**NSC Technical Subcommittee Call Minutes – October 17, 2019**

**Participation [by regions]:**

1: Sara Johnson - **NH**

2: Harry Ching - **NY**

3: Olivia Achuko – **DC**; Jeremy Hancher, Carrie Wintersteen & Lee Ann Briggs **– PA**

5: Renee Bashel, Lisa Ashenbrenner-Hunt & Jennifer Feyerherm – **WI**; Annette Fulgenzi – **IL**; Robert Elmouchi, Kaitlyn Leffert & Jenifer Dixon – **MI**; Tracy Barnes, Angela Taylor, Joe Neuklis, Chrystal Wagner & Mark Stoddard - **IN** and Mike Nelson & Emily Ohde - **MN**

6: Rosanne Sanchez – **NM** and Lloyd Kirk, R. Fenton Rood & M. Moe - **OK**

7: Allison Crowther, Arthur Fink, Nancy Larson, Leena Divakar & Lynelle Ladd – **KS**; Christine Paulson & Jennifer Wittenburg – **IA**

8: Kaitlin Urso – **CO**

9: Jennifer Lipkin - **NV**

**Other (?):** Luke Hershey, Jon Roberts, Adam Brooks, Austin Lee, Alison Luedtke and Lee

**September minutes:** approved as is

**Tech-Subcommittee:** <https://nationalsbeap.org/sbeap/resources/subcommittees/technical>

***This presentation was recorded and the power point from this presentation will be posted to the SBEAP Technical Subcommittee web page***

**Providing Proactive Environmental Assistance to the Cannabis Industry**

**Kaitlin Urso, Environmental Protection Specialist, Small Business Assistance Program**

Kaitlin will present on her work with the Cannabis Industry conducting air, energy, waste, water impacts and sustainability audits which includes the implementation of best management plans.

She will discuss her role in conducting [cutting edge air quality research](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.sciencemag.org%2Fnews%2F2019%2F01%2Flegal-pot-farms-expand-so-do-air-pollution-worries&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312064163&sdata=ddOseZ9luoqhsklKtqZMrDpgmtVZBNaM40376LbYy5Q%3D&reserved=0) related to the growth of cannabis plants.

She is currently facilitating the development of a free online tool for the cannabis industry that will help track, trend, and bench mark environmental data and allow businesses to anonymously share and compare metrics.

And she is also working on a project that encourages breweries to recapture CO2 generated from fermentation and then provide excess CO2 to the marijuana industry to supplement their crop growth.

**Kaitlin** is a free environmental consultant for small businesses for the Colorado Department of Public Health and Environment in Denver, CO. She has 9 years of technical environmental experience and a **mechanical engineering** degree from the University of Colorado.  In her role, Kaitlin rotates through industries to focus on providing proactive environmental assistance to and create lasting program resources for. Kaitlin specializes in greening the brewing and cannabis industries.

**In 2017**, Kaitlin spearheaded the creation of CDPHE’s [Sustainable Breweries Assistance Program](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.colorado.gov%2Fpacific%2Fcdphe%2Fsustainablebrewing&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312054162&sdata=AxyG%2FVPNqkIzBCkCGmHniBPNKc%2FTBHEk0pXtw8zDOhc%3D&reserved=0) and helped numerous local craft brewers focus on reducing their environmental impacts.

Kaitlin is the author of the air quality chapter of the current [Cannabis Environmental BMP Guide](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.denvergov.org%2Fcontent%2Fdam%2Fdenvergov%2FPortals%2F771%2Fdocuments%2FEQ%2FMJ%2520Sustainability%2FCannabis_BestManagementPracticesGuide_FINAL.pdf&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312074172&sdata=GWiahg2V481bp2oKJFS3KpWE%2BXKJllMWRtNRmgUiMdg%3D&reserved=0) in **2018** and was a speaker at the 2018 Cannabis Sustainability Symposium.

**For 2019**, Kaitlin has been selected to chair the BMP and data subcommittee of the [Denver Cannabis Sustainability Workgroup](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.denvergov.org%2Fcontent%2Fdenvergov%2Fen%2Fenvironmental-health%2Fenvironmental-quality%2Fcannabis-sustainability.html&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312074172&sdata=wawkarDXrnW0lVgHmXTbYHyMiFV01ukD8dPFnVarK1M%3D&reserved=0).

