

STEP SIX ORGANIZER GUIDE

Track, Visualize, and Interpret Your Community's AirCasting Data

CONNECT TO AIRCASTING

Search For & View Your Mobile AirCasting Sessions

- Launch a web browser and navigate to aircasting.org
- At the top of the page, hover your mouse over the text reading "AirCasting" and select "AirCasting Maps" from the dropdown
- By default, you will be on the "Mobile" tab of the maps page.
- By default, the "Parameter" selection will be "Particulate Matter" and the "Sensor" selection will be "AirBeam-PM2.5 (ug/m3)". If these are not the default selections, please update them accordingly. If you recorded with an instrument other than the AirBeam, please update the selections accordingly.
- Under "Location", enter a city or zip code then select the correct suggestion from the dropdown.
- Click the refresh icon inside the "Time Frame" field to ensure you're searching for sessions recorded during the past year, including today. *Note to Organizer: If you're checking the most recent contributions of your volunteers, update the "Time Frame" field to include the relevant timespan.*
- Under "Profile Names", enter the AirCasting profile for your organization then select the correct suggestion from the dropdown. *Note to Organizer: If your volunteers did not record their mobile sessions using the same profile name, then enter the other profile names one at a time, selecting the correct suggestion from the dropdown each time.*
- Once you've completed your search, a list of session cards matching your search criteria will appear along the bottom of the screen and the map will display the starting location of each mobile session. Click on the card for the session you plan to analyze and interpret. *Note to Organizer: If you're tracking the contributions of your volunteers, review the sessions and compare them to the calendar you created in Step 4, which assigned volunteers to conduct mobile AirBeam monitoring during specific dates and times. If you have missing sessions, contact the volunteer to find out whether they sampled during the assigned time. If they did and the mobile session data isn't showing up online, ask that they check the Internet connection on the mobile device they used to make the recording, launch the AirCasting app, navigate to the "Mobile Dormant" tab, and drag down on the screen to force sync their session data.*

- Now click on the card for the session you plan to analyze and interpret. Along the bottom of the screen, identify the horizontal-colored line; this is referred to as the Heat Legend. In the lower right-hand corner, click the connected up and down arrow to the right of the Heat Legend; this will fit the graph to your measurements. Sometimes this can help visually highlight where measurements were highest and lowest. If it doesn't help, try adjusting the thresholds between colors manually using the Heat Legend sliders, these are the white dots with black numbers above them. Drag the sliders or update the min/max values on the Heat Legend to adjust the relationship between measurements and colors on the graph and map. If it doesn't help, simply click the refresh arrow to reset the thresholds on the Heat Legend.
- Hover your mouse over the graph to see the corresponding location on the map.
- Click and drag your mouse over the graph to zoom to a specific time frame or use the zoom buttons along the top of the graph. Drag the scroll bar along the bottom of the graph to make further adjustments to the time frame.
- Zoom and pan the map to explore your mapped measurements.

Crowdmap Your Community's Air Quality Data

- Open a new tab inside the browser window and navigate to aircasting.org
- At the top of the page, hover your mouse over the text reading "AirCasting" and select "AirCasting Maps" from the dropdown
- By default, you will be on the "Mobile" tab of the maps page.
- By default, the "Parameter" selection will be "Particulate Matter" and the "Sensor" selection will be "AirBeam-PM2.5 (ug/m3)". If these are not the default selections, please update them accordingly. If you recorded with an instrument other than the AirBeam, please update the selections accordingly.
- Under "Location", enter a city or zip code then select the correct suggestion from the dropdown.
- Click the refresh icon inside the "Time Frame" field to ensure you're searching for sessions recorded during the past year, including today. If you're checking the most recent contributions of your volunteers, update the "Time Frame" field to include the relevant timespan.
- Under "Profile Names", enter your organization's AirCasting profile name then select the correct suggestion from the dropdown. If your volunteers did not record their mobile sessions using the same profile name, then enter the other profile names one at a time, selecting the correct suggestion from the dropdown each time.
- Once you've completed your search, a list of session cards matching your search criteria will appear along the bottom of the screen and the map will display the starting location of each session. Under CrowdMap click "On"; this will CrowdMap your community's air quality data.

- The CrowdMap averages together all the measurements from all the sessions listed on the sessions list and displays these averages as colored grid cells. The color of each grid cell corresponds to the average intensity of all the measurements recorded in that area. Click on a grid cell to view the underlying data.
- Along the bottom of the screen, identify the horizontal-colored line; this is referred to as the heat legend. Drag the Heat Legend sliders, these are the white dots with black numbers above them or update the min/max values on the Heat Legend to adjust the relationship between measurements and colors on the CrowdMap. Adjusting the thresholds between colors can visually highlight where measurements were highest and lowest. If it doesn't help, simply click the refresh arrow in the lower right-hand corner to reset the heat legend.

