Recommendations for Regulators – Cannabis Operations

Developed by:
Cannabis Committee
American Herbal Products Association
8630 Fenton Street, Suite 918
Silver Spring, MD  20910
www.ahpa.org

This document includes the following Recommendations for Regulators:

- Cultivation and Processing Operations
Introduction

The legal status of products derived from Cannabis spp. is in a transitional phase in many states in the United States. Where products that contain marijuana and its derivatives were formally illegal throughout the U.S., many state laws now allow adult use of these either for medical purposes only or for any social adult use.

The American Herbal Products Association (AHPA) chartered a Cannabis Committee in 2010 with an express purpose to address issues related to the safe use and responsible commerce of legally-marketed products derived from Cannabis species.

To meet its purpose, the AHPA Cannabis Committee has developed recommendations to regulators for best practice rules to address four operational stages of Cannabis production and distribution: cultivation and processing; manufacturing and related operations; laboratory practice; and dispensing.

The present document provides recommendations to regulators in the specific area of Cannabis Cultivation and Processing Operations, and is presented in the form of a draft regulation. These recommendations are intended to establish a basis for oversight of entities that cultivate cannabis in either outdoor or indoor facilities. The document address such topics as cultivation practices, facility requirements, management of water resources, recordkeeping and information disclosure. It also establishes best practices for operations that provide post-harvest processing of cannabis, for either distribution to dispensing operations, or to manufacturing operations for the production of cannabis-derived products.

This Revision 1 of the document incorporates some minor editorial changes to definitions. No changes to requirements specified in the document have been made.

The AHPA Cannabis Committee offers this document to states and local municipalities where use of marijuana is allowed under local law such that regulatory authorities can consider the adoption of these recommendations, in whole or in part, as the basis for development of jurisdiction-specific regulations.

Please contact AHPA for further information or to discuss this document further.

Points of contact:

  Michael McGuffin / P: 301-588-1171 x201 / E: mmcguffin@ahpa.org
  Jane Wilson / P: 734-476-9690 / E: jwilson@ahpa.org
PART [X] – Cannabis cultivation and processing operations

<table>
<thead>
<tr>
<th>SUBPART A – GENERAL PROVISIONS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 1.1 Subject operations</td>
<td>2</td>
</tr>
<tr>
<td>Section 1.2 Other statutory provisions and regulations</td>
<td>2</td>
</tr>
<tr>
<td>Section 1.3 Definitions</td>
<td>2</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART B – CULTIVATION AND PROCESSING OPERATIONS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 2.1 Types of cultivation operations</td>
<td>5</td>
</tr>
<tr>
<td>Section 2.2 Ancillary operations</td>
<td>5</td>
</tr>
<tr>
<td>Section 2.3 Cultivation practices</td>
<td>6</td>
</tr>
<tr>
<td>Section 2.4 Processing practices</td>
<td>7</td>
</tr>
<tr>
<td>Section 2.5 Distribution practices</td>
<td>7</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART C – PERSONNEL</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 3.1 Personnel training</td>
<td>7</td>
</tr>
<tr>
<td>Section 3.2 Employee safety</td>
<td>8</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART D – FACILITIES</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 4.1 General compliance</td>
<td>9</td>
</tr>
<tr>
<td>Section 4.2 Fire prevention</td>
<td>10</td>
</tr>
<tr>
<td>Section 4.3 Sanitation practices</td>
<td>10</td>
</tr>
<tr>
<td>Section 4.4 Electrical system</td>
<td>11</td>
</tr>
<tr>
<td>Section 4.5 Ventilation system</td>
<td>11</td>
</tr>
<tr>
<td>Section 4.6 Disposal and waste practices</td>
<td>11</td>
</tr>
<tr>
<td>Section 4.7 Security provisions</td>
<td>11</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART E – WATER RESOURCE MANAGEMENT</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 5.1 Cultivation water management</td>
<td>12</td>
</tr>
<tr>
<td>Section 5.2 Potable water for employee use</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART F – RECORDKEEPING</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 6 Recordkeeping practices</td>
<td>12</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART G – INFORMATION DISCLOSURE</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 7 Information disclosure</td>
<td>13</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>SUBPART H – RECALLS</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Section 8 Recall plan</td>
<td>14</td>
</tr>
</tbody>
</table>

FOR DISCUSSION. Prepared for consideration for submission to state or local regulatory agencies in states within the United States.
**SUBPART A – GENERAL PROVISIONS**

**Section 1.1 Subject operations**
(a) Except as provided by paragraph (b) of this section, any person, group of persons, non-profit entity, or business entity that cultivates cannabis for retail or wholesale transactions in the jurisdiction in which this part applies is engaged in a cultivation operation, and is subject to this part.

