

**GROWING RESPONSIBLE AND SOCIALLY SUSTAINABLE CANNABIS
(GRASS-C)**



**BEST MANAGEMENT PRACTICES
VERIFICATION PROGRAM**

<u>OVERVIEW</u>	1
<u>Introduction</u>	1
<u>Purpose</u>	1
<u>INSTALLATION OF GROWING OPERATION</u>	2
<u>Operation Information</u>	2
<u>Land Use & Conservation Measures</u>	2
<u>Planting Setup</u>	7
<u>OPERATION AND MAINTENANCE PRACTICES</u>	9
<u>Crop Water Use</u>	9
<u>Waste Management</u>	15
<u>Soil Management</u>	17
<u>Materials Storage</u>	18
<u>Pest Management</u>	20
<u>WORKFORCE</u>	21
<u>Social Equity and Labor Management</u>	21



OVERVIEW

Introduction

The Compassionate Use Act (Proposition 215) and the Adult Use Act (Proposition 64) changed the cannabis industry in California from a black market to a legal commercial commodity. The change to a legal market and legal cannabis production presented the opportunity for dissemination of best management practices (BMPs) for cannabis cultivation. These BMPs are essential to prevent habitat degradation and ensure sustainability of natural resources and the cannabis industry.

In response to the new regulatory system, the Upper Salinas-Las Tablas Resource Conservation District (USLTRCD), in collaboration with cannabis growers, researchers, resource agencies, and other technical experts, created a program called Growing Responsible and Socially Sustainable Cannabis (GRASS-C) with the goal of providing certification for sustainable cannabis production for San Luis Obispo County. With funding provided by the California Association of Resource Conservation Districts (CARCD), Mendocino County RCD (Resource Conservation District) has worked with partners to adapt the original GRASS-C program framework to reflect conditions and practices of cultivators in California's North Coast communities. This North Coast Edition of the GRASS-C program utilizes the same framework developed by the San Luis Obispo County program and coordinates it with the BMPs outlined in MCRCD's [Watershed Best Management Practices for Cannabis and Other Rural Gardeners](#) guide.

Tip!

While GRASS-C certification and the Watershed Guide are generally consistent with state and regional permit requirements, they are not summaries or a complete listing of required BMPs. Before beginning your cultivation project, land development, or retrofit project, contact the relevant agencies to ensure you understand their BMP standards and permitting requirements. Neither the Watershed Guide nor this GRASS-C certification are a substitute for review of and application for local and state permits, nor do they encompass identical requirements to those permits. All cannabis growers seeking to obtain legal permits should consult their local cannabis office and the [California Department of Cannabis Control](#).

MCRCD has a resource page for North Coast cannabis farmers at <https://mcrd.org/resources/cannabis-resources>. You can find the [Watershed Best Management Practices for Cannabis and Other Rural Gardeners](#) in English and Spanish available for download as well as a [companion video](#) on our website. MCRCD strongly recommends all growers interested in the GRASS-C program read the Watershed Guide as well as local cannabis regulations and ordinances.



Purpose

The purpose of this program is to establish all the necessary best management practices known for small scale commercial cannabis production within California. The goal of this program is to objectively identify, prioritize, and rank natural resource issues relevant to cannabis production. To do so, the program looks at both the macro and micro-scale resource concerns and has set criteria and best management practices (BMPs) for the varied cannabis growing methods (i.e. greenhouse, hoop house, outdoor).

The following are guiding principles to achieve sustainable cannabis production and resource management.

1. Protect, conserve, and enhance natural resources.
2. Respect ecological principles and incorporate them into cannabis operations.
3. Design management alternatives that meet local resource planning criteria for identified resource issues.
4. Address human concerns for achieving sustainable agricultural systems.
5. Consider the effects of planned actions on interrelated geographical areas (i.e., looking off-site, beyond the planning unit boundary).
6. Consider and explain the interaction between ecological communities and society.
7. Identify where indigenous stewardship methods might be useful, needed, and/or explored.
8. Assist growers with the development of management plans, regardless of scale, which will help achieve the objectives.
9. Identify areas where improvements in policy, knowledge, science, and technology are needed



OPERATION ESTABLISHMENT & INSTALLATION

Operation Information

Operation Name:
Lead Contact:
Property Address:
Mailing Address:
Phone Number:
Email:
Property Size:
Acres in Production:

Type of Production

Outdoor:	acres	High Hoop:	acres	Greenhouse:	acres
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Land Use & Conservation Measures

Prior to establishing a cannabis grow facility, it is important to assess and evaluate the location of the operation in proximity to natural resources. Below are BMPs for various categories of land use resource issues.

