clean AIRE nc

Your community. Your air. Your data.



AIRKEEPER DASHBOARD

Quick Start Guide

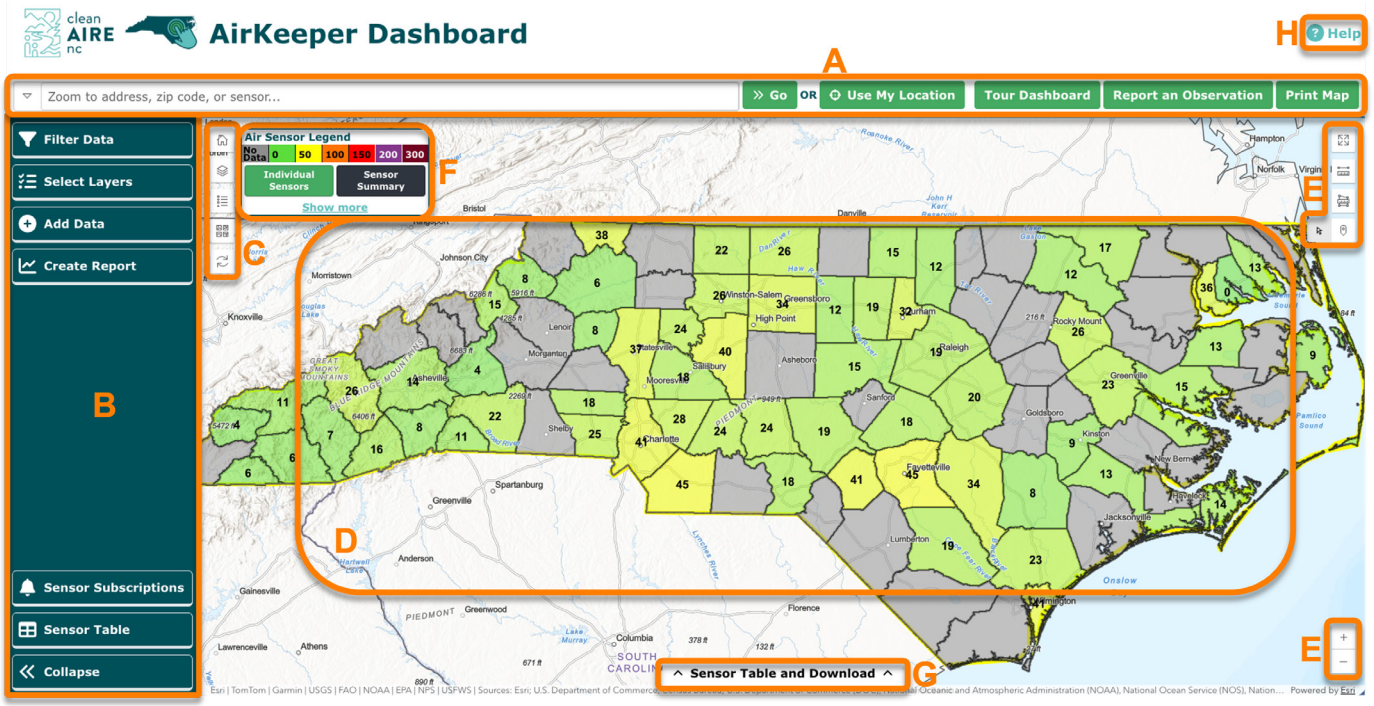
AIRKEEPER DASHBOARD

Quick Start Guide

Welcome to AirKeeper Dashboard v.2.0! This interactive mapping tool combines real-time and historic air quality data with critical information such as locations of pollution sources, demographic data, and health statistics, providing a powerful resource to investigate and communicate social and environmental realities.

This guide provides a quick tour of the major panels and components of the AirKeeper Dashboard and how to use them:

(A) Top Control Panel.....pg 2
(B) Side Control Panel....pg 3
(C) Map Controls.....pg 4
(D) Interactive Map.....pg 5
(E) Map Tools.....pg 5
(F) Air Sensor Legend....pg 6
(G) Sensor Table.....pg 7
(H) Help.....pg 7



(A) Top Control Panel

Actions at Your Fingertips

The Top Control Panel provides quick access to essential tools:

Zoom to Location/Sensor
Easily navigate to specific areas or individual sensors.

Tour Dashboard
Refresh your memory with an interactive Dashboard tour.

Report an Observation
Submit air quality observations to CleanAIRE NC to pair narrative information with technical sensor data.

Print Map
Create a printable image of your current map view.



(B) Side Control Panel

Tailor Your View

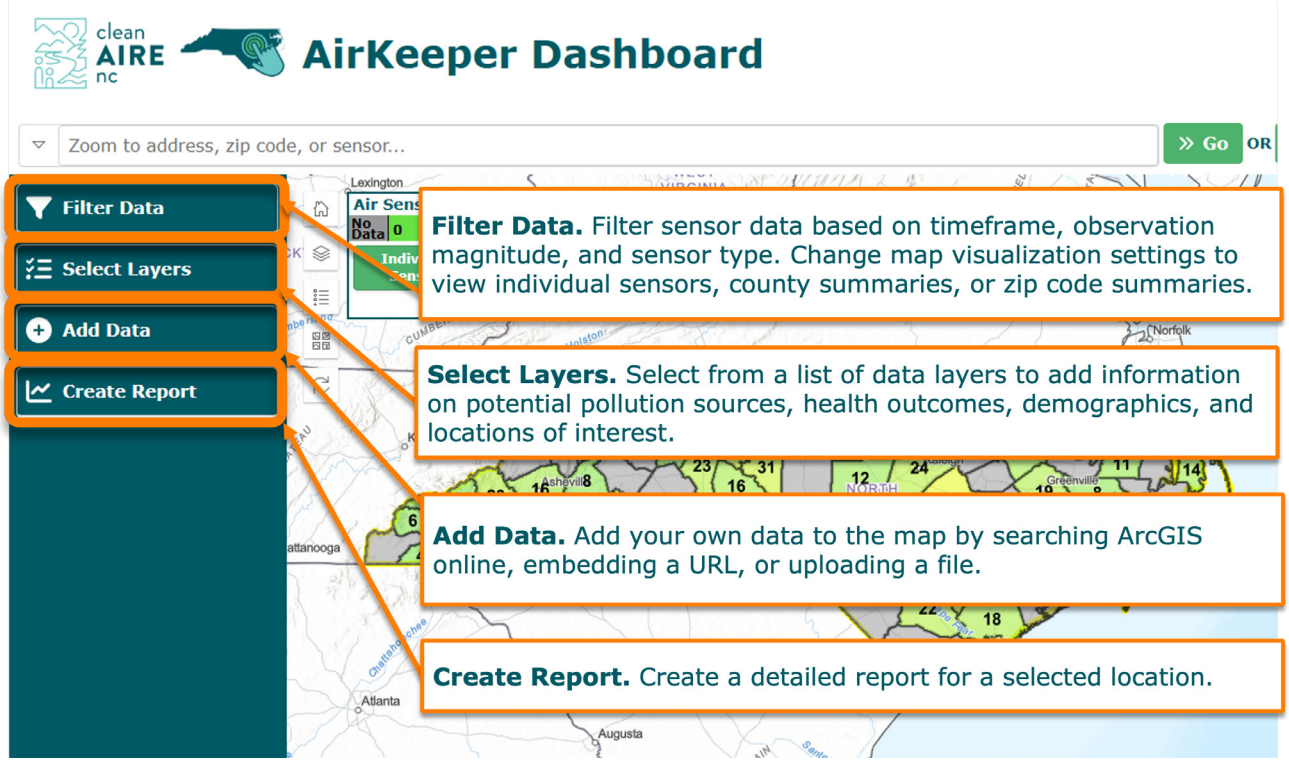
The Side Control Panel allows you to customize maps and data to meet your needs:

Filter Data
Control what sensor data is visible, and how it is displayed.

