

# Indiana Department of Environmental Management (IDEM) Office of Air Quality

## PM<sub>2.5</sub> BACKGROUND CONCENTRATION ADJUSTMENT FOR INDIANA MONITORS 2022 – 2024

### TECHNICAL ANALYSIS DOCUMENT



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Pete Laing/BC Wildfire Service July 12, 2023

**February 2026**

## Executive Summary

On February 7, 2024, the United States Environmental Protection Agency (U.S. EPA) promulgated a revised National Ambient Air Quality Standard (NAAQS) for fine particulate matter. Particulate matter (PM), also called particle pollution, is a mixture of solid particles and liquid droplets found in the air. Fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>) is created primarily from industrial processes and fuel combustion and secondary formation via atmospheric chemical reactions involving precursor gases such as sulfur dioxide (SO<sub>2</sub>), nitrogen oxides (NO<sub>x</sub>), ammonia (NH<sub>3</sub>), and volatile organic compounds (VOCs). The level of the annual PM<sub>2.5</sub> NAAQS was revised down from 12.0 micrograms per cubic meter (µg/m<sup>3</sup>) to 9.0 µg/m<sup>3</sup>. The annual PM<sub>2.5</sub> standard is met when the annual weighted quarterly average averaged over three years is less than or equal to 9.0 µg/m<sup>3</sup> (40 Code of Federal Regulations (CFR) § 50.20). Background concentrations used in air dispersion modeling are typically set to the current monitor design values. This document provides evidence that monitors were impacted by smoke from wildfires and fireworks in 2022, 2023, and 2024, and that the 2022-2024 design values for the primary annual and primary 24-hour PM<sub>2.5</sub> NAAQS are inflated by smoke. This document also provides model background concentrations for modeling purposes without the influence of wildfire and firework smoke as well as windblown dust. During 2022 through 2024, Indiana was affected by smoke from wildfires and fireworks in Canada and the United States. The smoke significantly increased the background concentrations of PM<sub>2.5</sub> used for air dispersion modeling. This document is intended exclusively for use in air dispersion modeling under IDEM's permitting and modeling programs. It is not to be used for regulatory designations, state implementation plan (SIP) development, or attainment demonstrations.

IDEM is making the background concentration adjustments for modeling purposes under the authority of the following documents:

- The April 4, 2019 EPA Memo<sup>1</sup>,
- The November 2024 EPA Guidance<sup>2</sup>,
- 40 CFR Part 51, Appendix W<sup>3</sup>, and
- IDEM's internal modeling policies<sup>4</sup>.

Each Tier 1 or Tier 2 day from 2022-2024 was analyzed to determine if smoke contributed to the excess PM<sub>2.5</sub> concentration for the day. IDEM used numerous pieces of evidence for the analysis. The following tools were used:

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<sup>1</sup> <https://www.epa.gov/air-quality-analysis/clarification-memo-additional-methods-determinations-and-analyses-modify-air>

<sup>2</sup> <https://www.epa.gov/system/files/documents/2024-11/guidance-on-developing-background-concentrations-for-use-in-modeling-demonstrations.pdf>

<sup>3</sup> <https://www.epa.gov/scram/2024-appendix-w-final-rule>

<sup>4</sup> <https://www.in.gov/idem/airquality/modeling/>

- AirNow Tech Navigator
- Aqua Multi-Angle Implementation of Atmospheric Correction (MAIAC) Land Aerosol Optical Depth (AOD)
- High-Resolution Rapid Refresh (HRRR) Smoke Forecast Model
- PM<sub>03</sub> Smoke Tool from the General Additive Model (GAM)
- National Oceanic and Atmospheric Administration (NOAA) Satellite Smoke Forecasts
- Fire Information for Resource Management System (FIRMS) active fire data
- IDEM Hourly PM<sub>2.5</sub> Ambient Air Quality Concentrations (optional)

Using the evidence from these tools, IDEM concluded that the days shown in Table 1 should be excluded from the 24-hour and annual PM<sub>2.5</sub> design value calculations. IDEM used the U.S. EPA design value tool<sup>5</sup> to calculate the new background concentration without the excess smoke influence.

Table 1 contains a summary of the background concentrations with the difference between the original concentration and the excluded smoke days concentrations. The table also includes total number of days excluded.