Topography and Slope

As a general principle, planting should mimic the natural topography of the site and not impede the natural hydrological process of the landscape. Whether the operation is a greenhouse, hoop house, or outdoor grow, installation and management of the site should follow the topography to reduce potential for soil erosion. Consult local guidelines and the Cannabis General Order to determine maximum allowable slopes.



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1. Has a consultation with local agencies (i.e. Resource Conservation Districts [RCD], University of California Cooperative Extension [UCCE], California Department of Food and Agriculture [CDFA]) occurred or has the applicant used agency resources to complete a conservation plan?

Yes (2pts) No

If yes, list the Agency and your contact or resource used:

2. Prior to planting, were the percent slope, aspect of each planting location, and the total acres of land within different levels of erosion risk identified?

Yes (2 pts) No NA (Indoor facility)

Soils

A preliminary inventory of soils should be done prior to any earth movement activities. The Natural Resource Conservation Service Web Soil Survey (<https://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>) provides accurate information about the types, depths, and properties of soils for continental United States. Highly erosive soils, alkaline, or soils not conducive for outdoor operations should be avoided.

In addition to NRCS and other agency references, you can also become more familiar with your soil through [SoilWeb](#), a streamlined extension of Web Soil Survey that provides detailed soils information and land classifications, as well as management suitability and erosion/runoff ratings.

Attach NRCS Web Soil Survey map to this document.

Light/Sun

At the onset, the operator should make the determination about how to provide adequate light for growing cannabis. During varying stages of plant maturity, light, and consequently the lack of, can alter the timing of different physiological changes in the plant. If an operator chooses to rely solely on the sun as a light source, attention should be made to the number of hours/days of sunlight present throughout the growing season. If using artificial light, the operator should have a plan for the number of hours of light exposure needed to induce various stages of plant growth.



1. Does the operation use artificial light?
 Yes No (2 pts)

2. Has any native vegetation removal occurred to develop a planting area?
 Yes No (2 pts)

3. What percent of total grow time is reliant on artificial light?
 0-25% (4 pts) 25-50% (3 pts) 50-75% (2 pts) 75-100% (1 pt)

Tip!

It is recommended to refer to local regulations, which may not allow for tree removal of commercial species.

In addition, new cultivation sites will have to go through a CEQA review process with a required biological technical report assessing existing vegetation prior to any site development.

Access/Roads

All access roads need to be installed and maintained to reduce impacts to hydrology and soil by limiting erosion and sediment. Roads should be constructed to avoid water courses to the best ability. In addition, proper rural road construction BMPs such as those found in the Pacific Watershed Associates Handbook for Forest, Ranch, and Rural Roads should be implemented ([Q](#)).

1. Are access roads constructed to minimize erosion?
 Yes (2 pts) No

2. Are there signs of rilling, ponding, or gullying on any access roads?
 Yes No (2 pts)

3. Are appropriate crossings and drainage systems installed?
 Yes (2 pts) No

4. Are proper drainage systems installed on road networks (inboard ditch, relief culverts, outloped, rolling dips, roads hydrologically disconnected from surface water)?



- Yes (2 pts) No (0 pts)

5. Road and crossing construction BMPs (one point each)

- Culverts are consistent with NMFS Southwest Region’s Guidelines for Salmonid Passage at Stream Crossings and CDFG’s Culvert Criteria for Fish Passage. (1 pt)
- Energy dissipates downstream of culverts. (1 pt)
- Cap material from natural sources (bare soil, vegetation) or aggregate (paved, crushed, other). (1 pt)
- Consultation with a licensed road contractor, engineer, or geologist. (1 pt)
- A winterization protocol is in place for seasonal shut-down and protection of roads (see p. 31 of the Watershed guide for details) (1 pt)

Waterbodies

Each facility should be aware of the waterbodies surrounding their property and have established strategies to protect those resources. For example, operations should have minimum setbacks from various waterbody classifications (*i.e.* perennial, intermittent, ephemeral, or man-made drainage) to reduce contamination of watercourses. United States Fish and Wildlife service provides an online wetlands mapper tool (<https://www.fws.gov/wetlands/>) that can be used to identify watercourses and wetlands throughout the United States.

Watershed and Subwatershed:
Primary Water Source:
(For surface water) Stream tributary to:
Listed species or sensitive organisms present:

1. Has the operation identified waterbodies occurring on site?

- Yes (2 pts) No

2. Have downstream basins been identified?

- Yes (2 pts) No



3. Are there established minimum setbacks from waterbodies?

- Yes (2 pts) No

Fill in the table with the appropriate waterbody and estimated setback for each.

Waterbody Type	*Total Number	Minimum Setback¹
Perennial		
Intermittent		
Ephemeral		
Man-made drainage		

*note: calculate the total number of each waterbody type occurring on the property.