Select Layers
Add preselected data layers to the map for contextual information.

Add Data
Search for external data to add the map or import your own.

Create Report
Generate a customized Location Report to save or share.



(C) Map Controls

Explore and Visualize

The Map Controls help you manage the map display:

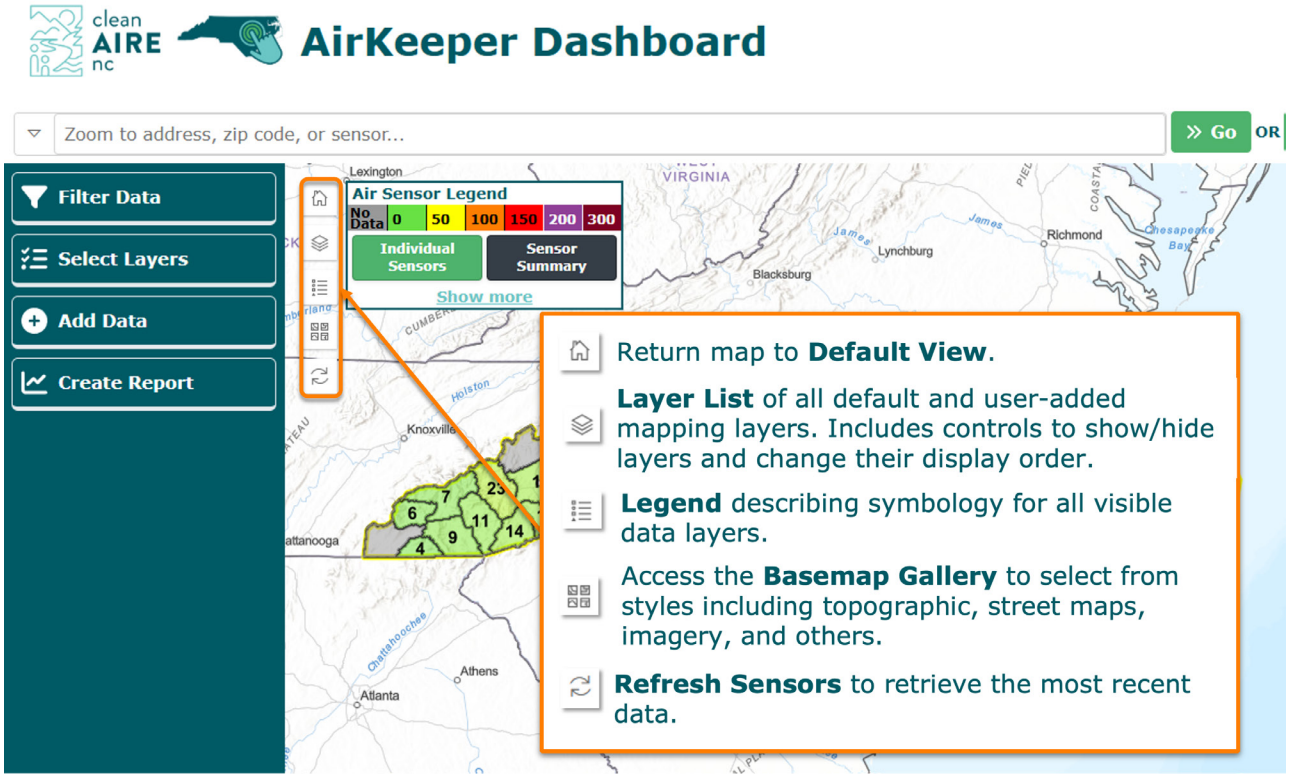
Home
Return map to the default view.

Layers
Toggle the map layers on and off.

Legend
View the map legend for interpretation.

Basemap
Choose different basemap styles or displays.

Data Refresh
Update sensor data to the latest readings.



(D) Interactive Map & (E) Map Tools

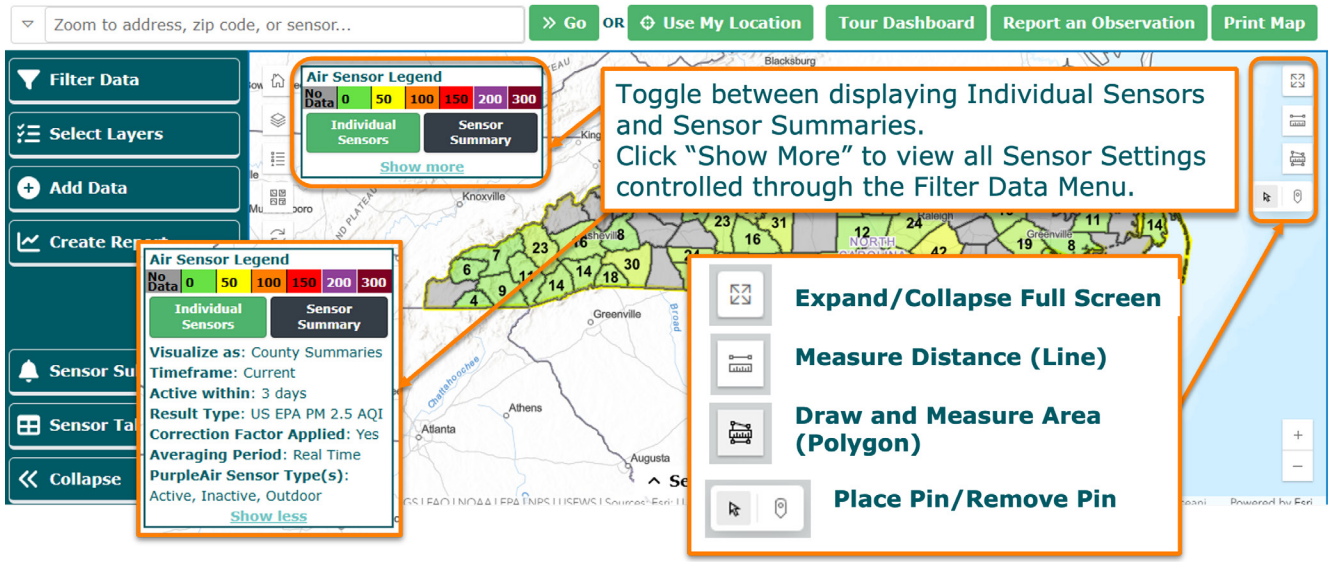
Navigate Your Data Landscape

The central, interactive map is where you view data and navigate to the places you wish to see:

Zoom
Use the + and – buttons, mouse scrolling, or pinching on touch screens to zoom.

Pan
Pan around the map by clicking and dragging.

Full Screen
Expand or collapse the map to full screen.



Distance Measurement
Draw a line to measure the distance between two places.

