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AIRKEEPER
DASHBOARD

Quick Start Guide

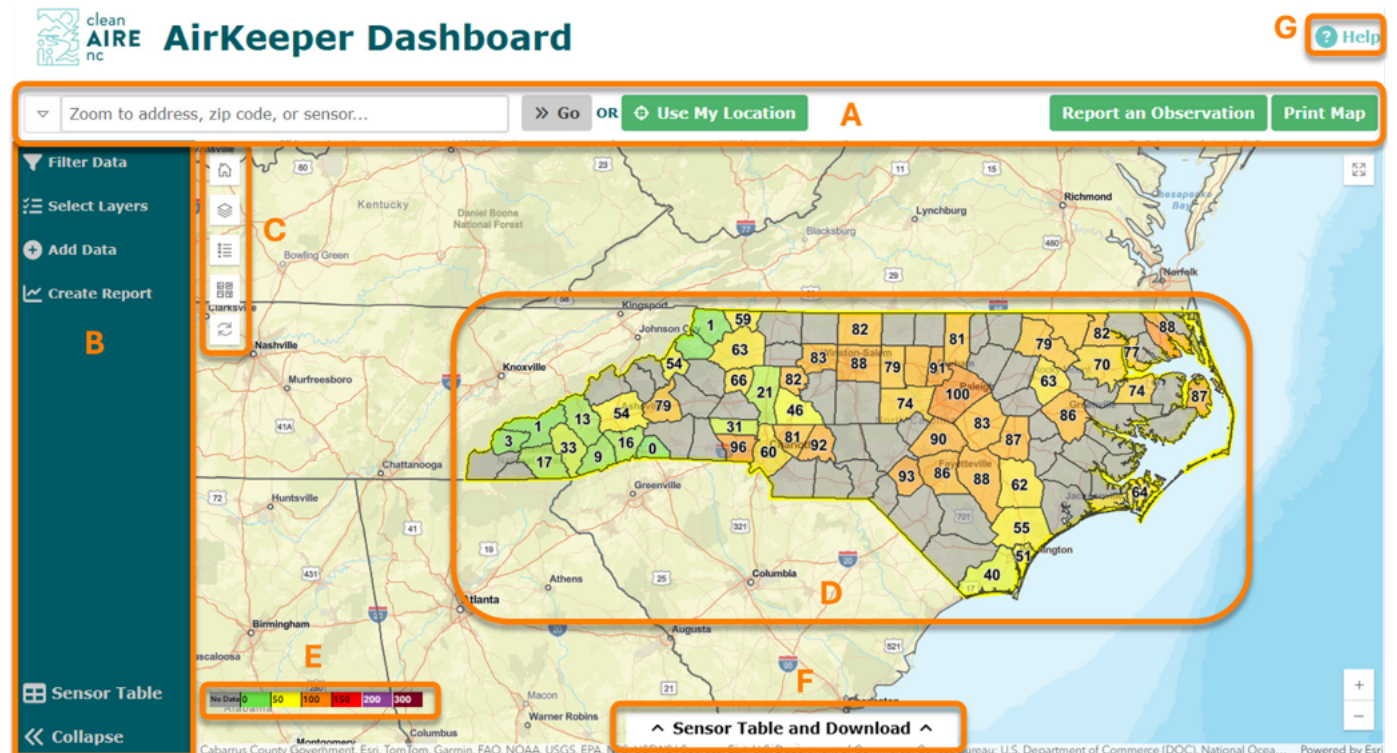


Quick Start Guide

Welcome to the AirKeeper Dashboard! This interactive new mapping tool combines real-time air quality data with critical information such as the location of pollution sources, demographic data, and health statistics, providing a powerful resource to understand and communicate environmental realities.

The next few pages provide a quick tour of the major panels and components of the AirKeeper Dashboard and how to use them:

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(A) Top Control Panel

Actions at Your Fingertips

The Top Control Panel provides quick access to essential tools:

