The Cannabis Conservancy Sustainability Standards

V.03



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Layout of the Standards

The general layout of the standards is as follows:

Domain

1. Category

1.1. Standard

1.1.A Element of Performance

Elements of Performance are further explained in both the Self-Assessment Checklist and the TCC Grower Manual.

TCC Standards of Sustainability

Introduction

The Cannabis Conservancy's mission is to empower and assure that the regulated Cannabis industry achieves environmental, economic, and social sustainability.

Our holistic, life-cycle approach strives to identify, quantify, and mitigate the environmental impacts of Cannabis cultivation from producer to consumer. We understand that this is a long-term commitment of gradual improvement and have therefore based our standards on a pragmatic approach that incorporates and appreciates the uniqueness of each individual's practices. As we launch our Cannabis-specific certification internationally, we are striving to promote a practical code of conduct that unites profitability with stewardship.

TCC's metrics and process are synergistically aligned with recognized, international standards. Our certification provides added value to our clients by communicating to consumers that TCC Certified products are produced following good agricultural practices, waste reduction methods, energy efficiency, and water conservation. Through our processes we also work to preserve the historic, cultural, and genetic heritage of Cannabis.

At TCC our clients are partnering with us to make the Cannabis Industry a leader in global sustainability. We provide our clients with a certification that is unbiased and transparent. Our education and training is designed to help accelerate company growth to further these principles. The information collected through our organization will help replace the current scarcity of data by creating industry benchmarks, large-scale scientific studies, and continued advancements in processes, procedures, and best management practices for the entire Cannabis marketplace.

TCC's confidentiality protocols are designed to safeguard each individual's niche application and cultivation methodologies. We protect our clients' information through our process of anonymous serialization.

We believe the achievement of efficient resource use is not a pinnacle to be reached, but rather a dynamic structure that evolves with time. The Cannabis Conservancy (TCC) Sustainability Standards laid out in this document are the Criteria we believe are paramount in the pursuit of a sustainable Cannabis industry.

Like sustainability itself, we hope for these Standards to grow and change alongside the industry.

Thank you for taking this journey with us.

Policy and Implementation

1. Sustainable cultivation policies and implementation

1.1. The organization has, and is actively utilizing, an up-to-date Sustainable Cultivation Policy.

1.1.A. The policy consists of internal protocols and procedures that specifically address Triple Bottom Line principles (i.e. valuing environmental, economic, and social impacts of the operation).

1.1.A. The policy recognizes sustainability as an organizational priority and key determinate in decision-making processes.

1.1.B. The policy incorporates safety and quality measures for the cultivation operation.

1.1.A. The policy includes internal protocols and procedures that specifically address any environmental impacts of the operation.

1.1.B. There is a clearly defined administrator for the policy.

1.1.A. There is a clearly defined plan for the implementation, documentation, and timely maintenance of the policy.

1.2. The organization has, and is actively utilizing, an up-to-date Sustainable Water Use and Conservation policy.

1.2.A. The policy consists of internal protocols and procedures that specifically address the sourcing and use of water.

1.2.B. The policy is regionally specific and tailored to the localized, temporal variability of water availability and risks.

1.2.C. The policy incorporates safety and quality measures for water usage in the operation.

1.2.D. The policy includes internal protocols and procedures that specifically address any environmental impacts of the operation's water use.

1.2.E. There is a clearly defined administrator for the policy.

1.2.F. There is a clearly defined plan for the implementation, documentation, and timely maintenance of the policy.

1.2.G. The policy contains goals with set targets to reduce water usage each year.

1.2.H. The policy includes an implementation plan to show how the organization will achieve their targets.

1.3. The organization is utilizing a sustainable energy use and energy conservation policy.

1.3.A. The policy consists of internal protocols and procedures that specifically address the sourcing and use of energy.

1.3.B. The policy is tailored to the grow's infrastructure and regional peak energy demand.

1.3.C. The policy incorporates safety and quality measures for energy usage in the operation.

1.3.D. The policy includes internal protocols and procedures that specifically address any environmental impacts of the operation's energy use.

