

# Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 6/9/23

**Air Quality Forecast:** This is the daily forecasted Air Quality Index (AQI) for each area provided by the PA Department of Environmental Protection. The AQI is based on PM2.5 or Ozone, whichever is forecasted to be higher.

| Forecast Period                        | Pittsburgh Area   | Liberty-Clairton Area                                     |
|--|---|---|
| <b>Today</b><br>Friday<br>6/9/23       | PM2.5<br><b>Unhealthy for Sensitive Groups</b><br>122 AQI | PM2.5<br><b>Unhealthy for Sensitive Groups</b><br>118 AQI |
| <b>Tomorrow</b><br>Saturday<br>6/10/23 | PM2.5<br><b>Moderate</b><br>82 AQI                        | PM2.5<br><b>Moderate</b><br>90 AQI                        |




## Today's Forecast:

Plume moved overnight staying more aloft, so concentrations did not rise significantly across the area. Hourly values across western PA have been in the high moderate (Yellow) to Code Orange range overnight. Some brief spikes in values may be seen if any of the smoke gets mixed down to the surface as winds begin to pick back up for the day but good mixing and areas that see showers will bring any spikes back down for the rest of the day. The Air Quality Action Day will not be downgraded but are not expecting to continue it beyond today for the smoke event. While the fires are not anywhere close to being out in Canada, our weather pattern for at least the next few days is going to be less favorable for us to be further impacted by these plumes. Ozone on the other hand we are keeping an eye on as we head into the weekend but that may become more of an issue for eastern PA.

See Page 2 for the Air Quality Index guide

[Data provided by the PA Department of Environmental Protection](#)

**ACHD Air Dispersion 36-Hour Forecast:** This is the dispersion forecast for Allegheny County starting from this morning through tomorrow afternoon. The atmospheric dispersion index is a rating of the atmosphere's ability to transport pollution away from its source and is based on emissions and weather. Better atmospheric dispersion can improve air quality.

| Forecast Period |   | Atmospheric Dispersion Index | Surface Inversion Strength | Wind (dir mph) |
|-----------------|---|------------------------------|----------------------------|----------------|
| <b>Today</b>    |  Morning | Generally Good – 54          | N/A                        | NW 5-10        |
|                 | Afternoon   | Good – 74                    | --                         | NW 10          |
| <b>Tonight</b>  |  Evening | Generally Poor – 20          | Slight                     | NW/W 5-10      |
|                 | Overnight   | Very Poor – 4                | Moderate                   | SW <5          |
| <b>Tomorrow</b> |  Morning | Good – 97                    | Weak                       | W/SW 5-10      |
|                 | Afternoon   | Very Good – 123              | --                         | W 10           |

See page 2 for the Atmospheric Dispersion Index guide and the daily Surface Temperature Inversion Report.

## ACHD Remarks:

An Air Quality Action Day has been declared for Pittsburgh Area and the Liberty-Clairton Area

**Note:** Inversion Results not available from NWS currently

Data provided by the National Weather Service (NWS) [Fire Weather Planning Forecast](#) and [PIT NWS Products](#)

## Guide to the Air Quality Index (AQI)

| Color  | Description                    | Meaning  | AQI       |
|--------|--------------------------------|--|-----------|
| Red    | Unhealthy                      | Everyone should limit exertion outdoors.                       | 151 - 200 |
| Orange | Unhealthy for Sensitive Groups | Sensitive people should limit exertion outdoors.               | 101 - 150 |
| Yellow | Moderate                       | Extremely sensitive people may wish to limit outdoor exertion. | 51 - 100  |
| Green  | Good                           | No health impacts are expected in this range.                  | 0 - 50    |

## Guide to the Atmospheric Dispersion Index

| Very Poor | Poor   | Generally Poor | Fair    | Generally Good | Good     | Very Good |
|-----------|--------|----------------|---------|----------------|----------|-----------|
| 1 - 6     | 7 - 12 | 13 - 20        | 21 - 40 | 41 - 60        | 61 - 100 | > 100     |

### ACHD Surface Temperature Inversion Report:

*This is the 7 AM surface-based temperature inversion report for Allegheny County.*

This morning's inversion of N/A °C with a depth of N/A m is estimated to break at N/A AM.

This inversion can be characterized as: None / Slight / Weak / Moderate / Strong.

There is no inversion above ~1000 meters reported.

### What does the Surface Temperature Inversion Report mean?

A surface temperature inversion is a weather pattern that stops mixing of the air near the ground, and pollution released into the air tends to remain at higher concentrations.

Surface temperature inversion conditions include how strong the surface inversion is (in °C), how high the inversion is above the surface (in meters), and when the inversion is expected to break (in Eastern Standard Time). Also included is whether an upper-level inversion or inversions exist, starting at about 1,000 meters.

#### Surface Temperature Inversion Characterization

- 0-0.9 C°: Slight
- 1-2.9 C°: Weak
- 3-4.9 C°: Moderate
- ≥5 C°: Strong