Zoom to Location/Sensor

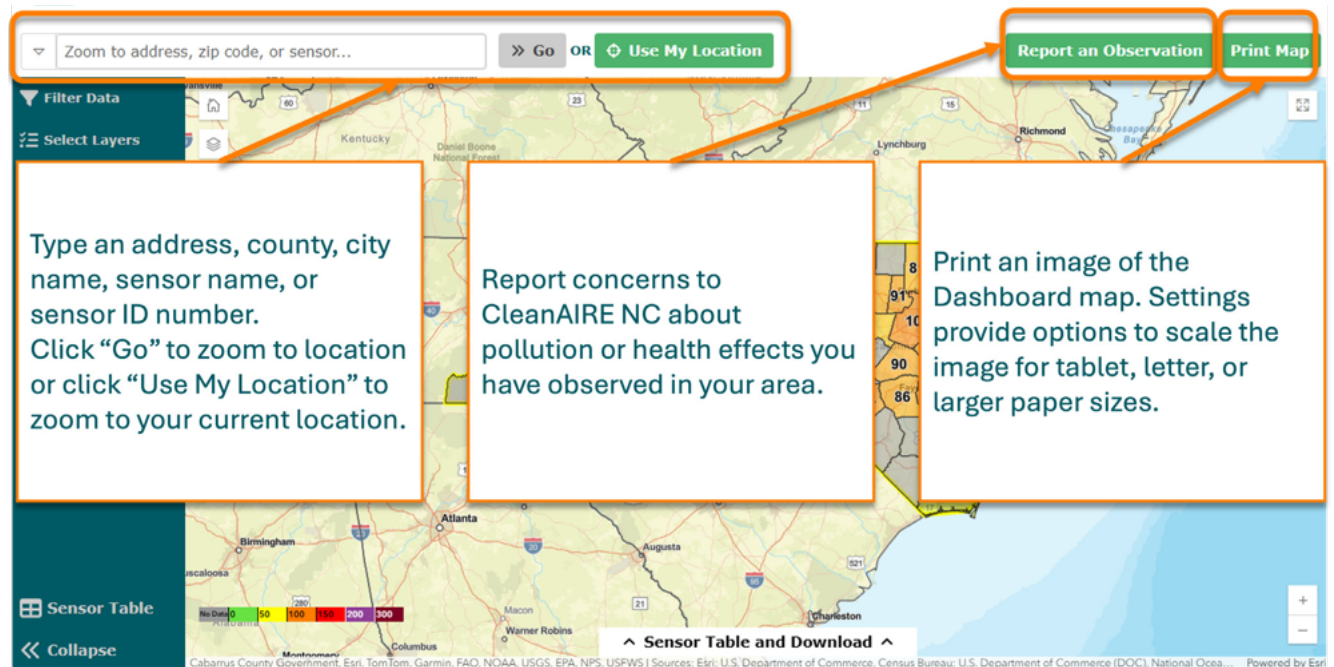
Easily navigate to specific areas or individual sensors.

Report an Observation

Submit air pollution concerns directly to CleanAIRE NC.

Print Map

Create a printable image of your current map view.



(B) Side Control Panel

Customize Your View

The Side Control Panel allows you to tailor the Dashboard to meet your needs:

Filter Data

Control what sensor data is presented, and how it is displayed.

Select Layers

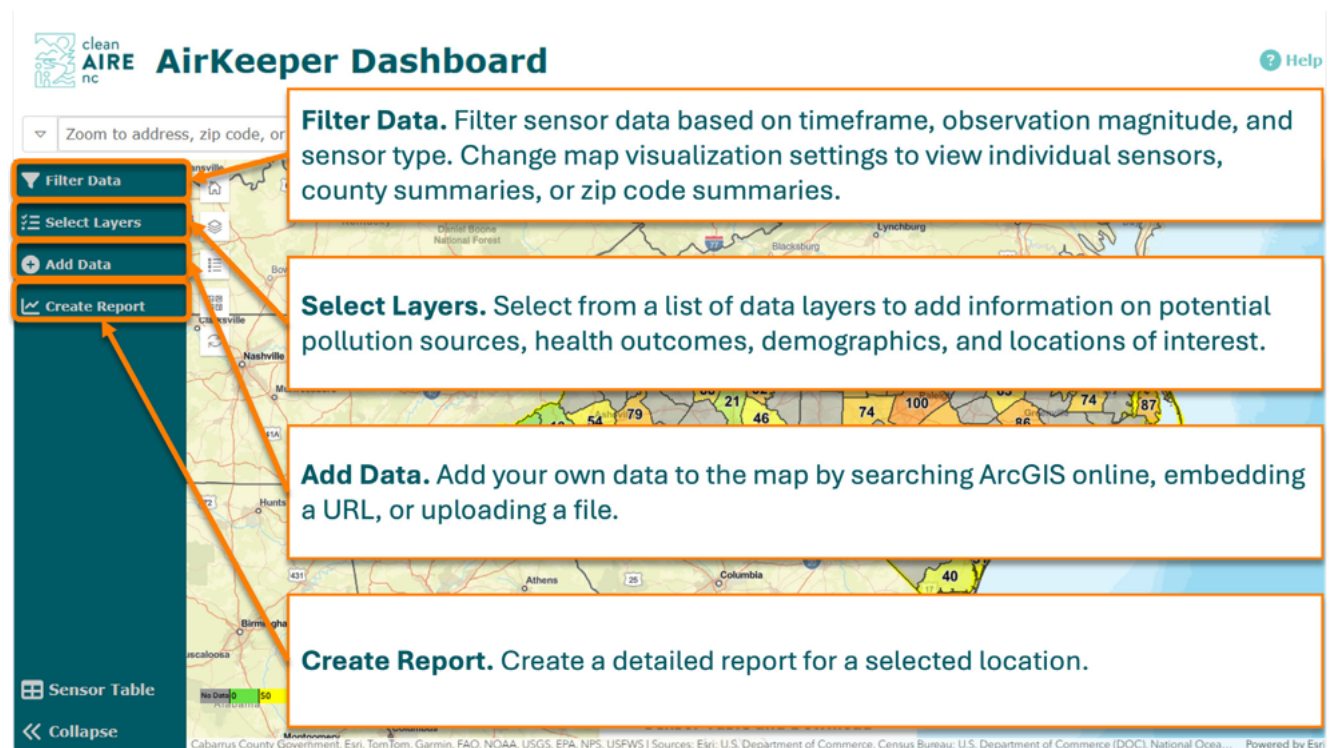
Add preselected data layers to the map for contextual information.