(b) A compliant individual who cultivates cannabis in accordance with local and state law for personal use is not subject to this part.

(c) Except as provided by paragraph (d) of this section, any person, group of persons, or business entity that processes cannabis for retail or wholesale transactions in the jurisdiction in which this part applies is engaged in a processing operation, and is subject to this part.

(d) A compliant individual who processes cannabis in accordance with local and state law for personal use is not subject to this part.

(e) Operations subject to this part are subject only to those sections of this part that directly apply to the operations conducted, such that:
   (1) A cultivation operation is not subject to the processing sections of this part unless processing operations are also conducted by the cultivation operation; and
   (2) A processing operation is not subject to the cultivation sections of this part unless cultivation operations are also conducted by the processing operation.

**Section 1.2 Other statutory provisions and regulations**
In addition to this part, cultivation operations and processing operations must comply with all other applicable statutory provisions and regulations related to cannabis cultivation and processing in the jurisdiction in which this part applies, and related to all other business activities undertaken in conducting the cultivation operation or processing operation.

**Section 1.3 Definitions**
The following definitions apply to this part:

*Batch* means a specific quantity of cannabis harvested during a specified time period from a specified cultivation area.

*Cannabis* means any of the aerial parts of a plant in the genus *Cannabis*, and does not mean hemp.

*Cannabis planting material* means cannabis seeds, seedlings, cuttings, clones, etc. used by a cultivation operation to grow cannabis.

*Cannabis waste* means cannabis discarded by the cultivation operation or processing operation.

---

1 This term “in the jurisdiction where this part applies” may be replaced throughout with the name of the specific jurisdiction.

FOR DISCUSSION. Prepared for consideration for submission to state or local regulatory agencies in states within the United States.
Compliant individual means an individual who has met all legal requirements to obtain and use cannabis or cannabis-derived products in the jurisdiction where this part applies.

Cultivate means to grow, harvest, dry, and cure cannabis. A person, group of persons, non-profit entity, or business entity that cultivates is a cultivator, and a facility where cannabis plants are cultivated is a cultivation operation.

Cultivation area means the physical location of a structure or property at which cannabis is cultivated.

Curing means the process by which cannabis is prepared, preserved, or finished.

Direct-from-garden or caregiver operation means a dispensing operation whereby compliant individuals obtain cannabis or cannabis-derived product directly from a cannabis cultivator.

Dispensing operation means a person, group of persons, non-profit entity, or business entity that provides cannabis or cannabis-derived product to compliant individuals and includes delivery services, direct-from-garden operations, growing co-ops, and storefront operations.

Drying means the dehydration of harvested cannabis.

Firewall assembly means a fireproof barrier used to prevent the spread of fire between or through buildings or structures.

Greenhouse means a permanent structure located outdoors that is completely covered by a material that allows a controlled level of light transmission.

Greenhouse cultivation means the cultivation of cannabis inside of a greenhouse utilizing natural sun and possible supplemental artificial lighting.

Harvest means to gather cannabis plants from cultivation medium or to gather specific aerial parts of cannabis plants.

Hemp means any part of a plant in the genus Cannabis, whether growing or not, with a delta-9 tetrahydrocannabinol concentration of not more than 0.3 (three-tenths) percent on a dry weight basis.

High intensity discharge lamps (HID lamps) means a type of electrical gas-discharge lamp which produces light by means of an electric arc between tungsten electrodes housed inside a translucent or transparent fused quartz or fused alumina arc tube.

Identity means the set of characteristics by which an ingredient or product is definitively recognizable or known. In the case of cannabis and other botanical ingredients, identity means the plant part and the botanical genus, species, variety, strain, and/or cultivar, as well as any other applicable characteristics as stated on the label or other labeling.

