Responsible Local Cannabis Policy & Licensing

Dustin McDonald, Vice President of Government Relations
Kelli Hykes, Senior Associate Government Relations
What is weedmaps®?

- Founded in 2008, Weedmaps is the oldest and largest cannabis technology company in the world and has been the leading innovator in developing software and platforms that drive the cannabis industry.

- Our core platform connects people with local dispensaries, delivery services, doctors, deals, brands, lab data and real-time menus. Weedmaps’ full suite of business-to-business and business-to-consumer software includes lab data integration, point-of-sale and medical practice management. We are also developing a suite of SaaS tools for the industry.

- Beyond providing the software and advertising solutions that underpin the industry, Weedmaps has been advocating for measured growth and responsible policy to guide the modernization of the industry for nearly a decade.

- Weedmaps is working collaboratively with all levels of government and stakeholder organizations to encourage reforms to medical and recreational cannabis laws and to establish regulatory frameworks capable of ensuring safe and reliable patient access.
**Business Listings:** Connect patients to dispensaries, delivery services, doctors, deals, brands, lab data and real-time menus.

**Software:** Point-of-sale and medical practice management which helps track sales, account for inventory, and manage patient information.

**Brands Platform:** Helps patients and consumers find their preferred medicine by connecting brands to points of sale. Helps to reduce fraud by allowing verification of various products.
Data Integration:

Enables all menu information – from inventory, price, weights, lab testing, etc. – to automatically update in real-time on Weedmaps apps and website.

Arms patients and consumers with the most trustworthy, reliable, up-to-date menu, pricing, and testing information available.
**What is Policy?**

- Semi-autonomous policy arm of Weedmaps
- Advocating for consumer safety improvements and illegal market reduction
- Key planks of our policy platform include:

<table>
<thead>
<tr>
<th>Minimizing the illegal market in legal states</th>
<th>Organizing sound state/local tax policy to ensure communities hosting licenses see economic benefit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ensuring safe and convenient access</td>
<td>Developing strategies to foster local licensee jobs and develop new technology solutions</td>
</tr>
<tr>
<td>Robust lab testing standards</td>
<td>Enforcement strategies that are flexible enough to meet varying illegal market challenges</td>
</tr>
<tr>
<td>Monitoring/safety regs that balance community safety with cost to operators</td>
<td></td>
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<tr>
<td>Development of cannabis IP and licensing policy</td>
<td></td>
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</tbody>
</table>

- Working collaboratively with all levels of government:

  - **National-Level:** United States, Canada, and several European countries
  - **State-Level:** California, Massachusetts, Michigan, New York and New Jersey—among others
  - **Local-Level:** Los Angeles, Compton, San Diego, and Toronto—among others
# Commercial Cannabis Licensing Categories

<table>
<thead>
<tr>
<th>Growers: Indoor cultivation from small to large scale</th>
<th><strong>Provisioning Center:</strong> Sells cannabis and cannabis products from a physical location open to the public</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Processors:</strong> Covers refined cannabis product creators and manufacturers</td>
<td><strong>Safety and Compliance Facilities:</strong> Laboratories that perform product safety tests on cannabis products</td>
</tr>
<tr>
<td></td>
<td><strong>Secure Transporters:</strong> Delivers cannabis products between growers, safety and compliance facilities, processors and provisioning centers</td>
</tr>
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</table>
Cultivation Centers
**Cultivation by the Numbers**

### Indoor Growers
- Total annual harvest amount is dependent on cultivar and canopy space
  - Each average harvest yields ½ - 1 gram of cannabis per watt of light used during flowering stage
  - Cultivators use 40 watts per sq ft of flowering space
- Harvests per year: 4.0-5.0
- Wholesale value: $2,200- $3,000/lb

### Michigan Licenses
- Class A - up to 500 plants
- Class B - up to 1,000 plants
- Class C - up to 1,500 plants
- Stacking multiple Class C licenses are available to the same licensee to allow for “mega growers”
# Cultivation: Spatial Requirements

<table>
<thead>
<tr>
<th>TOTAL BUILDING SIZE</th>
<th>%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flowering</td>
<td>53</td>
</tr>
<tr>
<td>Vegatative (Veg)</td>
<td>27</td>
</tr>
<tr>
<td>Drying &amp; Curing</td>
<td>9.5</td>
</tr>
<tr>
<td>Clone &amp; Early Veg</td>
<td>7</td>
</tr>
<tr>
<td>Trim &amp; package</td>
<td>3.5</td>
</tr>
</tbody>
</table>

TOTAL BUILDING SIZE: 83,000

![Diagram and image of cultivation space]
Cultivation: Energy Consumption

Indoor Energy Consumption by End Use:

- Lighting: 38%
- Ventilation & Dehumid: 30%
- Air Conditioning: 17%
- Space Heat: 5%
- CO2 Injection: 3%
- Water Handling: 2%
- Drying: 1%

Source: Evan Mills, 2012, presented by Lincus Energy
Processing Centers
Manufacturing & Extracts by the Numbers

- Revenue dependent on (1) starting material value; (2) desired final product
  - **Material Value**: Flower Vs. Trimmed Leaves & Biomass
  - **Final Product**: Specialty Concentrate Vs. Distillate
- Total Wholesale revenue:
  - **Specialty Concentrate Facility** that produces 3,000 lbs/yr will generate $27M in Gross Revenue
  - **Distillate Facility** that produces 3,000 pounds per year will generate $13M
What are Concentrates?