1.3.E. There is a clearly defined administrator for the policy.

1.3.F. There is a clearly defined plan for the implementation, documentation, and timely maintenance of the policy.

1.3.G. The policy contains energy goals with set targets to reduce their energy usage per year.

1.3.H. The policy includes an implementation plan to show how the organization will achieve their targets.

1.4. The organization is utilizing a waste reduction policy.

1.4.A. The policy consists of internal protocols and procedures that specifically address the creation and disposal of every type of waste.

1.4.B. The policy incorporates Zero Waste Principles.

1.4.C. The policy includes goals and procedures to avoid, reduce, reuse, compost, recycle, recover, treat, and dispose waste.

1.4.D. The policy includes stipulations for the reduction and substitution of harmful chemicals.

1.4.E. There are clearly maintained descriptive records for waste disposal.

1.4.F. The policy includes a goal of increasing the percentage of reused products, products derived from recycled materials, and products that are recyclable or compostable.

1.4.G. The policy outlines yearly targets around waste management and reduction.

1.4.H. The policy includes an implementation plan to show how the organization will achieve their targets.

2. Safety and Compliance

2.1. The organization is in compliance with all pertinent laws and regulations on the municipal, state, and regional levels.

2.1.A. There is documented evidence of compliance with all pertinent (i.e. local, regional, county, state, and/or provincial) laws, regulations, and licenses showing compliance.

2.2. The organization commits to improving any practices that have a serious potential risk to human health or the environment.

2.2.A. There is an active policy in use which includes internal protocols and procedures that specifically look to minimize environmental and human risk.

2.2.B. There are policies and action plans in place to prepare for any foreseeable emergencies.

2.2.C. The organization resists the use of practices or inputs that could ultimately be harmful to workers or the environment.

2.2.D. There is a plan to phase out all wasteful practices and toxic products in the cultivation, processing, and packaging stages.

2.2.E. There is a clearly defined leader or administrator for the action plans and policies.

3. Education, Research, and Development

3.1. The organization educates, trains, and motivates employees and partners to conduct their activities in an environmentally responsible manner.

3.1.A. The organization utilizes an active policy consisting of internal protocols and procedures that specifically look to minimize environmental and human risk.

3.1.B. There are actively used, on-going training procedures in place to educate staff about, and how to comply with, TCC policy.

3.1.C. There is a clearly defined manager who coordinates or provides these educational services.

3.1.D. There is a clearly defined plan for the implementation, documentation, and timely maintenance of the education and training plan.

3.2. The organization supports Cannabis Research.

3.2.A. The organization supports at least one aspect of Cannabis Research, e.g. research on the environmental impacts of raw materials, products, processes, and wastes associated with the cannabis industry to minimize adverse impacts

3.2.B. There is a clearly defined point- person in charge of research and development.

3.2.C. There is a clearly defined plan for the implementation, documentation, monitoring, and improvement of cultivation techniques.

3.3. The organization contributes to the transfer of environmentally sound management methods and technology.

3.3.A. The organization provides staff with the necessary information, technology, and support (financial or otherwise) to conduct their work in an environmentally sound manner.

3.3.B. There are clearly defined procedures and protocols in place to train staff to understand and utilize methods and technology.

Land and Infrastructure

4. Land and Infrastructure Policies and Implementation

4.1. The organization has assigned a person to oversee sustainable land use efforts.

4.1.A. A designated person is appointed responsibility for the implementation of the policy.

4.1.B. Point person has been trained on compliance measures.

4.1.C. The policy is used in the decision- making process.

4.1.D. Training procedures are in place to educate staff on the policy

4.1.E. The implementation of the policy has been tracked and recorded.

4.1.F. Resources have been allocated for the implementation of the policy.

4.2. The organization is in compliance with all relevant laws and regulations on the municipal, State, Regional level.

4.2.A. The organization has documented evidence of compliance with all pertinent (local/state/provincial) laws, regulations, and licenses.