2 Different jurisdictions may have other terminology for the type of operation that is defined as a dispensing operation in this document.
Indoor cultivation means cultivation of cannabis grown in a fully enclosed location in which the only light source is artificial.

Manufacture means to compound, blend, grind, extract, or otherwise make or prepare cannabis-derived product. A person, group of persons, non-profit entity, or business entity that manufactures is a manufacturer, and a facility where manufacture occurs is a manufacturing operation.

May is used to indicate an action or activity that is permitted.

Medium means the nutritive substrate that the cultivator is using to establish a root system.

Must is used to state a requirement.

Nursery facility means an indoor, greenhouse, or outdoor cultivation operation that produces cannabis plants for the purpose of providing planting material to other cultivation operations.

Outdoor cultivation means cultivation of cannabis out of doors utilizing natural sunlight and possibly supplemental artificial lighting.

Pack (verb) means to place cannabis or cannabis-derived product into containers for distribution, other than to package the cannabis or cannabis-derived product; and includes the placement of cannabis into any type of container by cultivation operations, processing operations, and dispensing operations, as well as the placement of filled primary packaging containers into other containers such as for storage or transport.

Personal use means cannabis that is produced for a compliant individual's personal medical needs and is not sold or distributed in any manner.

Planting means to place cannabis seeds or young plants in soil or medium.

Process means to trim, inspect, grade, or pack cannabis. A person, group of persons, non-profit entity, or business entity that processes cannabis is a processor, and a facility where cannabis is processed is a processing operation.

Processing loss means cannabis that, for any reason, during processing is deemed unfit for human consumption.

Propagation materials means all substances used in the cultivation of cannabis.

Pruning means cutting away dead or overgrown cannabis leaves, branches or stems.

Should is used to state recommended or advisory procedures.

Supplemental lighting means artificial lighting used to help or extend the vegetative life cycle of a cannabis plant.

Trimming means the removal of leaves and stems from harvested cannabis.

Variety means a specific stock, line, or breed of cannabis, also commonly referred to as strain.
Vendor means a person, group of persons, non-profit entity, or business entity that supplies cannabis or cannabis-derived product to storefront or delivery service dispensing operations, and may be either the direct representative of a cultivation or manufacturing operation, or may function independently of such operations by purchasing cannabis or cannabis-derived product from such operations and reselling it to other operations.

**SUBPART B – CULTIVATION AND PROCESSING OPERATIONS**

**Section 2.1 Types of cultivation operations**

(a) Cannabis may be cultivated by any of the following types of cultivation operations, as defined in section 1.3 in this part:
   (1) Indoor cultivation operations;
   (2) Greenhouse cultivation operations;
   (3) Outdoor cultivation operations; and
   (4) Nursery operations.

(b) Cultivation operations may do the following, as allowed by applicable legislation and regulation:
   (1) Produce their own cannabis planting material; and
   (2) Obtain cannabis planting material from any of the following:
       (i) Other cultivation operations;
       (ii) Nursery operations; and
       (iii) Compliant individuals.

(c) Processing operations may obtain cannabis from any of the following, as allowed by applicable legislation and regulation:
   (1) Cultivation operations;
   (2) Compliant individuals, and
   (3) Vendors.

(d) Cultivation operations and processing operations may distribute cannabis to any of the following, as allowed by applicable legislation and regulation:
   (1) Other cultivation operations;
   (2) Other processing operations;
   (3) Dispensing operations;
   (4) Manufacturing operations;
   (5) Vendors; and
   (6) Compliant individuals.

**Section 2.2 Ancillary operations**

(a) Cultivation operations and processing operations may also engage in other operations, including:
   (1) Manufacturing, packaging, labeling, and holding of cannabis-derived product;
   (2) Laboratory operations;
   (3) Dispensing of cannabis and cannabis-derived product; and
   (4) Cultivation and marketing of products other than cannabis.

FOR DISCUSSION. Prepared for consideration for submission to state or local regulatory agencies in states within the United States.
(b) The ancillary operations identified in section 2.2(a) may be conducted:
   (1) At the same location as cultivation or processing, so long as such
       operations are permitted at this location in the jurisdiction in which this
       part applies; or
   (2) At another location at which such operations are permitted in the
       jurisdiction in which this part applies.
(c) The ancillary operations identified in section 2.2(a) must be conducted in
compliance with all regulations relevant to such operations in the jurisdiction
in which this part applies.

