



SIERRA CLUB

-ILLINOIS CHAPTER-

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November 29, 2019

VIA ELECTRONIC MAIL

Illinois Department of Agriculture

ATTN: Recreational Cannabis Permit Applications

P.O. Box 19281

State Fairgrounds

Springfield, IL 62794-9281

AND

Illinois Department of Financial and Professional Regulation

ATTN: Recreational Cannabis Permit Applications

320 West Washington Street, 3rd Floor

Springfield, IL 62786

RE: Environmental and Worker Protection Best Practices for Recreational Cannabis Evaluation

In recognition of the fact that Public Act 101-0027, the Cannabis Regulation and Tax Act, includes an assessment of environmental practices in considering both cultivation and dispensary applications, Sierra Club would like to offer these potential best practices for consideration in making those assessments.

The recommendations below address both the potential environmental impact of cultivation and dispensary facilities as well as the health and safety concerns of cannabis workers employed therein, and host communities for these facilities.

CULTIVATION FACILITIES

1) **LIGHTING:** Use of LED lighting can help reduce heating and humidity problems associated with indoor cannabis cultivation, in turn reducing the power consumption from HVAC units. As LED lighting generates minimal to no heat, indoor temperatures in cultivation centers are reduced, therefore reducing water evaporation and indoor humidity. A reduction in water evaporation can also lead to reduced fertilizer and soil nutrient loss. LED lighting can significantly reduce a facility's carbon footprint through minimizing electricity consumption.

2) **WATER USAGE PLAN:** A sustainable water usage plan would help reduce the water needed to supply the approximate 22L of water needed per plant per day. The use of water reclamation systems,

such as reverse osmosis and closed circuit desalination, can purify roughly 75-97% of cultivation waste water to be reused in the cultivation process. The reclamation of water can also reduce the amount of pesticides possibly present in, and the unbalanced pH of, cultivation waste water. As stated in the Public Act, all liquid cultivation waste must be disposed of according to state and federal requirements. Any reduction in the amount of pesticide introduced into the environment through cultivation waste is additionally beneficial to both the environment and the safety of cannabis workers.

3) **SOLID WASTE MANAGEMENT:** A solid waste management plan for recyclable waste, especially organic waste, would also reduce the environmental impact of cannabis cultivation. As provided for in the Public Act, all cannabis plant waste must be ground and mixed with other compostable mixed waste. The establishment of an on-site composting plan utilizing this compostable waste as part of their continued cultivation practice would not only reduce the waste disposed of by the grower but also the need for other nutrient inputs, reducing both cost and nutrient discharge. The adoption of a sustainable waste management plan, such as using compostable packaging materials, can further reduce a cultivation facility's impact. A waste management hierarchy that first prioritizes reduction of waste, reuse of materials, and then recycling is a good approach to a variety of waste streams.

4) **CHEMICALS:**

Cultivation inputs

The use of pesticides, fungicides and herbicides comes with risks to workers, the environment, and the surrounding community.

The **minimum practice** in this regard would be the adoption of a chemical pest control usage plan outlining a cultivator's ability to comply with pesticide regulations as determined by the State, how pesticides will be used, knowledge of the environmental and public health risks associated with pesticide use, and any practice put in place for sustainable pesticide use..

A **better practice** would include, the use of organic fertilizers and Integrated Pest Management Systems (IPM) can reduce the use of chemical pest control and prevent the emergence of pesticide resistant pests.

The **best practice** would require organic certification of cultivated product, and provide maximum protection for workers, the environment, and the end consumer. While a more labor intensive practice, organic production simplifies compliance with environmental regulations associated with pesticide use and reduces or eliminates the presence of chemical pest control agents in any cultivation waste. Also, with the increased public demand for organic products and sustainable practices, cannabis cultivators may find strong consumer demand for products produced with organic farming practices. A suggestion to encourage cultivators to implement organic farming and other environmental best practices is the creation of incentive programs, such as a voluntary certification system or the establishment of labeling standards that clearly identify products produced using organic and other best practices.

In all cases, a demonstrated plan for the exercise of stringent hazardous waste protocols in the disposal of pesticides, cleaning products, chemicals, and other potential environmental contaminants would be beneficial both environmentally and to the safety of cannabis workers.