Area Measurement
Measure the area of a shape you create using.

Pinning
Drop a pin on the map to mark a place using.

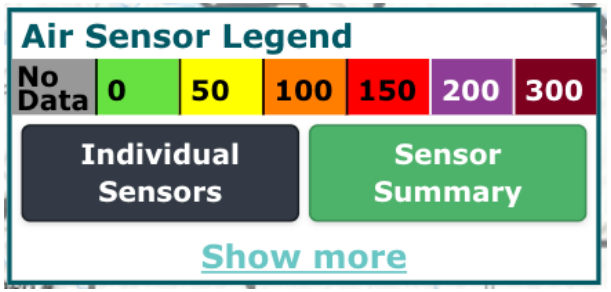
(F) Air Sensor Legend

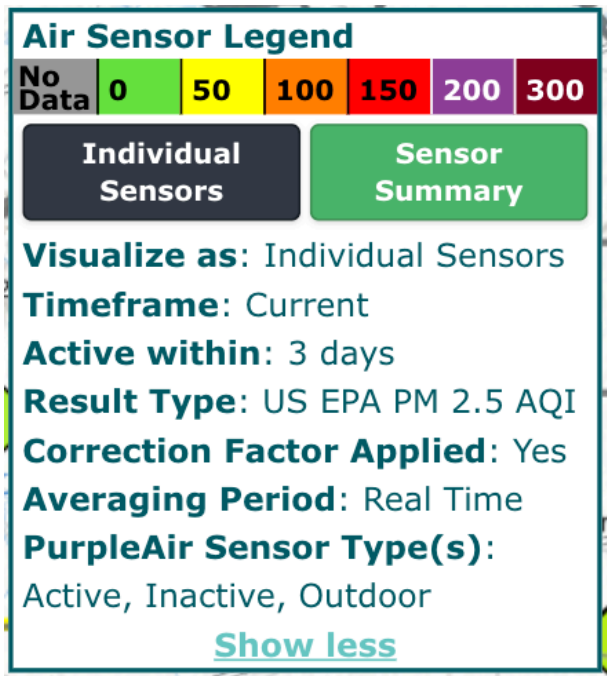
Interpret the Data

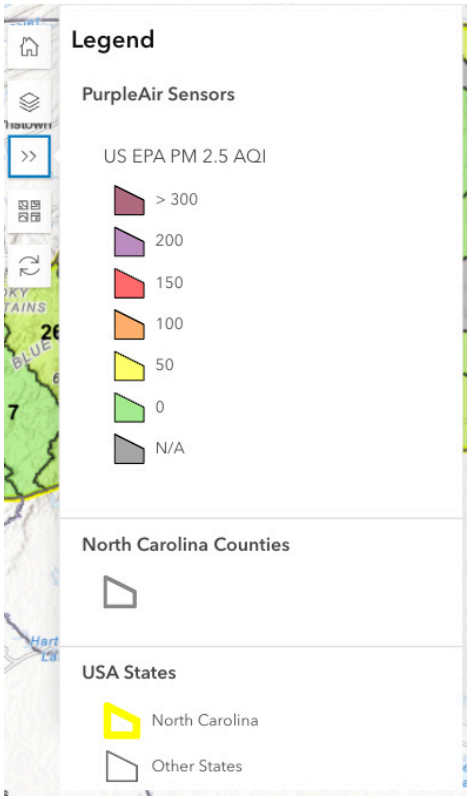
This legend explains the PM2.5 Air Quality Index (AQI) and concentration scales associated with air quality sensors, providing context for potential health effects associated with each category.

Toggle between "Individual Sensors" and "Sensor Summaries" to view air quality data per PurpleAir monitor or as an average over an entire geographic area such as a county or zip code.

The Air Sensor legend remains visible on the map at all times. Click the "**Show more**" text to view your current settings for displaying air sensor data. It can also be viewed through the **Legend** button on the Map Control Panel.



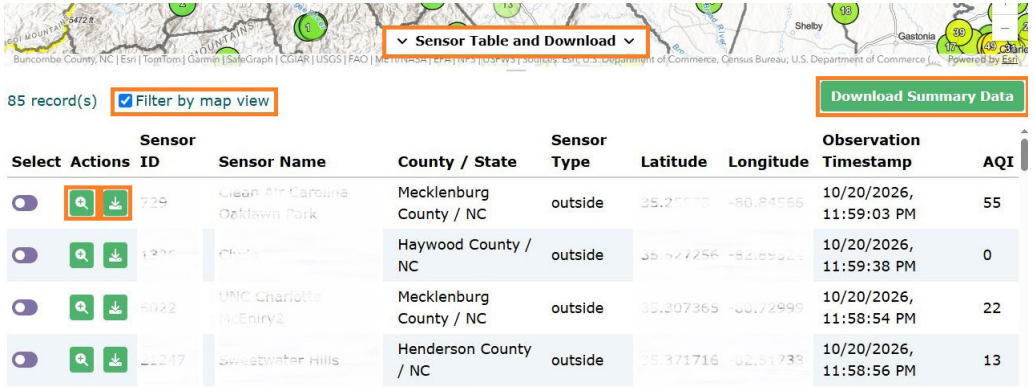




(G) Sensor Table & Download

Data in Detail

The Sensor Table displays PurpleAir Sensor observations in a table format. The data shown matches the user's settings in the Filter Data tool under "Visualize Results..." (e.g. county, zip code, or individual sensors).



Users to adjust the sensors seen in the table to match the map by checking the "Filter by map view" box. Download the table data as it appears through the "Download Summary Data" button.

Use the table to zoom to individual sensors on the map with the green magnifying glass button in the "Actions" column. The green button to the right allows users to download data for individual sensors in a more detailed table that matches the timeframe and other selections.

(H) Help

Get Assistance

This button will launch the AirKeeper Dashboard help content and additional resources through the CleanAIRE NC website.