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<sup>5</sup> <https://www.epa.gov/air-quality-analysis/exceptional-events-design-value-tool>

**Table 1 – PM<sub>2.5</sub> Background Concentrations Summary Table**

<b>Monitor Name</b>	<b>PM<sub>2.5</sub> Annual Background Concentration Including Wildfire Smoke (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> Annual Background Concentration Excluding Wildfire Smoke (µg/m<sup>3</sup>)</b>	<b>Difference (µg/m<sup>3</sup>)</b>	<b>Number of Wildfire Smoke Days Excluded</b>
Columbus - Rocky Ford Drive	7.2	6.6	-0.6	46
Jeffersonville - Bates-Bowyer Ave	9.2	8.5	-0.7	50
Muncie - Central HS	7.7	7.1	-0.6	36
Jasper - Post Office	8.3	7.7	-0.6	22
Elkhart - Prairie St	8.7	7.9	-0.8	46
New Albany	7.6	7.1	-0.5	15
Plummer	7.4	6.8	-0.6	30
Fishers	7.6	6.7	-0.9	56
Carmel - Hazel Dell Parkway	9.3	8.6	-0.7	16
Mechanicsburg	7.7	6.8	-0.9	36
Kokomo - E. Vaile Ave	7.6	7.0	-0.6	39
East Chicago - Franklin School	8.4	7.8	-0.6	15
Gary - Madison St	9.9	8.7	-1.2	25
East Chicago - Marina	9.0	8.2	-0.8	36
Hammond-167th St	8.5	7.7	-0.8	48
Michigan City - Marsh Elem. Sch.	7.9	7.4	-0.5	15
Anderson - Eastside Elem	8.1	7.2	-0.9	47
Indianapolis - Washington Park	9.9	8.9	-1.0	59
Indianapolis - W. 18th St.	11.6	10.3	-1.3	58
Indianapolis - School 21	9.7	8.9	-0.8	16
Indianapolis- I-70 E	11.4	10.3	-1.1	49
Bloomington - Binford	7.3	6.6	-0.7	44
Ogden Dunes	8.4	7.5	-0.9	49
South Bend - Shields Dr.	8.8	7.9	-0.9	41
Dale	7.9	7.4	-0.5	14
Lafayette - Greenbush St	7.8	7.1	-0.7	36
Evansville - U of E	8.4	8.0	-0.4	14
Evansville - Buena Vista	8.9	8.3	-0.6	46
Terre Haute - Lafayette Ave	9.3	8.6	-0.7	39
Larwill	8.1	7.3	-0.8	45

## Introduction

On February 7, 2024, U.S. EPA promulgated a revised NAAQS for fine particulate matter. Particulate matter (PM), also called particle pollution, is a mixture of solid particles and liquid droplets found in the air. Fine particulate matter with a diameter of 2.5 microns or less (PM<sub>2.5</sub>) is created primarily from industrial processes and fuel combustion. The level of the annual PM<sub>2.5</sub> NAAQS was strengthened from 12.0 to 9.0 µg/m<sup>3</sup>. The annual PM<sub>2.5</sub> standard is met when the annual weighted quarterly average averaged over three years is less than or equal to 9.0 µg/m<sup>3</sup> (40 Code of Federal Regulations (CFR) § 50.20). Background concentrations used in air dispersion modeling are typically set to the current monitor design values. This document provides evidence that monitors were impacted by smoke from wildfires and fireworks in 2022, 2023, and 2024, and that the 2022-2024 design values for the primary annual and primary 24-hour PM<sub>2.5</sub> NAAQS are inflated by smoke. This document also provides model background concentrations for modeling purposes without the influence of wildfire and firework smoke as well as windblown dust. During 2022 through 2024, Indiana was affected by smoke from wildfires and fireworks in Canada and the United States. The smoke significantly increased the background concentrations of PM<sub>2.5</sub> used for air dispersion modeling. It is not IDEM's intention to use the adjusted PM<sub>2.5</sub> background concentrations for any attainment designation or regulatory purposes other than use for dispersion modeling analyses.

## Overview

IDEM used the U.S. EPA PM<sub>2.5</sub> Tiering Tool<sup>6</sup> website to determine each monitor's Tier 2 threshold. According to the website, **Tier Thresholds** in this tool are determined based on the following criteria:

1. Data Period and Completeness
  - Thresholds are based on the most recent complete 5-year period: 2020–2024.
  - There is no minimum data completeness requirement for inclusion.
  - If a site has fewer than five years of data, users should coordinate with the appropriate EPA regional office to determine the suitable tiering analysis.
2. Site-Level Calculations and Data Exclusions
  - Thresholds are calculated at the site level, using site-level aggregated daily values consistent with PM<sub>2.5</sub> NAAQS data handling procedures (see Section 3.0(d)).