Search For & View Your Fixed Aircasting Sessions

- Open a new tab inside the browser window and navigate to aircasting.org
- At the top of the page, hover your mouse over the text reading "AirCasting" and select "AirCasting Maps" from the dropdown
- Click the "FIXED" tab at the top left-hand side of the AirCasting maps page
- By default, the "Parameter" selection will be "Particulate Matter". If this is not the default "Parameter" selection, please update it accordingly. The default "Sensor" selection will be "OpenAQ-PM2.5 ($\mu\text{g}/\text{m}^3$)". Update the "Sensor" selection to "AirBeam-PM2.5 ($\mu\text{g}/\text{m}^3$)".
- Under "Location", enter a city or zip code then select the correct suggestion from the dropdown.
- Click the refresh icon inside the "Time Frame" field to ensure you're searching for sessions recorded during the past year, including today.
- Once you've completed your search, a list of session cards matching your search criteria will appear along the bottom of the screen and the map will display the location of each fixed session. [Note to Organizer: If you're tracking the contributions of your volunteers, review the sessions and compare them to the list of locations you created in Step 4, which assigned volunteers to establish fixed AirBeam sessions at designated locations. If you have missing sessions, contact the volunteer to assist with either setting up their AirBeam for the first time or troubleshoot any issues that may have forced the AirBeam offline. The two most common problems are loss of power and interruption of the WiFi network. If you're unable to resolve the problem over the phone, schedule a time to visit and troubleshoot in person.](#)
- Using the map, click on the air monitoring station located closest to where you recorded your mobile AirCasting session.
- Click and drag your mouse over the graph to zoom to the specific time frame during which you recorded your mobile session. You can also use the zoom buttons along the top of the graph and then drag the scroll bar along the bottom of the graph to make further adjustments to the time

frame.

- Once the time frame on the graph roughly corresponds with the time frame during which you recorded your mobile session, note the average measurement value located to the left of the graph. Then compare this number to the average measurement value from your mobile session.

Search For & View Data From The Closest Government Monitoring Station

- Open a new tab inside the browser window and navigate to aircasting.org
- At the top of the page, hover your mouse over the text reading “AirCasting” and select “AirCasting Maps” from the dropdown
- Click the “FIXED” tab at the top left-hand side of the AirCasting maps page
- By default, the “Parameter” selection will be “Particulate Matter” and the “Sensor” selection will be “OpenAQ-PM2.5 ($\mu\text{g}/\text{m}^3$)”. If these are not the default selections, please update them accordingly.
- Under “Location”, enter a city or zip code then select the correct suggestion from the dropdown.
- Click the refresh icon inside the “Time Frame” field to ensure you’re searching for sessions recorded during the past year, including today.
- Once you’ve completed your search, a list of session cards matching your search criteria will appear along the bottom of the screen and the map will display the location of each fixed session. Using the map, click on the air monitoring station located closest to where you recorded your mobile AirCasting session.
- Click and drag your mouse over the graph to zoom to the specific time frame during which you recorded your mobile session. You can also use the zoom buttons along the top of the graph and then drag the scroll bar along the bottom of the graph to make further adjustments to the time frame.
- Once the time frame on the graph roughly corresponds with the time frame during which you recorded your mobile session, note the average measurement value located to the left of the graph. Then compare this number to the average measurement value from your mobile session.

INTERPRET YOUR DATA

You now have four browser tabs open. Each tab offers you a different view of the air quality in your community. Using the below prompts, explore these visualizations and analyze and discuss the collected data with your workshop attendees.

- Were the PM2.5 measurements from your mobile AirCasting session what you expected? If so, why? If not, why not?
- Where were PM2.5 levels highest? Where were they lowest? Why do you think this was?

- Did any measurements surprise you? If so, why?
- How do you think the time of day, day of the week, and season may have affected your measurements?
- Were the particle sources you could identify the ones you were expecting to find?
- Looking at the CrowdMap, where were PM measurements highest? Where were they lowest? Why do you think this was?
- Was the average measurement value at the closest fixed AirBeam station or government monitoring station higher, lower, or nearly the same as the average value during your mobile session? Why do you think this was? (Make sure to adjust the graph on the fixed AirBeam station so the time frame matches the time frame of the mobile session you're comparing it to. The session average, maximum, and minimum values will update in correspondence with the graph time frame.)
- Were the average measurement values at the closest fixed AirBeam station higher, lower, or nearly the same as the average from the closest government monitoring station? Why do you think this was? (Make sure to adjust the graph time frame on the fixed AirBeam station and government monitoring station so they match. The session average, maximum, and minimum values will update in correspondence with the graph time frame.)