Questions? Connect with us at Dashboard@cleanairenc.org

Using the AirKeeper Dashboard Tools

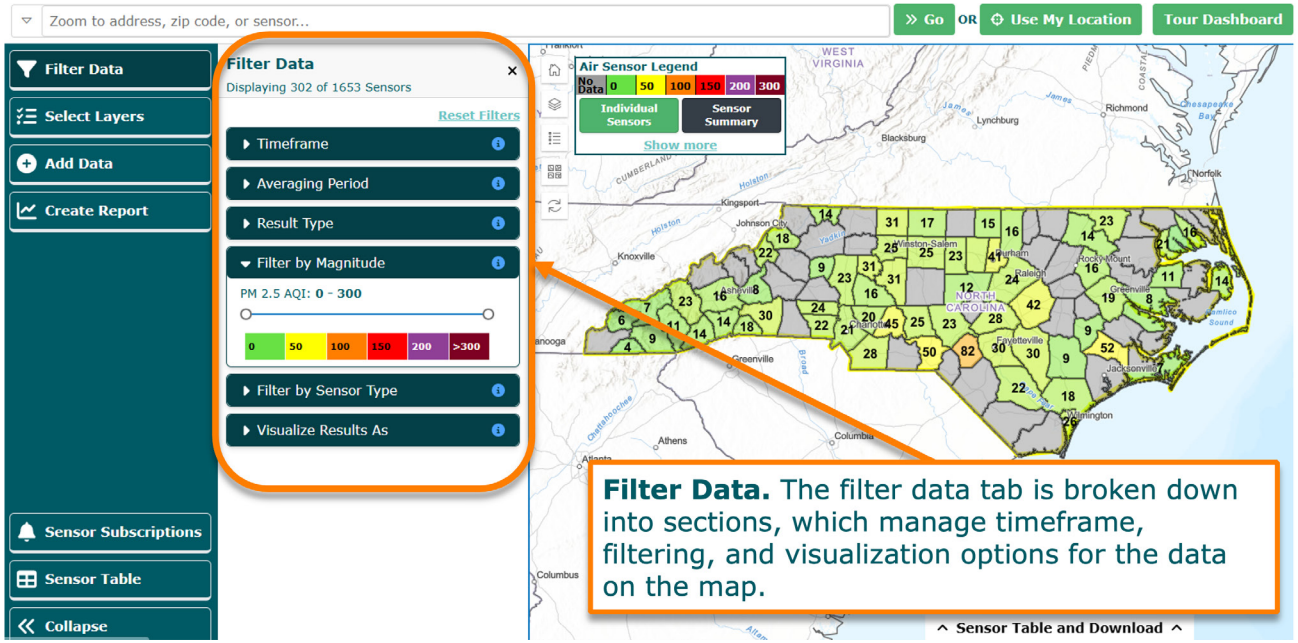
This section dives into some of the specific options users can select from the Side Control Panel to add context to their maps and tailor the AirKeeper Dashboard to their needs.

Filter Data

Tailor Your Air Quality View

The Filter Data tool allows you to customize which PurpleAir sensor data is displayed.

Users can choose which sensors to view, and how to visualize results.

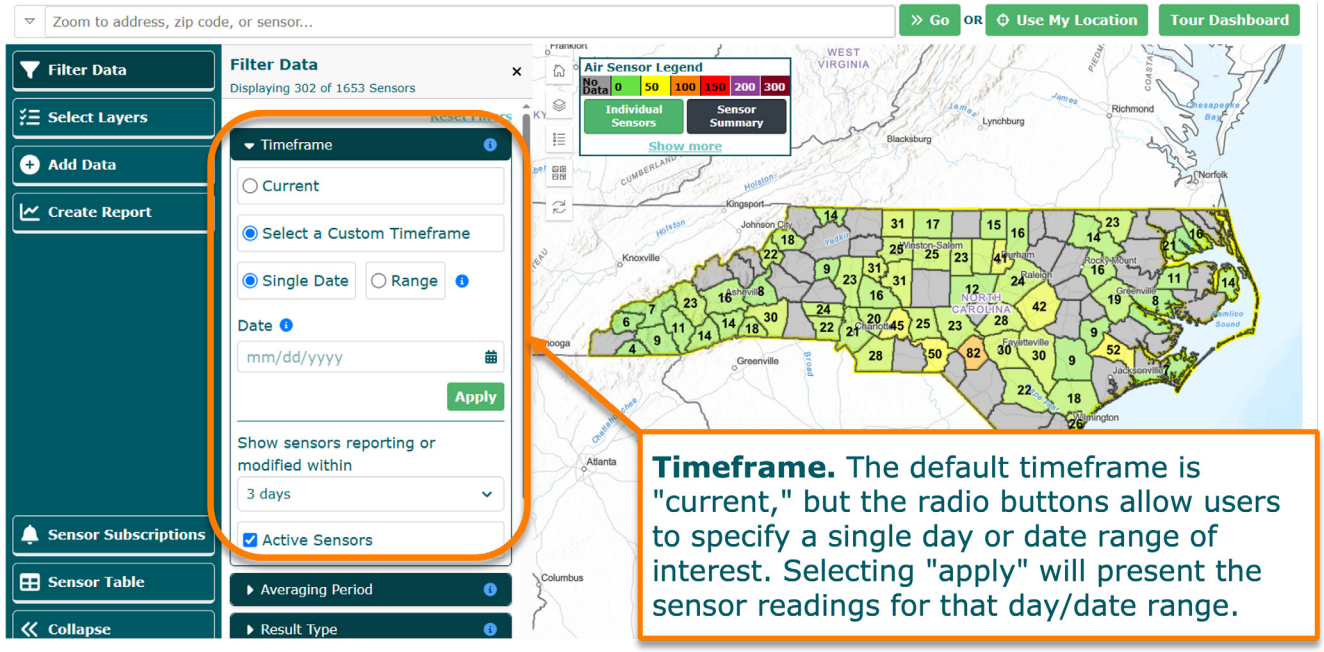


Timeframe:

View current sensor data or choose specific periods for analysis.

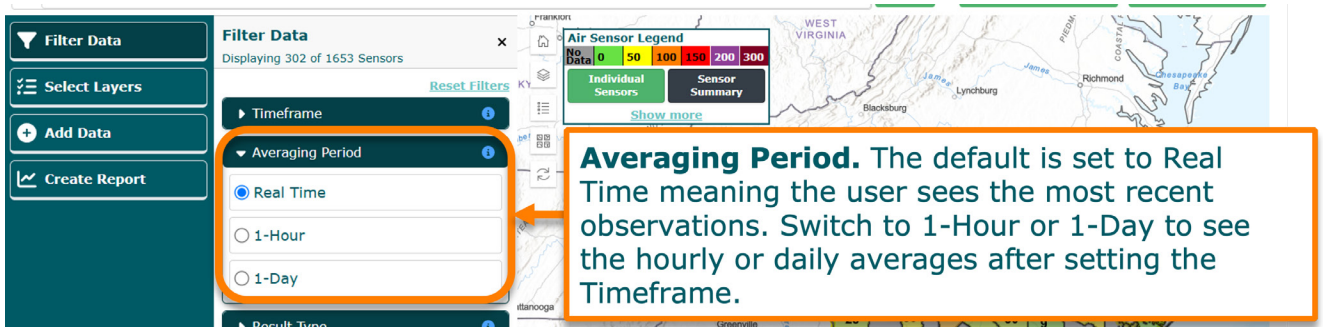
Use the dropdown menu to change settings to “Select a Custom Timeframe,” then select Single Date or Range to choose a date on the calendar. *(Don’t forget to click “Apply” after you choose a date.)*

Sensor data does not refresh automatically, so use the Refresh Button (↻) on the Map Control panel for results closest to the minute.



Averaging Period:

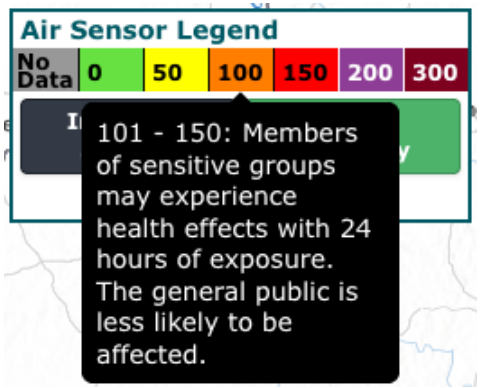
Finally, adjust the Averaging Period to show Real Time data or hourly or daily averages.