5. Ecosystem Health

5.1. The organization has conducted an Environmental Impact Assessment and set ecosystem health and services goals.

5.1.A. The organization has documented the environmental risks to the grow site and surrounding areas.

5.1.B. Cannabis production strives to maintain and improve ecosystem health and services.

5.1.C. Cannabis production has a neutral or positive impact on neighboring lands.

5.1.D. The operation addresses any Air Quality issues or nuisances.

5.1.E. The operation has a system in place to address complaints related to the environmental impacts.

5.1.F. Systems are in place to protect ecosystem services.

6. Biodiversity

6.1. The organization has conducted a baseline biodiversity assessment.

6.1.A. A biodiversity assessment has been conducted on the cultivation facility.

6.1.B. Cannabis production has a neutral or positive effect on on biodiversity.

6.2. The organization supports wild pollinators.

6.2.A. The grower provides nesting and feeding habitat for bees and other wild pollinators through the season. This must include at least 6% of all areas vested to pollinator beneficial planting.

6.2.B. Bee Habitat- The grower has established or maintains bee-supportive habitat: undisturbed ground, dead trees (snags), native bee nesting boxes (such as those for mason, leafcutter, or other native species) and apiaries for managed honey bees.

6.2.C. The grower maintains a robust Integrated Pest Management (IPM) program and does not use any pesticides or fungicides of any kind (even natural) during main bloom periods when bees are most active.

6.3. The organization has set biodiversity conservation goals.

6.3.A. The organization has set targeted goals to mitigate adverse effects on surrounding biodiversity.

6.3.B. Measures are taken to conserve or enhance the ecosystem's plants and animals.

7. Landscaping

7.1. The organization has climate appropriate landscaping around its facility.

7.1.A. The facility's landscape and surrounding areas are appropriate for the location's climate.

7.1.B. Surrounding areas (i.e. areas for which the organization is responsible) provide habitat for local flora and fauna.

Cultivation Practices

8. Cultivation Plan

8.1. The organization has a cultivation plan that was crafted in accordance with a risk assessment of the organization.

8.1.A. The cultivation plan (i.e. farm plan) includes guidelines and goals for implementation of sustainable agricultural practices

8.1.B. The organization provides a detailed cultivation methodology.

8.1.C. The organization has conducted analysis of their cannabis cultivation to outline agricultural practices and inputs during each stage of production.

9. Employee Safety and Preparedness

9.1. The organization provides a safe and healthy working environment.

9.1.A. Employees are provided with training and have adequate and appropriate personal protection equipment (PPE).

9.1.B. Employees are not exposed to hazardous conditions while at work.

9.1.C. Proper warning signs are in place.

9.1.D. There is an emergency plan and policy in place, and employees are trained on emergency preparedness.

10. Genetically Modified Organisms (GMOs)

10.1. The organization does not utilize GMOs.

10.1.A. All inputs and products used during cannabis cultivation are non--GMO.

10.1.B. Cannabis cultivators use only non--chemically treated clones and planting materials, grown in accordance with TCC standards.

10.1.C. Are organic and non--chemically treated planting materials available for cultivation? If not, is the organization making good faith efforts to acquire them?

11. Seeds and Nursery Stock

11.1. Seeds are non--GMO and non-chemically treated.

11.1.A. Any seed treatments must be noted.

11.1.B. The provider of your seed or clone provides a letter of assurance.

11.2. The operation maintains a record of seed sourcing.

11.2.A. The operation maintains an appropriately detailed database for all seed used.

11.3. The organization has its own seed bank.

12. Ground Cover

12.1. The organization considers the full life cycle of any ground cover materials used.

12.1.A. The organization restricts the use of short--lived or single-use synthetic ground covers and/or mulches that do not comply with TCC standards.

12.1.B. Synthetic material is reused for multiple seasons and then recycled or made from recycled materials, therefore offsetting the carbon cost

12.1.C. The organization uses cover crops and/or green manure and/or locally sourced sustainable mulch.

13. Nutrient Best Management Practices

13.1. The organization must provide a list of all agricultural inputs used in their growing process.

13.1.A. Agricultural inputs list must include product name, active ingredient, purpose, application rate, timing within life cycle of plant and method, MSDS, and history of application.