Add Data

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

Create Report

Generate a detailed AirKeeper Report for a specific location.



The screenshot shows the AirKeeper Dashboard interface. On the left is a dark teal side control panel with four main buttons: 'Filter Data', 'Select Layers', 'Add Data', and 'Create Report'. Below these are 'Sensor Table' and 'Collapse' options. The main area is a map of North Carolina with various data layers overlaid. Four callout boxes with orange borders point to the side panel buttons:

- Filter Data.** Filter sensor data based on timeframe, observation magnitude, and sensor type. Change map visualization settings to view individual sensors, county summaries, or zip code summaries.
- Select Layers.** Select from a list of data layers to add information on potential pollution sources, health outcomes, demographics, and locations of interest.
- Add Data.** Add your own data to the map by searching ArcGIS online, embedding a URL, or uploading a file.
- Create Report.** Create a detailed report for a selected location.

(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

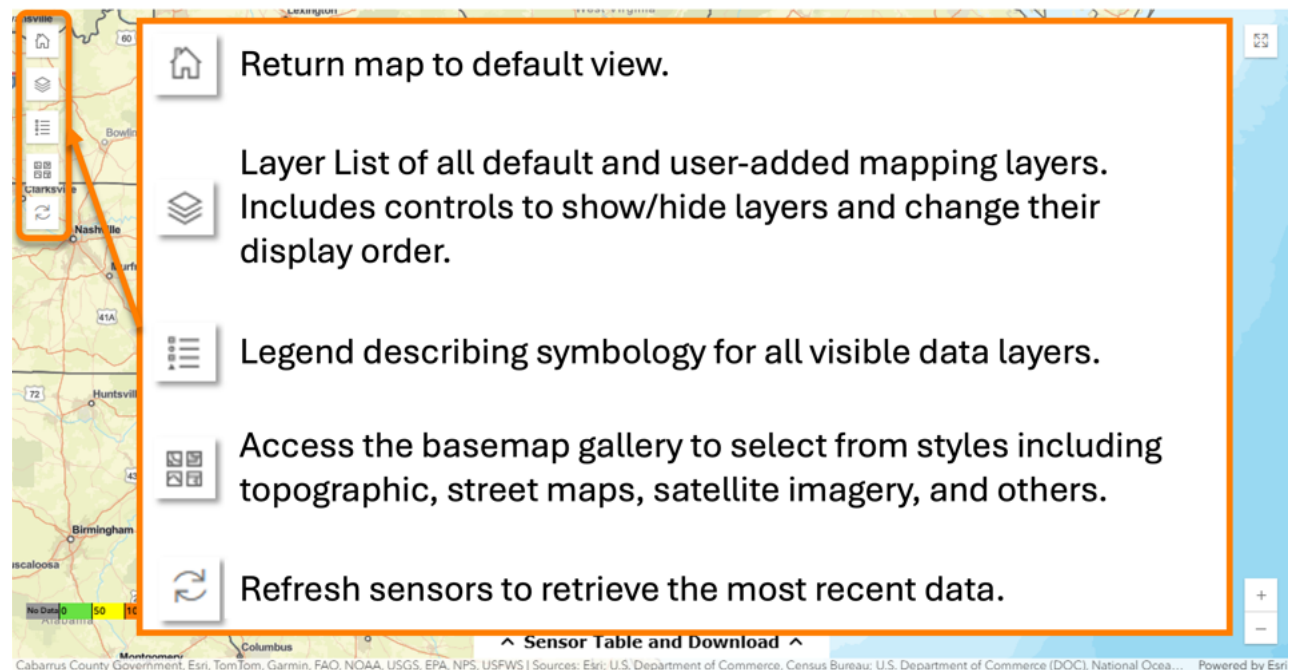
View the map legend for interpretation.

Basemap

Choose different basemap styles or displays.

Data Refresh

Update sensor data to the latest readings.