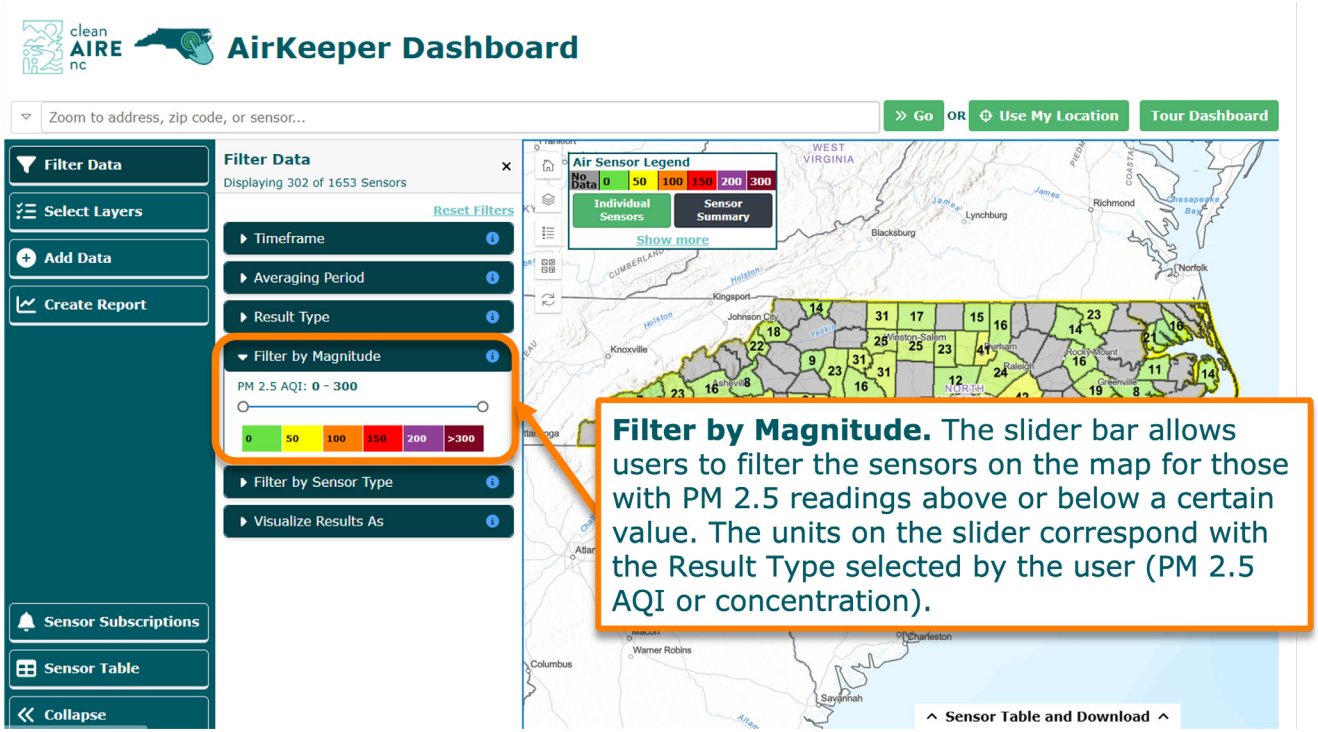


Filter by Magnitude:

Easily visualize areas around the state displaying poor air quality.

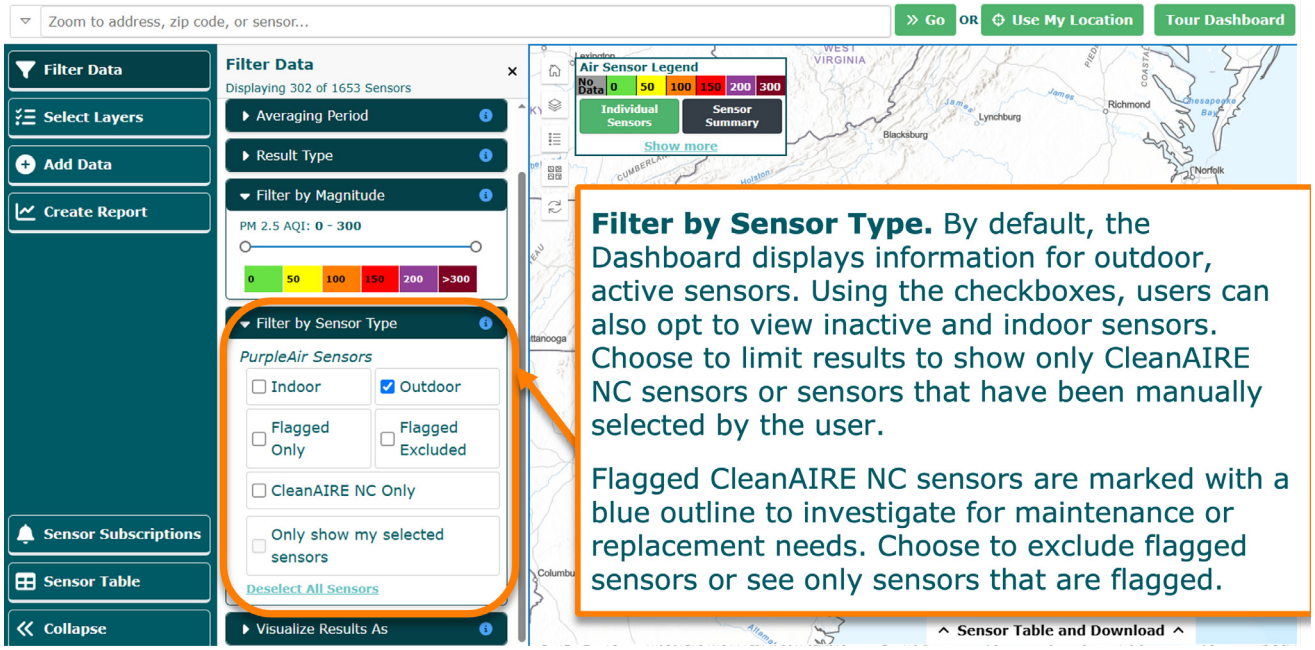
Use the slider bar to filter out sensors reading above or below a certain AQI level so that you can focus on areas with higher risks of health impacts.

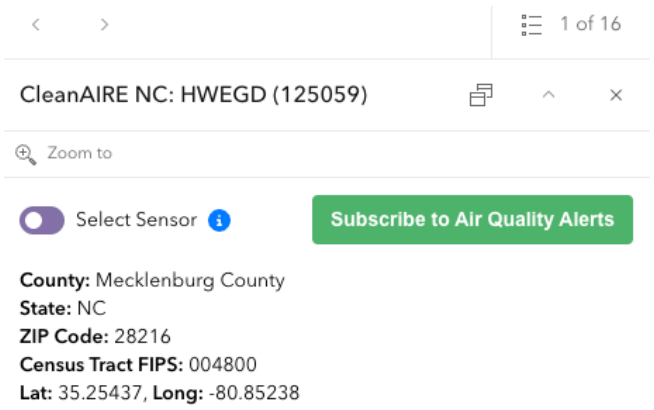




Filter by Sensor Type:

Choose to include or exclude indoor air sensors across the statewide PurpleAir Network. Sensors that have been flagged for quality investigation may be included or excluded as well. The "CleanAIRE NC Only" check box allows you to see which sensors are part of the AirKeeper Network hosted by community scientists and managed by CleanAIRE NC