4. What is the condition of the setbacks (i.e., ground and canopy cover for erosion control, pollutant filtration, temperature reduction, etc.)? (good = > 75% ground/canopy cover, fair = 50-75% ground/canopy cover, poor = < 50% ground/canopy cover)

- Good (3 pts) Fair (2 pts) Poor

5. Is the riparian zone planted with native vegetation?

- Yes (2 pts) No (0 pts)

Fish and Wildlife Resources

A Site Management Plan is required within 90 days of enrollment in the Water Board order and should be revised annually if there are substantial changes to water source, storage, roads, or cultivation style. A conservation plan is also recommended and should be updated every five (5) years. A grow operation should identify any sensitive fish and wildlife species present on the property and develop conservation practices to minimize impacts. Example BMPs would be incorporating predatory bird stands, protection of stream habitat, preservation of wetlands, and forest/woodland area management.

1. Has the operation conducted any biological surveys or studies?

¹ Minimum setbacks are established by regulatory agencies. Check with each regulatory jurisdiction to establish the minimum setback.



- Yes (2 pts) No

If yes, attach any surveys or studies.

2. What percent of the property is maintained as non-productive habitat (i.e. native and naturalized grasses, flowering plants, shrubs and trees, edges and corridors)? Cultivation area should be measured to include the entire facility; all access roads, structures, water storage, parking areas, power supply area, or any other structures.

- >95% (4 pts) >80-94% (3pts) 70-79% (2 pts) <70% (1 pt)

Attach map marked with percent of property maintained in non-production.

3. Habitat Enhancement and Protection BMPs (one point each)

- Large trees in stream retained (1 pt)
- Bird habitat protected during construction and maintenance activities (1pt)

- Large cavity trees and snags retained for birds (1 pt)
- Trees on site with a variety of heights and diameter classes (1 pt)
- Beaver ponds left in place to slow the release of water, trap sediments, and create habitat (1 pt)
- Crop diversity (hedgerows, cover crops, windbreaks, other tree/shrub planting) (1 pt)
- Livestock kept more than 200 feet from stream corridors and erodible soils (1 pt)

4. Herbivory Prevention and Pest Control BMPs (one point each)

- Animal-friendly materials for wildlife excluders (1 pt)
- Non-lethal methods of animal control (1 pt)
- Property fencing allows for wildlife (migration) corridors (1 pt)

Cultural Resources

Prior to any grading, all cultural resources should be identified and mapped, especially in areas known to have historic activity or sites.

1. Has a cultural resources survey been conducted prior to installation?

- Yes (2 pts) No

2. Have measures been made to protect any cultural resources?



Yes (2 pts) No

If yes, describe what has been done or planned to be done:

Overall ranking score for land use and conservation measures:

 Points out of 56 Points Possible



Planting Setup

Power

Cannabis operations should strive to rely on 100% renewable energy such as wind, solar, or, in a few circumstances, micro hydropower production.

1. What is the source of power used?

- Conventional
- Wind
- Solar
- Hydro
- Generator – permanent/sited
- Generator – temporary/portable
- Other: _____

2. Estimated percent renewable energy:

- 0-25% (1 pts) 25-50% (2 pts) 50-75% (3pts) 75-100% (4pt)

Water

Sources of water used for irrigating cannabis should be sustainable. If the water source is groundwater, a proximity analysis and well draw down calculator (https://www.groundwatersoftware.com/calculator_7_time_drawdown.htm) should be conducted to determine how to minimize groundwater impacts. If the source is from surface-water, withdrawals should be limited to wet months (January to April). Surface-water pumps should be screened with openings no greater than 3/32" (i.e., small enough to exclude small fish) and screen diameter must be large enough that the suction pressure is invisible. National Marine Fisheries Service has guidelines for surface-water screens (http://www.westcoast.fisheries.noaa.gov/publications/hydropower/southwest_region_1997_fish_screen_design_criteria.pdf).

Rainwater harvest and grey water are other sources of water that can be used for irrigation. If these systems are used, they should be designed, engineered, and operated to be used during wet winter months and avoid impacts to neighboring waterbodies. Permits for water diversions and storage will be obtained through the appropriate regulatory agency depending upon the point of diversion and/or storage capabilities.

1. Are surface water withdrawals limited to wet seasons (December-April)?



Yes (4 pts) No (0 pts)

2. Have a proximity analysis and well drawdown calculation been completed?
 Yes (4 pts) No (0 pts)
3. Has a water needs assessment and calculation been done to determine water requirements throughout the year?
 Yes (2 pts) No (0 pts)
4. Does the design for the operation include alternative water sources (ponds, tanks)?
 Yes (2 pts) No (0 pts)

Noise

Operations should be cognizant of noise levels from heavy equipment, traffic, fans, heaters, pumps, etc. Due to the nature of cannabis operations, some may require around the clock operation to ensure plant vitality and vigor. This may pose a problem in relation to adjoining property owners. It is recommended each operation abide by the local noise ordinance.

