

## **Odor Management and Response Plan (OMRP)**

Prepared for Cheshire Planning Board by Stafford Green, Inc.

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## **Odor Management and Response Plan: Definitions**

**Odor Intensity (BIRS)** Butanol Intensity Reference Scale. Odor intensity is the perceived strength of the odor sensation. More than any other property of odor, perceived odor intensity is what triggers odor complaints. It is measured by comparing the intensity of the odor perceived to that noted when sniffing standardized concentrations of a reference odorant.

**Odor Nuisance:** one or more air contaminants or combinations thereof, in such concentration and of such duration as are or may tend to be injurious to or to adversely affect human health or welfare, animal life, vegetation, or property, or as to interfere with the normal use and enjoyment of animal life, vegetation, or property.

**Odor Nuisance Formal Complaint:** Stafford Green requests that at minimum, but not limited to, that the following information be gathered by the zoning enforcement officer at the time that a complaint is received or prior to conducting an onsite investigation.

1. Name(s) and address(es) of complainant(s).
2. Driving directions to the site of the complaint and source as necessary.
3. Where on their property was the complainant when they experienced the odor?
4. Description of odor.
5. Dates, times, frequency, and duration when the complainant(s) experienced the odor.
6. Is the odor on-going, past or intermittent at the complainant's residence or business at this time?
7. Nature of any allegation of effects on the complainant's health, property, animals, or vegetation.
8. Nature of any allegation of interference with the normal use and enjoyment of the complainant's property, animals, or vegetation.
9. Alleged source of the odor.
10. Meteorological conditions (temp, wind direction, wind speed, etc.)
11. Does the complainant want an investigator to come to their residence or business? If we go to their residence or business, they may lose their confidentiality because state vehicles are marked. Explain to the complainant that their confidentiality may be lost during an investigation to confirm nuisance. We cannot substantiate a nuisance if we don't go to the complainant's residence or business, but we can look for issues at the alleged source.
12. For an OS&E odor measurement on private property, complainant will be asked to sign a waiver

**Odor Nuisance Investigation:** An investigation is used to determine whether a nuisance odor violation should be issued based on whether the frequency, intensity, duration, and offensiveness of detected and documented odors combined cause interference with the normal use and enjoyment of animal life, vegetation, or property. If the preponderance of the evidence does not confirm the presence of odors in such concentration and duration as to be injurious to or affect human health, welfare, animal life, vegetation, or property, the investigator will still evaluate all the evidence collected during the course of the investigation.

**Purpose of Policy:**

1. To offset odors before they rise to intensity or concentration levels that may be deemed a formal “public nuisance.”
2. To establish a plan for response and action on heightened odor levels, whether detected by Stafford Green or complained about by nearby residents.

**Odor Management:** combines use of early detection technology, odor reduction and order dispersal methods

1. **Early Detection Technology** scientifically determines intensity, concentration and unique odor profile.
  - a. Through a contract with Stafford Green, Odor Science & Engineering, Inc., of Bloomfield Connecticut, will collect odor data starting June 1st throughout the season, analyzing odor intensity levels, odor concentration levels and unique odor profiles, and provide appropriate detection technology for mitigation steps.
  - b. Stafford Green staff will be trained to monitor and interpret data to identify intensity of odor. If and when odor intensity is consistently detected, mitigation steps described below will be taken.
2. **Reduction and Odor Dispersal Methods** include the following:
  - a. Windbreak/Buffers<sup>1</sup>- reduction in odor, dust particles and noise through design and maintenance of a windbreak/buffer program. Initial design detail provided on submitted site plans.
  - b. High Fragranced Flowers and Ground Cover – Stafford Green will be incorporating an array of beneficial flowers that serve as natural deterrents/pesticide and omit high levels of fragrance. E.g. Jasmine, Lavender, Honeysuckle, Roses, Geraniums, Mint, Thyme, Chamomile, Basil and Rosemary

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<sup>1</sup> USDA-Natural Resources Conservation Service(NRCS)- Plant Materials Program – submitted to planning board

3. **Response Plan** Upon confirmed detection of consistent level of odor intensity, Stafford Green will immediately activate misters. Additionally, upon receipt of a formal complaint and accompanying analysis, Stafford Green will immediately undertake mitigation measures as follows:
  - a. Activate misting technology based on environmental variables, the number of misters and level of misting to be determined by OS&E and manufacturer's specifications.
  - b. Collect and preserve all data necessary to establish odors levels, before and after initial mitigation measures.
  - c. Stafford Green will retest to confirm that odor is appropriately mitigated. If not, Stafford Green will increase distribution until adequately mitigated.
  - d. Upon mister activation, 5 rows of hoop house materials are ordered and prepped on site
4. **Contingency Plan.** If misting technology fails (via formal complaint) to sufficiently mitigate odor,
  - a. Stafford Green will immediately implement a containment and neutralization plan consisting of the progressive erection of temporary hoop houses and use of carbon filtering technology to neutralize odors<sup>2</sup>.
  - b. Hoop houses ordered and installed continually based on daily measurements to contain order, until 100% of crop is covered, if necessary
  - c. Stafford Green will retest odor emanation until confirmed effective.
5. **Hoop House installation at 100%**
  - a. If a formal complaint is registered at 100% hoop house coverage, Stafford Green will immediately begin removing crop as needed to reduce odors to an acceptable level, until the entire crop is removed if necessary.

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<sup>2</sup> Hoop House Mitigation Structure detailed overview shared with planning board

6. **Engagement of Cannabis Control Commission (CCC).** If after exhausting all methods above, odors are not sufficiently mitigated, Stafford Green recognizes that the Town of Cheshire may report Stafford Green's failure to comply with the conditions of its special permit to the CCC and that the CCC may take investigative action as required and may require Stafford Green to cease operations until Stafford Green is in compliant with local bylaws.

### **Odor Management and Response Steps Overview:**

**Initial Response:** If an odor is detected, and health effects are alleged by a complainant the complaint will be prioritized for immediate response and an investigation will be conducted as soon as possible, but no greater than 2 business days.

### **Preemptive Steps:**

1. OS&E<sup>3</sup> implements Odor data collection program starting June 1st, before cannabis planting. Each data collection results in an instantaneous Butanol Intensity Reference Scale (BIRS) rating determination on site.
  - a. In addition, there will be scheduled and standard odor data logging throughout the grow season by trained Stafford Green managers and independently by OS&E
2. If odor detected at "consistent odor level" on BIRS scale for any odor documented by engineers, it will be recorded in the log.

### **Formal Complaint Response Steps:**

1. If formal odor complaint received, OS&E takes readings within 2 business days (with the intention of Stafford Green addressing it the same business day) to detect "consistent odor level" and identify its source.
2. If "consistent odor level" is detected, at the 500' buffer over standard measurement period after formal complaint, it is recorded by OS&E and mister technology is activated same day. Location, amount and frequency will be adjusted as required to mitigate intensity of identified odor.
3. If after a formal complaint is filed and the mister technology is unable to mitigate the odor, Stafford Green will install hoop house mitigation structures<sup>4</sup> (structures installed immediately)
4. OS&E makes measurement within 2 business days of formal complaint at 500' buffer

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<sup>3</sup> OS&E Odor Monitoring Plan- Submitted to planning board

<sup>4</sup> Hoop House Mitigation Structure Overview – provided to planning board

and determines how many hoop houses needed in order to reduce the intensity level of odor on BIRS scale.