

NOACA AIR QUALITY FORECAST UPDATE

**Air Quality Subcommittee
March 20, 2026**

ACTION REQUESTED

No action requested. This item is for presentation and discussion.

PREVIOUS ACTION

No prior action. This items is a quarterly update for the Subcommittee.

BACKGROUND

NOACA forecasts daily peak eight-hour ground-level ozone concentrations and fine particulate matter concentrations.

- In 2026, daily forecasts for ozone began March 1 and will conclude October 31
- Daily forecasts for fine particulate matter are year-round

NOACA posts daily air quality forecasts through AirNowTech, in affiliation with the United States Environmental Protection Agency (U.S. EPA)

BACKGROUND

About the Model

- Regression analysis model jointly developed with the Akron Regional Air Quality Management District (ARAQMD)
- NOACA staff revisited the original model design with ARAQMD partners
- Review focused on understanding how the model captures Lake Erie's influence on air quality
- Examination of meteorological variables and forecast inputs with the National Weather Service

Meteorological data Inputs

Lake Erie Influence Variables

Regression Analysis Model

Air Quality Forecast

BACKGROUND

- **NOACA air quality staff are updating the regional air quality forecasting process**
 - Continued and renewed stakeholder engagement
 - Earlier reporting to airnow.gov to encourage mode shift
- **Collaboration with NOAA personnel to report model performance**
 - Northeast Ohio National Air Quality Forecasters Conference, January 2026

NOACA FORECAST PERFORMANCE FOR 2026 (PM_{2.5})

PM _{2.5} GOOD/MODERATE THRESHOLD (9 µg/m ³)		NOACA FORECAST	
		BELOW	ABOVE
OBSERVED	BELOW	12%	12%
	ABOVE	12%	64%
CORRECT = 76%			

NOACA FORECAST PERFORMANCE FOR 2026 (PM_{2.5})

PM _{2.5} MODERATE/UNHEALTHY THRESHOLD (35 µg/m ³)		NOACA FORECAST	
		BELOW	ABOVE
OBSERVED	BELOW	100%	0%
	ABOVE	0%	0%

CORRECT = 100%

NOACA AND NOAA FORECAST PERFORMANCE FOR 2026 (PM_{2.5})

FORECAST		THRESHOLD	
		9 µg/m ³	35 µg/m ³
AGENCY	NOACA	76%	100%
	NOAA 12Z (M/B)	(76/73)%	(100/100)%

NOACA AND NOAA FORECAST PERFORMANCE FOR 2026 (O₃)

FORECAST		THRESHOLD	
		50 ppb	70 ppb
AGENCY	NOACA	100%	100%
	NOAA 12Z (M/B)	(100/100)%	(100/100)%

NEXT STEPS

- Meet with Regional Stakeholders
- Streamline Advisory Protocols: simplify advisory issuance workflows to enable earlier and clearer communications to regional residents
- Track forecast performance of NOACA and NOAA for ozone and fine particulate matter
- Update Air Quality Subcommittee in **June 2026**



NOACA

Northeast Ohio Areawide Coordinating Agency

NOACA will **strengthen** regional cohesion, **preserve** existing infrastructure, and **build** a sustainable multimodal transportation system to **support** economic development and **enhance** quality of life in Northeast Ohio.