



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Withdrawn	389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

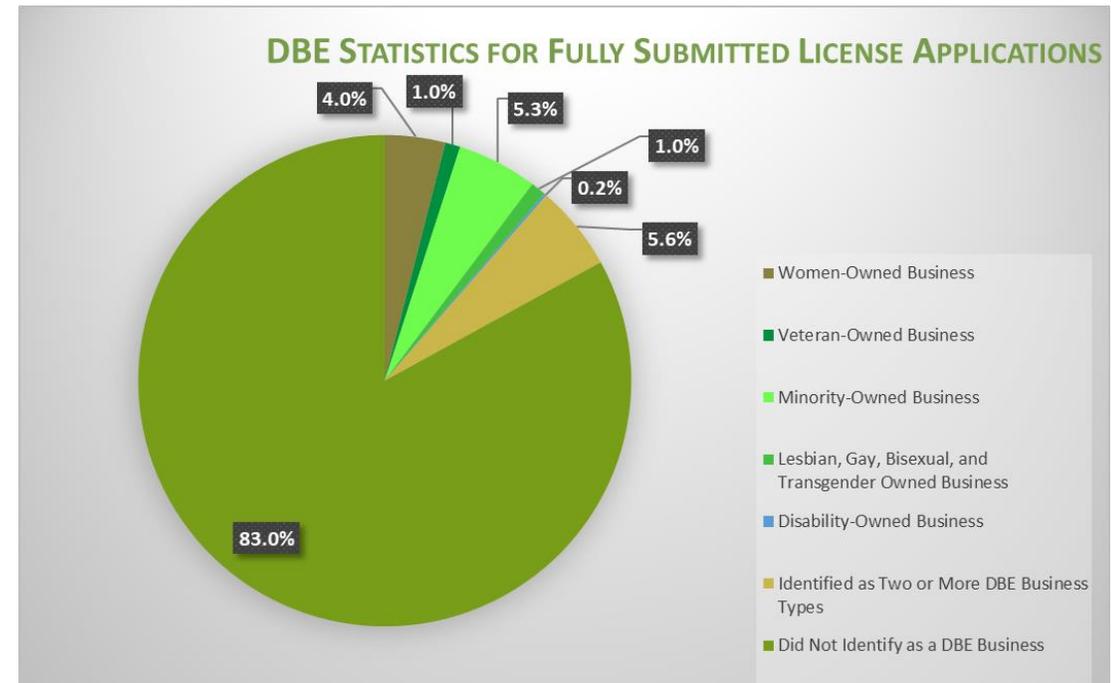
Type	#
RMD Priority	227
Economic Empowerment Priority	21
Expedited Review	26
General Applicant	332
Total	606