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<sup>6</sup> <https://www.epa.gov/air-quality-analysis/pm25-tiering-tool-exceptional-events-analysis#:~:text=3.2.5%20less%20than%20the%20threshold.>

- To determine which site-days to exclude from calculations, the raw data record for all monitors at a site is reviewed.
- If any hour of the day at any monitor at the site has either:
  - an R flag (Request Exclusion), or
  - a fire-related I flag (Informational),

then the entire site-level daily value is excluded from the tier threshold calculation.

- Fire-related I flags include:
  - IT – Wildfire (U.S.)
  - IF – Fire (Canada)
  - IG – Fire (Mexico/Central America)
  - IH – Fireworks
  - IM – Prescribed Fire
  - IP – Structural Fire
- Threshold Determination and Tier Classification
  - The threshold is based on the lower of the following two values:
    - a. The month-specific 98th percentile for 24-hour  $PM_{2.5}$  data over the most recent 5-year period
    - b. The minimum annual 98th percentile for 24-hour  $PM_{2.5}$  data over the same period, with all R-flagged and fire-related I-flagged days excluded
  - Tier classifications are as follows:
    - Tier 1: 24-hour  $PM_{2.5} \geq 1.5 \times$  threshold
    - Tier 2: 24-hour  $PM_{2.5} \geq$  threshold but  $< 1.5 \times$  threshold
    - Tier 3: 24-hour  $PM_{2.5} <$  threshold

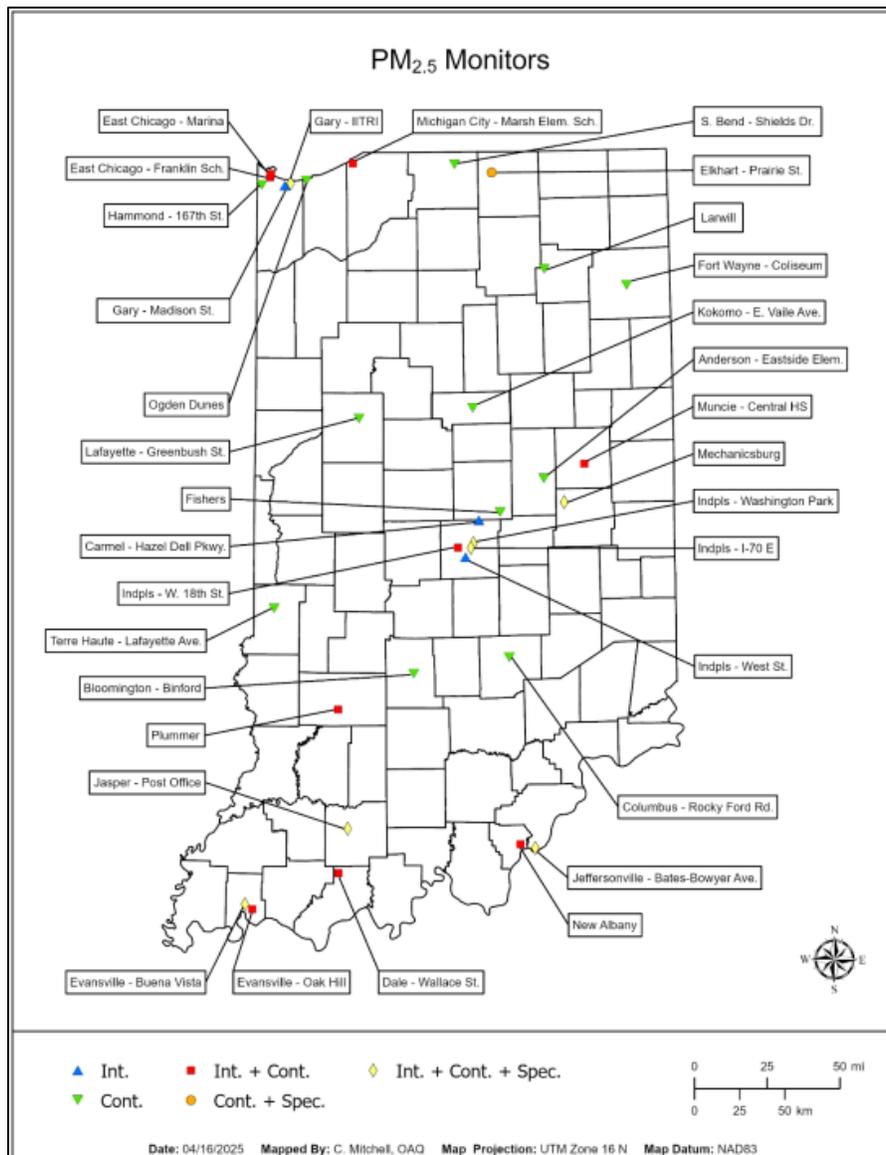
According to IDEM's Modeling policy document<sup>7</sup>:

