

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 12/30/22

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 12/30/22	PM2.5 Moderate 64 AQI	PM2.5 Unhealthy for Sensitive Groups 101 AQI
Tomorrow Saturday 12/31/22	PM2.5 Good 49 AQI	PM2.5 Moderate 59 AQI




Today's Forecast:

With warm air remaining overhead, temperatures falling into the low 40s overnight and into Friday morning will still allow for a temperature inversion to develop. This inversion will not be as strong as the one that developed Thursday morning. Conditions will still be favorable for hourly concentrations of fine particulate matter (PM-2.5) to become elevated for several hours. Concentrations will improve on an hourly basis during the afternoon hours when the best mixing occurs once the inversion breaks with the daytime warming. On average for the day, peak values may end up in the low end of the Code Orange range. An Air Quality Action Day will be declared again for Friday as a result.

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	Fair – 21	Weak	S 5
	Afternoon	Fair – 28	--	S 5
Tonight	 Evening	Poor – 8	--	S <5
	Overnight	Poor – 11	Moderate	S <5
Tomorrow	 Morning	Fair – 21	Weak	S <5
	Afternoon	Generally Poor – 19	--	SW 5

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

ACHD Remarks:

Today is an Air Quality Action Day for the Liberty-Clairton area.

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 2.0 °C with a depth of 139 m is estimated to break at 10:30 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 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

