

Air Quality Forecast and Dispersion Outlook of Allegheny County, Pennsylvania for 10/13/23

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 10/13/23	PM2.5 Good 40 AQI	PM2.5 Good 42 AQI
Tomorrow Saturday 10/14/23	PM2.5 Good 25 AQI	PM2.5 Good 25 AQI




Today's Forecast:

High pressure will briefly nose southward Friday to bring us the nicest day weather wise we may see in awhile. Skies will turn out mostly sunny with light northeast winds and temperatures topping out in the upper 60s. Ample mixing and dispersion will permit lower levels of PM2.5. A cold front associated with this low will affect us Saturday with rain showers, and even a thunderstorm. Turning rather cool Sunday into Monday behind the front, with mostly cloudy skies and a couple of showers possible each day. With the expected precipitation and low level mixing, air quality Saturday through Monday will remain in the good range.

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	24 – Fair	NA	NE 5-10
	Afternoon	31 – Fair	--	NE 5-10
Tonight	 Evening	9 – Poor	Moderate	E-NE 5-10
	Overnight	10 – Poor	Weak	E 5-10
Tomorrow	 Morning	14 – Generally Poor	--	E-SE 5-10
	Afternoon	15 – Generally Poor	--	E 5-10

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

ACHD Remarks:

Significant potential for precipitation throughout Saturday, October 14, 2023 into Sunday, October 15, 2023. Radiosonde data from NWS is unavailable at the time of this report – sodar data in the Mon Valley suggests no surface inversion this morning.

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 **NA** with a depth of **NA** is estimated to break at **=**

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

There is no inversion above ~1000 meters 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