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

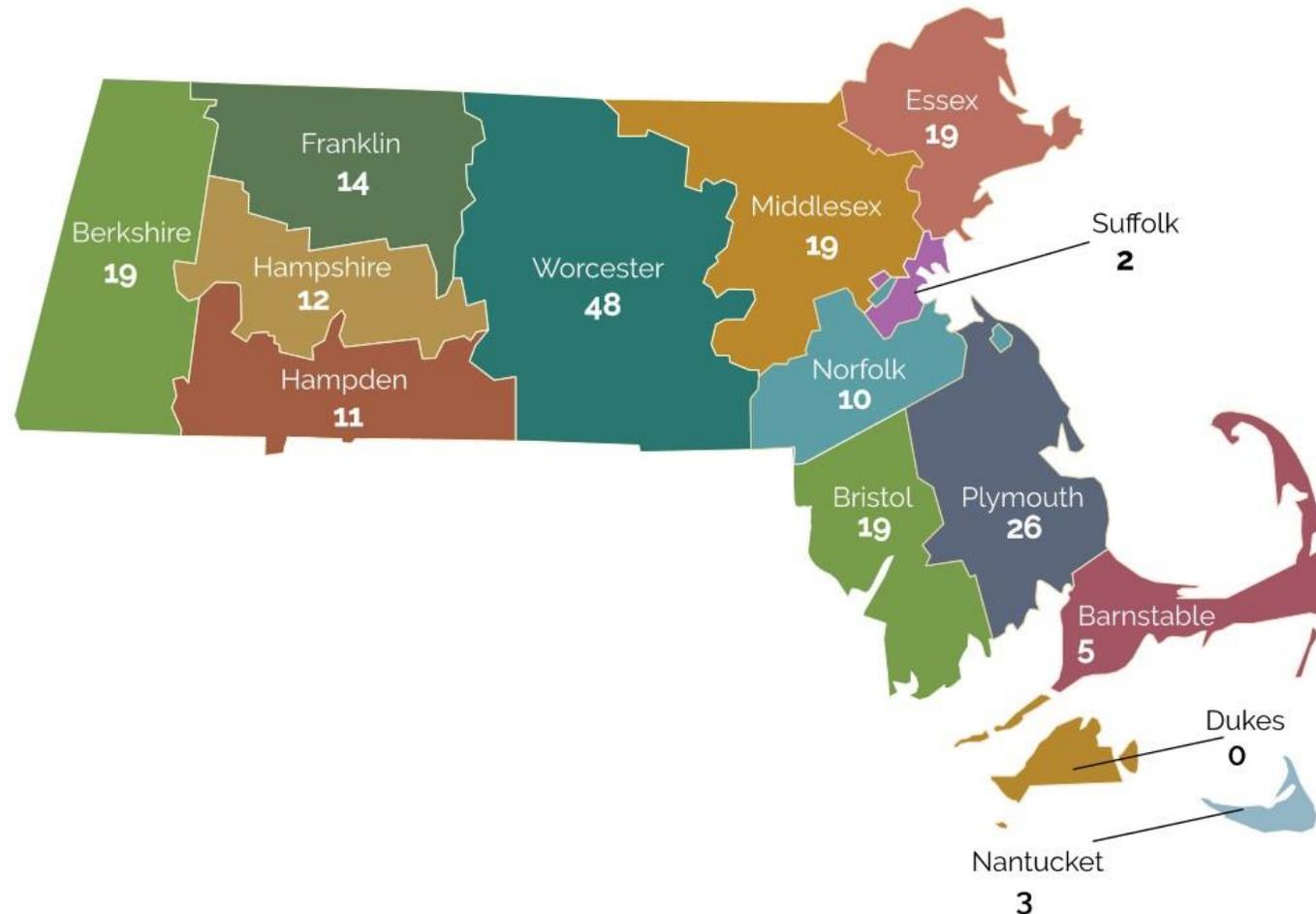
Status	#
Application Submitted: Awaiting Review	156
Application Reviewed: More Information Requested	156
Application Deemed Complete: Awaiting 3 rd Party Responses	63
All Information Received: Awaiting Staff Recommendation	20
Applications Considered by Commission	211
Total	606



