



Commonwealth of Massachusetts  
Executive Office of Energy and Environmental Affairs

## Department of Environmental Protection

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# VOC Dashboard

## Frequently Asked Questions (FAQs)

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### 1. What are VOCs?

Volatile Organic Compounds (VOCs) are chemicals that easily evaporate to gas at room temperature. VOCs are ubiquitous in the environment because they are emitted by fossil fuel combustion (e.g., cars and trucks, power plants, homes and businesses), manufacturing processes (e.g., solvents), commercial and household products (e.g., paints, cleaners), and by natural sources (e.g., vegetation, forest fires). VOCs can contribute to ozone formation, and some VOCs are toxic and can adversely affect human health and the environment. More information is available at <https://www.mass.gov/info-details/voc-monitoring-data>.

### 2. Where and how often are VOC samples collected?

MassDEP monitors VOCs at four locations in Boston, Lynn, Weymouth, and Chelsea. VOC samples are collected every 6 days at all sites on the same schedule. Make-up samples may be collected off-schedule in the event of a missed or voided sample. These make-up samples are kept as close to the original schedule as possible.

### 3. What are AALs and TELs?

MassDEP developed Allowable Ambient Limits (AALs) and Threshold Effect Exposure Limits (TELs) to evaluate potential human health risks from exposures to chemicals in air. Exposure above an AAL or TEL does not mean an individual will

develop cancer or experience non-cancer health effects. However, the risk or probability of developing adverse health effects increases with the intensity and frequency of exposure. More information is available at <https://www.mass.gov/info-details/massdep-ambient-air-toxics-guidelines> and on the “Information and Disclaimers” tab in the dashboard.

#### **4. What does “Display Void Data” mean?**

The “display void data” feature allows a user to include or exclude samples that did not meet quality assurance criteria and are marked “void”. Selecting “yes, display” will include void samples in visualizations and calculations, while selecting “no, exclude” will exclude them. VOC sample data can be void for many reasons including issues with sample collection or laboratory analysis. Only valid data is submitted to the EPA Air Quality System database. All sample data, both valid and void, is included in the dashboard for informational purposes.

#### **5. Why are acetone and acetaldehyde listed twice?**

MassDEP measures VOCs using two different sampling and analytical methods. Acetone and acetaldehyde are measured in both methods, so data for both is reported in this dashboard. Results from the carbonyl sampling method are specified as “acetone (carbonyl)” and “acetaldehyde (carbonyl)”. The carbonyl method is preferred for acetone and acetaldehyde measurements. Therefore, applicable TEL/AAL values are listed only for the acetone (carbonyl) and acetaldehyde (carbonyl) data.

#### **6. How often is data updated?**

VOC data is updated on a quarterly basis.

#### **7. Why does data start in 2020?**

The current VOC network configuration was completed in 2021, following the start of VOC sampling at Weymouth in 2020 and Chelsea in 2021. Prior to 2020, VOC data was collected at Boston and Lynn. This dashboard shows data from all four sites back to 2020. Data from Boston and Lynn prior to 2020 can be obtained through EPA’s AQS database at <https://www.epa.gov/aqs>. The site and parameter codes needed to access this data can be found in the “AQS Code Info Tab”.

## 8. How do I use this dashboard?

There is a “How to Use” tab on the left side of the VOC dashboard that details how to use the dashboard. It covers how to find, filter, and export data from the dashboard. The “How to Use” tab is on the left for webpages, and under the sliding menu in the mobile display. An instructional video is available at [https://youtu.be/Agk-EB\\_MDxI](https://youtu.be/Agk-EB_MDxI).