A cannabis CONCENTRATE is an accumulation of desirable compounds (i.e. Trichomes) that is achieved through mechanical or chemical means.

- Tier 6 License – Nonvolatile Solvents

A cannabis EXTRACT is a concentrate made by dissolving the trichomes from the plant using a liquid solvent (chemical).

- Volatile solvents = a solvent that is or produces a flammable gas or vapor that, when present in the air in sufficient quantities, will create explosive or ignitable mixtures
Concentrates

- **Dry Sift**
  - Made by sieving the plant through a series of screens
  - Whole trichome glands break off the plant

- **Rosin**
  - Made by applying pressure and heat to plant

- **Shatter**
  - An oleoresin with a glass-like consistency
  - High cannabinoid content ranging from 40-70%

- **Distillate**
  - Molecular Distillation
  - Cannabinoid content ranging from 70-95+%
How Are Extracts Made?
How Are Extracts Made? - Processing

**Equipment Necessary**
1. Closed Loop System
2. Cannabis (Live Resin, Nug, Trim)

**Process**
1. Plant material is placed into material column
2. Liquid Solvent passes over material and dissolves the trichomes to create a Solution
3. Liquid Solvent must be removed from the Solution
### Primary Hazards & Engineering Controls

<table>
<thead>
<tr>
<th>Primary Hazards:</th>
<th>Engineering Controls:</th>
</tr>
</thead>
<tbody>
<tr>
<td>• Chemical exposure to the solvents</td>
<td>• Flammable Solvent Storage Cabinets</td>
</tr>
<tr>
<td>• Fire and explosion</td>
<td>• Personal Protective Clothing</td>
</tr>
<tr>
<td>• Oxygen Deficiency</td>
<td>• Outside Gas Storage</td>
</tr>
<tr>
<td>• Electrical Hazards</td>
<td>• Ventilation Controls</td>
</tr>
<tr>
<td>• Noise</td>
<td>• Suppression Systems</td>
</tr>
<tr>
<td></td>
<td>• Combustible Gas Indicator</td>
</tr>
<tr>
<td></td>
<td>• Oxygen Meter</td>
</tr>
<tr>
<td></td>
<td>• Class I Division I electrical systems</td>
</tr>
<tr>
<td></td>
<td>• Emergency Action Plans</td>
</tr>
<tr>
<td></td>
<td>• Hygiene-sanitation programs</td>
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</tbody>
</table>
The following codes and standards are relevant to the lab design and construction of cannabis extraction facilities:

- National Fire Protection Association (NFPA) – NFPA 58, Currently developing the language for a new chapter in the 2018 edition of NFPA 1
- International Fire Code (IFC) – Chapters 34-37, 61
- International Building Code (IBC) – 307
- National Electric Code (NEC) – Chapter 5
- International Mechanical Code (IMC) – 506, 507, 510
- International Plumbing Code (IPC) – 1008.1.8.3
- Occupational Safety and Health Standards (OSHA) - Specifically Standards 29 CFR 1910.137 & CFR 1910.95 Table G-16
- Generally Recognized as Safe (GRAS) – U.S. Food and Drug Administrations list of safe solvents
- American Conference of Governmental Industrial Hygienist (ACGIH) Industrial Ventilation Handbook
# Cannabis Concentrates

<table>
<thead>
<tr>
<th>LPG Operation Description</th>
<th>LPG Production Spatial Requirements (sq ft.)</th>
<th>SFCO2 Operation Description</th>
<th>SFCO2 Production Spatial Requirements (sq ft.)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Processing Capacity</td>
<td>Workflow</td>
<td>Processing Capacity</td>
<td>Workflow</td>
</tr>
<tr>
<td>(Kilo per Day)</td>
<td>sq. Ft.</td>
<td>(Kilo per Day)</td>
<td>sq. Ft.</td>
</tr>
<tr>
<td>700</td>
<td>Product Intake &amp; Column Loading</td>
<td>700</td>
<td>Product Intake &amp; Column Loading</td>
</tr>
<tr>
<td></td>
<td>Raw Material Processing &amp; Column Loading</td>
<td></td>
<td>Raw Material Processing &amp; Column Loading</td>
</tr>
<tr>
<td></td>
<td>Column Unloading &amp; Spent Material Storage</td>
<td></td>
<td>Spent Material Storage</td>
</tr>
<tr>
<td></td>
<td>Walk-In Fume Hoods</td>
<td></td>
<td>Extraction System</td>
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<tr>
<td></td>
<td>Residual Solvent Removal</td>
<td></td>
<td>Winterization</td>
</tr>
<tr>
<td></td>
<td>Packaging</td>
<td></td>
<td>Distillation</td>
</tr>
<tr>
<td></td>
<td>Secure Cold Storage</td>
<td></td>
<td>Packaging Area</td>
</tr>
<tr>
<td></td>
<td>Ancillary Storage</td>
<td></td>
<td>Secure Cold Storage</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Total: 9,410</td>
<td>Ancillary Storage</td>
</tr>
</tbody>
</table>

Note: Does not account for office space or bulk solvent storage.