13.1.B. Growth stage of plant indicated in records.

13.2. Soil fertility management only uses inputs from Approved List.

13.2.A. Cultivation only uses fertility inputs from Approved List.

13.2.B. Targets are set and methods implemented to phase out inputs not on Approved List.

13.3. Cultivation methodology only uses naturally occurring mineral fertilizers and only as a supplement to biologically- based fertility methods

13.3.A. List of all inputs used to maintain and enhance soil fertility is provided.

13.3.B. If the organization is currently using synthetic fertilizers, they are considered to be in transition. They must have set goals and a timeline to phase out synthetic fertilizers.

13.3.C. All nutrient inputs are stored in a clean, secured and appropriate area when not in use.

13.4. The organization has a source locally first policy.

13.4.A. The organization has a sourcing policy in place to first look for local inputs, when available and financially appropriate.

14. Contamination Minimization

14.1. The organization has policies and practices in place to avoid contamination.

14.1.A. The organization has active policies to avoid contamination, and a point-person to ensure policies are followed.

14.1.B. Barriers and/or buffers are in place during cultivation and in storage to avoid contamination.

14.1.C. Products used to clean equipment are the least hazardous and most environmentally friendly available.

14.1.D. Measures are taken to protect the cultivation area from products not used in cultivation.

15. Pest Management

15.1. The organization implements an integrated pest management plan.

15.1.A. The pest management plan includes considerations for human and environmental health.

15.1.B. The pest management plan is based on integrated pest management (IPM) principles.

15.1.C. All active substances used for pest management are only from the Approved List.

15.1.D. If the organization is currently not using materials from the Approved List, they are considered to be in transition. They must set goals and a timeline to phase out synthetic items from the Approved List.

15.1.E. IPM plan uses hierarchy of practices: prevention, observation, intervention including physical/mechanical/biological methods, Approved substances.

15.1.F. Pest deterring plants and/or beneficial insect attracting plants are incorporated into the cultivation system.

15.2. The organization has pest and disease deterrent protocols and monitoring schemes.

15.2.A. Policies are in place to eliminate contamination from pests and disease.

15.2.B. Deterrents are in place to minimize contamination from pests and disease.

15.2.C. Staff is trained to identify common pests and disease.

15.2.D. There is a schedule for monitoring plant health.

15.3. The organization has containment protocols in place for when pests and disease are found.

15.3.A. The organization has a plan to remove, quarantine, and treat plants contaminated with pests and/or disease once they are identified.

15.3.B. Protocols are in place to identify the source of the infestation.

15.4. Facility is free from pests not associated with the cultivation process.

15.4.A. Cannabis production facility contains no evidence of pest- debris or pest- infestation (e.g. rodents, cockroaches, etc.) at a level that risks the quality or safety of the product.

15.4.B. Domestic animals are controlled so as not to pose a safety or quality risk to the product or process.

16. Growing Media

16.1. The organization has a sustainable sourcing policy that encourages sourcing local, TCC-approved and/or environmentally friendly materials, when available.

16.1.A. Documentation is provided for the source of the substrate, the mode and distance of transportation and type of packaging.

16.2. The organization has conducted a substrate assessment.

16.2.A. A substrate assessment has been conducted including type, composition, and mineral content.

16.2.B. A substrate preparation plan has been implemented.

16.2.C. The organization has completed a pre--use test.

16.3. The organization strives to continually improve soil fertility and quality .

16.3.A. Organization has documented plan in place, including benchmarks on how to achieve goals.

16.3.B. For in--ground cultivation, provide methods used to maintain and improve soil fertility and quality.

16.3.C. Soil fertility and quality is measured before, after, and during cultivation.

16.4. Fertility management plan is in place.

16.4.A. Fertility management plan has specific plans in place to prevent pollution of the environment .

16.4.B. Agricultural inputs are applied in relation to plant uptake, preventing the buildup of residues.

16.4.C. Monitoring and data collection protocols are in place to track fertility in correlation with runoff.

