

# General Operating Requirements

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- Waste Disposal, Security (Outdoor, Indoor, Retail, Transportation), Energy
- Reviewed operational requirements in multiple jurisdictions, primarily Colorado, Massachusetts, Washington
- Consensus amongst Compliance and Enforcement Subcommittee to go in a best management, tier appropriate approach for security purposes, primarily for outdoor cultivation
- Consensus amongst Sustainability committee on Waste Disposal and Energy
- Met/spoke with VAAF PHARM/Enforcement, ANR-DEC, PSD, DLL, Efficiency Vermont NACB/The Cannabis Conservancy, VSS, CCB ED/GC, reviewed public comment, Sub Committee members

# General Operating Requirements: Waste Disposal

- All applicable local & state statutes, ordinances and regulations apply
- Commercial organic material (No to Low THC)
  - Stalks, Rootballs, Soil Media, Leaf Material, discarded nonflowering plants, etc.
    - Preferably composted onsite (or via anaerobic digestion, pyrolyzation (biochar), or biomass gasification - doesn't need to be rendered as unusable/unrecognizable
- Active ingredient material (High THC or decarboxylated)
  - Flower, Processed Oil (distillate, rosin, resin, wax, etc.), Edibles, Topicals
  - Should be restricted on some level
    - Need to be rendered as unrecognizable/unusable either onsite or by authorized hauler
      - Methods and final disposal addressed through rulemaking
  - Unsaleable Product Waste (Distribution, Retail, Lab)
    - Products processed to turn THC-A into THC needs to be rendered as unrecognizable/unusable or have chain-of-custody manifests or oversight
      - Methods and final addressed through rulemaking
- Retail/Lab waste
  - All exterior waste receptacles located on a retail or lab license holder's premises or shall be locked and secured to prevent unauthorized access

# General Operating Requirements: Waste Disposal

- Manufacturers/Processors
  - Subject to Hazardous Waste Rules – Solvents,
    - Most will be Conditionally Exempt Generators (under 220lbs/months) or Small Quantity Generators (220 – 2000 lbs/month)
    - Encourage solvent Recapture in process or from waste material
- Hazardous Waste
  - Light Fixtures containing heavy metals, lithium-ion batteries, Pesticides/Cleaning Products
    - Current State Disposal Regulations
- Post Consumer Products
  - Used/empty containers, vape cartridges
  - Collection of cannabis containing containers which might contain residue should be allowed to facilitate their reuse and/or recycling by authorized facilities.
- Documentation and Recordkeeping
  - Require licensees to maintain accurate and comprehensive records regarding Cannabis waste that accounts for, reconciles, and evidences all waste activity related to the disposal of Regulated Cannabis.

# Baseline Security Requirements: Outdoor Security

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- 7 Security “Best Management Practices”
  - Fencing
  - Video surveillance system with unobscured views of area
  - Alarm system
  - Photographic surveillance
  - Motion activated flood-light
    - May face away from the plant
  - Security services
    - *With or without physical presence*
  - Controlled point of access

# Baseline Security Requirements: Outdoor Security

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- 1000 sq ft – Choose One of seven ‘Best Management Practices’
  - Small cultivators only need to choose fencing if preferred
  - Mixed Tier License holders follow this for their outdoor component
- Fencing required for all above ‘small cultivators.’ All outdoor cultivators may apply to the CCB for a variance from the fencing requirement; CCB will review proposals on a case-by-case basis.
  - Polywire, or something similar
  - Fencing specs to be defined in regs
- 2500 sq ft – plus two ‘Best Management Practices’
- 5000 sq ft – plus three ‘Best Management Practices’
- 10,000 sq ft – plus four ‘Best Management Practices’
- 20,000 sq ft – plus five ‘Best Management Practices’
- 37,500 sq ft – all seven ‘Best Management Practices’

# Baseline Security Requirements: Outdoor Security

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- Timely reporting of theft and/or losses to regulatory authorities for all
- At end of growing season, at least 3 weeks before harvest, 24- hour attendance/ security required
  - THC is peak 2-3 weeks before harvest
  - Highest risk for theft is during this time
- If crop is visible from the street, a physical barrier of concealment must be created
  - Example: Fencing, Hedge, Barn, etc.
- If a facility experiences theft, additional BMPs would be required
- Before license is granted, site must be visited by an inspector to determine security risks
  - Visibility and Accessibility
  - Additional security and/or barrier may be required after inspection
- Point of Access/GPS included in application (already discussed/approved by CCB as part of additional app requirements)
- Following first growth season- security and compliance must be reassessed
- All outdoor license types need seed-to-sale traceability systems to prevent diversion
- If issues, site specific plan working with CCB Enforcement (or designee) to prescribe a solution