Generators should meet the local standard of under 60dB at a 100-foot distance. Many noise level apps are available to test decibels for a generator area.

1. Are measures taken to reduce noise?

Yes (2 pts) No

List measures to reduce noise levels on the property.

Planting Media

1. Do the plants mature to harvest in the native soil (transplanted out of containers at some point), or are they grown completely in containers?
 Transplanted to soil (4 pts) Grown exclusively in containers (0 pts)

Spacing & Trellising



The spacing between plants, both during the growing season as well as curation, should be adequate to prohibit cross contamination, improve pest management, and canopy microclimate.

1. Was the trellis and/or spacing system designed to optimize canopy microclimate, sunlight exposure (if applicable), and minimize disease and insect pressure?

Yes (2 pts) No (0 pts)

If yes, provide a written description of your trellis system(s) and how it addresses these issues.

2. Is the trellis and training system composed of renewable and/or compostable materials, such as jute twine, bamboo, or metal cages?

Yes (2 pts) No (0 pts)

Odor

Odor can be problematic for certain operations, especially depending on varietal of cannabis grown and proximity to other properties. Facilities should develop and adopt an odor control plan based on best management practices to reduce odors from various sources.

1. Does the operation have an odor control plan?

Yes (2 pts) No

Overall ranking score for planting setup:

 Points out of 28 Points Possible



DAILY OPERATION AND MAINTENANCE PRACTICES

Crop Water Use

Each operation will vary in relation to crop water use. For the purposes of this document, the water use for cannabis has been divided into four (4) main categories: indoor, greenhouse, high hoop, and outdoor. For clarification, indoor is considered to be an enclosed structure where all environmental and climatic factors such as light, temperature, and pests can be controlled. Greenhouse and high hoop are similar with the variance that greenhouse is enclosed whereas high hoop has open corridors under the structure, while outdoor does not have a protective cover over the crop.

Crop Water Requirement

What are the maximum annual acre-feet estimated crop water requirements for the various growing techniques?

- Indoor: _____ AF
- Greenhouse: _____ AF
- High hoop: _____ AF
- Outdoor: _____ AF

Growing Season

1. What is the annual average length of time for growing cannabis on your property?

- 0-3 months 3-6 months 6-9 months >9 months

Harvest numbers/frequency

1. What is the annual number of harvests?

- 1 2 3 >3

Source of water (i.e. surface, roof runoff, groundwater). Circle all that apply.

- Surface
- Groundwater
- Rain Harvest
- Greywater
- Natural precipitation
- Other: _____

Irrigation practice – flood, hand, sprinkler, drip, or dryland. Circle all that apply.

- Flood



- Sprinkler
- Drip
- Hand
- Dryland
- Other: _____

1. Water System and Water Conservation BMPs (one point each)

- Water meter on tank outlet (1 pt)
- Search for leaks conducted in whole system and leaks repaired (1 pt)
- Prefiltration prior to storage to prevent sedimentation (1 pt)
- Automatic shutoff float valve (1 pt)
- Self-adjusting irrigation controller (1 pt)
- Anti-backflow devices on water supply hoses (1 pt)
- Irrigation system set for dawn/dusk operation and to avoid runoff (1 pt)
- Available storage volume sufficient to provide water from April 1 to October 31 (1 pt)
- Rigid tank for storage, secured and with secondary containment (1 pt)
- Tank located a minimum of 100 feet from the edge of stream and at least 30 feet from the property line and county roads (1 pt)
- Ponds lined with an environmentally friendly material (bentonite, ento-mat, degradable geotextiles) (1 pt)
- Escape route in ponds for amphibians/wildlife (1 pt)
- Storage elevated relative to site to eliminate pumps (1 pt)

Water quality – dissolved oxygen, pH, salinity, metals, salts, etc.

1. Is a water quality analysis conducted more than every five years?

- Yes (2 pts) No

2. Frequency of water quality analysis:

- Annually (3 pts)
- Every 3 years (1 pt)
- No

If yes, attach analysis results.

3. Are any measures being taken to address water quality issues?

- Yes (2 pts) No



If yes, list/describe what measures are being taken to address water quality:

4. What are the water quality measures of concern? List (e.g. high pH, metals, nitrogen, etc.):

Stock – seed, clone, teen, early vegetative

1. What is the base stock type for the operation? _____

2. Prior to receipt of plant material, were tests for viruses conducted?

Yes (2 pts) No

If yes, attach virus test.