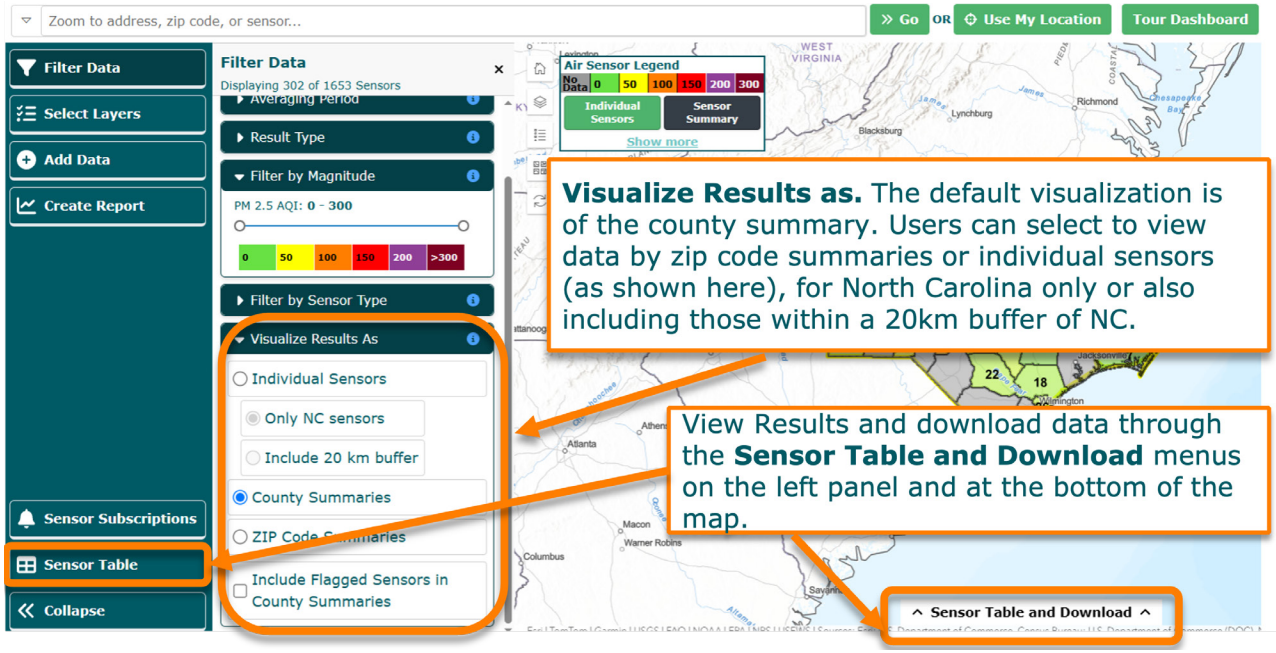
If creating a selection of sensors (click on a sensor and toggle to select), you can choose to only show those sensors both on the map and within the Sensor Table.

Visualize Results As:

Settings under **"Visualize Results as"** allow you to display individual sensor data or get air quality summaries at the county or zip code levels.

Choose whether to visualize PM2.5 measurements along the Air Quality Index scale or by concentration.

A correction factor has been applied by default so that readings will more closely match regulatory sensors.



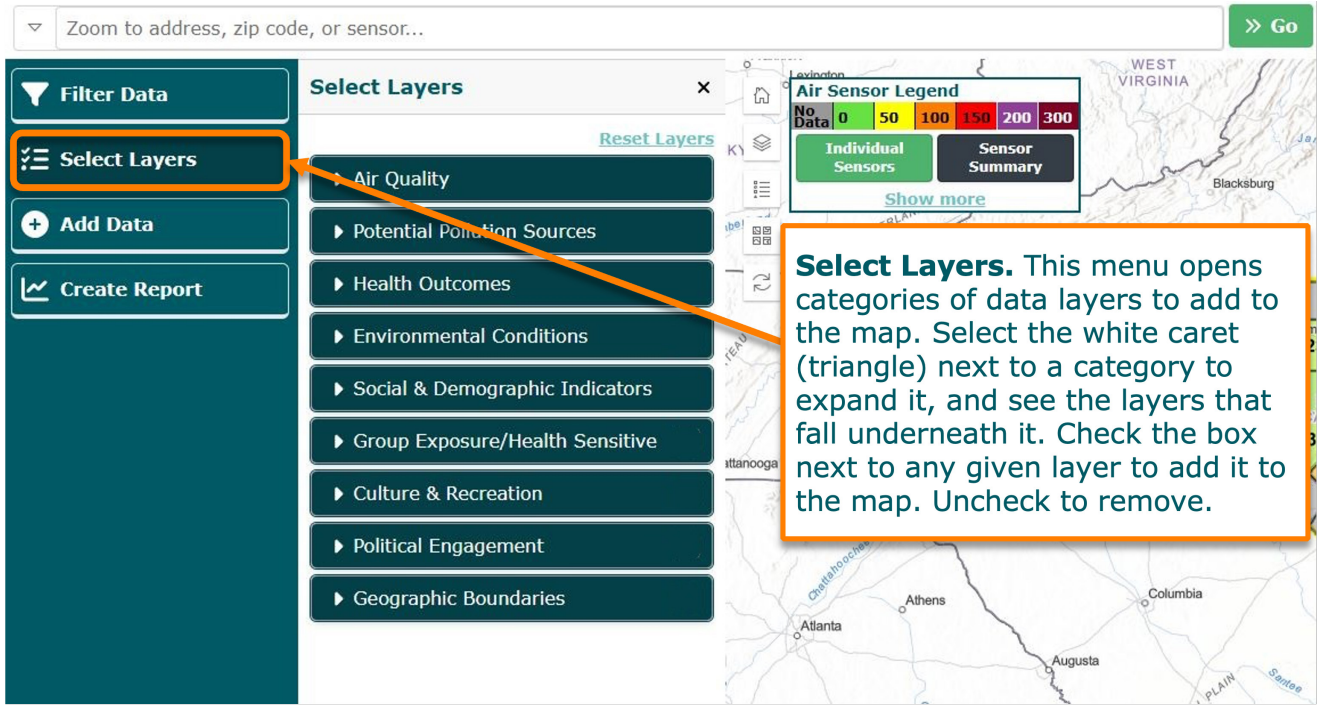
Select Layers

Add Context to Your Map

The Select Layers tool lets you overlay preselected data layers onto the map. This data is organized into nine categories, with subcategories color-coded by tier for easier navigation.

Select the white caret icon (▶) next to a category title to view all the subcategories and available layers beneath. Click the checkboxes to choose which layers to display.

Click the information icon (ⓘ) to the right of a given layer for an explanation of the data.



