I. SCOPE

This policy shall apply to all marijuana occupancies including but not limited to marijuana processing kitchens, plant husbandry occupancies, and dispensaries located within Poudre Fire Authority’s jurisdiction. These occupancies involve unique operations which create significant life safety and fire hazards. As such, all occupancies engaging in these activities shall be required to submit plans for review and approval of such operations.

The following are the most common operational processes that must be documented in your plans:

- Plant Husbandry / Processing license
- Annual LPG Use & Storage amounts
- Annual CO2 Enrichment System process and storage amounts - Including natural gas generators and for any system containing more than 100 lbs of CO2
- Annual Compressed Gas Use & Storage- required for 6,000 cu/ft or more of an inert. (1 pound of CO2 = 8.74 cu/ft)
- Annual Fumigation / Thermal Insecticide Fogging
- All documentation required within this policy based on the processes used

II. PERMITS

New and/or existing dispensaries and plant husbandry occupancies (including kitchens) may require construction permits or a change of occupancy. Please see the appropriate building department for guidelines for dispensaries & plant husbandry in commercial buildings. Including but not limited to tenant finishes, chemical hood installation and mechanical ventilation system installation.
III. SPECIFIC REQUIREMENTS

1. Carbon dioxide (CO2) systems
   - If used in plant husbandry occupancies, equipment (meters or gauges) shall be provided to indicate CO2 levels in each grow area/room and CO2 storage locations.
   - These meters shall be calibrated and inter-connected to gas supply solenoids located at the storage container to limit CO2 levels to a maximum of 5000 ppm.
   - All systems must have valves that positively close in the event of a loss of electrical power to the building or in event of alarm activation. Manual reset shall be installed to reset the system.
   - Inspection and testing of equipment. All sensors, alarms and storage containers must be inspected and tested annually or as prescribed by the manufacturer. A written record of all required inspection and testing shall be maintained on the premises for a period of three years. Testing of emergency devices or systems required by this policy shall be conducted by persons trained and qualified in these systems.
   - Gases shall be distributed within the facility by means of any approved piping system. These pipes must be labeled with name of gasses and direction of flow. All Shut offs must be marked as such.
   - Signage shall be provided on the entrance door of each grow room/area and all storage rooms utilizing CO2 stating:

   ![DANGER]

   Potential Oxygen Deficient Atmosphere

   - NFPA 704 Simple Asphyxiate placards shall also be provided at the exterior main entrance and at room where CO2 is used.

2. Product extraction processes.
   All processing of marijuana plants into refined or concentrated products, utilizing compressed, flammable gases:
   - Equipment used in the processing of plant material using butane or other flammable gasses or hazardous materials must be submitted
for review and approval of the process prior to use of the equipment. This includes changes of existing processes or new equipment.

- All equipment used in the extraction of THC must be UL listed or approved by an industrial hygienist or a fire protection engineer. Any letter or documentation of approval must be submitted to Poudre Fire Authority for your official records and a copy must be maintained on the premises at all times.

- The final process of cooking or heating off any remaining flammable gasses or hazardous materials must be completed within a UL listed Chemical hood that has been installed and approved by the appropriate Building Department.

- Any other process used to remove the final amounts of flammable gasses and or Hazardous material must be approved by the Poudre Fire Authority prior to its use.

- Storage of butane or other flammable gasses shall be in accordance with the 2012 International Fire Code.

- A flammable gas detector shall be in used during the extraction process.

- Extraction equipment shall be used strictly in accordance with the manufacturer’s instructions.

- Other extraction processes using hazardous materials shall be submitted for review and approval by the Poudre Fire Authority Community Safety and Service Division.

3. **Exiting & Security**

- Required minimum exit access shall be provided and in accordance with the 2012 International Fire Code.

- Enhanced building security measures shall by no means impede egress for the facilities’ occupants or firefighters in the event of an emergency.

- Fire Department Key Access (Knox Box) shall be provided near the main entrance to the facility.

- Locking hardware on doors (interior or exterior) shall be in accordance with the 2012 International Building Code.

4. **Fire extinguishers**

- Portable fire extinguishers shall be provided within the facility in accordance with the 2012 International Fire Code.

- Travel distance to extinguishers shall not exceed seventy-five (75) feet of travel.
5. **Interior Finishes**
   - Rooms shall not be covered, draped or otherwise have installed, any material not rated for flame spread and smoke development based on occupancy. The use of any plastic or fabric must meet the requirements of NFPA 701, and documentation of certification must be submitted to Poudre Fire Authority for your official records and a copy must be maintained on the premises at all times.