Cannabinoid Extraction Methods

For facilities proposing to extract cannabinoids, extraction methods should avoid or minimize emissions and worker safety risks. Hydrocarbons as extraction agents should be avoided due to fire and vapor inhalation risks to workers. Alcohol extraction methods carry fewer risks, while CO2 (with worker

breathing protections in the event of a CO₂ release) and solvent-free methods avoid risks to workers and consumers of harmful vapors and residue in final products.

6) COMMUNITY ENGAGEMENT:

The creation of educational outreach programs for growers, especially small-scale farmers, and those new to farming, can demonstrate how to implement and utilize the best practices outlined above, and make new business opportunities available to those who need it most.

The adoption of environmental impact studies that accurately capture the relationships and dependencies between cannabis employers, communities and their environment. Environmental impact studies can not only illuminate how the cannabis industry interacts with its immediate environment, such as how water use impacts the local watershed and the species it supports, but also focus on ways the industry can promote equity and sustainability in the community. As the industry grows, impact studies can suggest ways to deter corporate consolidation of cannabis production and continue to support small-scale farms and promote local economies.

Lastly, an emphasis on community engagement between cannabis workers, employers and organizations promoting social and environmental justice within the industry. Community engagement can take many forms, from partnering with local non-profit to promote events to initiating charitable events of your own. Supporting local communities through engagement can increase public acceptance of the cannabis industry and the positive impacts cannabis establishments can have on local economies. Community engagement can also have a positive impact on cannabis employee morale and job satisfaction. This engagement is particularly important for facilities located in environmental justice communities, where often this community engagement has been lacking or nonexistent with other facilities with potential pollution impacts.

7) ELECTRICITY SUPPLY

The State has expressed support for a goal of 100% clean energy (Executive Order 2019-06; HR 490/SR 655 (2017)), and cultivators can contribute to reaching this goal through their own electricity supply commitment. Applicants that demonstrate a commitment to 100% clean energy supply should be advantaged. Consistent with the overall equity goals of the program, additional advantage should be considered for applicants sourcing their energy demand to projects in Qualified Environmental Justice or Qualified Low Income Communities, as defined by the Illinois Power Agency.

DISPENSING FACILITIES

1) BUILDING DESIGN, LOCATION, AND OPERATION

Dispensing facilities should seek to avoid and minimize their carbon footprint and environmental impact with green building practices, including commitments to achieve certain building standards such as Leadership in Energy and Environmental Design (LEED)

Dispensing facilities in locations accessible to mass transit, and whose applicants project a substantial segment of customer and employee access by transit, bike, pedestrian, and other non-auto modes should be advantaged, due to a reduction in carbon and other air pollutants from customer and employee travel, and minimizing traffic and parking impacts on the community.

2) WASTE REDUCTION, REUSE, AND RECYCLING

Dispensing facilities should seek to minimize waste in packaging and materials by:

- Minimizing packaging for consumer products
- Utilizing packaging containing post-consumer recycled content
- Utilizing packaging that is recyclable locally
- Accepting consumer returns of packaging for recycling, particularly for unique wastes without readily accessible local recycling programs
- Committing to recycling of bulk packaging wastes, including cardboard and plastic film

3) ELECTRICITY SUPPLY

The State has expressed support for a goal of 100% clean energy ((Executive Order 2019-06; HR 490/SR 655 (2017)), and dispensary operators can contribute to reaching this goal through their own electricity supply commitment. Applicants that demonstrate a commitment to 100% clean energy supply should be advantaged. Consistent with the overall equity goals of the program, additional advantage should be considered for applicants sourcing their energy demand to projects in Qualified Environmental Justice or Qualified Low Income Communities, as defined by the Illinois Power Agency.

4) ALIGNMENT WITH BEST CULTIVATION PRACTICES

Dispensing facilities that demonstrate a commitment to partner with cultivators adhering to best environmental and worker protection practices should be advantaged.

Thank you for your consideration of these recommendations. Implementation of these, and other, best practices can ensure maximum benefit for the environment, workers, and communities as the recreational cannabis industry develops in Illinois.

Sincerely,

A handwritten signature in black ink that reads "Jack Darin". The signature is written in a cursive, flowing style.

Jack Darin

Director

cc: Toi Hutchinson, Office of the Governor