# Baseline Security Requirements: Outdoor Security

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Drying/Curing/Storage onsite for Outdoor growers

- Feels similar to indoor facility security
  - Locks on perimeter doors/windows
  - Can migrate outdoor BMPs if able
- This area/buildings onsite need to be diagramed as part of application materials.
- Finished product needs to be in a locked container if stored in area before transporting
  - Locked container to be defined through regulation
- Storage of cannabis shall be under conditions that will protect them against physical, chemical, and microbial contamination as well as against deterioration of product or container

# Baseline Security Requirements: Indoor Security

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- Look largely the same across all adult-use jurisdictions
- Medical program does not prescribe security measures, asks for a plan in application
- Security alarms and locks on all perimeter doors and windows
  - No security alarms necessary for small 1000sq ft indoor grower, but the Board may require them on a case-by-case basis if it determines a security need exists for a particular applicant
- Video surveillance with continuous monitoring and storage 'control areas'
  - Surveillance room is a control area
  - Any room where cannabis is present
  - Regs to address camera specs, placement, coverage, retention, storage
- Seed-to-sale traceability systems to prevent diversion
- ID badges for all licensees and employees on the premises
- Logs of all non-employee visitors kept for three years
- Cannabis storage areas located within an area that satisfies security measures listed above.

Potential waiver of a security requirement allowed if alternative is available



# Baseline Security Requirements: Retail Security

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- Indoor cultivation security measures overlap with retail security
  - Security alarm system installed by an alarm installation company, on all perimeter entry points and perimeter windows
- Video surveillance video in point-of-sale areas, entrances, exits, any place cannabis is handled
  - 24 hours a day and be stored at least 90 days, with timestamps
- Employees should wear ID badges at all times while at work
  - DMV creates medical dispensary ID badges – \$5 per badge
- Retailers should have security and alarm systems to prevent and detect theft
- Chronological point-of-sale transaction record, accessible by CCB or designee
- Upon request, a license holder shall make available to CCB or designee all information related to security alarm systems, monitoring, alarm activity
- Other records- map of camera locations, direction of coverage, camera numbers, surveillance equipment maintenance activity log, authorized user list, operation instructions
- Can have security guards present, not required

# Baseline Security Requirements: Transportation

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- Each license holder shall designate a 'Cannabis Licensed Agent' (CLA)
  - Must carry employee registration card at all times
- Only CLAs can transport- must remain with the vehicle
  - Emergency stops must be recorded- log maintained describing the reason for the stop, duration, location, any activities of personnel leaving the vehicle.
- Seed-to-sale tracking must be in place, with both originating and receiving establishments, while transporting before final sale of finished product.
- Must remain on routes in State (could present a challenge in a few border communities)
- Record-keeping procedures/manifest of product being moved with copies kept by originating and receiving establishments, times of departure and arrival must be estimated before hand, noted, and recorded in actual time.
- Only transported between licensed Cannabis establishments.
- Storage and transportation shall be under conditions that will protect them against physical, chemical, and microbial contamination as well as against deterioration of product or container

# Baseline Security Requirements: Transportation

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- Vehicles
  - Owned by CLA or Transporter (if hired third party)- Transporters held to a higher standard
  - Equipped with functioning heating/air conditioning systems appropriate for maintaining correct temperatures for storage of Cannabis products
  - Not visible from outside vehicle.
  - Properly registered, inspected, insured in Vermont
- If any license holder transporting over 20 pounds on a dry weight basis, must be transported in a secure, locked storage compartment within the vehicle transporting the product
  - Could tier out types of vehicles in the future- DMV does this- different axels/weights, etc.
- Vehicle will need GPS capabilities, that can be determined at the discretion of the CLA or transporter needs to be working at the time of inspection. Communication, however, must be made to the destination prior to departure.
- Larger operations need to have access to a secure form of communication with personnel at the originating location when vehicle contains Cannabis or Cannabis products
- If Transporter is transporting for more than one Cannabis establishment at a time, products from each establishment shall be kept in separate locked storage compartment during transportation and separate manifests shall be maintained