Overall ranking score for crop water use:

_____ *Points out of 22 Points Possible*



Soil & Sediment Erosion Control

Each facility will need to develop a plan to address soil instability and erosion. The site should be managed to reduce soil erosion and sedimentation pre- and post-installation, including long-term management and operation. There are several approaches to stabilizing soil after disturbance from installing an operation such as cover crop, mulching, filter strips, and soil stabilizers. Due to the fact not all practices will be employed at every operation, if the area is stabilized from implementation of one practice, then the other practices are not applicable.

Cover crop

1. Are there cover crops?

- Yes (2 pts) No NA (2 pts)

2. Are the cover crops composed of native vegetation and in good condition?

- Yes (2 pts) No NA (2 pts)

3. Estimated percent cover:

- 75-100% (4 pts) 50-75% (3pts) 25-50% (2 pts) 0-25% (1 pt)

Mulch

1. Has mulch been applied to reduce soil erosion?

- Yes (2 pts) No NA (2 pts)

2. Is there a minimum of 2-4" applied around the facilities, including plants?

- Yes (2 pts) No NA (2 pts)

3. Does the area have adequate amount of mulch surrounding the operation to prevent soil erosion or cover crops?

- Yes (2 pts) No NA (2 pts)

4. Does the operation have an erosion control plan and/or BMPs installed?



- Yes (2 pts) No

List erosion control BMPs in the plan or installed:

Filter strips

1. Are there filter strips installed?

- Yes (2 pts) No

2. If so, are the filter strips adequately reducing pollutants to watercourses?

- Yes (2 pts) No

Soil stabilizers

1. Have soil stabilizers been applied?

- Yes (2 pts) No NA (2 pts)

If yes, list/describe type of soil stabilizer:

2. How frequently are soil stabilizers applied?

- 0-3 months 3-6 months 6-12 months >12 months



Overall ranking score for soil and sediment control measures:

 Points out of 22 Points Possible



Soil Management

Soil management involves the physical and chemical parameters necessary to provide adequate soil moisture and macro- and micro-nutrients to plant growth. In addition, management of soil includes practices of incorporating materials either on-site or offsite to ensure adequate nutrient levels.

Local Soils

1. Are only on-site soils used--no soils generated, or soil imported?

Yes (2 pts) No (0 pts)

Composting

1. Does the facility incorporate compost as a soil management practice?

Yes (2 pts) No (0 pts)

2. What is the frequency of compost application?

Quarterly (3 pts) Bi-annually (2 pts) Annually (1 pt)

3. Is compost tested for organic matter content?

Yes (2 pts) No (0 pts)

Organic and inorganic compounds

1. Is there a nutrient management plan in place to prevent nitrogen leaching into groundwater and nearby waterbodies?

Yes (2 pts) No (0 pts)

2. What percentage of natural-based materials to synthesized² compounds are added to the soil?

75-100% (4pts) 50-75% (3pts) 25-50% (2 pts) 0-25% (1pt)

² Synthesized compounds examples are potassium nitrate, ammonium nitrate, calcium nitrate, etc. Nature-based materials are compost, leaf litter, manure, and other such materials.



3. What percentage of potting soil is reused as part of next season's planting mix or reused for other on-site agriculture?

- 85-100% (4 pts) 70-84% (3 pts) 50-69% (2 pts) < 50% (0 pts)

If inorganic compounds are used, provide a list of which are used in the soil:

Overall ranking score for soil management practices:

 Points out of 19 Points Possible



Pest Management

Pest management and pest control is an important focus for sustainable cannabis production. The operator needs to account for many issues when deciding when and how to manage or control a pest such as pest life stage, abundance of beneficial insects, economics, and injury to existing crops. Use of proper equipment (mechanical vs. chemical) for management is also another important factor to consider. Each facility should strive to have low-input practices with standards that are adaptable and flexible as new information and techniques become available.

Identification – Identification of potential pests is the first step to management and control. Each facility should have expertise and current knowledge of potential pests and be able to readily identify nuisance pests from beneficial insects, plants, etc.

1. Are plants surveyed on a regular basis for identification and accounting of pests?

Yes (2 pts) No (0 pts)

If yes, how frequently?

Daily (4 pts) Weekly (3 pts) Monthly (2 pts) Annually (1 pt)

2. Have any pests identified been reported to California Department of Food and Agriculture?

Yes (2 pts) No (0 pts) NA- No Pests (3 pts)

Control – If pests are present at the site, an Integrated Pest Management Plan should be implemented to minimize, control, and possibly eradicate them. The plan can be a living document which adjusts according to the season, pest present, life stage of the plant, abundance of the pest present on site. Resources to identify Integrated Pest Management BMPs are accessible through UC Cooperative Extension.

1. Are chemical treatments applied?

Yes (0 pts) No (2 pts)

If yes, are the chemical treatments (pesticides, fungicides, etc.) on approved list (*i.e.* Clean Green Certification)?

