**DEEP Air Monitoring Network**

The Connecticut air monitoring network consists of 14 sites monitoring air pollutants and meteorological parameters:

- **Air pollutants**: Ozone, particulate matter, sulfur dioxide, nitrogen oxides, carbon monoxide, black carbon
- **Meteorological parameters**: Wind speed, wind direction, relative humidity, temperature, dew point, solar radiation

Air monitoring is conducted to meet the following objectives:

- **Compliance Purposes**: Determine attainment status for criteria pollutants.
- **AQI Reporting**: Provide timely and accurate data for Air Quality Index and forecasting.
- **Control Strategies**: Develop new strategies and assess existing ones.
- **Trend Analysis**: Assess short-term and long-term pollutant trends.
- **SIP Development**: Provide data used in modeling to aid in development of State Implementation Plans.
- **Characterize Sources**: Distinguish between contributions from local sources and the effects of long-range transport.
- Support long-term health assessments and model evaluations.
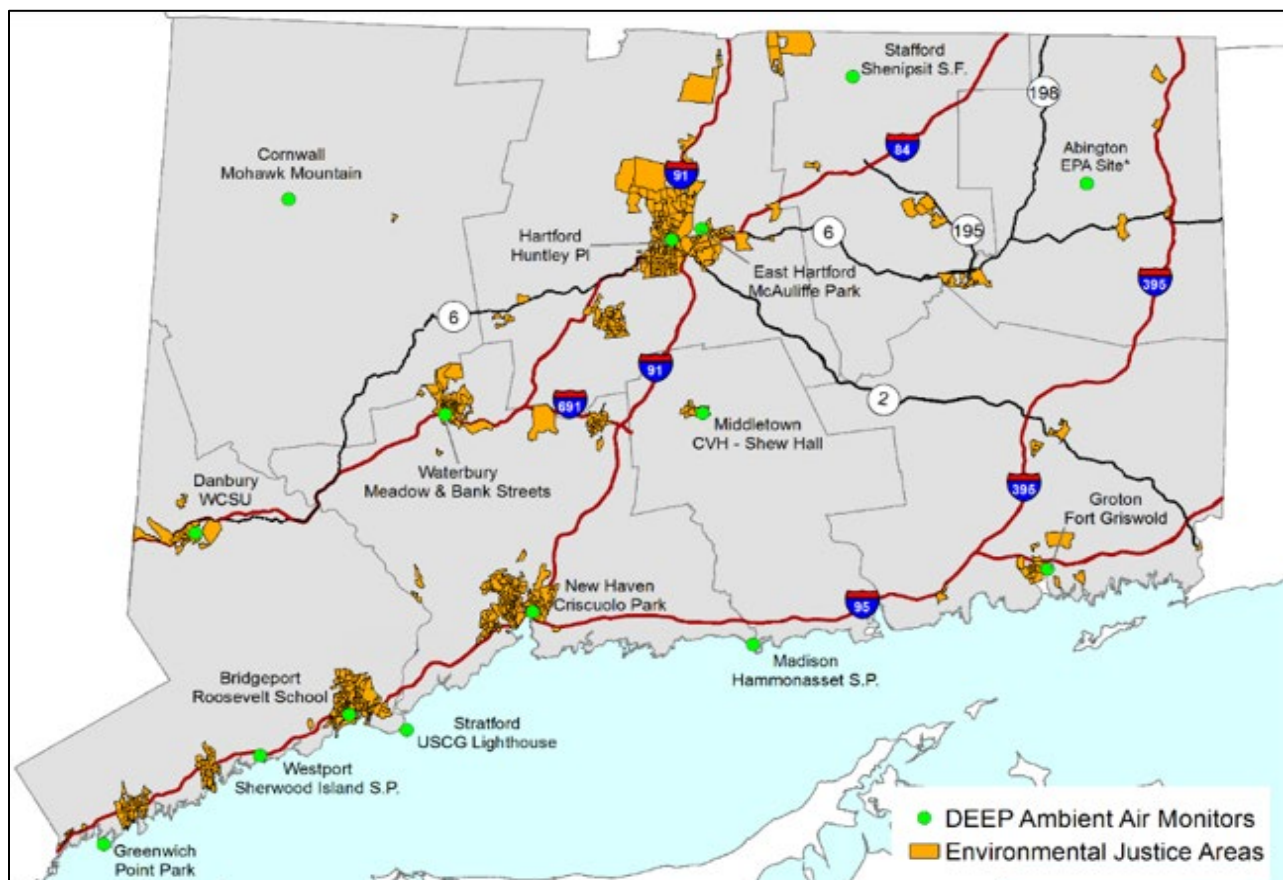
**Community-Based Monitoring Programs in Connecticut**

DEEP supports community-based air quality monitoring efforts by advising and assisting on prospective projects. An air quality sensor loan program is currently being developed with the goal of providing select air quality sensors to help communities build their programs. The Air Bureau has assisted with communities on monitoring projects across Connecticut such as those outlined below.

