

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 5/27/2022

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 5/27/22	Ozone Good 41 AQI	PM2.5 Good 46 AQI
Tomorrow Saturday 5/28/22	Ozone Good 43 AQI	PM2.5 Good 42 AQI

Today's Forecast: A low pressure system approaching from the west will continue provide showers and thunderstorms across the region on Friday. Highest chances for rainfall will be early in the day. Breezy southerly flow will continue to usher in ample moisture so some of these showers may result in periods of heavier rainfall. Mostly cloudy skies throughout the remainder of the day will limit ozone concentrations to the good range. The breezy winds and early rainfall will also keep concentrations of fine particulate matter (PM-2.5) inside the good range. Highs will be in the low to mid-70s.

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	Poor – 8	None	S 5 to SSE 6
	Afternoon	Good – 73	--	SSW 6 to SW 6-7
Tonight 	Evening	Very Poor – 5	--	SW 3-5
	Overnight	Very Poor – 3	--	SW 5 to WSW 5
Tomorrow 	Morning	Fair – 29	None	W 5-7
	Afternoon	Good – 72	--	WNW 7 to NW 3-7

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

ACHD Remarks: Rain today continuing into the night. Also, the sounding data from the National Weather Service was unavailable, so I had to use an alternative source.

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 surface inversion of °C with a depth of m is estimated to break at . This surface inversion can be characterized as: **None** / Slight / Weak / Moderate / Strong.

No upper inversion starting below ~1000 m 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