Add Data

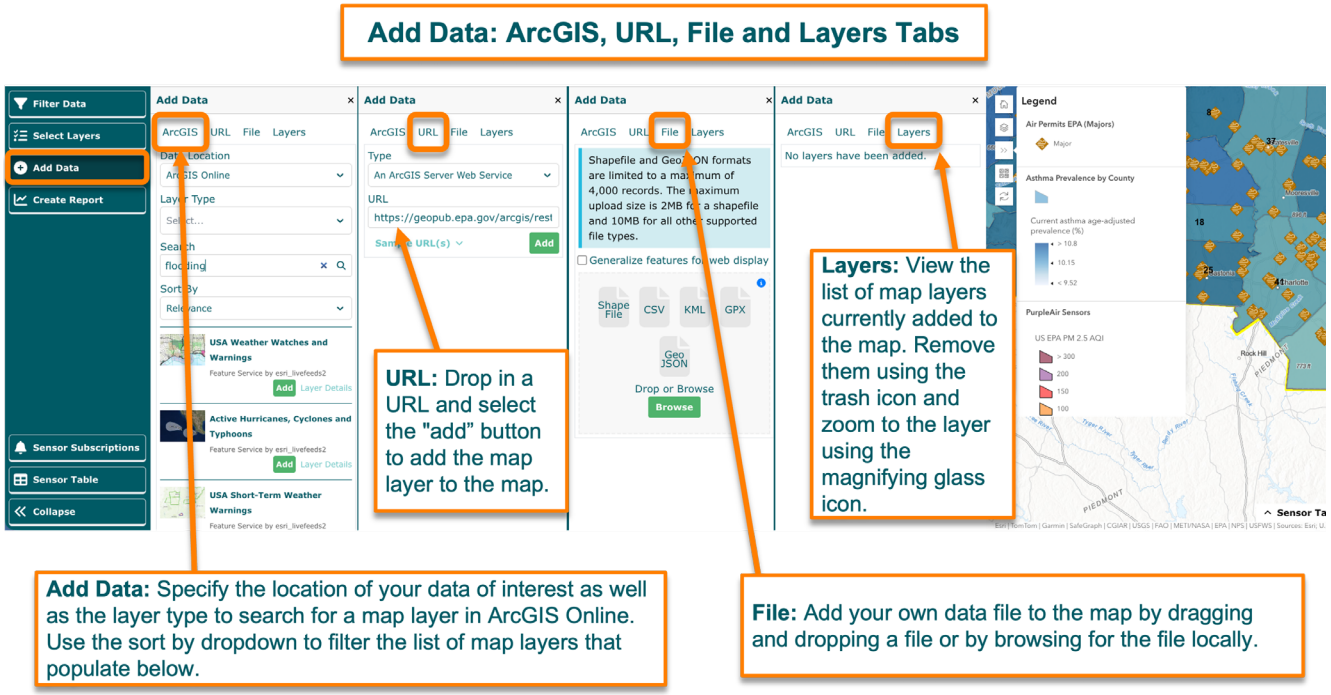
Integrate External Information

Clicking on the Add Data tool opens up a panel with four new tabs to help users add external data to the map from various sources.

Users may:

1. Browse or search for available map data from the ArcGIS Online data library;
2. Add data layers via URL; or
3. Upload data files saved locally on a computer or laptop.

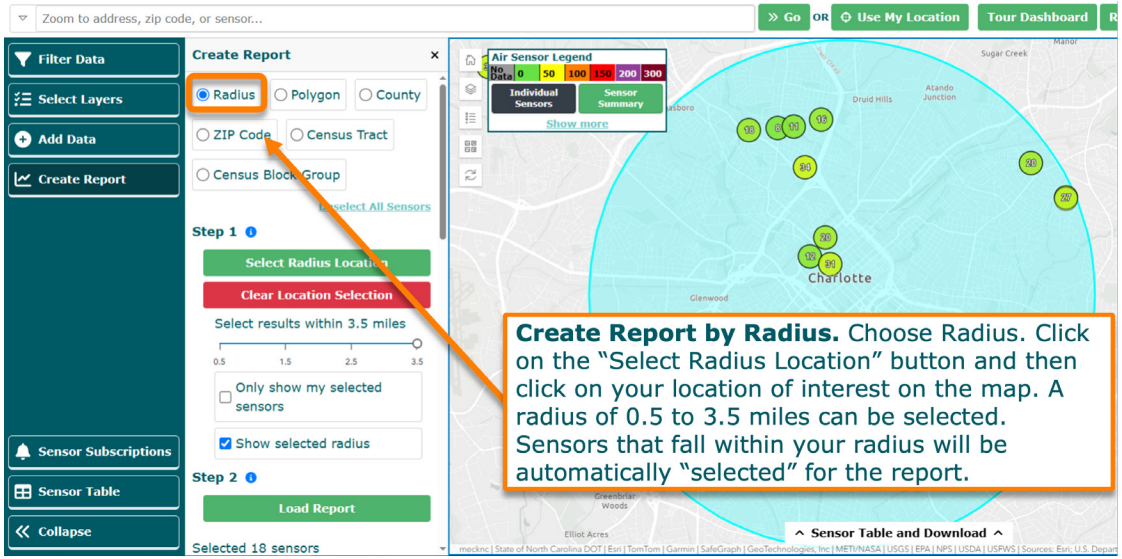
Under the Layers tab, users can remove layers with the trash can icon or zoom to a layer with the magnifying glass icon.



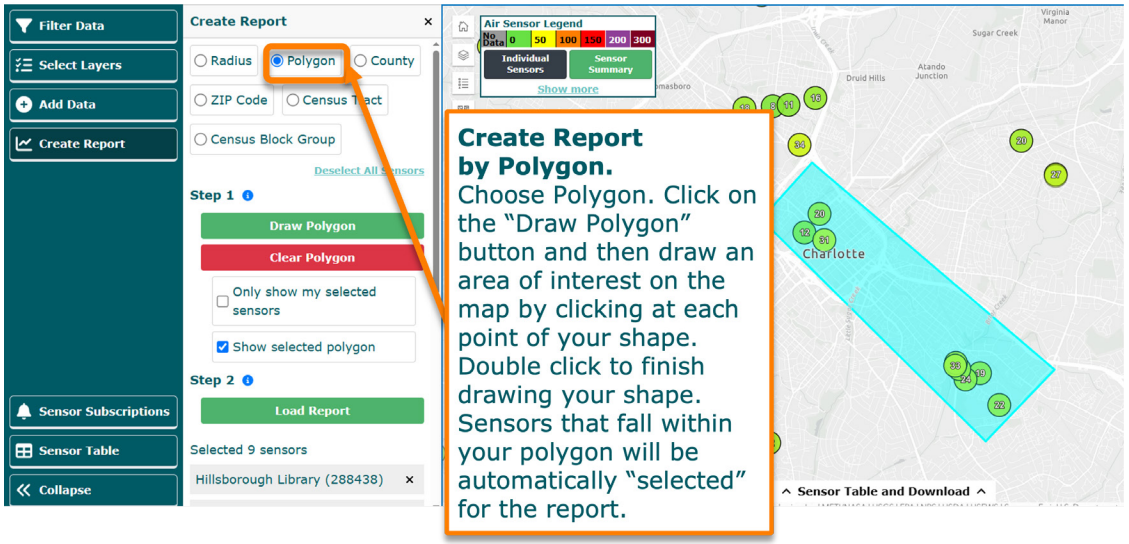
Create Report

Share Key Insights

The Create Report tool lets you generate in-depth reports for your area of interest. There are several ways to create a report. To draw a circle around a single point, select the radio button for Radius and then click Select Radius Location. Click anywhere on the map and radius will be drawn around that point. Use the slider bar to set your size and load the report.