Background concentrations account for those sources that are either too small or too distant to be included in the modeling analysis. Monitoring data from the monitoring stations closest to the proposed source should generally be used. Comparing the selected monitoring sites to the applicant's location determines which site will be used. Background concentrations should be from the most current three-year period.

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<sup>7</sup> [https://www.in.gov/idem/airquality/files/modeling\\_ag\\_policies.pdf](https://www.in.gov/idem/airquality/files/modeling_ag_policies.pdf)

**Figure 1- Indiana PM<sub>2.5</sub> Monitors**



Every day that was either Tier 1 or Tier 2 for each monitor was analyzed to determine if smoke influenced the monitor day to artificially inflate the normal PM<sub>2.5</sub> concentration. The increased PM<sub>2.5</sub> concentration would affect the design value of the monitor and decrease the available background concentration for air quality modeling purposes.

The following Tables 2 through 4 show the 2022, 2023 and 2024 PM<sub>2.5</sub> 24-hour 98<sup>th</sup> percentile values with and without the influence of smoke. The 2022-2024 PM<sub>2.5</sub> 24-hour design values are included in Table 5.

**Table 2 – 2022 24-hour PM<sub>2.5</sub> Background Concentrations**

<b>Monitor name</b>	<b>AQS ID</b>	<b>PM<sub>2.5</sub> 98th Percentile Including Wildfire Smoke (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> 98th Percentile Excluding Wildfire Smoke (µg/m<sup>3</sup>)</b>
Fort Wayne - Coliseum	180030015	NA	NA
Columbus - Rocky Ford Drive	180050008	14.8	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	21.5	18.5
Muncie - Central HS	180350006	17.8	16.8
Jasper - Post Office	180372001	21.0	15.7
Elkhart - Prairie St	180390008	29.9	19.7
Plummer	180550001	16.9	14.7
Fishers	180570007	17.1	14.8
Carmel - Hazel Dell Parkway	180570008	22.5	18.8
Mechanicsburg	180650003	20.0	16.0
Kokomo - E. Vaile Ave	180670004	17.5	16.6
East Chicago - Franklin/Washington Sch	180890006	20.6	20.5
Gary - Madison St	180890031	23.5	19.8
East Chicago - Marina	180890034	19.3	18.1
Hammond-167th St	180890036	18.2	16.6
Michigan City - Marsh Elem. Sch.	180910011	19.1	18.8
Anderson - Eastside Elem	180950011	18.1	17.4
Indianapolis - Washington Park	180970078	24.4	21.8
Indianapolis - W. 18th St.	180970081	29.5	25.3
Indianapolis - School 21	180970084	21.3	21.3
Indianapolis- I-70 E	180970087	27.0	23.2
Bloomington - Binford	181050003	16.2	13.7
Ogden Dunes	181270024	21.7	16.3
South Bend - Shields Dr.	181410015	23.0	21.0
Dale	181470009	19.0	15.2
Lafayette - Greenbush St	181570008	16.7	16.0
Evansville - U of E	181630016	23.0	15.9
Evansville - Buena Vista	181630021	20.2	16.6
Terre Haute - Lafayette Ave	181670018	24.3	21.0
Larwill	181830003	19.8	19.8