16.5. The organization takes measures to prevent land degradation.

16.5.A. Procedures or preventative measures are in place to minimize erosion and salinization.

16.5.B. Procedures are implemented to reduce or eliminate runoff.

16.5.C. An erosion mitigation plan is in place.

16.6. In the case of single harvest use or application, the organization tracks the life cycle of all growing media.

16.6.A. The life cycle of the growing medium is tracked and records are kept.

16.6.B. The organization utilizes methods to minimize growing medium waste contamination, nutrient loss, mineral buildup.

16.7. The organization must test soil at harvest time.

16.7.A. At harvest soil is tested for contaminants and residual nutrient build up.

17. Hydro (Coming soon)

18. Final Product Testing

18.1. The organization follows TCC Approved sampling protocols.

18.1.A. Cannabis and Cannabis products are tested in laboratories that follow TCC guidelines.

18.1.B. The organization provides documentation showing employee training on TCC's SOPs.'

18.2. Cannabis and Cannabis products are tested for a full panel of all potential contaminants.

18.2.A. Cannabis and Cannabis products are tested for contamination by pesticide, microbials, metals, residual solvents, and other chemicals.

18.3. The organization must provide all laboratory testing results to TCC and comply with accompanying TCC auditing procedures.

18.3.A. Testing results must be provided prior to audit.

18.3.B. During audit, testing samples will be collected by auditor.

18.3.C. Laboratory testing results must be provided to TCC for every batch.

18.4. The organization has active, approved traceback and recall protocols in place.

18.4.A. Protocols are regionally, organizationally, and product specific.

18.4.B. There is a trained and designated person in charge of all traceback and recall procedures

18.4.C. Organization must complete a mock recall annually to assure that the protocols are effective.

18.4.D. Traceback and recall protocols include a hold and release program to ensure that contaminated products do not reach the consumer.

18.4.E. For Cannabis samples that do not pass testing, the source of contamination must be identified.

Harvest and Processing

19. Policy

19.1. The operation is actively using documented harvest protocols.

19.1.A. Harvest protocols must comply with TCC guidelines of harvesting, processing (including trimming and whole plant processing), curing and storage.

20. Harvesting

20.1. The organization has appropriate procedures and training on harvesting and contamination.

20.1.A. The organization follows documented procedures that assure harvested product is not exposed to contamination.

20.1.B. The organization provides documentation of harvest worker training.

21. Processing

21.1. Organization provides training for all employees (permanent, contract, and volunteers) involved in processing.

21.1.A. Organization will provide documentation of employee training.

21.2. Processing must be safe and sanitary.

21.2.A. Processing is conducted in a sanitary and dedicated space.

21.2.B. Proper PPE is utilized during processing.

21.2.C. There are sufficient quantities and demarcations of safety equipment.

21.2.D. Materials must be separated into specific waste -streams .

22. Curing

22.1. Organization utilizes appropriate policies and procedures for a safe curing process.

22.1.A. Organization utilizes SOPs to assure an acceptable curing process.

22.1.B. Curing must occur in a designated area free of contaminants.

22.1.C. Procedures must be in place to properly separate all strains and batches.

23. Storage

23.1. Organization utilizes appropriate policies and procedures for safe storage.

23.1.A. Organization utilizes SOPs to assure acceptable storage.

23.1.B. Organization maintains documented inventory, proper cleaning and maintenance procedures.

23.1.C. Storage must occur in a designated area free of contaminants.

23.1.D. Procedures must be in place to properly separate all strains and batches.

Water

24. Management

24.1. The organization is in compliance with all relevant water regulations.

24.1.A. The organization conducts due diligence in order to ensure they are in compliance with all relevant water use regulations.

24.1.B. Organization has documented evidence to all pertinent (local/state/provincial) laws, regulations, and licenses.

25. Sourcing and Derivation

25.1. The organization extracts water in line with sustainable practices and goals.

25.1.A. The organization utilizes sustainable water extraction practices and goals.

25.1.B. The organization clearly defines all water sources.