<table>
<thead>
<tr>
<th>LPG Production Spatial Requirements (sq ft.)</th>
<th>SFCO2 Production Spatial Requirements (sq ft.)</th>
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<tr>
<td>Total: 9,410</td>
<td>Total: 3,520</td>
</tr>
</tbody>
</table>

Note: Does not account for office space or bulk solvent storage.
Provisioning Centers
Cannabis Retail – By the Numbers

Provisioning Centers

- Consumer volume is largely dependent on retail density and state consumer count.
- Tax rate and product quality also have strong influence.
- Assumptions:
  - 600 consumers per day
  - Patients purchase $120 every two weeks (average ticket price = $60)
- Revenue of $10 - $26M per year
Provisioning Center

<table>
<thead>
<tr>
<th><strong>Cannabis Retailer Example (Population 200,000)</strong></th>
</tr>
</thead>
<tbody>
<tr>
<td>Dispensaries per population</td>
</tr>
<tr>
<td><strong>Number of Licenses</strong></td>
</tr>
<tr>
<td>Employees per License</td>
</tr>
<tr>
<td><strong>Total Employees</strong></td>
</tr>
<tr>
<td>Patients Per Day</td>
</tr>
<tr>
<td>Average Sale Per Customer</td>
</tr>
<tr>
<td>Gross Monthly Sales</td>
</tr>
<tr>
<td>Annual Gross Revenue</td>
</tr>
<tr>
<td>Monthly Net Tax</td>
</tr>
<tr>
<td><strong>Annual Tax (3%)</strong></td>
</tr>
<tr>
<td><strong>Estimated Illegal Market Rate</strong></td>
</tr>
<tr>
<td><strong>Total Market Value</strong></td>
</tr>
<tr>
<td><strong>Total Illegal Market Value</strong></td>
</tr>
</tbody>
</table>

*Employees include 2 security guards, 2 receptionists and intake personnel, 7 budtenders, 2 vendor and inventory managers, 1 staff manager, 1 marketing and social media director, 1 accountant/controller, and 1 executive director.*
Local Government Responsibility

• **Opt-In:** On November 1, 2017, the Bureau of Medical Marihuana Regulation’s (BMMR) announced provisional operating authority to Provisioning Centers that provide documents by the local municipal clerk affirming the facility may operate in the jurisdiction.

• Required documentation may include the local ordinance that permits the Provisioning Center to operate or new or amended local law permitting the facility to operate.

• An applicant that is located in a municipality without an authorizing ordinance is ineligible for state marihuana facility licensure.

• The Bureau is relying on the local municipality’s authorizing ordinance to determine whether an applicant is in compliance with relevant provisions of the MMFLA.
Why Opt-In?

- **Maintaining Medical Access is Critical:** Patients have come to rely on Provisioning Centers to access high quality medication in forms that are not easily or safely produced at home or by a Medical Marihuana Caregiver, such as vaporizers, tinctures, oils, waxes, and edibles.

- Raids are costly and often ineffective.

- The legal market has tested, safe product and knowledgeable staff.

- Tax Revenue is only shared with local governments that opt-in
Responsible Opt-In Ordinances

- Model Ordinance that complies with Medical Marihuana Facilities Licensing Act, Michigan Medical Marihuana Act, and Marihuana Trafficking Act
- Options for all licensing categories
- Options to create a Marihuana Commission or use Town Manager to administer the licensing program
- Sets up the licensing application, fees, and award process
- Permits appropriate city departments to inspect facilities
- Establishes minimal operating standards
- Creates permissible uses under zoning code
- [www.wmpolicy.com/white-papers](http://www.wmpolicy.com/white-papers) scroll down to Michigan Model Ord.
## Other Policy Development Tools

### Quick Opt-In Model Ordinance
- Opportunity to pass place-holder legislation so businesses can apply for state licenses
- Allows for a thoughtful and constructive public process
- Helps attract serious investors and business owners
- Shows a good faith effort to medical patients and business leaders

### Personalized Support
- WM Policy testifies at public hearings and work sessions with staff that have local government and legislative drafting experience
- Zoning Legislation
- Appropriate Density Recommendations
Regulating is the difference between this...And...
This, or ...
Contact Us

Dustin McDonald
Vice President, Government Relations
DMcdonald@weedmaps.com

Kelli Hykes
Senior Associate, Government Relations
khykes@weedmaps.com