**Table 3 – 2023 24-hour PM<sub>2.5</sub> Background Concentrations**

Monitor name	AQS ID	PM <sub>2.5</sub> 98th Percentile Including Wildfire Smoke (µg/m <sup>3</sup> )	PM <sub>2.5</sub> 98th Percentile Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	18.7	14.9
Columbus - Rocky Ford Drive	180050008	24.0	13.4
Jeffersonville - Bates-Bowyer Ave	180190010	30.1	16.3
Muncie - Central HS	180350006	25.2	13.0
Jasper - Post Office	180372001	22.7	16.0
Elkhart - Prairie St	180390008	30.2	15.9
New Albany	180430008	26.3	16.9
Plummer	180550001	27.7	14.6
Fishers	180570007	28.8	13.4
Carmel - Hazel Dell Parkway	180570008	35.2	16.2
Mechanicsburg	180650003	38.4	14.8
Kokomo - E. Vaile Ave	180670004	24.7	14.0
East Chicago - Franklin/Washington Sch	180890006	23.2	16.1
Gary - Madison St	180890031	31.9	15.6
East Chicago - Marina	180890034	29.6	18.1
Hammond -167th St	180890036	29.0	16.2
Michigan City - Marsh Elem. Sch.	180910011	20.2	15.5
Anderson - Eastside Elem	180950011	38.1	14.6
Indianapolis - Washington Park	180970078	36.9	17.8
Indianapolis - W. 18th St.	180970081	43.5	25.9
Indianapolis - School 21	180970084	29.2	15.5
Indianapolis - I-70 E	180970087	38.1	20.2
Bloomington - Binford	181050003	27.1	12.5
Ogden Dunes	181270024	30.6	14.7
South Bend - Shields Dr.	181410015	31.2	16.4
Dale	181470009	19.9	12.3
Lafayette - Greenbush St	181570008	26.3	14.6
Evansville - U of E	181630016	19.6	14.0
Evansville - Buena Vista	181630021	25.7	15.9
Terre Haute - Lafayette Ave	181670018	27.2	18.6
Larwill	181830003	32.0	14.4

**Table 4 – 2024 24-hour PM<sub>2.5</sub> Background Concentrations**

<b>Monitor name</b>	<b>AQS ID</b>	<b>PM<sub>2.5</sub> 98th Percentile Including Wildfire Smoke (µg/m<sup>3</sup>)</b>	<b>PM<sub>2.5</sub> 98th Percentile Excluding Wildfire Smoke (µg/m<sup>3</sup>)</b>
Fort Wayne - Coliseum	180030015	18.0	18.0
Columbus - Rocky Ford Drive	180050008	13.4	12.4
Jeffersonville - Bates-Bowyer Ave	180190010	16.6	15.5
Muncie - Central HS	180350006	16.9	12.8
Jasper - Post Office	180372001	15.4	15.1
Elkhart - Prairie St	180390008	19.0	17.9
New Albany	180430008	14.0	14.0
Plummer	180550001	13.6	13.0
Fishers	180570007	15.7	12.6
Carmel - Hazel Dell Parkway	180570008	16.4	16.2
Mechanicsburg	180650003	14.8	14.1
Kokomo - E. Vaile Ave	180670004	13.9	13.1
East Chicago - Franklin/Washington Sch	180890006	17.7	14.6
Gary - Madison St	180890031	21.4	17.6
East Chicago - Marina	180890034	18.1	17.3
Hammond -167th St	180890036	17.2	15.6
Michigan City - Marsh Elem. Sch.	180910011	16.2	15.6
Anderson - Eastside Elem	180950011	15.4	13.6
Indianapolis - Washington Park	180970078	19.6	16.9
Indianapolis - W. 18th St.	180970081	26.0	19.7
Indianapolis - School 21	180970084	21.8	15.1
Indianapolis - I-70 E	180970087	21.4	18.6
Bloomington - Binford	181050003	12.8	12.7
Ogden Dunes	181270024	15.6	14.3
South Bend - Shields Dr.	181410015	18.6	16.3
Dale	181470009	15.1	12.4
Lafayette - Greenbush St	181570008	15.7	13.8
Evansville - U of E	181630016	15.6	13.5
Evansville - Buena Vista	181630021	17.8	15.5
Terre Haute - Lafayette Ave	181670018	20.2	16.9
Larwill	181830003	15.7	14.3