# Baseline Energy Standards

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- Language for applying regulations
  - When installing new HVAC and Dehumidification equipment
  - When changing lights that increase wattage
  - When replacing or adding more than 10% of light fixtures
  - When there's a change in occupancy classification of the building
  - When converting a greenhouse to a more climate-controlled version or expanding a climate-controlled greenhouse

# Baseline Energy Standards

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- Apply Vermont Commercial Building Energy Standards (CBES) for cannabis operations in the following areas:
- Indoor Cultivation Facilities
  - Building Envelop- ensure all buildings are properly insulated, which will reduce energy usage for heating and cooling needs
  - Lighting for non-cultivation- same standard for new buildings and retrofits
  - Ventilation requirements same as CBES
  - HVAC- same efficiency requirements for equipment in CBES (fans, motors)
    - Exemption requiring grow specific equipment to have economizers and heat recapture. These are components that increase the energy efficiency of standard HVAC units but due to high heat and humidity levels required for cannabis are counterproductive or can cause mold growth in units
  - Vermont Fire & Building Safety Code will apply for extraction operations, hazardous material handling, and cultivations using carbon dioxide enrichment (employee and public safety issue)
- Greenhouses- *a structure or a thermally isolated area of a building that maintains a specialized sunlit environment exclusively for, and essential to, the cultivation or maintenance of adult-use cannabis plants. Greenhouses are those that are in use for a period of 180 days or more*
  - Same as CBES – HVAC Equipment efficiency – same exemption for grow specific equipment

# Baseline Energy Standards

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- Lighting for Indoor Cultivation
  - Minimum of 1.9 Photosynthetic Photon Efficacy (PPE)
    - Measure of how efficiently the fixture turns electricity into light usable for growing cannabis
    - Limit will still provide growers with options (double-ended high-pressure sodium, ceramic metal halide, LEDs) based on cultivation preference
- Lighting for Greenhouse Specific
  - Envelop- Minimum u-factor of 0.7.
    - Rating indicates how good the clear panels of a greenhouse are at reducing heat loss. This limit still allows growers product options and is suitable for Vermont's climate.
    - Will save energy by reducing heating loads and equipment run times
  - Cultivation lighting- 1.7 PPE or better
    - Greenhouses use fixtures to supplement the sun, a lower limit allows for a few more options accounts for efficiency differences in GH specific lighting fixtures
    - Low lighting load greenhouses- If a greenhouse has a total connected lighting load of less than 40kW it is exempt from lighting requirements. 35 1000w lights or less (~1200 sq. ft).

# Baseline Energy Standards

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- Additional Equipment Efficiency Standards
  - Below minimum standards rate different types of dehumidification equipment based on their energy efficiency performance.
  - All four of these levels are very energy efficient, just above current energy star standards
  - Similar to new standards implemented in Denver, Washington, California
  - Supported by cannabis equipment manufacturers as a level that moves energy efficiency forward in the dehumidification space while also allowing cultivators a variety of options in equipment and design
- Standalone dehumidifiers that meet the following minimum integrated energy factors:
  - Minimum integrated energy factor of 1.77 L/kWh for product case volumes of 8.0 cubic feet or less;
  - Minimum integrated energy factor of 2.41 L/kWh for product case volumes greater than 8.0 cubic feet.

# Baseline Energy Standards

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- Additional Equipment Efficiency Standards Continued
- Integrated HVAC system with on-site heat recovery designed to fulfill to least 75 percent of the annual energy for dehumidification reheat;
- Chilled water system with on-site heat recovery designed to fulfill at least 75 percent of the annual energy for dehumidification reheat; or
- Solid or liquid desiccant dehumidification system for system designs that require dewpoint of 50 degrees F or less
- Fans and Clean Water Pumps- 2021 energy efficiency standards should apply for Fans and Water Pumps



# Baseline Energy Standards

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- Energy Benchmarking/Optimization
  - License holders should report energy and water performance benchmarks annually to help the CCB/state understand how this emerging market impacts state climate goals
- Require license holders to biannually address how it is written operating procedures around the following:
  - 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.
  - How the cultivator regularly assesses opportunities to reduce energy and water usage, which should include:
  - Identification of potential energy use reduction opportunities (such as natural lighting and energy efficiency measures), and a plan for implementation of such opportunities;
  - 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;
  - Strategies to reduce electric demand (such as lighting schedules, active load management, and energy storage); and
  - Engagement with energy efficiency programs offered by Efficiency Vermont, Burlington Electric Department, or Vermont Gas Systems.