Licensing Applications | November 7, 2019

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

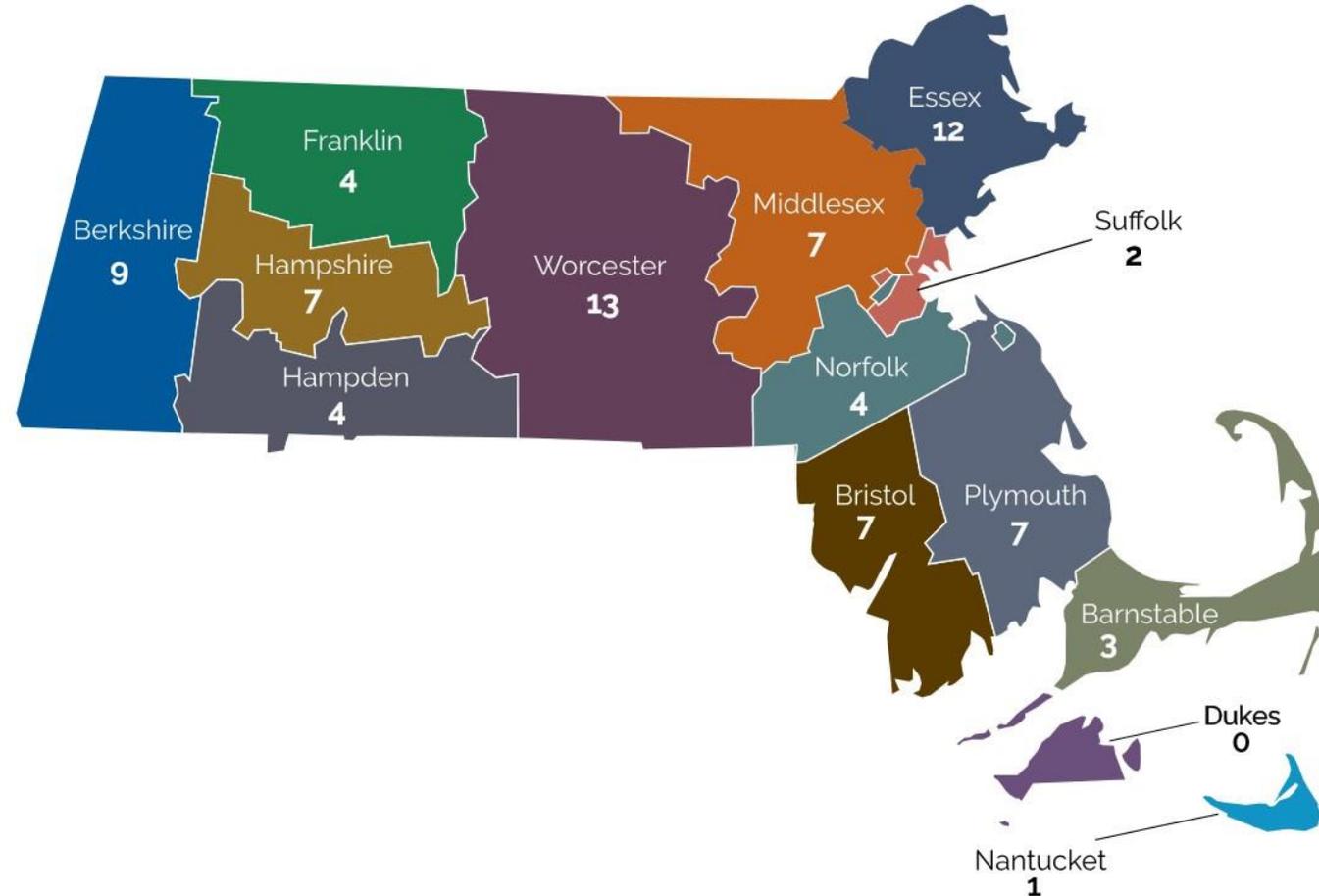
County	+/-
Barnstable	
Berkshire	+1
Bristol	
Dukes	
Essex	+2
Franklin	+3
Hampden	
Hampshire	+1
Middlesex	
Nantucket	
Norfolk	
Plymouth	+2
Suffolk	
Worcester	+2
Total	+11