6. **Electrical**
   - Extension cords, power strips, or multi-outlet assemblies etc. are prohibited from being used as permanent wiring.

IV. **SITE INSPECTION**

   Upon licensing with city, county and or the state of Colorado you will be required to sign a Poudre Fire Authority document agreeing to adhere to the 2012 International Fire Code. This document will be kept on file. Approximately 45 days after the business is operational a general fire inspection will be completed by Poudre Fire Authority to ensure compliancy with the Fire Code.

V. **NOTICE**

   Any / all occupancies discovered operating marijuana occupancies (kitchens, Dispensaries, & Plant Husbandry) not in compliance with the requirements of this policy may result in the issuance of a “Stop Work Order” and or a summons being issued to offending parties.
Extraction Operations Using Flammable and Combustible Liquids/Gases or Compressed Gases

Legal, solvent based extraction of cannabis using Flammable and Combustible Liquids/Gases or Compressed Gases has become more prevalent in Colorado and we have seen an increase in commercial operations in the portions of Larimer County that Poudre Fire Authority (PFA) serves. It should be noted that Flammable and Combustible Liquids/Gases and Compressed Gases are regulated materials in the International Fire Code (IFC). Therefore storage, use and handling of these products is regulated by PFA under the requirements of the IFC, local amendments and policies in portions of unincorporated Larimer County, the City of Fort Collins and other areas that fall under our jurisdiction.

The following is a short summary of items that must be addressed in commercial, solvent based extraction. This is not an all-inclusive list and professional guidance should be sought in addressing all appropriate regulations:

- Equipment used in the processing of plant material using flammable and combustible liquids/gases or compressed gases must be UL listed or must be peer reviewed by a Professional Engineer, licensed in the State of Colorado or a licensed Fire Protection Engineer. It must also be a closed loop system that will not allow vapors to escape to the atmosphere in the facility. The listing or peer review must be submitted to PFA for review and approval prior to permitted operations. This includes changes of existing processes or new equipment.

- The facility and operational procedures must be peer reviewed by a Professional Engineer, licensed in the State of Colorado or a licensed Fire Protection Engineer. The report generated by the appropriate, licensed professional must be submitted to PFA for review and approval, prior to permitted operations. These documents must be maintained on premise at all times.

- The final process of cooking or heating off any remaining flammable gases or hazardous materials must be completed within a UL listed Chemical hood that has been installed and approved by the appropriate Building Department, or inside a closed oven that is vented to the exterior of the building.

- Any other process used to remove the final amounts of flammable gases or hazardous material must be peer reviewed as noted above and approved by PFA prior to its use.

- Storage of butane or other flammable gases shall be in accordance with the International Fire Code.

- A flammable gas detector specific to the gas being used as the solvent shall be in used during the extraction process and anytime there is gas in the facility.
- Extraction equipment shall be used strictly in accordance with the manufacturer’s instructions.

- Operational checklists (including pre & post-production) shall be posted and readily visible near extraction equipment. A pre-operation leak checking with an associated log is mandatory and this log must be made available to inspectors upon request.

- All extraction processes shall be submitted for review and approval by the Poudre Fire Authority Community Safety and Service Division. All extraction machines and the area where the process is taking place must be peer reviewed and all documentation must be kept on file.

- Exiting & Security shall be in accordance with the IFC and International Building Code (IBC) and enhanced building security measures shall not impede free egress from individual rooms or the facility. In addition, a Fire Dept. Knox Box shall be provided near the main entrance of the facility.

- Fire extinguishers shall be provided in accordance with the IFC.

- Interior Finishes shall be in accordance with the (IFC) and (IBC). Rooms shall not be covered, draped or otherwise have installed, any material not rated for flame spread and smoke development, based on occupancy. The use of any plastic or fabric must meet the requirements of NFPA 701 and be installed in compliance with the IFC and IBC. Documentation of NFPA 701 certification must be submitted to Poudre Fire Authority for official records. A copy must also be maintained on the premises at all times.

- Extension cords, power strips, multi-outlet assemblies, etc. are prohibited from being used as permanent wiring and all electrical components must be compliant with the IFC, IBC and the National Electric Code (NEC).

- Please be aware that if you complete a new construction or tenant finish build, PFA does a concurrent review of the construction documents along with the Building Department.

- Refer to PFA Policy P01-5701 and the other, referenced regulatory documents.
Code requirements for MIP Facilities within the City of Fort Collins

In an effort to assist us in assessing possible hazards within your operation, the Poudre Fire Authority requests a response to the following items listed below. Please forward this document with your application to the City Clerk’s Office. Please initial each requirement confirming you understand and agree to comply. Failure to comply with the fire code may affect your operation.