25.1.C. The organization sets water harvesting and reuse goals and practices

25.1.D. The organization separates pre-- and post--use water.

25.1.E. Post--use water is repurposed to appropriate uses.

25.1.F. The organization measures and monitors the quantity of all water used, including fresh, recycled, and harvested.

25.1.G. Goals are set to increase the percentage of water use from rainwater catchment or recycled water.

26. Agricultural Techniques for Water Conservation

26.1. The organization implements agricultural techniques to improve the water efficiencies of outdoor cultivation sites.

26.1.A. The organization implements conservation tillage to reduce erosion and runoff.

26.1.B. The organization establishes conservation riparian buffer zones alongside watercourses to improve efficiency in intercepting overland flow and reduce nutrient transport.

26.1.C. The organization creates contours across slopes to catch surface runoff and promote groundwater recharge.

26.1.D. The organization has established infield grass strips to block runoff pathways.

26.1.E. The organization has or will implement mechanical retrofits to improve efficiencies (change droplet size on nozzles, spray closer to ground, lower pressure).

26.2. The organization implements appropriate water scheduling.

26.2.A. Plants are watered at the appropriate time of day and frequency.

26.2.B. Water schedule is documented.

26.2.C. Water application pattern changes according to month, season, and availability.

26.2.D. Organization implements weather--based irrigation scheduling.

26.3. The organization ensures regular maintenance of water use equipment .

26.3.A. Organization routinely checks for leaks and repairs damaged irrigation equipment.

26.3.B. Organization regularly maintains and calibrates irrigation equipment.

27. Irrigation Technologies

27.1. The organization uses an efficient irrigation system.

27.1.A. Irrigation system is tailored to the organization's location, size, and cultivation method.

27.1.B. Organization implements irrigation technologies that have higher distribution uniformities and water -use efficiencies (precision drip and micro- sprinkler irrigation systems).

27.2. The organization performs regular upkeep and maintenance of irrigation systems.

27.2.A. Organization is actively keeping records in accordance with their active maintenance plan.

27.2.B. Organization has a layout of pipelines in case of large pipe burst repairs.

27.2.C. Organization monitors water meters on a regular basis to detect leaks.

27.2.D. Organization assesses water holding capacity and readily available water capacity of each growing medium used during cultivation.

27.3. The organization actively utilizes policies and practices to record and monitor their water usage.

27.3.A. Organization has water management practices in place to identify where water is being used and how water use can be minimized.

27.3.B. Organization uses a water management logbook to record usage.

27.3.C. Organization uses calibrated/installed/accurate water meters on each piece of equipment.

27.3.D. Organization monitors the soil moisture below the root zone to monitor excess irrigation.

27.3.E. Actions are taken to mitigate the environmental impact of water use as identified in EIA.

27.4. The organization is actively utilizing policies and practices to improve irrigation.

27.4.A. The organization has a plan to assess and continually improve their irrigation method.

27.4.B. Organization performs annual on-site irrigation audits.

27.4.C. Organization implements volumetric measurement of irrigation water use.

27.5. The organization employs non--irrigation water -saving techniques.

27.5.A. Organization uses techniques to save water outside of the main irrigation system.

27.5.B. Uses dry farming methods or intercropping.

27.5.C. The organization use cover crops, mulch, or amends the soil with biochar, high organic material, and/or compost.



28. Pre-Use Water Quality

28.1. The organization verifies that water used for Cannabis production does not contain biological, physical, or chemical contamination.

28.1.A. The organization conducts a water analysis prior to applying water during cannabis production.

28.1.B. The organization has provided water quality analysis reports.

28.1.C. The organization has a policy and protocols for maintaining non-contaminated water for cannabis production.

28.2. Water is analyzed for chemical makeup and contamination prior to plant application.

28.2.A. Water is monitored and tested for make up prior to plant application.

28.2.B. Methods (filtration/chemical/UV) utilized to decontaminate water and achieve **desired** makeup of water are clearly defined and documented.

28.3. Nutrients added to water are on Approved List and recorded.

28.3.A. There is a logbook onsite with records of all nutrient inputs.