**Table 5 - 3-year (2022-2024) 24-hour PM<sub>2.5</sub> Background Concentration Design Values**

Monitor name	AQS ID	PM <sub>2.5</sub> 24-hour Background Including Wildfire Smoke (µg/m <sup>3</sup> )	PM <sub>2.5</sub> 24-hour Background Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	18	16
Columbus - Rocky Ford Drive	180050008	17	13
Jeffersonville - Bates-Bowyer Ave	180190010	23	17
Muncie - Central HS	180350006	20	14
Jasper - Post Office	180372001	20	18
Elkhart - Prairie St	180390008	26	17
New Albany	180430008	20	15
Plummer	180550001	19	14
Fishers	180570007	21	14
Carmel - Hazel Dell Parkway	180570008	25	17
Mechanicsburg	180650003	24	15
Kokomo - E. Vaile Ave	180670004	19	15
East Chicago - Franklin/Washington Sch	180890006	21	17
Gary - Madison St	180890031	26	18
East Chicago - Marina	180890034	22	18
Hammond-167th St	180890036	21	16
Michigan City - Marsh Elem. Sch.	180910011	19	17
Anderson - Eastside Elem	180950011	24	15
Indianapolis - Washington Park	180970078	27	19
Indianapolis - W. 18th St.	180970081	33	24
Indianapolis - School 21	180970084	24	17
Indianapolis - I-70 E	180970087	29	21
Bloomington - Binford	181050003	19	13
Ogden Dunes	181270024	23	15
South Bend - Shields Dr.	181410015	24	18
Dale	181470009	18	13
Lafayette - Greenbush St	181570008	20	15
Evansville - U of E	181630016	19	14
Evansville - Buena Vista	181630021	21	16
Terre Haute - Lafayette Ave	181670018	24	19
Larwill	181830003	23	16

Tables 6 through 9 contain the annual PM<sub>2.5</sub> annual mean values for each year with and without the influence of smoke and the cumulative 2022-2024 design value.

**Table 6 – 2022 Annual PM<sub>2.5</sub> Background Concentrations**

Monitor name	AQS ID	PM <sub>2.5</sub> 2022 Annual Mean Concentrations Including Wildfire Smoke (µg/m <sup>3</sup> )	PM <sub>2.5</sub> 2022 Annual Mean Concentrations Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	NA	NA
Columbus - Rocky Ford Drive	180050008	6.65	6.47
Jeffersonville - Bates-Bowyer Ave	180190010	8.99	8.67
Muncie - Central HS	180350006	7.54	7.28
Jasper - Post Office	180372001	8.61	8.12
Elkhart - Prairie St	180390008	8.54	8.19
New Albany	180430008	NA	NA
Plummer	180550001	7.13	6.91
Fishers	180570007	7.15	6.90
Carmel - Hazel Dell Parkway	180570008	10.07	9.44
Mechanicsburg	180650003	7.14	6.57
Kokomo - E. Vaile Ave	180670004	7.30	7.16
East Chicago - Franklin/Washington Sch	180890006	8.28	7.95
Gary - Madison St	180890031	9.56	9.04
East Chicago - Marina	180890034	8.23	8.01
Hammond-167th St	180890036	7.59	7.40
Michigan City - Marsh Elem. Sch.	180910011	7.91	7.74
Anderson - Eastside Elem	180950011	7.64	7.43
Indianapolis - Washington Park	180970078	9.60	9.14
Indianapolis - W. 18th St.	180970081	10.46	9.87
Indianapolis - School 21	180970084	9.23	8.87
Indianapolis - I-70 E	180970087	10.76	10.43
Bloomington - Binford	181050003	6.96	6.66
Ogden Dunes	181270024	8.47	7.73
South Bend - Shields Dr.	181410015	8.71	8.35
Dale	181470009	7.90	7.63
Lafayette - Greenbush St	181570008	7.16	6.97
Evansville - U of E	181630016	8.79	8.42
Evansville - Buena Vista	181630021	8.54	8.20
Terre Haute - Lafayette Ave	181670018	8.43	8.11
Larwill	181830003	7.61	7.39

**Table 7 - 2023 Annual PM<sub>2.5</sub> Background Concentrations**

Monitor name	AQS ID	PM <sub>2.5</sub> 2023 Annual Mean Concentrations Including Wildfire Smoke (µg/m <sup>3</sup> )	PM <sub>2.5</sub> 2023 Annual Mean Concentrations Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	8.37	8.05
Columbus - Rocky Ford Drive	180050008	8.41	6.86
Jeffersonville - Bates-Bowyer Ave	180190010	10.39	8.71
Muncie - Central HS	180350006	8.28	7.05
Jasper - Post Office	180372001	8.6	7.83
Elkhart - Prairie St	180390008	9.42	7.59
New Albany	180430008	8.42	7.44
Plummer	180550001	8.33	6.90
Fishers	180570007	8.50	6.64
Carmel - Hazel Dell Parkway	180570008	9.94	8.64
Mechanicsburg	180650003	9.20	7.32
Kokomo - E. Vaile Ave	180670004	8.65	7.02
East Chicago - Franklin/Washington Sch	180890006	9.85	8.52
Gary - Madison St	180890031	11.00	8.56
East Chicago - Marina	180890034	10.75	8.95
Hammond-167th St	180890036	10.33	8.31
Michigan City - Marsh Elem. Sch.	180910011	8.68	7.54
Anderson - Eastside Elem	180950011	9.85	7.57
Indianapolis - Washington Park	180970078	11.41	9.13
Indianapolis - W. 18th St.	180970081	13.42	10.97
Indianapolis - School 21	180970084	10.07	8.80
Indianapolis - I-70 E	180970087	13.69	11.14
Bloomington - Binford	181050003	8.54	6.74
Ogden Dunes	181270024	9.66	7.84
South Bend - Shields Dr.	181410015	10.28	8.32
Dale	181470009	8.71	7.93
Lafayette - Greenbush St	181570008	9.16	7.50
Evansville - U of E	181630016	8.89	8.15
Evansville - Buena Vista	181630021	9.96	8.69
Terre Haute - Lafayette Ave	181670018	10.51	9.01
Larwill	181830003	9.76	7.61