For Polygon, choose that radio button then Draw Polygon. Click points on the map where you want to place vertices for your shape. Double click when done, and then load your report

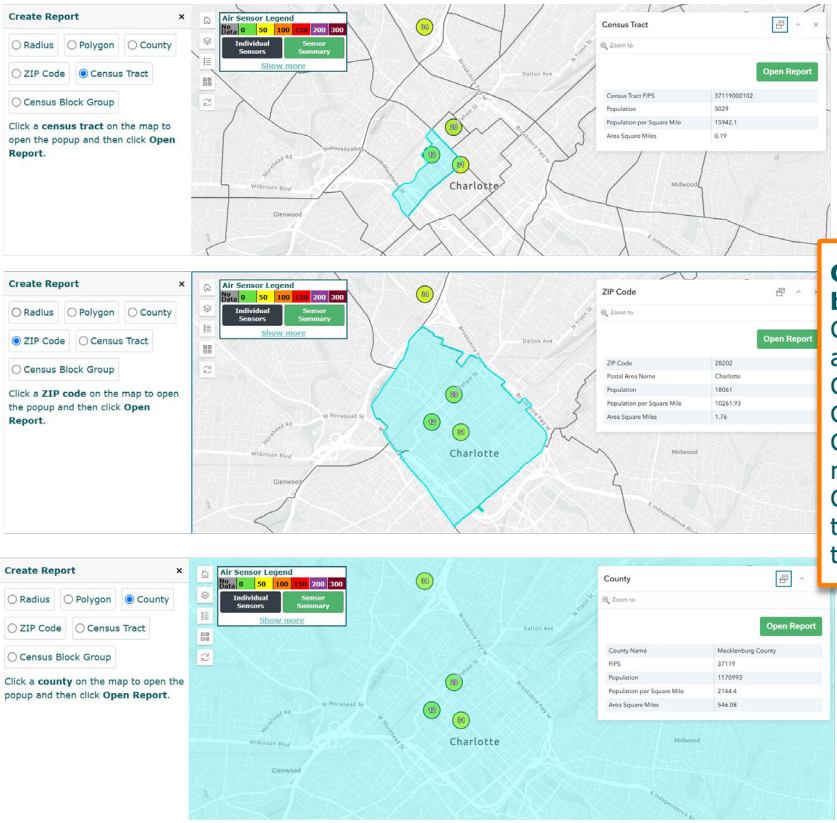


Create Report (cont.)

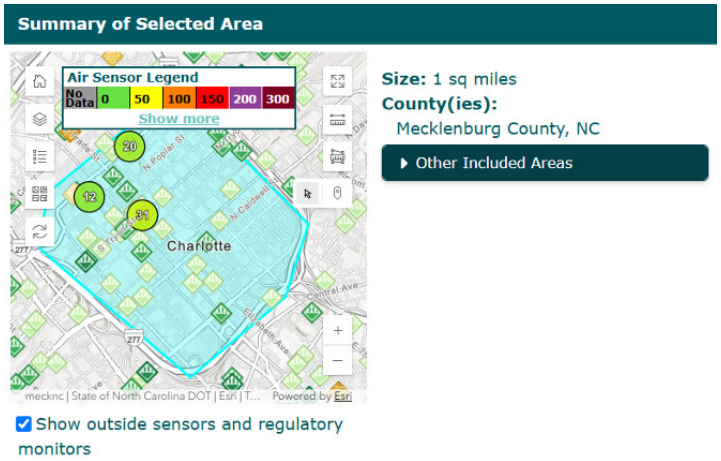
Share Key Insights

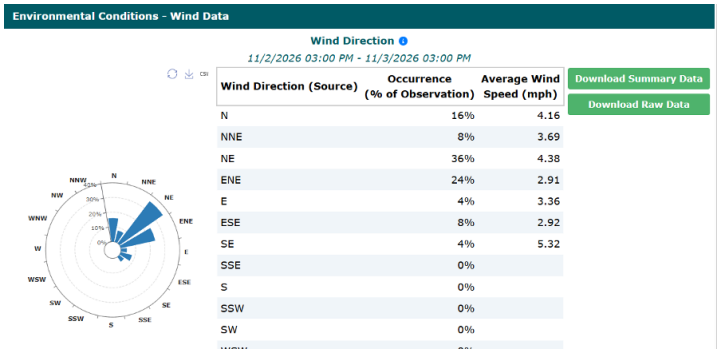
To create a report for an entire census tract, zip code, or county, select the radio button for the type of geography you wish to view. Click an area on the map which causes a pop-up to appear. Click “Open Report” from the pop-up.

You can choose an area with or without sensors to create a location report that summarizes key findings for your chosen boundary.



Create Report by Geography
Choose the type of area for your report: Census Tract, Zip Code, or County. Click an area on the map to select. Click Open Report to view the location report for that geographic area.

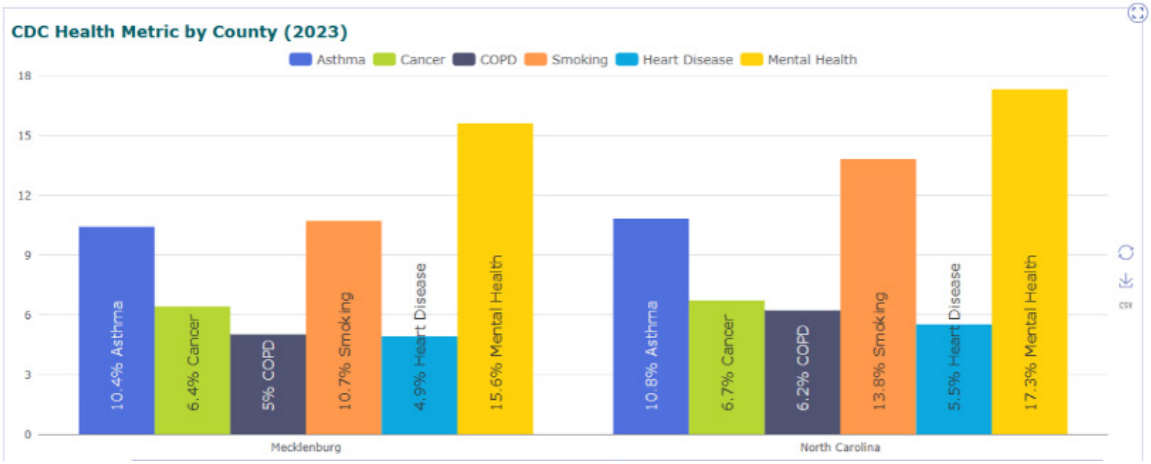




Customize Your Report

Customize your reports with the data you need (including air quality, pollution sources, health outcomes, etc.), all presented in easy-to-visualize charts and tables with options to download and links to more info. Print to PDF to save or share your insights!

Geographic Area	Asthma	Cancer	COPD	Smoking	Heart Disease	Mental Health
National	9.7%	6.2%	5.4%	12.4%	5%	16.3%
North Carolina	10.8%	6.7%	6.2%	13.8%	5.5%	17.3%
Mecklenburg	10.4%	6.4%	5%	10.7%	4.9%	15.6%



clean AIRE nc

Questions?

Connect with us at Dashboard@cleanairenc.org

AirKeeper Dashboard Team

Concept, Testing, & Design: Z Strawderman, Brian Magi, Natalie Smith, Taft Harrell

Development Team: Eastern Research Group

External Testing & Design: AirKeeper Dashboard Collaborative Group

cleanairenc.org/airkeeper-dashboard

Revised 11/2026