Section 2.3 Cultivation practices
(a) Propagation materials
   (1) Propagation materials used in cultivation operations must be
       appropriate for use in food production.
   (2) Cultivation operations must follow the manufacturer’s usage, storage,
       and disposal recommendations for the propagation material.
(b) Pesticides
   (1) Pesticides used in cultivation operations must be one of the following:
       (i) Subject to a tolerance established for application to cannabis by the
           US Environmental Protection Agency (EPA);
       (ii) Identified by EPA regulation as exempted from tolerance;
       (iii) Subject to a Section 18 emergency exemption under FIFRA\(^3\); or
       (iv) Permitted for application to cannabis in other countries as long as
           the pesticide is also permitted for application to one or more food
           crops in the United States.
   (2) Cultivation operations must follow the manufacturer’s application and
       storage recommendations, and disposal recommendations for the
       pesticide product.
   (3) Cultivation operations must follow the EPA Worker Protection
       Standard\(^4\) when preparing and applying pesticides.
   (4) Indoor cultivation operations must comply with the pesticide
       manufacturer’s published re-entry interval time periods when applying
       pesticides.
(c) Nutrients
   (1) Nutrients used in cultivation operations must be appropriate for use in
       food production.
   (2) Cultivation operations must follow the manufacturer’s application,
       storage, and disposal recommendations for the nutrient product.
   (3) Cultivation operations must not return unused rooting hormone to the
       source container.
   (4) Nitrate-based and other oxidizing fertilizers must be stored away from
       solvents, fuels and pesticides.

\(^3\) Section 18 of the \textit{Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA)} authorizes EPA to allow an
unregistered use of a pesticide for a limited time if EPA determines that an emergency condition exists.
\(^4\) The EPA Worker Protection Standard can be accessed at the following website -
\url{http://www.epa.gov/agriculture/twor.html} (accessed September 9, 2013)
(d) Carbon dioxide
   (1) Indoor cultivation facilities utilizing carbon dioxide must maintain levels under 2000 ppm in cultivation areas when facility personnel may be present.
   (2) Indoor cultivation facilities utilizing carbon dioxide at levels above 2000 ppm in a sealed room must prohibit personnel from entering the cultivation area unless personal protective equipment is provided.
   (3) All regulators and environmental control systems that regulate carbon dioxide emissions must be maintained in good working order and be serviced in accordance with the manufacturer’s recommendations.

(e) Equipment and tools
   (1) Equipment used for measuring, regulating, or recording temperatures, pH, humidity, or other conditions related to the cultivation and processing of cannabis must be accurate and adequately maintained.
   (2) Cultivation and processing tools that come in direct contact with cannabis plants should be disinfected as needed to protect plant health.
   (3) Scales used for the weighing of cannabis must be calibrated at regular intervals.

Section 2.4 Processing practices
(a) Processing operations must be maintained in a clean and sanitary condition including all work surfaces and equipment.
(b) Processing operations must implement protocols which prevent processing contamination and mold and mildew growth on cannabis.
(c) Employees handling cannabis in processing operations must utilize facemasks and gloves in good operable condition as applicable to their job function.
(d) Employees must wash hands sufficiently when handling cannabis or use gloves.

Section 2.5 Distribution practices
Cannabis distributed by cultivation operations and processing operations must be accompanied by the following information:
   (1) Cultivation or processing operation’s name;
   (2) Identity of contents;
   (3) Net weight of contents; and
   (4) Sufficient information to trace the cannabis to its batch.

SUBPART C – PERSONNEL

Section 3.1 Personnel training
(a) Cultivation and processing operations must:
(1) Ensure that each person engaged in the operation has the education, training, and experience, or any combination thereof, to enable that person to perform all assigned functions.
(2) Maintain records of any training provided to employees for the performance of all assigned functions.
(b) Cultivation and processing operations should provide all employees with training that includes:
   (1) Instructions regarding regulatory inspection preparedness and law-enforcement interactions; and
   (2) Information on U.S. federal laws, regulations, and policies relating to individuals employed in these operations, and the implications of these for such employees.
(c) Cultivation and processing operations must implement employee hygiene protocols and training, which at a minimum address:
   (1) Policies which prohibit employees who are showing signs of illness, open wounds, sores or skin infections from handling cannabis.
   (2) Hygiene training for employees who handle cannabis with specific attention to preventing microbial contamination.
   (3) Hand washing requirements including washing hands with soap and hot water before beginning work, after using the bathroom and after meal breaks.
   (4) Instructive hand washing signage must be in appropriate areas such as bathrooms, kitchens, and lunch areas, and in multiple languages as needed.

