

# Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 12/28/22

**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
<b>Today</b> Wednesday 12/28/22	PM2.5 <b>Moderate</b> 67 AQI	PM2.5 <b>Moderate</b> 92 AQI
<b>Tomorrow</b> Thursday 12/29/22	PM2.5 <b>Moderate</b> 84 AQI	PM2.5 <b>Moderate</b> 100 AQI




### Today's Forecast:

High pressure moving over the area and shifting to the south and east will allow for mostly clear skies for Wednesday. This will allow temperatures to finally climb back above the freezing mark and reach the low to mid-40s during the afternoon. Concentrations of PM-2.5 will rise with southwesterly flow and the northward push of warm air aloft, averaging out high in the moderate range for the day. Hourly concentrations may become elevated during the early morning hours during the period with a temperature inversion.

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	Fair – 38	Moderate	S 5-10
	Afternoon	Generally Good – 50	--	SW 5-10
<b>Tonight</b>	 Evening	Poor – 7	Moderate	S 5-10
	Overnight	Poor – 7	Strong	S <5
<b>Tomorrow</b>	 Morning	Fair – 25	Moderate	S 5
	Afternoon	Fair – 30	--	SW 5-10

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

### ACHD Remarks:

High pressure will remain in control for Thursday. PM-2.5 concentrations will climb to levels high in the moderate range, with maximum averages that may approach the high moderate to Code Orange threshold.

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 4.5 °C with a depth of 448 m is estimated to break at ~11:30 AM.

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

An inversion **above ~1000 meters** is also 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