Yes (2 pts) No (0 pts) NA (2 pts)

Attach documentation of all chemical treatments applied.



2. Are treatments applied to the smallest area possible to achieve control (spot spray vs. overhead)?

- Yes (2 pts) No (0 pts) NA (2 pts)

3. Are there adequate sanitation practices employed to prevent the spreading of pests, weeds, disease?

- Yes (2pts) No (0 pts)

If yes, what is the frequency of application?

- Daily Weekly Monthly Yearly

Beneficial Insects – Pollinators play an essential role in crop production, pest management, and biodiversity. Providing habitat to support native pollinators and beneficial insects promotes biodiversity and may reduce the need for pesticide applications.

1. Does the operation have a pollinator management plan identifying potential pests and beneficial insects?

- Yes (2pts) No (0 pts)

2. Are native wildflowers, shrubs and trees provided on site for beneficial insects?

- Yes (2pts) No (0 pts)

3. What percentage of the planting operation provides habitat specific for pollinators?

- 10-25% (1 pt) 25-50% (2 pts) >50% (3 pts)

Overall ranking score for pest management and practices:

 Points out of 24 Points Possible



Materials Storage

Materials used in the production of cannabis must be documented and stored to prevent accidents or spills. Each facility should have a designated materials storage container with an emergency evacuation and spill plan in place.

Materials Management Plan – Each facility should have a management plan and strategy for dealing with materials both hazardous and non-hazardous to prevent accidental spills and to address emergency situations. ‘Not applicable’ should be noted only if a facility has no hazardous or non-hazardous materials to store such as fertilizers, pesticides, or herbicides.

Location – The location of a materials storage facility is important for minimizing risks and preventing contamination into groundwater or surface waterbodies in the case of an accident.

1. Are there designated storage facilities on site?
 Yes (2 pts) No (0 pts) NA (2 pts)
2. If yes, are the facilities located more than 100 feet from waterbodies to prevent contamination to surface water?
 Yes (2 pts) No (0 pts) NA (2 pts)
3. Chemical Storage BMPs (one point each)
 - Ventilated, locked shed located in the shade with posted storage instructions (1 pt)
 - Hazardous materials stored in original containers and clearly labelled (1 pt)
 - Secondary containment able to hold the maximum volume stored (1 pt)
 - There are adequate resources for hazard prevention and response (eye wash, fire extinguisher, spill kits, etc.) (1 pt)
 - Storage materials used are appropriate for the materials stored in them (1 pt)
 - Appropriate material safety data sheets (MSDS) are posted or readily available (1 pt)

Emergency spill and evacuation plan

1. In the event of a spill or emergency, is there a plan in place to address these issues?



Yes (2 pts)

No (0 pts)

2. If yes, when was the plan recently updated or reviewed?

0-3 months (3 pts)

3-6 months (2 pts)

6-12 months (1 pts)

>12 months (0 pts)

3. Have all employees been trained in proper emergency spill prevention procedures?

Yes (2 pts)

No (0 pts)

Overall ranking score for materials storage management and practices cumulative score:

_____ *Points out of 17 Points Possible*



Waste Management

Each facility will need to have adequate processes for dealing with byproducts and waste from crop production. The purpose of having a waste management plan, procedure, and practices is to minimize or eliminate pollutant discharge into watercourses from stockpiling. Waste can vary, depending on the operation, and include, but not limited to, organic materials, metal, pipes, soil, food containers and beverages, timber/lumber, and metal scraps. It is recommended for a designated employee to oversee and enforce proper solid waste procedures and practices.

Collection facility/process

1. Is there a designated waste management employee?

Yes (2 pts) No

2. Does the facility have adequate storage of waste materials?

Yes (2 pts) No

3. Are there preventive stormwater measures installed around solid waste such as berms, dikes, biodegradable erosion control BMPs, etc.?

Yes (2 pts) No

4. Are organic and inorganic waste kept separate?

Yes (2 pts) No

Composting

1. Does the operation have on-site composting of organic waste material(s)?

Yes (2 pts) No

2. Is compost coming from off-site (imported)?

Yes No

3. What percentage of compost is from on-site?

75-100% (4 pt) 50-75% (3pts) 25-50% (2 pts) 0-25% (1 pts)



4. Is previous year's (season's) compost being used on-site?

Yes (2 pts) No

5. If yes, are any inorganic supplements added to the compost³?

Yes No (2 pts)

Disposal area

1. Are there sufficient numbers of solid waste storage areas?

Yes (2 pts) No

2. If there are solid waste storage areas, are they located a minimum of 50 ft away from any drainage areas or watercourses?