Section 3.2 Employee safety
(a) Cultivation operations and processing operations must implement safety protocols and provide all employees with adequate safety training relevant to their specific job functions, which may include:
   (1) Emergency action response planning as necessary;
   (2) Employee accident reporting and investigation policies;
   (3) Fire prevention;
   (4) Hazard communication policies, including maintenance of material safety data sheets (MSDS);
   (5) Materials handling, spill, and disposal policies;
   (6) Job hazard analyses; and
   (7) Personal protective equipment policies, including respiratory protection.
(b) Cultivation operations must provide and maintain at least one emergency eye flushing station readily accessible to all employees and access to adequate eye flushing water for each employee working in field operations.
(c) Cultivation operations and processing operations must visibly post and maintain an emergency contact list which includes at a minimum:
   (1) Operation manager contacts;
   (2) Emergency responder contacts;
   (3) Poison control contacts;
(4) Fire department contacts; and
(5) Spill response team contacts.

SUBPART D – FACILITIES

Section 4.1 General compliance
(a) Cultivation operations must comply with all legal requirements pertaining to
the following as applicable:
   (1) Restrictions on the size of the cultivation area;
   (2) Restrictions on the number of cannabis plants allowed or other
        quantitative limits; and
   (3) Light pollution restrictions.
(b) Location of cultivation operations:
   (1) Indoor cultivation operations may be located on any property that is
       zoned for such use and must be located in a fully permitted, non-
       residential structure that:
       (i) Was constructed in compliance with local building code;
       (ii) Has a complete roof enclosure supported by connecting walls
            extending from the ground to the roof;
       (iii) Is secure against unauthorized entry; and
       (iv) Minimizes unnecessary visual, auditory or olfactory evidence of
            indoor cannabis cultivation.
   (2) Outdoor cultivation operations and greenhouse cultivation operations
       may be located on any property that is zoned for such use.
   (3) Outdoor cultivation operations and greenhouse operations must be
       located within any setbacks that pertain to the property where the
       cultivation is taking place.
   (4) Greenhouse cultivation structures must be fully permitted and built to
       code at the time of construction.
(c) Location of processing operations
   (1) Processing operations may be located on any property that is zoned
       for such use.
   (2) Processing operations must be located within any setbacks that pertain
       to the property where the processing is taking place.
   (3) Processing operation structures must be fully permitted and
       constructed in compliance with local building code.
(d) Outdoor cultivation or greenhouse cultivation operations must shield or
downcast supplemental lighting.
(e) Cultivation operations and processing operations that transport cannabis
must do so in a secured enclosed container or secured trunk of the delivery
vehicle.
Section 4.2 Fire prevention
(a) Any room in an indoor cultivation operation in which operational supplemental lighting, ballasts, or electrical control panels are located must be constructed with a minimum of a one-hour firewall assembly.

(b) Indoor cultivation operations must:
(1) Provide at least one operating fire extinguisher, and
(2) Provide additional fire extinguishers in a number proportional to the watts of supplemental lighting used in the facility (one fire extinguisher per every 10,000 watts of lighting), or in accordance with local fire code.

(c) Fire extinguishers must be:
(1) Easily accessible to employees from every room and in each hallway of the facility;
(2) Maintained annually or as otherwise specified by the manufacturer; and
(3) Of the appropriate class rating for the type of fire associated with the functions being performed in the facility (i.e., electrical, chemical).

(d) Flammable products must be stored in a properly marked fire containment cabinet or area.

(e) Signage that complies with National Fire Protection Association (NFPA) standard 704 must be placed at entrances to exposure areas.

Section 4.3 Sanitation practices
(a) Cultivation operations and processing operations must provide employees with adequate and readily-accessible toilet facilities.
(1) Toilet facilities must be maintained in a sanitary condition;
(2) Toilet facilities must be adequately stocked with toilet paper, soap, and single use paper towels or other drying devices; and
(3) Toilet facilities must be kept in good repair at all times.

