

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 9/2/22

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 9/2/22	Ozone Good 50 AQI	PM2.5 Good 45 AQI
Tomorrow Saturday 9/3/22	PM2.5 Moderate 59 AQI	PM2.5 Moderate 59 AQI




Today's Forecast:

PM2.5 concentrations will be highest early Friday morning, then will drop late in the morning into the afternoon under an increasing southeast wind. Overall averages of this pollutant will end up in the good range, and ozone will also increase some, but end up just short of moderate territory.

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	Strong	ESE 3
	Afternoon	Generally Good – 55	--	S 6
Tonight	 Evening	Poor – 9	--	SE 5
	Overnight	Very Poor – 6	--	SE 3
Tomorrow	 Morning	Fair – 33	Moderate	SE 2
	Afternoon	Generally Good – 48	--	SW 6

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

ACHD Remarks: Air quality over the holiday weekend should be in the upper good to lower moderate range. Moderate inversions are forecasted for the early mornings which could cause elevated PM2.5 in the mornings, but that should break fairly quickly with better dispersion during the day.

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 6.2° and a depth of 196 m is estimated to break at 10:30 am.

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

There is no upper level inversion 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