**The Dwight Healthy and Just Neighborhood Project**

The Greater Dwight Neighborhood in New Haven, CT, deployed several PurpleAir sensors to monitor for fine particulate material from vehicle emissions. The group is partnered with Yale University and received several grants to purchase and deploy more sensors.

Learn more: **Dwight Healthy and Just Neighborhood | Yale Urban Design Workshop**

**Town of Stamford, CT**

The city of Stamford, CT installed PurpleAir sensors throughout the city based on the State Department of Public Health's map of areas with high asthma rates. Data from the sensors is available online and can be used by citizens to help inform on local air quality. The program was established in cooperation with the Air Bureau and is monitored by the Stamford Department of Health.

Learn more: **Air Quality | Stamford, CT (stamfordct.gov)**

**Enhanced Air Monitoring in Derby/ Ansonia, CT**

The CT Department of Public Health received an American Rescue Plan (ARP) grant to establish a network of low-cost air sensors to provide real-time measurements of pollutants in environmental justice communities. The project will provide training modules and an education and outreach campaign for community members to lead long-term air sensor network operation. A goal of the project is to establish a digital dashboard that will provide information about the effects of poor air quality days on health and link to existing programs to support community health. This project is scheduled to begin later in 2023.

**Western Connecticut Clean Air Action**

Multiple towns in Western Connecticut purchased and deployed air sensors due to concerns over the construction of new power utilities. This project has been concluded.

## Connecticut PurpleAir Network

DEEP is developing a network of PurpleAir sensors to measure fine particulate matter (PM2.5) across Connecticut. Data from these air sensors can be made public at purpleair.com and readily available on a scale otherwise unfeasible with regulatory monitors.

PurpleAir sensors are deployed at all 14 of DEEP's air monitoring stations to run alongside regulatory monitors, assess performance, and saturate the state network. Additional PurpleAir sensors have been loaned to community partners including schools, community groups, and outdoor education facilities, to measure air quality and promote engagement with air quality and health.
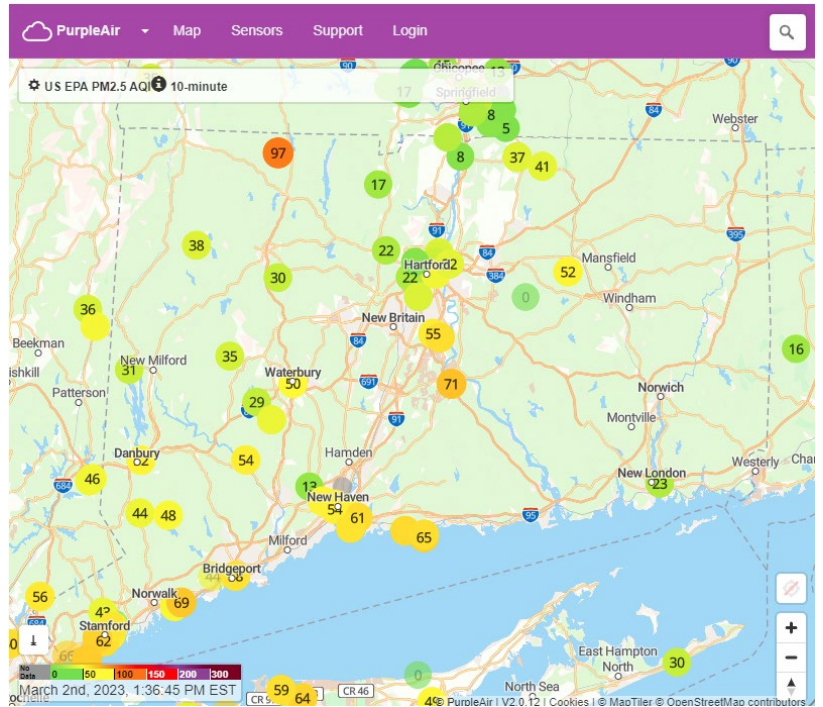


Below is a real-time map of all PurpleAirs throughout Connecticut that are collecting outdoor PM2.5 measurements and publicly posting the data.

## Air Sensor Loan Program

DEEP has developed a pilot sensor loan program to provide air quality sensors to community groups, educators, and individuals that are interested in monitoring local air quality. PurpleAir monitors are a brand of air quality sensor that measure fine particulate matter (PM$_{2.5}$) and report measurements to a publicly viewable map. Community-lead projects around Connecticut are deploying PurpleAir or similar air sensors to monitor for community specific air quality issues.



### How to Get Involved
If you are interested in applying for an air sensor loan, please email the completed Air Sensor Loan Request Form to **DEEP.AirMonitoring@ct.gov**.
**Air Sensor Loan Request Form(.pdf)**