Yes (2 pts) No

3. Are potentially hazardous wastes segregated from non-hazardous?

Yes (2 pts) No

- Contained, covered area designated for waste and recycling (1 pt)
- Materials reused on-site (1 pt)
- Composting toilet located more than 100 feet from water source, sited and constructed according to SWRCB OWTS policy (1 pt)
- Soils, compost, spoils and other piles secured with a tarp and located at least 200 feet from waterways, compacted, revegetated or tarped, and surrounded by swales, wattles or other protection (2 pt)

Overall ranking score for waste management practice:

 Points out of 28 Points Possible

³ Inorganic supplements consist of non-carbon-based materials such as minerals. Examples would include materials such as perlite, vermiculite, pea gravel, etc.



WORKFORCE

Social Equity and Labor Management

For cannabis production facilities to be sustainable, they must provide a safe and fair working environment for their employees and interact successfully with the surrounding community. A heavy reliance on human labor to conduct various stages of cannabis production requires a safe and fair work environment. Providing fair compensation, benefits, and promoting a positive work environment should be the goal of each facility.

Requirements

1. Is there an employee handbook with the appropriate human resources policies (harassment, salary, benefits and incentives, safety policy procedures and grievances, etc.)?

Yes (2 pts) No

2. Is there a Job Hazard Analysis (JHA) provided to employees and kept on site?

Yes (2 pts) No

3. Does the operation pay competitive salaries for the region?

Yes (2 pts) No

If yes, provide documentation of average salaries per job category for the region.

4. Are any benefits (health, dental, vision, life) contributions made on behalf of the employer?

Yes (2pts) No

5. Is there a formal process for performance evaluations?

Yes (2 pts) No

6. Is there a formal process for grievances and disciplinary action?

Yes (2 pts) No

Overall ranking score for social equity and labor management and practices:

_____ *Points out of 12 Points Possible*





Category	Self-Score	Verified Score
Land Use & Conservation Measures		
Planting Setup		
Operation & Maintenance		
Soil & Sediment Control		
Soil Management		
Pest Management		
Materials Storage		
Waste Management		
Social Equity & Labor Management		
TOTAL:		
POINTS POSSIBLE:	228	228
*RANK:		

Score	Rank
212-228	AA
200-211	A
176-199	B
157-175	C
132-156	D
< 132	Cannot be considered for this program

Self-Assessment conducted on: _____ / _____ /20_____

Self-Assessment conducted by: _____
 Print name

 Signature

Third-Party Verification conducted on: _____ / _____ /20_____

Third-Party Verification conducted by: _____
 Print name, Title

 Signature



RESOURCES

Farming Inputs

- Clean Green (www.cleangreencert.org) has valuable information on cannabis production BMPs, including a list of products. Clean Green Certified Program provides a list of products that are used and have been reviewed for Clean Green certification (www.cleangreencert.org/wp-content/uploads/2016/10/MasterCGReviewedInputList-Revised-8-5-16.pdf). This list does not include all products that may be used, but a sample of those that have been reviewed.
- Organic Materials Review Institute (OMRI), www.omri.org (the generic search tool is very helpful also).
- Washington State Department of Agriculture (WSDA).
<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>
- National List of Allowed and Prohibited Substances
www.ams.usda.gov/NOP/NOP/standards/ListReg.html
- CDFA Fertilizer Product Database – Organic Input Materials (OIM)
https://www.cdfa.ca.gov/is/fldrs/fertilizer_OIM.html
- [ATTRA](http://www.attra.org) has a new Ecological Pest Management, on-line pest management tool for farmers. This database highlights reduced risk materials that can be integrated with ecological pest management strategies. It can be found at the following link: http://www.attra.org/attra-pub/biorationals/biorationals_main_srch.php

Rainwater Harvest and Greywater Resources

- [Rainwater Catchment Information](#)
- [County of Mendocino Greywater Information](#)
- [City of Fort Bragg Greywater Do's and Dont's](#)
- [Greywater Action's](#) instructions and FAQs for rainwater harvest and greywater reuse.

Local Ordinances

- Mendocino County Commercial Cannabis Activity Land Use Development Ordinance
<https://www.mendocinocounty.org/home/showpublisheddocument/43195/637571004801070000>
- Humboldt County Commercial Cannabis Licensing and Regulations
<https://humboldt.gov.org/2676/Cannabis>
- Trinity County Commercial Cannabis Cultivation Regulations
https://www.trinitycounty.org/sites/default/files/Planning/CANNABIS/Programmatic_EIR/FEIR/Amend ed%20Cannabis%20Program%20Ordinance%20315-849.pdf

Soil and Roads Resources



- SoilWeb
<https://casoilresource.lawr.ucdavis.edu/gmap/>
- The Handbook for Forest, Ranch, and Rural Roads
<https://mcrd.org/wp-content/uploads/2017/01/Handbook-for-Forest-Ranch-and-Rural-Roads-Web.pdf>
- State Water Resource Control Board's Cannabis Cultivation Frequently Asked Questions
https://www.waterboards.ca.gov/water_issues/programs/cannabis/faqs.html