28.3.B. The records include the nutrient names, chemical makeup, amounts added, date of additions, and batch related information.

29. Post-Use Water Quality

29.1. Excess water is collected, analyzed, and recorded.

29.1.A. Records include: quantity of runoff water during cultivation, nutrient makeup of runoff, and destination of runoff.

29.1.B. The organization provides evidence that runoff or discharged water quality is improved via a documented process before exiting the cultivation facility.

29.1.C. Documentation is provided showing that runoff is recycled or reused.

Energy

30. Energy Management

30.1. The organization conducts an annual energy audit.

30.1.A. The organization has conducted an energy audit of the cultivation facility.

30.1.B. The organization's energy usage is above or in--line with industry benchmarks.

30.2. The organization implements training program and sets organization goals that focus on behavioral changes to reduce energy consumption.

30.2.A. Organization provides documents ensuring all employees have learned and are utilizing the energy policy.

30.2.B. Training program and materials are developed and used.

30.2.C. Organization re-evaluates and updates their energy conservation goals to meet organization's needs and environmental benchmarks.

31. Building Analysis, Insulation & Seals

31.1. The building incorporates proper insulating technology, either through its original construction or subsequent additions.

31.1.A. The building is properly insulated.

31.1.B. The facility has an appropriate insulating R-factor for its location.

32. Equipment Policies and Procedures

32.1. The organization measures and records Net Energy Usage.

32.1.A. All energy sources at the cultivation facility are identified and recorded.

32.1.B. The energy consumption per cultivation cycle at the facility is documented.

32.1.C. Generators are only used as backup power.

32.2. The organization has a complete list of all equipment used during cultivation and harvest.

32.2.A. The organization has a complete list of all equipment used during cultivation and harvest.

32.2.B. Equipment list should mirror the farm plan and include equipment specifications, age, warranty, manufacturer, and usage.

32.3. The organization has a plan to ensure equipment is used according to cultivation plan.

32.3.A. Procedures are in place to provide oversight in daily operations and record any deviations from normal practices.

33. Temperature and Humidity Systems

33.1. The organization maintains efficient heating/cooling/dehumidification systems.

33.1.A. Energy efficient equipment is used.

33.1.B. Phase-out plan for inefficient equipment replacement has been approved.

33.1.C. A monitoring system is utilized to track the operating efficiency of the system.

33.1.D. Systems and equipment undergo maintenance to ensure operating efficiency.

34. Lighting System

34.1. The organization implements energy efficient lighting.

34.1.A. Energy efficient lighting is currently in use.

34.1.B. Organization has set goals to minimize energy use from lighting systems.

34.1.C. Design of lighting system and bulb type has been analyzed to decrease energy use.

34.1.D. Scheduled maintenance of current light system.

34.1.E. Natural light is utilized when possible.

35. Automation and Installation of Energy -Efficient Equipment

35.1. The organization implements energy efficient lighting systems.

35.1.A. Lighting system is automated.

35.1.B. Facility implements controllers or lighting motion sensors.

35.1.C. Organization uses heat exchangers or variable HVAC systems.

36. Air Circulation

36.1. The organization utilizes an efficient circulation system.

36.1.A. Air circulation has been analyzed and appropriate equipment is properly located.

36.1.B. Passive supplemental airflow alternatives are utilized.

37. Fuel Consumption Behavior

37.1. The organization consumes fuel judiciously.

37.1.A. The organization limits or prohibits the use of open flame burners and petroleum products.

37.1.B. Carbon Dioxide generators that use fossil fuels are phased out.

38. Alternative Energy

38.1. The organization utilizes alternative energy.

38.1.A. Organization generates alternative power onsite.

38.1.B. Organization receives power from alternative energy sources such as solar panels, wind power, geothermal, or alternative energy co-op.

39. Carbon Offset

39.1. The organization is involved in a carbon offset scheme.

39.1.A. Organization buys carbon credits to offset their carbon production.

Waste

40. Implementation

40.1. The organization has established waste minimization policies and procedures.

40.1.A. Organization maintains descriptive records of waste disposal.