(b) Cultivation operations and processing operations must provide adequate and convenient hand-washing stations.
(1) Hand washing stations must be provided with running water of suitable temperature;
(2) Hand washing stations must be provided with effective hand cleaning or sanitizing preparations and single use paper towels or other drying devices;
(3) Hand washing stations must be located at points in the facility where good sanitary practices require employees to wash or sanitize their hands; and
(4) Outdoor and greenhouse cultivation operations must provide hand-washing stations at field locations as appropriate.

(c) Cultivation operations and processing operations must implement sanitation practices, which at a minimum address:
(1) Removal of debris, and control of the growth of mold, mildew and algae in the cultivation area or processing area;
(2) Pest control practices, including maintenance and repair of caulk cracks and drain areas;
(3) Identification of hoses dedicated for use in cultivation; and
(4) Maintenance and cleaning of irrigation systems.
(d) Processing operations must protect cannabis from contact with birds, rodents, insects, and other animals and from exposure to the elements.

Section 4.4 Electrical system
(a) The cultivation operation’s electrical system must be of sufficient capacity to handle the actual electrical load and be installed in accordance with an approved electrical permit.
(b) All electrical work and upgrades at cultivation operations must be performed with proper permitting.
(c) All electrical equipment used by a cannabis cultivation operation should be connected to the electrical system in accordance with the equipment manufacturer’s recommendations.

Section 4.5 Ventilation system
(a) Enclosed cultivation operations and processing operations must be equipped with adequate ventilation to maintain proper humidity and temperature.
(b) For indoor cultivation operations:
   (1) If a mechanically propelled air intake system is used, a filter capable of removing 99.97% of particles with a diameter of 0.3 micrometers (µm) must also be utilized, as necessary to control potential contamination with pathogenic organisms.
   (2) If a non-mechanically propelled or passive intake system is being utilized, a grate and filter sufficient to reduce the intrusion of rodents and insects must be installed.

Section 4.6 Disposal and waste practices
(a) Cannabis waste must be disposed of in a manner which prevents unauthorized use and such disposal must be documented.
(b) Bulbs and ballasts utilized during the cultivation of cannabis must be disposed of in accordance with manufacturer’s recommendations.

Section 4.7 Security provisions
(a) Outdoor and greenhouse cultivation operations should be enclosed by a secure perimeter fence at least six (6) feet in height. The fence should include a lockable gate that is locked when a qualified employee is not in the immediate area. The fence must not violate any other ordinance, code section or provision of law regarding height and location restrictions.
(b) Indoor cultivation facilities and processing facilities must have locking doors and windows which allow emergency ingress and egress in accordance with applicable regulations.
(c) Cultivation operations and processing operations must implement and communicate security protocols to all personnel.
(d) Visitors must be accompanied by an employee at all times.
SUBPART E – WATER RESOURCE MANAGEMENT

Section 5.1 Cultivation water management
(a) In the absence of local or state water district regulations for cannabis production, cultivation operations must create and implement a cultivation water management plan to address the following:
   (1) Erosion prevention; and
   (2) Effluent and agricultural discharges.
(b) Chemical solutions must be disposed of in accordance with applicable laws and regulations.
(c) Application of nutrients or pesticides through an irrigation system (chemigation), must be performed in accordance with state or local agricultural regulations.

Section 5.2 Potable water for employee use
(a) Cultivation operations not utilizing a municipal source of potable water must test the potable water supply at least two times per year to ensure compliance with state primary drinking water standards.
(b) Chemicals, fertilizers, pesticides, media and other products must be stored away from the potable water supply.

