, special services), criminal justice, death, more	+ICD-9/10 codes related to cannabis; treatment services related to cannabis	Limited use, free *requires application process for specific purposes defined by MA DPH priorities	PHDW



Data Name	Source	Population Included	Age Range	Number of individuals	Years Available	Outcomes Measured	Cannabis Use Measures	Access and Cost	Website
Massachusetts and Rhode Island Regional Poison Center Data	MA/RI Regional Poison Control Center	All poison-related calls managed by the regional center	All	Over 46,000 calls annually	2009-2018	Poison exposure and information calls	Type of poison, including marijuana-product codes	Limited use *requires application for specific purposes	MA/RI PCC
Massachusetts State Trauma Registry	MA DPH	Patients with traumatic injuries receiving emergency services at designated state trauma centers	All	Thousands	2008-2015	Trauma utilization, health outcomes	Secondary *ICD-9/10 codes related to cannabis	Limited use, free *requires application process	Trauma Registry

+International Classification of Diseases (CD)

*MA APCD has specific policies around claims with a substance use disorder (SUD) diagnosis; researchers can choose between redaction of SUD claims and inclusion of other information or receiving a more limited version of the dataset including claims with a SUD diagnosis.



Table 5. Summary of data available to monitor cannabis-involved driving

Data Name	Source	Population Included	Age Range	Number of cases	Years Available	Outcomes Measured	Marijuana – related Measures	Access and Cost	Website
National data with Massachusetts indicator									
Fatality Analysis Reporting System (FARS)	U.S. Dept. of Transportation, National Highway Traffic Administration	Drivers and others involved in fatal MVCs	All ages	30,000+	1975-2018	Fatal motor vehicle crashes on U.S public roadways	Drug testing performed; cannabinoid toxicology results	Yes, publicly available	FARS
National Survey on Drug Use and Health (NSDUH)	Substance Abuse and Mental Health Services Administration (SAMHSA)	U.S. civilian, non-institutional population	12+	65,000	1971-2017, annually *DUI-M question added in 2016	Drug use and health behavior including reported driving under the influence	Specific questions about driving under the influence of marijuana	Public use, free *Application and Restricted use at Data Center required for state indicators	NSDUH
Massachusetts Youth Risk Behavior Survey (MYRBS)	MA DPH and CDC	Massachusetts high school students	13-18	3,300	2007-2017, odd years	Health outcome and health behaviors	Past 30-day driving when using marijuana	Limited use, free *requires application process	MYRBS



Data Name	Source	Population Included	Age Range	Number of cases	Years Available	Outcomes Measured	Marijuana – related Measures	Access and Cost	Website
Massachusetts Data									
Massachusetts Behavioral Risk Factor Surveillance System	CDC and MA Department of Public Health	MA residents (civilian, non-institutionalized)	18+	7,000	1984-2017, annually *OUI-M question added in 2015	Health outcomes and behaviors	Question about being under the influence of marijuana in potentially harmful situation (e.g. driving, operating machinery)	Limited use, free *requires application process	<u>MA BRFSS</u>
Massachusetts Drug Recognition Expert (DRE) Data	MA DRE Coordinator	Drivers evaluated by MA DREs for suspected OUI drugs	all	Hundreds	2010-2018	Aggregated information on DRE evaluations and expert opinions on the class of drug or other cause of impairment in a driver	Number and % of evaluations in which DREs concluded a driver was likely under the influence of cannabis	Free *requires partnership with state DRE coordinator	<u>MA DRE</u>
Massachusetts Marijuana Baseline Health Study (MBHS)	MA DPH	Massachusetts adults (non-institutionalized)	18+	3,000	2017, one-time	Emergency department and urgent care visits	Specific questions about emergency department and urgent care visits for marijuana use	No information available	<u>MBHS</u>



Data Name	Source	Population Included	Age Range	Number of cases	Years Available	Outcomes Measured	Marijuana – related Measures	Access and Cost	Website
Massachusetts State Trauma Registry	MA DPH	Patients with traumatic injuries receiving emergency services at designated state trauma centers	All	Thousands annually	2008-2015	Trauma utilization, health outcomes	Drug screening indicator; ICD-9/10 codes related to cannabis and to motor vehicle injury	Limited use *requires application process	Trauma Registry
Massachusetts Youth Health Survey (MYHS)	MA DPH	Massachusetts middle and high school students	11-18	5,500	2007-2017, odd years	Health outcome and health behaviors	Past 30-day driving when using marijuana	Limited use, free *requires application process	MYHS