(D) Interactive Map

Navigate Your Data Landscape

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

Zoom

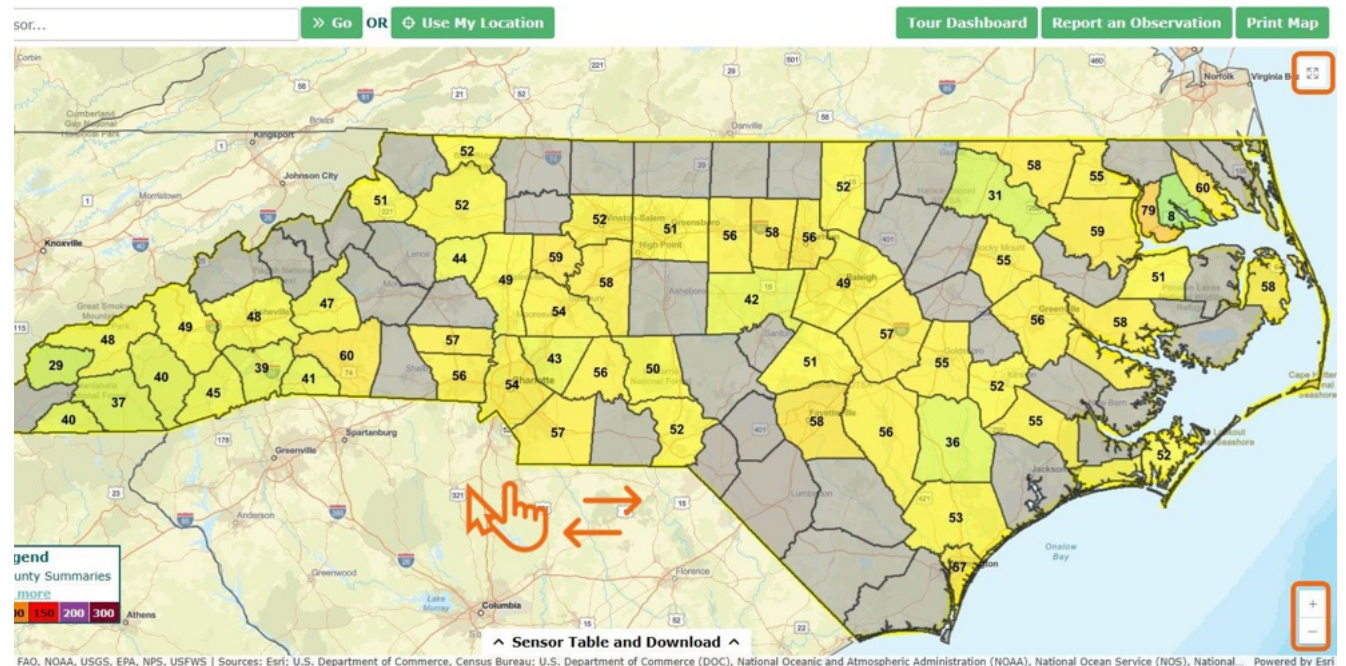
Zoom in and out (by using the + and – buttons, mouse scrolling, or pinching on touch screens).

Pan

Pan around the map by clicking and dragging to move the map.

Full Screen

Expand the map to full screen (⌘) and then exit back to normal view (⌘).

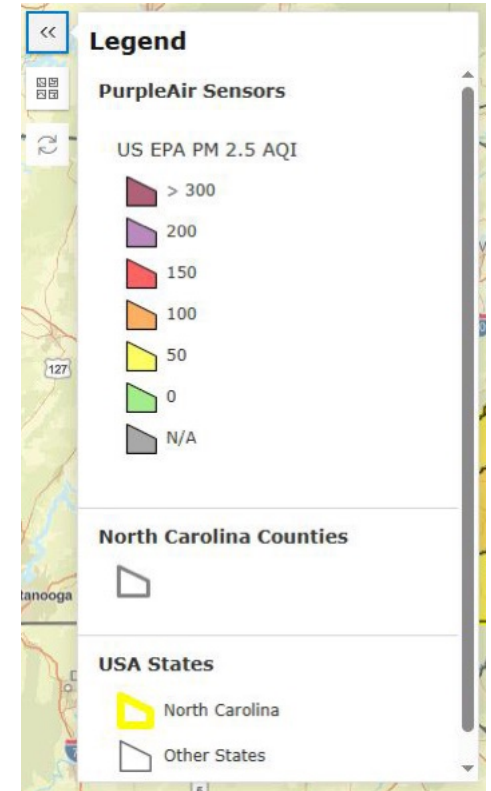
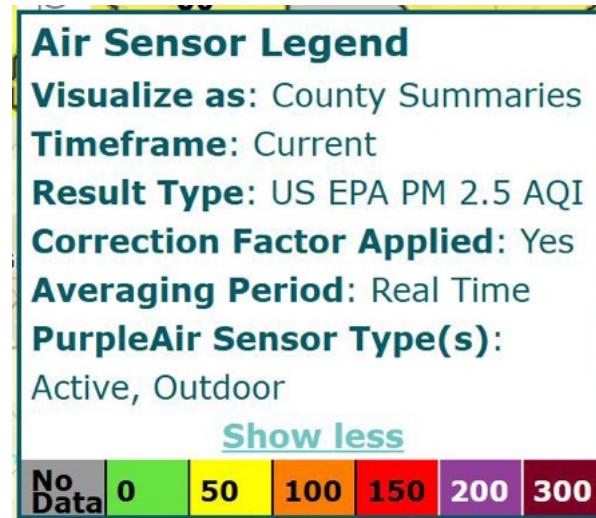


(E) Air Sensor Legend

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.