**Table 8 - 2024 Annual PM<sub>2.5</sub> Background Concentrations**

Monitor name	AQS ID	PM <sub>2.5</sub> 2024 Annual Mean Concentrations Including Wildfire Smoke (µg/m <sup>3</sup> )	PM <sub>2.5</sub> 2024 Annual Mean Concentrations Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	8.24	8.24
Columbus - Rocky Ford Drive	180050008	6.62	6.47
Jeffersonville - Bates-Bowyer Ave	180190010	8.21	8.03
Muncie - Central HS	180350006	7.41	6.82
Jasper - Post Office	180372001	7.39	7.27
Elkhart - Prairie St	180390008	8.10	7.92
New Albany	180430008	6.77	6.77
Plummer	180550001	6.76	6.70
Fishers	180570007	7.06	6.69
Carmel - Hazel Dell Parkway	180570008	7.96	7.81
Mechanicsburg	180650003	6.68	6.57
Kokomo - E. Vaile Ave	180670004	6.82	6.68
East Chicago - Franklin/Washington Sch	180890006	7.02	6.9
Gary - Madison St	180890031	9.03	8.62
East Chicago - Marina	180890034	7.89	7.75
Hammond-167th St	180890036	7.68	7.44
Michigan City - Marsh Elem. Sch.	180910011	7.08	6.98
Anderson - Eastside Elem	180950011	6.72	6.56
Indianapolis - Washington Park	180970078	8.80	8.40
Indianapolis - W. 18th St.	180970081	10.79	10.03
Indianapolis - School 21	180970084	9.76	8.89
Indianapolis - I-70 E	180970087	9.62	9.33
Bloomington - Binford	181050003	6.47	6.45
Ogden Dunes	181270024	7.10	6.92
South Bend - Shields Dr.	181410015	7.33	7.15
Dale	181470009	7.06	6.72
Lafayette - Greenbush St	181570008	7.03	6.87
Evansville - U of E	181630016	7.58	7.39
Evansville - Buena Vista	181630021	8.31	8.03
Terre Haute - Lafayette Ave	181670018	8.91	8.55
Larwill	181830003	6.94	6.86

**Table 9 – 3-year (2022-2024) Annual PM<sub>2.5</sub> Background Concentration Design Values**

Monitor name	AQS ID	Annual Mean Background Including Wildfire Smoke (µg/m <sup>3</sup> )	Annual Mean Background Excluding Wildfire Smoke (µg/m <sup>3</sup> )
Fort Wayne - Coliseum	180030015	8.3	8.1
Columbus - Rocky Ford Drive	180050008	7.2	6.6
Jeffersonville - Bates-Bowyer Ave	180190010	9.2	8.5
Muncie - Central HS	180350006	7.7	7.1
Jasper - Post Office	180372001	8.3	7.7
Elkhart - Prairie St	180390008	8.7	7.9
New Albany	180430008	7.6	7.1
Plummer	180550001	7.4	6.8
Fishers	180570007	7.6	6.7
Carmel - Hazel Dell Parkway	180570008	9.3	8.6
Mechanicsburg	180650003	7.7	6.8
Kokomo - E. Vaile Ave	180670004	7.6	7.0
East Chicago - Franklin/Washington Sch	180890006	8.4	7.8
Gary - Madison St	180890031	9.9	8.7
East Chicago - Marina	180890034	9.0	8.2
Hammond-167th St	180890036	8.5	7.7
Michigan City - Marsh Elem. Sch.	180910011	7.9	7.4
Anderson - Eastside Elem	180950011	8.1	7.2
Indianapolis - Washington Park	180970078	9.9	8.9
Indianapolis - W. 18th St.	180970081	11.6	10.3
Indianapolis - School 21	180970084	9.7	8.9
Indianapolis - I-70 E	180970087	11.4	10.3
Bloomington - Binford	181050003	7.3	6.6
Ogden Dunes	181270024	8.4	7.5
South Bend - Shields Dr.	181410015	8.8	7.9
Dale	181470009	7.9	7.4
Lafayette - Greenbush St	181570008	7.8	7.1
Evansville - U of E	181630016	8.4	8.0
Evansville - Buena Vista	181630021	8.9	8.3
Terre Haute - Lafayette Ave	181670018	9.3	8.6
Larwill	181830003	8.1	7.3