Agency Contact Information

FEDERAL

- US Environmental Protection Agency (USEPA) www.epa.gov
- US Fish and Wildlife Service (USFW) www.fws.gov
- Army Corps of Engineers (USACE) www.usace.army.mil
- National Oceanic and Atmospheric Administration (NOAA) www.noaa.gov

STATE

- California Bureau of Cannabis Control <https://www.bcc.ca.gov/>
- State Water Resources Control Board (SWRCB) www.swrcb.ca.gov
- California Department of Fish and Wildlife (CDFW) www.wildlife.ca.gov
- California Department of Pesticide Regulation (CDPR) www.cdpr.ca.gov

REGIONAL

- North Coast Regional Water Quality Control Board (NCRWQCB)
www.waterboards.ca.gov/northcoast

LOCAL

- County Agriculture and Environmental Health Departments



Do I Need A Permit? A Quick Reference Guide

(from the *Watershed Best Management Practices for Cannabis Growers and Other Rural Gardeners*)

Activity	Applicable Permits	Agency
Movement of earthen materials in, or alteration of, the bed and/or banks of a watercourse	1602 Lake and Streambed Alteration (LSA) Agreement	California Department of Fish and Wildlife (CDFW)
	401 certification	North Coast Regional Water Quality Control Board (NCRWQCB)
	404 certification	US Army Corps of Engineers
Clearing, grading and/or conversion of land	3-acre conversion	CAL FIRE
	Construction Storm-water General Permit	NCRWQCB
	Grading Permit	County government. Specific department varies.
Structural development	Building Permit	County government. Specific department varies.
Water diversion from hydrologically connected waters of the state and/or storage	1602 LSA Agreement (CDFW)	California Department of Fish and Wildlife
	Small Irrigation Use registration or an Appropriative Water Right (SWRCB)	State Water Resources Control Board (SWRCB) Division of Water Rights
	Building permit if storage tank is over 5,000 gallons (Counties)	Counties
Activity	Applicable Permits	Agency



Waste Discharges resulting from Cannabis Cultivation or operations with similar environmental effects	General Waiver	NCRWQCB
Human Waste Facilities, including outhouses and composting toilets	Onsite Waste-water Treatment System (OWTS)	SWRCB Counties' Environmental Health Depts.



References

For further information, Clean Green (www.cleangreencert.org) has valuable information on cannabis production BMPs, including a list of products. Clean Green Certified Program provides a list of products that are used and have been reviewed for Clean Green certification (available at: <https://www.cleangreencert.org/wp-content/uploads/2016/10/MasterCGReviewedInputList-Revised-8-5-16.pdf>). This list does not include all products that may be used, but a sample of those that have been reviewed.

For products not on this list, the following resources are useful in determining the best products and ingredients that will assist you in developing a sustainable crop operation:

- Organic Materials Review Institute (OMRI), www.omri.org (the generic search tool is very helpful also).
- Washington State Department of Agriculture (WSDA).
<http://agr.wa.gov/FoodAnimal/Organic/MaterialsLists.aspx>
- National List of Allowed and Prohibited Substances
www.ams.usda.gov/NOP/NOP/standards/ListReg.html
- CDFA Fertilizer Product Database – Organic Input Materials (OIM)
https://www.cdfa.ca.gov/is/fldr/fertilizer_OIM.html
- ATTRA has a new Ecological Pest Management, on-line pest management tool for farmers. This database highlights reduced risk materials that can be integrated with ecological pest management strategies. It can be found at the following link:
http://www.attra.org/attra-pub/biorationals/biorationals_main_srch.php

Attach a list of products **not** included in any of the aforementioned resources.





Agency Contact Information

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San Francisco District
1455 Market Street
San Francisco, CA 94103-1398
415.503.6804

Los Angeles District
Los Angeles, CA 90017
213.452.3333

California Department of Fish and Wildlife
Central Region (Region 4)
1234 East Shaw Avenue
Fresno, CA 93710
559.243.4593
R4LSA@wildlife.ca.gov

Central Coast Regional Water Quality Control Board
895 Aerovista Place, Suite 101
San Luis Obispo, CA. 93401-7906
805.549.3147
centralcoast@waterboards.ca.gov

San Luis Obispo County Planning Department
976 Osos Street, Suite 200
San Luis Obispo, CA 93401
805.781.5600

CalFIRE
635 North Santa Rosa
San Luis Obispo, CA 93405
805.543.4244

Natural Resource Conservation Service
65 South Main Street, Suite 108
Templeton, CA 93465
805.434.0396 ex.3195