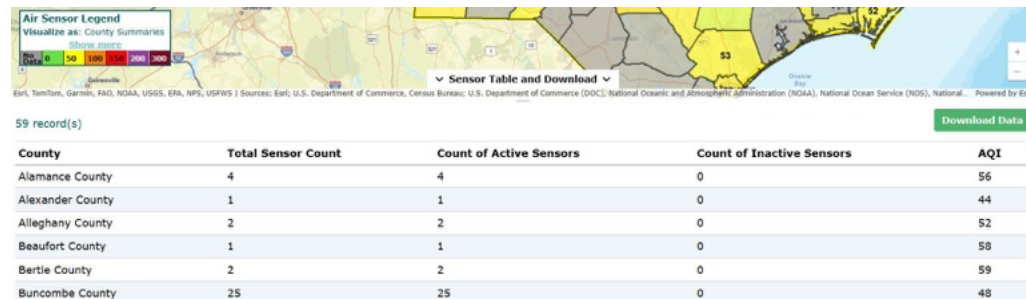
The Air Sensor legend remains visible on the map at all times. Click the “**Show more**” text to view your current settings for displaying air sensor data. It can also be viewed through the **Legend** button on the Map Control Panel.



(F) Sensor Table

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). **Download Data** as a CSV file for further analysis.



(G) 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

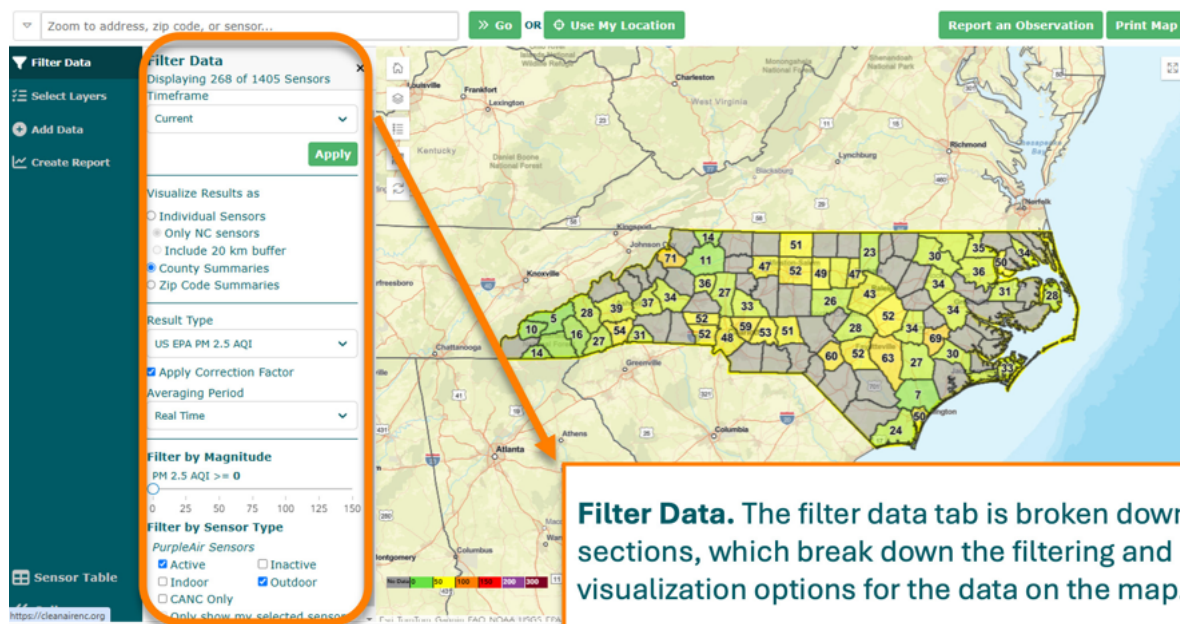
This section dives into some of the specific options users can select from the Side Control Panel to add context to their maps and tailor the AirKeeper Dashboard to their needs.

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.



Filter Data. The filter data tab is broken down into sections, which break down the filtering and visualization options for the data on the map.

