

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 12/2/22

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 12/2/22	PM2.5 Moderate 58 AQI	PM2.5 Moderate 90 AQI
Tomorrow Saturday 12/3/22	PM2.5 Good 38 AQI	PM2.5 Good 40 AQI

Today's Forecast:




Fine particle levels will be highest Friday morning as the inversion does not break until the late morning. Overall average PM2.5 concentrations will end up in the lower to middle moderate range as skies end up partly sunny with a milder afternoon.

A cold front will pass through early Saturday, with mostly cloudy skies and the likelihood of rain showers into the early afternoon. Good air quality continues Sunday.

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	11 – Poor	--	S 5-10
	Afternoon	15 – Generally Poor	--	S 5-10
Tonight	 Evening	7 – Poor	Weak	S-SE 5-10
	Overnight	17 – Generally Poor	--	S 10-15 Gusts 20-30
Tomorrow	 Morning	24 – Fair	--	SW 10-15 Gusts 30-35
	Afternoon	60 – Generally Good	--	W 10-15 Gusts 20-30

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

ACHD Remarks:

Significant probability of precipitation overnight on Friday 12/2/22 into the early afternoon of Saturday 12/3/22.

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 6.7°C with a depth of 656 m is estimated to break at ~12pm.

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

No inversion above ~1000 meters is 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