SUBPART F – RECORDKEEPING

Section 6 Recordkeeping practices
(a) Cultivation operations must record the identity and source of all cannabis propagation material with sufficient specificity to ensure that the material can be traced to its source. Such records must be created whether the propagation material is obtained off-site or produced on-site.
(b) For each batch of cannabis, cultivation operations must maintain cultivation records that include at a minimum:
   (1) Planting records:
       (i) Form of cannabis planted (e.g., seed, clone, seedlings, etc.);
       (ii) Date(s) that planting took place;
       (iii) Variety(ies) planted;
       (iv) Size of the cultivation area; and
       (v) Location of the cultivation area.
   (2) Propagation records:
       (i) Media used, and whether the media was reused or new product;
       (ii) Description of all actions taken to prevent or treat the cannabis for disease or pest issues;
       (iii) Soil amendments added, and strength of the application;
       (iv) Nutrients added, and strength of the application;
       (v) All substances applied to the plant(s) surface or used as a fumigant in the cultivation and/or nursery area, and
       (vi) Pruning or other physical technique(s).
(3) Pesticide use records:
   (i) Pesticide chemical name;
   (ii) Brand name and manufacturer name;
   (iii) Amount of pesticide applied;
   (iv) Date pesticide applied;
   (v) Identification or location of plants to which pesticide was applied; and
   (vi) Name of applicator if required.

(4) Harvest records:
   (i) Identity of each variety harvested;
   (ii) Date of harvest;
   (iii) Gross weight of the cannabis harvested for processing (generally recorded after drying);
   (iv) Total weight of cannabis waste resulting from the harvest, and
   (v) Net weight of harvested cannabis (gross weight less waste).

(c) Processing operations must maintain records for processed cannabis that include at a minimum:
   (1) Identity of the variety processed;
   (2) Sufficient information to trace the processed cannabis to its cultivation source;
   (3) Date of processing;
   (4) Initial weight; and
   (5) Total weight of any processing loss (based on wet or dry weight).

(d) Cultivation operations and processing operations must maintain records of the commercial sale of cannabis to other cultivation and processing operations, to manufacturing operations, and to dispensing operations that include at a minimum:
   (1) Identity of the variety distributed;
   (2) Total weight of each variety distributed;
   (3) Date of distribution; and
   (4) Identity of the receiving operation.

(e) Cultivation operations and processing operations are not required to retain records of cannabis distributed for the following purposes:
   (1) Samples provided for testing;
   (2) Samples provided to other operations at no charge; and
   (3) Samples provided to compliant individuals at no charge.

**SUBPART G – INFORMATION DISCLOSURE**

**Section 7 Information disclosure**

(a) Cultivation operations must provide the following records to other cultivation operations, processing operations, manufacturing operations, and dispensing operations receiving cannabis from the cultivation operation, upon the receiving operation’s request:
   (1) Nutrients used during cultivation;
(2) All substances applied to the plant(s) surface or used as a fumigant in the cultivation area;
(3) Pesticides applied during cultivation; and
(4) Other substances used during cultivation that may result in a residue on cannabis.

(b) Information provided by a cultivation operation, whether written or verbal, about the identity, quality, and cultivation conditions of cannabis it provides must be accurate.

(c) Cultivation operations and processing operations must disclose the extent and type of testing and analysis conducted on the cannabis it provides, including:
   (1) The type of test, analysis or examination used, if any, to determine the particular strain or cultivar of each batch of cannabis provided;
   (2) Any tests to determine the quantitative levels of contained constituents, and if so, the type of testing used;
   (3) Any tests to determine the absence or presence of specific classes of potential contaminants, and if so, the type of testing used. The information required by this paragraph must be disclosed for each of the following:
      (i) Pesticides;
      (ii) Yeasts and molds; and
      (iii) Other microbiological contaminants.
   (4) Whether the testing was conducted by the cultivation or processing operation, or by an external laboratory.

**SUBPART H – RECALLS**

**Section 8  Recall plan**

(a) Each cultivation operation and processing operation must develop and implement a recall plan addressing at a minimum:
   (1) Factors which necessitate a recall procedure;
   (2) Personnel responsible for a recall; and
   (3) Notification protocols.

(b) Each cultivation operation and processing operation must establish a policy for communicating a recall of cannabis that has been shown to present a reasonable or a remote probability that the use of or exposure to the product will cause serious adverse health consequences, or could cause temporary or medically reversible adverse health consequences. This policy should include:
   (1) A mechanism to contact all customers who have, or could have, obtained the cannabis from the cultivation operation or processing operation;
   (2) Information on the return or destruction of any recalled product;
   (3) A mechanism to contact the cultivation operation; and
(4) Communication and outreach via media, as necessary and appropriate.
(c) Any recalled cannabis that is returned to a cultivation operation or processing operation must be disposed of in a manner that ensures that it cannot be salvaged and will not be used by a compliant individual or by any other person.