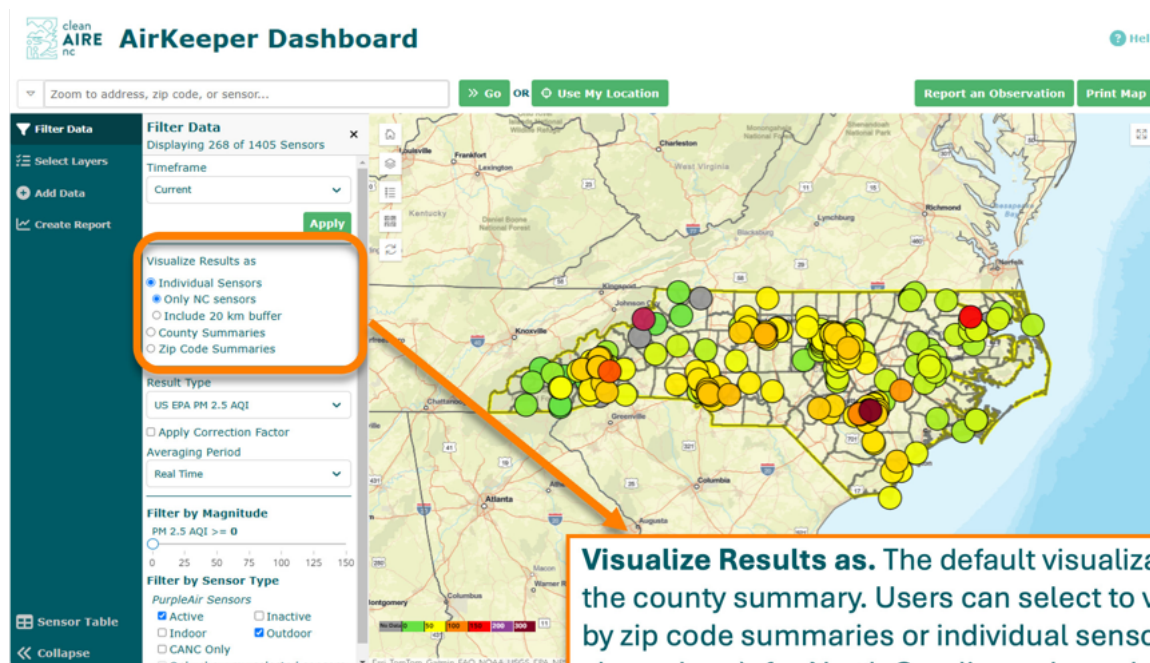
Visualize Results As:

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.

Applying a correction factor will show readings that more closely match regulatory sensors.

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



Visualize Results as. The default visualization is of the county summary. Users can select to view data by zip code summaries or individual sensors (as shown here), for North Carolina only or also including those within a 20km buffer of NC.

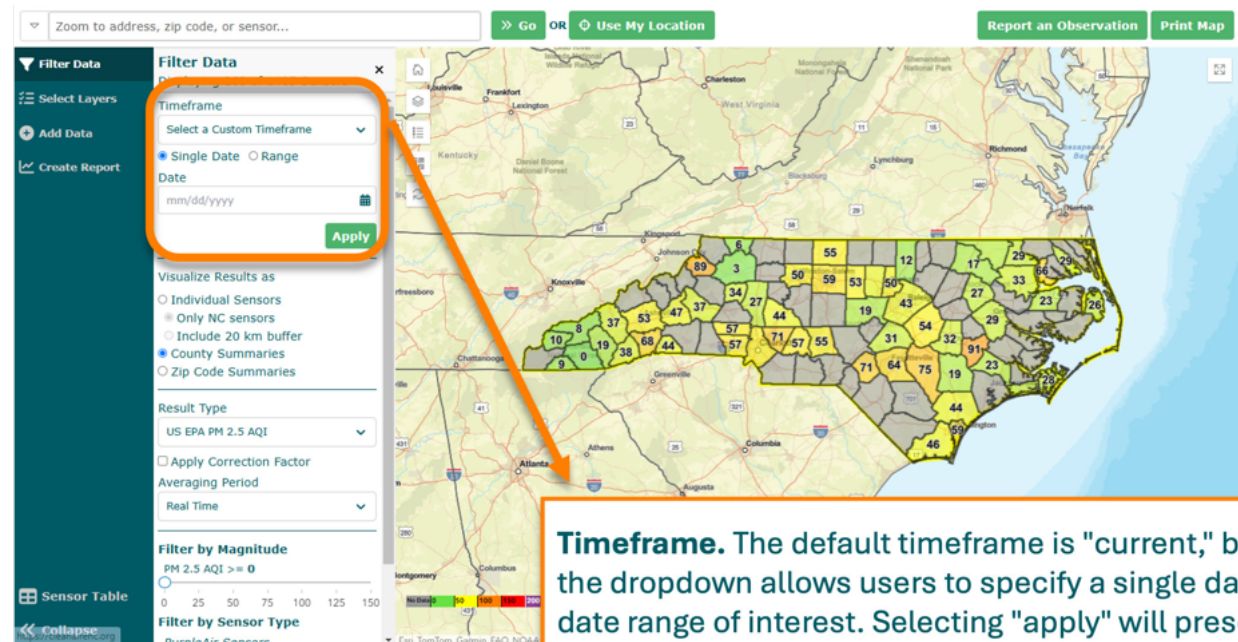
Timeframe:

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 OK 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.

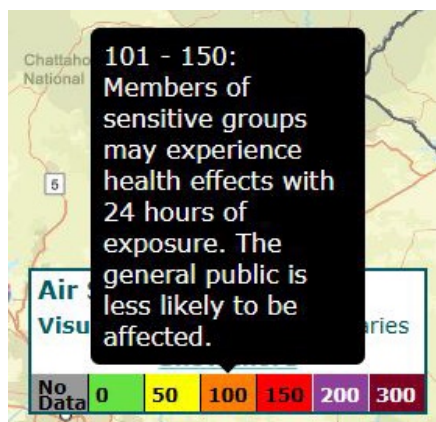


Timeframe. The default timeframe is "current," but the dropdown allows users to specify a single day or date range of interest. Selecting "apply" will present the sensor readings for that day/date range.

Filter by Magnitude:

Easily visualize areas around the state displaying poor air quality.