Additionally, Kaitlin has been a speaker at the [North American Cannabis Summit](https://eur02.safelinks.protection.outlook.com/?url=http%3A%2F%2Fnorthamericancannabissummit.org%2Fwp-content%2Fuploads%2F2018%2F07%2FNACS_AgendaTracks.pdf&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312084186&sdata=OxdcZhE5AF48hyw2pqh%2BHXC%2FlAPAnVnspN0rlaoir1Y%3D&reserved=0), the [Craft Brewers Conference](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.craftbrewersconference.com%2Fsession%2352%3Fsession-title%3Dsustainability-101-and-a-success-story%3A-cashing-in-on-resource-efficiency!&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312084186&sdata=xBkTuRrR9af%2BSTu3tPyBKpx3n1ynRXs6pJD0sC98tQI%3D&reserved=0), [MJBizNEXT](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fmjbizconference.com%2Fnext%2F%3Fgclid%3DEAIaIQobChMI0KehsqSH4gIVULbACh1iswO0EAAYAiAAEgKg8PD_BwE&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312094186&sdata=zlrl01GwFGNjMHgdgag%2BGWM01l8fFZSNuHKuhnQRJNM%3D&reserved=0) conference, [Air and Waste Management Association’s conference](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.awma.org%2Face2019&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312094186&sdata=1ErKOfPZS%2BTqqvcXY16qP4j7e5rUtZlNZqkG0MgSPJU%3D&reserved=0), [NCIA](https://eur02.safelinks.protection.outlook.com/?url=https%3A%2F%2Fwww.cannabisbusinesssummit.com%2F&data=02%7C01%7C%7Cf362934e93f44257c91908d6d8881262%7Cac144e41800148f09e1c170716ed06b6%7C0%7C0%7C636934476312104187&sdata=lMdyMbHEc9WzojRFN%2BKsS9%2F3I5iXR69QU29U7XPYv70%3D&reserved=0)’s business conference, and the [Colorado Environmental Health Association](https://ceha49.wildapricot.org/event-3003655)'s annual conference.

**Some Take Aways:**

**Cannabis** is a pure or hybrid plant cultivated to extract certain materials such as THC (Tetrahydrocannabinaol as a component of Marijuana) or CBD (Cannabidiol) oil as well as the fiber of the plant (hemp)

0.3% by weight THC is a regulatory threshold for hemp

**Terpenes** are fragrant volatile organic compounds that give Cannabis its aromatic profile; Terpenes are found in other plants as well, e.g., Limonene found in Orange

**Cultivation indoors** – Marijuana; heat & humidity must be managed; lighting, irrigation & water treatment are also significant

**Cultivation outdoors** – CBD oil and industrial hemp

**Cultivation** is an agricultural activity and **processing** the cultivated material is manufacturing

**CBD & THC extraction** using solvents such as Propane, Butane and Hexane in some instances. Carbon Dioxide has been used for extraction as well.

**Odor complaints** – Carbon filtering to control or masking/counteractive agents; difficult to manage as individuals respond differently to certain odors at certain thresholds

**Environmental implications** - volatile organic compounds (Ozone), nitrogen oxides (stationary emergency engine), hazardous air pollutant (Hexane), hazardous waste (spent solvents), energy, water consumption plant waste (composting and the 50:50 rule; anaerobic digestion is a future consideration); IPA (Isopropyl Alcohol) or Ethanol can be used for cleaning

**Indoor air samplin**g was conducted in Colorado from February to September 2019. It is expected that results of the study would be published in May 2020

**Resource**

<https://cannabisbigdata.co/blooming-benchmark>

The Blooming Benchmark empowers cannabis businesses to track, trend, and benchmark environmental data in a secure and actionable way.

**Future topics:**

* **November 19:** Surface Coating MACT updates overview & discussion on recordkeeping/reporting, David Darling, American Coatings Association
* **December 17:** to be determined

**Next Call: November 19, 2019**

1 pm CST (2 pm EST) (3rd Tuesday of month)