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

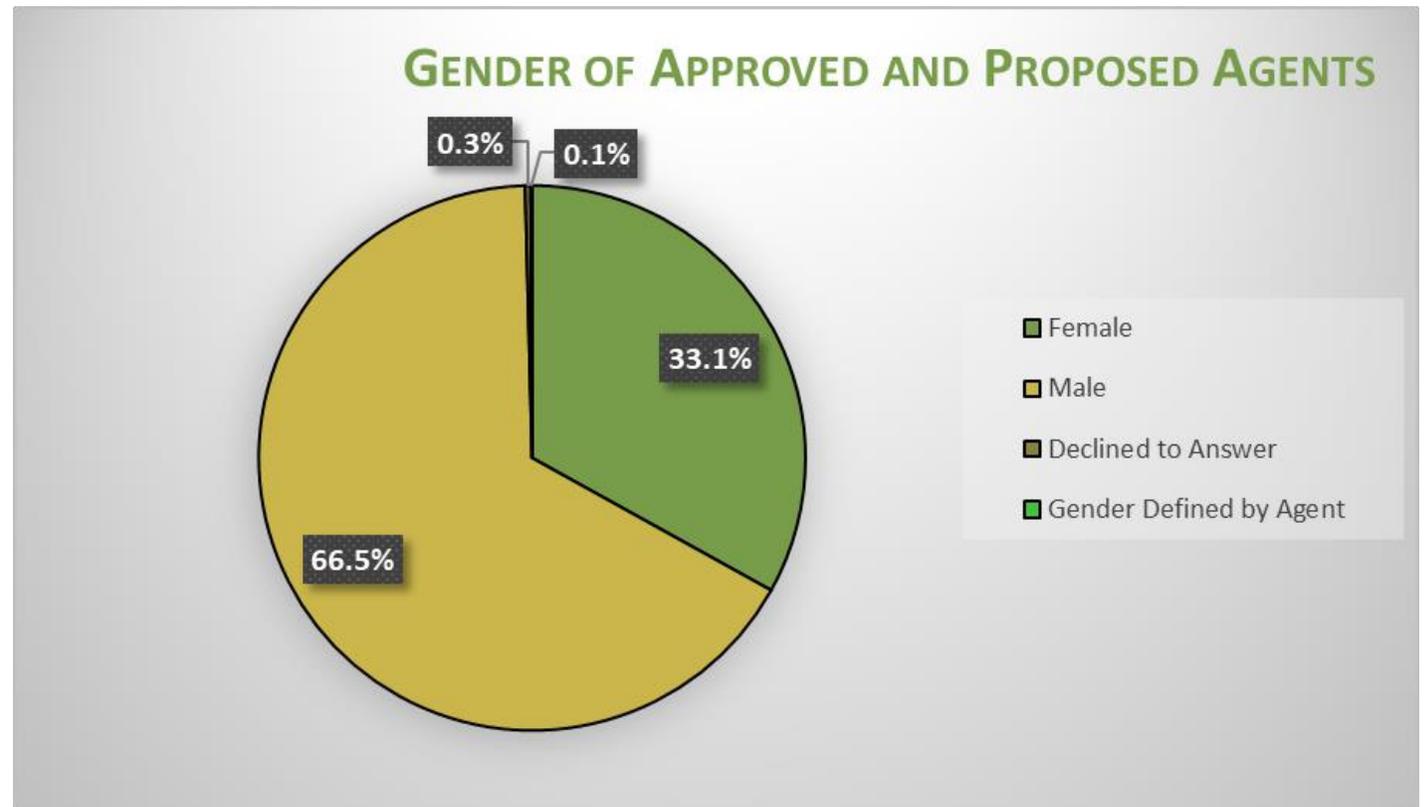
Of Total Pending:

