

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 8/29/23

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 |
|---|------------------------------------|--------------------------------|
| Today Tuesday 8/29/23 | Ozone Moderate 54 AQI | PM2.5 Good 48 AQI |
| Tomorrow Wednesday 8/30/23 | PM2.5 Good 48 AQI | PM2.5 Good 48 AQI |




Today's Forecast:

A moderately strong inversion might cause PM2.5 to be highest Tuesday morning, then a westerly flow during the afternoon will result in PM2.5 concentrations averaging in the high end of the good range. With a partly sunny sky and temperatures moving into the lower 80s, ozone maximums may reach the lower moderate range. A scattering of showers and thundershowers occurs during the afternoon and evening

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) |
|-----------------|---|------------------------------|----------------------------|----------------|
| Today |  Morning | 10 – Poor | -- | N-NW <5 |
| | Afternoon | 45 – Generally Good | -- | W-SW 5-10 |
| Tonight |  Evening | 4 – Very Poor | -- | W 5-10 |
| | Overnight | 4 – Very Poor | Moderate | W-NW <5-5 |
| Tomorrow |  Morning | 44 – Generally Good | -- | W-NW 5-10 |
| | Afternoon | 65 – Good | -- | NW 10 |

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

ACHD Remarks:

No sounding data is available at this time. The PA DEP suggests a moderate to strong inversion for the Pittsburgh area on Tuesday 8/29/23.

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 NA °C with a depth of NA m is estimated to break at NA.

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 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