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



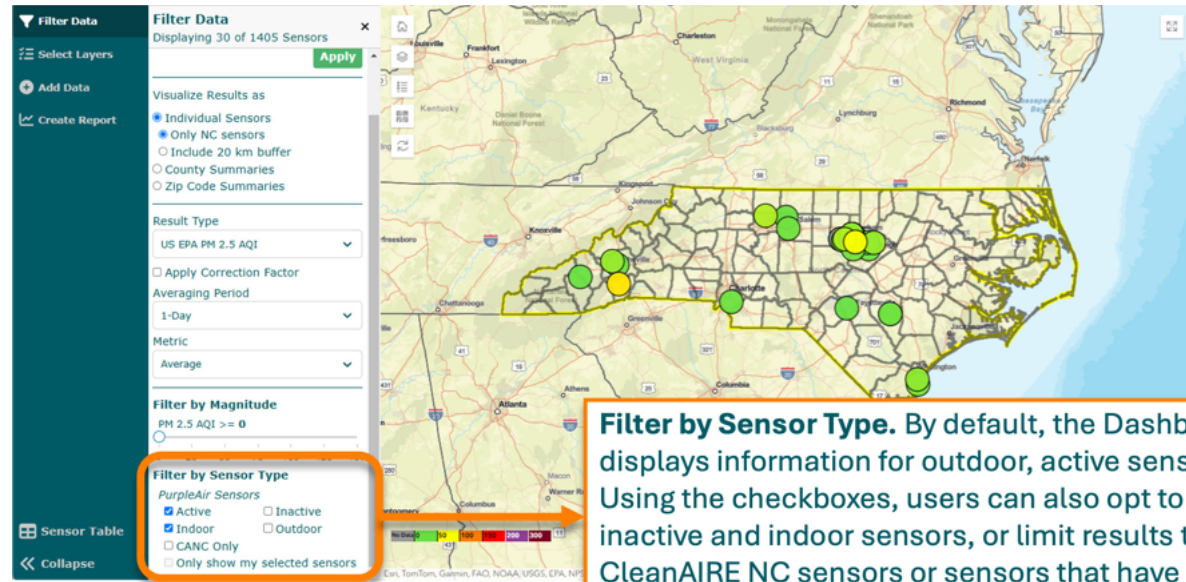
The screenshot shows the AirKeeper Dashboard interface. The "Filter Data" panel on the left includes a "Filter by Magnitude" section with a slider bar set to 0. A callout box points to this slider, explaining its function. The main map area displays a map of North Carolina with several green and yellow sensor locations. The "Filter Data" panel also shows options for "Visualize Results as" (Individual Sensors, Only NC sensors, etc.), "Result Type" (US EPA PM 2.5 AQI), and "Averaging Period" (1-Day).

Filter by Magnitude. The slider bar allows users to filter the sensors on the map for those with PM 2.5 readings above a certain value. The units on the slider correspond with the Result Type selected by the user (PM 2.5 AQI or concentration).

Filter by Sensor Type:

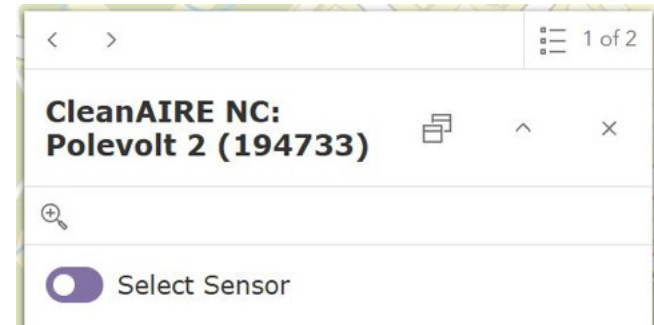
Filter out inactive sensors or choose to isolate data from the CleanAIRE NC AirKeeper Network.

Choose to include or exclude indoor air sensors across the statewide PurpleAir Network.



Filter by Sensor Type. By default, the Dashboard displays information for outdoor, active sensors. Using the checkboxes, users can also opt to view inactive and indoor sensors, or limit results to only CleanAIRE NC sensors or sensors that have been manually selected by the user.

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.



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 for easier navigation.

Select the black caret icon (▾) next to a category title to view all the available layers within that category. Click the checkboxes to choose which layers to display.

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

The screenshot shows the AirKeeper dashboard interface. At the top, there is a search bar with the text "Zoom to address, zip code, or sensor..." and buttons for "Go", "OR", and "Use My Location". On the right side, there are buttons for "Report an Observation" and "Print Map". The main content area is divided into a left sidebar and a map. The sidebar has a "Filter Data" section with a dropdown menu, and a "Select Layers" section with a list of categories and subcategories. The "Select Layers" section is currently expanded, showing a list of layers with checkboxes and information icons. The map on the right shows a color-coded overlay for PurpleAir Sensors, with a legend indicating "US EPA PM 2.5 AQI" values ranging from 0 to 300. A callout box with an orange border and arrow points to the "Select Layers" panel, containing the text: "Select Layers. Use the checkbox to add a map layer to the map. Uncheck the box to remove any given layer. Additionally, select the black caret (triangle) next to a category to expand it, and see the layers that fall underneath it."