- 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

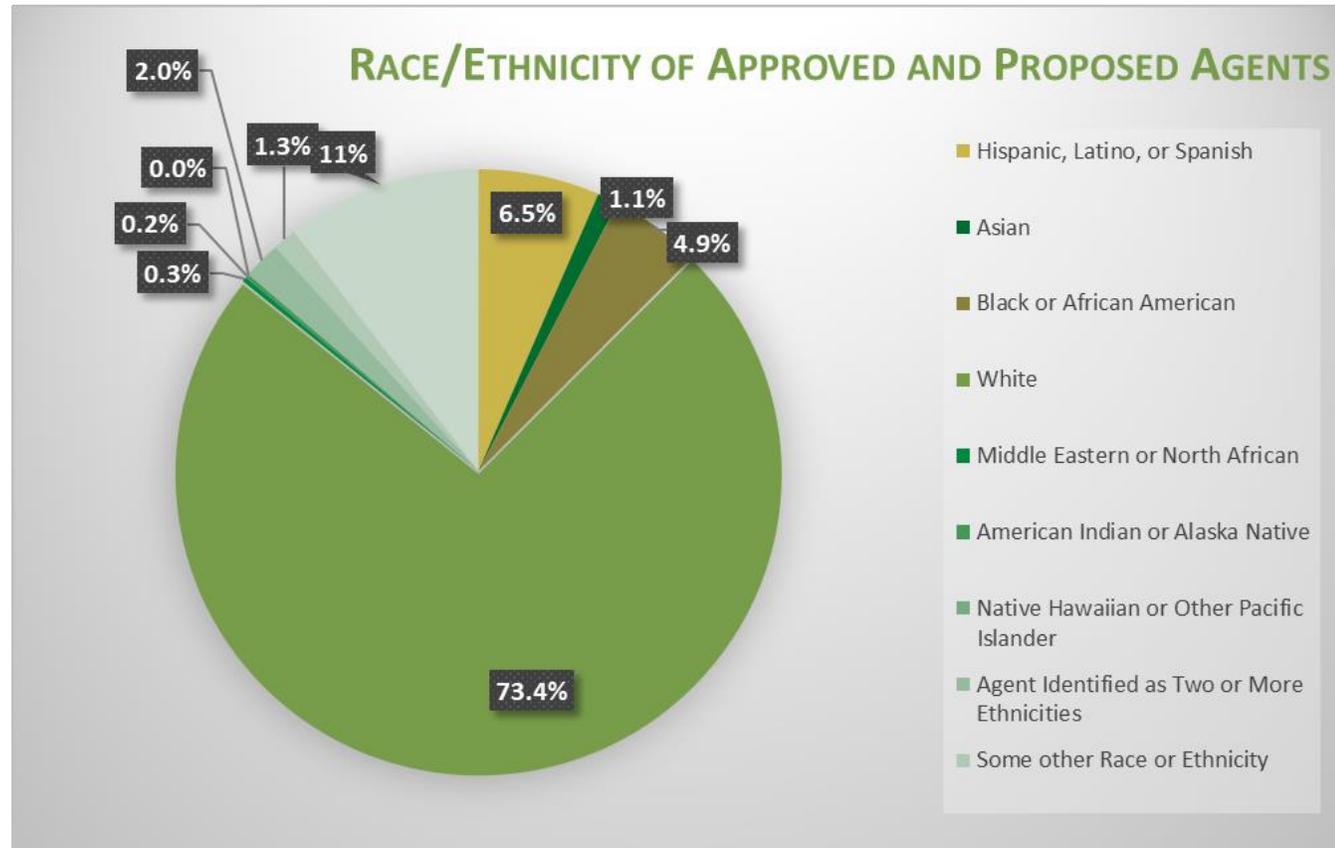
Gender	#	%
Female	2,298	33.1
Male	4,623	66.5
Declined to Answer	22	0.3
Gender Defined by Applicant	6	0.1
Total	6,949	100.0



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

5) Staff Recommendations on Change of Ownership

- a. Alternative Therapies Group, Inc.

6) 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

6) 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

6) 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

7) 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)

8) 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

8) 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

9) 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

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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

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

(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.

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

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
- (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**
- (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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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

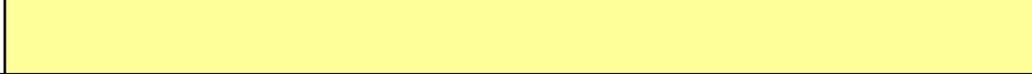
- Address-level information is not available.
- State level data are not necessarily granular enough to detect changes from the cannabis industry.

Considerations

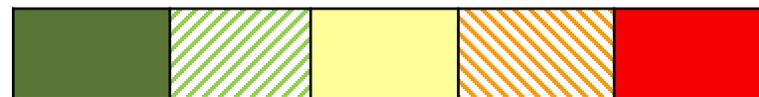
- Our primary recommendation aligns with that the Commission is already moving towards:
 - Consider collection of electricity use information from legal cultivators.
- The Commission could develop a partnership with electricity providers to obtain address-based or highly local level (e.g. census block)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

9) 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

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