1. Equipment used in the processing of plant material using butane or other flammable gasses or hazardous materials must be submitted for review and approval of the process prior to use of the equipment. This includes changes of existing processes or new equipment. Initials

2. All equipment used in the extraction of THC must be UL listed or must be peer reviewed by a state certified engineer or a fire protection engineer. Any letter or documentation of approval must be submitted to Poudre Fire Authority for your official records and a copy must be maintained on the premises at all times. Initials

3. The MIP facility in its entirety must be peer reviewed by a state certified engineer or a fire protection engineer. Any letter or documentation of approval must be submitted to Poudre Fire Authority for your official records and a copy must be maintained on the premises at all times. Initials

4. The final process of cooking or heating off any remaining flammable gasses or hazardous materials must be completed within a UL listed Chemical hood that has been installed and approved by the appropriate Building Department, or inside a closed oven that is vented to the exterior of the building. Initials

5. Any other process used to remove the final amounts of flammable gasses and or Hazardous material must be approved by the Poudre Fire Authority prior to its use. Initials

6. Storage of butane or other flammable gasses shall be in accordance with the 2012 International Fire Code. Initials

7. A flammable gas detector that detects the flammable gas/liquids being used shall be in used during the extraction process. Initials

8. Extraction equipment shall be used strictly in accordance with the manufacturer’s instructions. Initials

9. Other extraction processes using hazardous materials shall be submitted for review and approval by the Poudre Fire Authority Community Safety and Service Division. All Extraction machines and the area where the process is taking place must be peer reviewed and all documentation must be kept on file. Initials

10. Ventilation must be installed in accordance with the peer reviews requirements. And must be no less
than 100 cubic feet per minute anytime there is flammable gas or liquids in the facility. All exhaust must be directed away from any ignition sources. Initials________

11. The transfer of gas from larger tanks to smaller tanks cannot be done inside the facility. Initials_______

12. The use of flammable gas/liquids in the extraction of THC or in the MIP facility requires the installation of a NFPA 704 placarding specific to the highest hazard gas being used as a solvent; posted on the main entrance and entrance to extraction room. Initials_______

The Poudre Fire Authority will be inspecting your facility within 30-45 days after a medical marijuana license is issued.

Business Name____________________________________________________________________________________

Address_____________________________________________________________________________________________________________________

Name of Licensee _______________________________________ Phone # _____________________________

Name of Person Completing this Form _________________________________________________________________

Emergency Contact Info: Phone ____________________________ E-Mail ______________________________

Signature___________________________________________________ Date______________________

Office of the Fire Marshal
Poudre Fire Authority
(970) 416-2891
Code requirements for Marijuana Grow Operations within the City of Fort Collins

In an effort to assist us in assessing possible hazards within your operation, the Poudre Fire Authority requests a response to the following items listed below. Please forward this document to your application to the City Clerk’s Office. Failure to comply with the fire code may affect your operation.

1. Extension cords are only intended to be used with portable electric appliances, such as a hand drill and not the refrigerator or microwave. An extension cord cannot be plugged into another extension cord. Are there enough electrical outlets so all the equipment can be plugged in safely without the use of extended extension cords? Y____ N____

2. The use of non-fire rated plastic sheets to construct temporary (and unpermitted) walls is prohibited. There are two problems with this scenario:
   (a) a building permit is required to be issued,
   (b) the use of these “temporary” walls establishes a maze within, which is a fire code violation.
Are temporary walls of plastic sheeting anticipated for use within the facility? Y____ N____

3. An inventory of all crop-growing enhancements being stored and used which, by definition, are hazardous materials (i.e. solids-fertilizers, liquids-fertilizers, gases-carbon dioxide, nitrogen, compressed air) shall be submitted for evaluation. Material Safety Data Sheets shall be compliant with fire code standards for uniformity. Y____ N____

4. Exits shall be unobstructed at all times. Exit signs shall be visible for any direction. Exit door shall be operable without the use of a key, special knowledge or effort. Y____ N____

5. When an emergency access drive is required, it shall be visible and unobstructed. Is the fire lane painted or signed, and kept clear for emergency vehicles? Y____ N____

6. Is the business address posted on the building face which fronts the street? Y____ N____

The Poudre Fire Authority will be inspecting your facility within 30-45 days after a medical marijuana license is issued.

