

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 8/19/22

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 Friday 8/19/22	Ozone Moderate 77 AQI	PM2.5 Moderate 58 AQI
Tomorrow Saturday 8/20/22	Ozone Good 50 AQI	PM2.5 Good 48 AQI




Today's Forecast:

PM2.5 will remain elevated Friday morning, then the breaking inversion and increasing mixing will bring the overall average down to the moderate range. Ozone levels will also go moderate during the afternoon with mostly sunny skies and temperatures into the middle 80s.

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	Generally Poor – 19	*	SE 1
	Afternoon	Good – 67	--	SE 3
Tonight	 Evening	Very Poor – 3	--	SE 2
	Overnight	Very Poor – 2	--	SE 2
Tomorrow	 Morning	Generally Good – 48	Strong	SSE 3
	Afternoon	Good – 85	--	SSE 6

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

ACHD Remarks: *Issues in the NWS morning sounding height calculations make inversion calculation unreliable. Assuming the temperature reading is correct, there appears to be a Moderate to Strong ~4.8° inversion. Break time cannot be calculated accurately without the depth of the inversion, but likely to be between 9am and 10am.

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 *4.8° and a depth of * is estimated to break at *.

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

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