40.1.B. Organization implements good housekeeping practices.

40.1.C. Organization has developed and implemented inventory control procedures.

40.1.D. Organization performs an annual waste audit.

40.1.E. Waste audit includes total amount of solid municipal, hazardous, universal, recyclable, and compostable waste.

41. Composting

41.1. The organization composts or diverts used soil from the waste stream.

41.1.A. The organization composts used substrate either onsite or through a company.

41.1.B. The organization makes efforts to divert used soil and subsequent nutrients from landfills or incineration, when allowed by law.

41.1.C. The organization finds post-harvest uses of the growing medium.

42. Purchasing

42.1. The organization incorporates waste reduction into their purchasing policy.

42.1.A. The organization has a purchasing policy that requires purchasers to assess the sustainability of a product and provides Letter of Guarantee.

42.1.B. The organization considers packaging in the products they purchase.

42.1.C. The organization buys in bulk and uses reusable containers that can be returned to their supplier.

42.1.D. Does the organization question if the product: is actually required, can be purchased used, is easily repairable, requires or generates hazardous waste?

42.1.E. The organization knows the life span of each product.

42.2. The organization has a green product procurement policy.

42.2.A. The organization considers the life cycle of each product it purchases to ensure it is the most sustainable available.

42.2.B. There is a tracking system to show how the principals of Zero Waste were incorporated into the decision to purchase the product.

43. Internal Waste Stream Assessment, Reduction, and Management

43.1. The organization has developed and approved an internal sustainable waste management policy.

43.1.A. The facility possesses internal protocols and procedures that specifically ensure waste streams are separated and managed appropriately.

43.1.B. Organization has established a program, site, transportation, and finances for waste stream management.

43.1.C. Waste is divided into appropriate streams and these streams follow the principles of waste hierarchy.

43.1.D. The plan addresses disposal of hazardous materials.

43.1.E. Organization includes contractual obligations to ensure waste that is diverted from the solid waste stream is not landfilled or incinerated.

43.1.F. The results of the waste audit are shared with staff.

43.2. The organization tracks and records waste and waste diversion.

43.2.A. All waste generated by the organization is weighed or measured.

43.2.B. Reports are analyzed to find areas of improvement.

43.3. The organization follows input flows through the system.

43.3.A. The organization tracks input and output material flows.

43.3.B. Goals are set by organization to minimize excess inputs.

43.4. The organization re-incorporates waste into the system.

43.4.A. Waste is collected and re-incorporated into the system.

43.4.B. The processed waste must undergo treatment before re--entering the system is detailed.

43.4.C. For waste that cannot be re-incorporated into the system, a process for how it can be phased out of cultivation practices has been explored.

43.5. The organization implements landfill/incineration diversion program .

43.5.A. Organization has set targets to promote recycling, reuse, and composting of cultivation materials.

44. External Waste Stream Assessment, Reduction, and Management

44.1. The organization has developed and approved an external waste production policy.

44.1.A. Organization takes responsibility for the goods passed onto the consumer.

44.1.B. Organization is aware of all regulatory concerns and potential liability of the waste produced during cultivation.

44.1.C. There is a relevant product stewardship program.

44.2. The organization minimizes packaging of their products.

44.2.A. The products and their packaging are reusable, repairable, recyclable, or compostable.

45. Transitional and Multi--Use Operations

45.1. The organization has a plan with implementation protocols to move from current toward TCC cultivation practices.

45.1.A. If cultivating in--ground, there is documentation of the use of non--organic inputs dating back 2--3 years.

45.1.B. If using reclaimed soil, there is documentation showing the origin and composition of the soil.

45.1.C. The cultivation processes abstain from the use of inputs that do not comply with organic principles and applicable standards.

45.1.D. Organic and non--organic methods are separate, labeled, and tracked accordingly.

45.1.E. If grow uses non--organic or chemically treated planting materials, the organization has policies in place to phase out these materials.

45.1.F. A person is responsible for phasing out these materials in the cultivation cycle.