Business Name________________________________________________________

Address ______________________________________________________________

Name of Licensee ______________________________________________________ Phone # __________________________

Name of Person Completing this Form ______________________________________

Emergency Contact Info: Phone __________________________ E-Mail __________________________

Signature___________________________________________________ Date____________________

Office of the Fire Marshal
Poudre Fire Authority
(970) 416-2891
The International Fire Code (IFC) is a model code that is adopted throughout the State of Colorado, 41 other states, the District of Columbia, Guam and Puerto Rico. This model code is, at its core, designed to establish minimum regulations for fire prevention and fire protection systems using prescriptive and performance-related provisions. Through this code, the Poudre Fire Authority (PFA) safeguards the public health and safety in the communities we serve.

In the first quarter of 2019, the PFA will be adopting the 2018 IFC which will be replacing the 2015 edition of the IFC and multiple policies and amendments that are currently adopted as law in PFA’s jurisdiction. The 2018 IFC and associated amendments, when adopted, will take precedent over code requirements contained in previous editions, amendments and policies.

Due to recent advances in the science of plant processing/extraction operations and carbon dioxide (CO2) enrichment, the 2018 IFC has added multiple code sections pertaining to these processes. This is a summary of the major changes. This is not an all-inclusive document and other code provisions, referenced standards and amendments may apply in certain applications and as such, guidance from licensed design professionals should be sought in addressing all appropriate regulations.

- **Chapter 39** pertains specifically to processing and extraction of oils and fats from various plants by use of a solvent, desolventizing the raw material, production of the miscella, distillation of the solvent from the miscella and solvent recovery of oils by use of a solvent, distillation of solvents and solvent recovery.

- Processes using flammable gases or flammable cryogenics cannot be located in buildings containing occupancy groups A, E, I or R (Assembly, Educational, Institutional or Residential).

- Processes utilizing hydrocarbon solvents have to be in dedicated rooms specific to the process.

- Post-processing or winterization must take place in an appliance listed for such use. Domestic or commercial cooking appliances are forbidden.

- Where flammable and combustible liquids are boiled, distilled or evaporated, the process has to take place under a hazardous exhaust fume hood that is rated for exhausting flammable vapors. Electrical equipment used within the hood must be rated for use in flammable atmospheres. Heating over an open flame is prohibited.

- LPG (liquefied petroleum gas – including propane, butane and other flammable hydrocarbon gases) cannot be released to the atmosphere.

- Systems and equipment used in processing must also be compliant with the International Building Code and International Mechanical Code.

- Systems and equipment must be listed (independent lab such as UL, or others) or approved. If no listing is available the equipment and/or system must be peer reviewed by a Colorado state licensed engineer or Fire Protection Engineer (FPE) who must submit a technical report to PFA for review and approval. Technical report criterion is outlined in the IFC.
- Flammable gas detection is required and detectors must activate at 25% of the lower flammability limit of the specific gas. Detectors must be UL listed.

- Gas detectors shall initiate audible and visual alarms in extraction rooms, shall deactivate heating systems in extraction rooms, shall dis-able all light switches and electrical outlets and must activate the mechanical ventilation system where the system is interlocked.

- Failure of gas detection systems shall result in deactivation of heating systems, activation of mechanical ventilation and initiate a trouble signal in an approved location.

- Emergency shutoffs shall be provided for processes involving gaseous hydrocarbon based solvents. Shutoffs must be available at point of use and at each gas source.

- Site inspection is required by the state licensed engineer or FPE. They must provide a site inspection report with enough lead time for review and approval by PFA prior to any final inspection by PFA. This must be submitted with advanced notice for review of report.

- An operational permit is required for plant processing/extraction operations and CO2 enrichment.

- Chapter 53 and Section 5307.4 regulate storage, use and handling of carbon dioxide (CO2) and the design, installation and maintenance of CO2 enrichment systems in excess of 100 pounds or any quantity having a remote fill connection.

- Gas detection required in rooms where process is located, where containers are located or others where accumulation can occur.

- Gas detectors must activate a low-level alarm at 5,000 parts per million (PPM) and a high level alarm at 30,000 PPM.

- Low level detection activation shall stop flow of CO2, activate mechanical exhaust ventilation; activate audible and visible supervisory alarm at an approved location in building.

- High level detection shall stop flow of CO2, activate mechanical exhaust and activate audible and visible evacuation alarm inside and outside of the CO2 enrichment and container storage areas.

- When activated by gas detection, mechanical ventilation shall remain on until manually reset

- Hazard identification signs must be posted at entry to rooms where CO2 enrichment occurs and where containers are located.

- No refilling of containers indoors, only via a remote fill connection outdoors.