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.

Add Data: ArcGIS, URL, File, and Layers Tabs

URL. Drop in a URL and select the "add" button to add the map layer to the map.

Layers. View the list of map layers currently added to the map. Remove them using the trash icon and zoom to the layer using the magnifying glass icon.

Add Data. Specify the location of your data of interest as well as the layer type to search for a map layer in ArcGIS Online. Use the sort by dropdown to filter the list of map layers that populate below.

File. Add your own data file to the map by dragging and dropping a file or by browsing for the file locally.

Create Report Share Key Insights

The Create Report tool lets you generate in-depth reports for your area of interest.

Simply click on a location on the map, use the slider bar to define your radius, and load a report.

Select Location. Click on the “Select a Location” button and then click on your location of interest on the map. A radius of 0.5 to 3.5 miles can be selected. Sensors that fall within your radius will be automatically “selected” for the report.

To create a report for an entire county or zip code, go to the Select Layers menu, then look under Geographic Boundaries and check the box next to the boundaries you wish to see on the map.

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

ZIP Code

Zoom to

Open Report

ZIP Code	28806
Postal Area Name	Asheville
Population	45694
Population per Square Mile	960.56
Area Square Miles	47.57

+ Add Report Sections

Add Data to Map

Add Report Sections x

[Remove All](#)

Air Quality Measurements

- PM 2.5 Sensors
- Regulatory Monitors

Pollution Sources

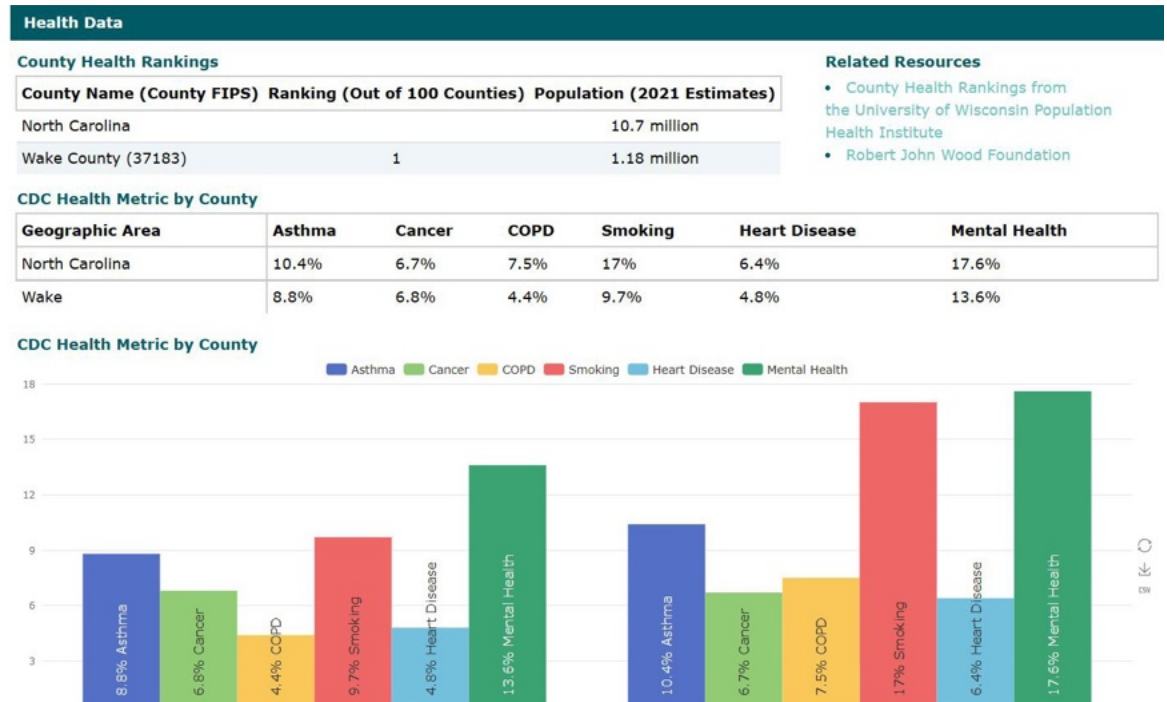
- Active Facilities Regulated by the NC Division of Air Quality
- Mecklenburg County Air Permits
- EPA Regulated Facilities (Air Only)
- EPA Regulated Facilities (Other than Air)
- Animal Feeding Operations
- Solid Waste Landfills
- Wastewater Treatment Plants Regulated by EPA

Community Information

- Population Statistics
- Education Levels
- Race Breakdown
- Income Breakdown
- ⚠ EJ Screen Indexes

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!





Questions?

Connect with us at Dashboard@cleanairenc.org

AirKeeper Dashboard Team

Concept, Testing, and Design: Z Strawderman, Daisha Wall, Brian Magi

Development Team: Eastern Research Group

External Testing and Design: AirKeeper Dashboard Collaborative Network



cleanairenc.org/airkeeper-dashboard