

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 12/23/22

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 12/23/22	PM2.5 Good 24 AQI	PM2.5 Good 22 AQI
Tomorrow Saturday 12/24/22	PM2.5 Good 22 AQI	PM2.5 Good 20 AQI




Today's Forecast:

A period of snow will occur Friday morning as the arctic front charges through and causes a dramatic temperature drop, with blowing and drifting of the snow. Wind chills may be as low as 15 below by the afternoon as winds gust past 40 mph at times. PM2.5 will be a non-issue with the violent atmospheric mixing.

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	Very Good – 115	--	SW 25-30 Gusts 40-50
	Afternoon	Very Good – 136	--	SW 25-30 Gusts 40-50
Tonight	 Evening	Good – 67	--	SW 25-30 Gusts 40-50
	Overnight	Good – 63	--	SW 25-30 Gusts 40-50
Tomorrow	 Morning	Very Good – 101	--	SW 20-25 Gusts 35-40
	Afternoon	Very Good – 103	--	SW 20-25 Gusts 35-40

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

ACHD Remarks:

Air quality will remain good through the holiday weekend, possibly turning moderate again early next week with milder air and much less mixing.

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

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

No inversion above ~1000 meters is 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