Table 6: Summary of data available to monitor cannabis-related criminal justice encounters

Data Name	Source	Population Included	Age Range	Number of individuals	Years available	Outcomes measured	Cannabis-related measures	Access and cost	Website
National data with Massachusetts indicator									
National Incident-Based Reporting System (NIBRS)	Federal Bureau of Investigation	Incident-based crime reporting in the U.S.	All	Thousands annually	1989-2018	Crime incidents	Cannabis cultivating/manufacturing, transporting, distributing/selling, possessing/concealing, buying/receiving, using/consuming.	Public use, free *MA data is available from MA EOPPS with data sharing agreement	NIBRS FBI
Massachusetts data									
Boston Police Department (BPD) Data	BPD	Arrests in Boston, MA	All	Hundreds	2000-2018	Violations; demographic information	Offenses characterized according to M.G.L 94C, Class D: Distribution; Possession w/ intent to distribute; Possession; and Trafficking.	Limited use	BPD
High Intensity Drug Trafficking	New England High Intensity Drug	Drug trafficking information	All	Thousands annually	1999-2018	Drug searches and seizures	Cannabis searches and seizures	Limited use, free	New England HIDTA



Data Name	Source	Population Included	Age Range	Number of individuals	Years available	Outcomes measured	Cannabis-related measures	Access and cost	Website
area (HIDTA) data	Trafficking area (HIDTA)							*requires formal collaboration between New England HIDTA and researcher	
Massachusetts Department of Correction Data	Massachusetts Department of Correction	Individuals incarcerated in state correction facilities*	All adults	Thousands annually	2009-2018	Location of incarceration, sentence length, time served	Offenses characterized according to M.G.L 94C: Distribution of a Class D Drug; Possession w/ intent to distribute Class D Drug; marijuana trafficking, marijuana possession.	Limited use, free *requires application process	DCS
Massachusetts State Police (MSP) Data	MSP	Arrests	All	Thousands annually	2010-2018	Violations; demographic information	Offenses characterized according to M.G.L 94C: Distribution of a Class D Drug; Possession w/ intent to distribute Class D Drug; marijuana trafficking, marijuana possession; violations near school or park	Limited use, free *requires application process	MSP Public Records Request



Data Name	Source	Population Included	Age Range	Number of individuals	Years available	Outcomes measured	Cannabis-related measures	Access and cost	Website
Massachusetts State Police (MSP) CrimeSOLV SOLV data on cannabis seizures	Massachusetts State Police	Incident-based crime reporting in Massachusetts (data reported to NIBRS)	All	Thousands annually	2017-2018	Violations; demographic information	Offenses characterized according to M.G.L 94C, Class D: Distribution; Possession w/ intent to distribute; Possession; and Trafficking	Public use, free	MSP CrimeSOLV
Massachusetts Trial Court Data	The Massachusetts Executive Office of the Trial Court	Individuals tried in Massachusetts courts	All (including records from juvenile court)	Thousands annually	2000-2018	Sentencing, convictions, demographic information	Offenses characterized according to M.G.L 94C: Distribution of a Class D Drug; Possession w/ intent to distribute Class D Drug; marijuana trafficking, marijuana possession	Limited use, free *requires application process	MA Trial Court

*Data on individuals incarcerated in county-level Houses of Correction must be obtained from each county, each via a unique data sharing process.



Appendix B. List of key informant agencies

Federal Bureau of Investigation (FBI) - Boston Division

Massachusetts Center for Health Information and Analysis (CHIA)

ISO New England

Massachusetts Department of Criminal Justice Information Services (DCJIS)

Massachusetts Department of Corrections (DOC)

Massachusetts Department of Public Health (DPH)

Special Projects

Bureau of Healthcare Safety and Quality

Injury Surveillance Program

Office of Data Management and Outcomes Assessment

Massachusetts Department of Elementary and Secondary Education (DESE)

Massachusetts Department of Public Utilities (DPU)

Massachusetts Department of Transportation (DOT)

Registry of Motor Vehicles (RMV)

Massachusetts Executive Office of Public Safety and Security (EOPSS)

Massachusetts Department of Mental Health (DMH)

Massachusetts Executive Office of the Trial Court (EOTC)

Hampden County Sheriff's Department

Massachusetts and Rhode Island Regional Center for Poison Control and Prevention

Massachusetts State Police

New England High Intensity Drug Trafficking Area & Fusion Center

Worcester County House of Correction



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