## TOOLS USED FOR ANALYSIS

Each Tier 1 or Tier 2 day from 2022-2024 was analyzed to determine if smoke contributed to the excess PM<sub>2.5</sub> concentration for the day. IDEM used numerous pieces of evidence for the analysis. The following tools were used:

- AirNow Tech Navigator
- Aqua Multi-Angle Implementation of Atmospheric Correction (MAIAC) Land Aerosol Optical Depth (AOD)
- High-Resolution Rapid Refresh (HRRR) Smoke Forecast Model
- PMO3 Smoke Tool from the General Additive Model (GAM)
- National Oceanic and Atmospheric Administration (NOAA) Satellite Smoke Forecasts
- Fire Information for Resource Management System (FIRMS) active fire data
- IDEM Hourly PM<sub>2.5</sub> Ambient Air Quality Concentrations (optional)

### AirNow Tech Navigator

AirNow-Tech is U.S. EPA's website for air quality data management analysis. PM<sub>2.5</sub> concentrations, AQI values, smoke and fires maps, HYSPLIT forward and back trajectories<sup>8</sup> can be created in Navigator. Backward trajectories were created 24 to 72 hours previous to the high PM<sub>2.5</sub> concentration day evaluated.

HYSPLIT models simulate the dispersion and trajectory of substances transported and dispersed through our atmosphere, over local to global scales.

HYSPLIT is a complete system for computing simple air parcel trajectories, as well as complex transport, dispersion, chemical transformation, and deposition simulations. HYSPLIT continues to be one of the most extensively used atmospheric transport and dispersion models in the atmospheric sciences community. A common application is a back trajectory analysis to determine the origin of air masses and establish source-receptor relationships. HYSPLIT has also been used in a variety of simulations describing the atmospheric transport, dispersion, and deposition of pollutants and hazardous materials. Some examples of the applications include tracking and forecasting the release of radioactive material, wildfire smoke, windblown dust, pollutants from various stationary and mobile emission sources, allergens and volcanic ash.

The model calculation method is a hybrid between the Lagrangian approach, using a moving frame of reference for the advection and diffusion calculations as the trajectories or air parcels move from their initial location, and the Eulerian methodology, which uses a fixed three-dimensional grid as a frame of reference to compute pollutant air concentrations (The model name, no longer meant as an acronym, originally reflected

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<sup>8</sup> <https://www.arl.noaa.gov/hysplit/>

this hybrid computational approach). HYSPLIT has evolved over more than 30 years, from estimating simplified single trajectories based on radiosonde observations to a system accounting for multiple interacting pollutants transported, dispersed, and deposited over local to global scales.

### **MAIAC AOD**

Aerosol Optical Depth (AOD) from the Moderate Resolution Imaging Spectroradiometer (MODIS) combined Terra and Aqua Multi-Angle Implementation of Atmospheric Correction (MAIAC) Land Aerosol Optical Depth level 2 product. Derived using both Terra and Aqua MODIS inputs, this product is produced daily at 1 kilometer pixel resolution. This product helps generate a number of atmospheric and geometric properties/parameters that are used to produce another facet of the MAIAC algorithm: the land surface Bidirectional Reflectance Factor.

Aerosols released into the atmosphere from anthropogenic activity (cars, industry) and natural events (fires, dust storms) affect human health, reduce visibility, and alter Earth's radiation budget. AOD is a quantitative estimate of the amount of aerosol present in the atmosphere, and it can be used as a proxy for surface PM<sub>2.5</sub>. AOD measures the extinction of a ray of light as it passes through the atmosphere. Satellite measurements of aerosols, called aerosol optical thickness, are based on the fact that the particles change the way the atmosphere reflects and absorbs visible and infrared light. An optical thickness of less than 0.1 (palest yellow) indicates a crystal-clear sky with maximum visibility, whereas a value of 1 (reddish brown) indicates very hazy conditions. The rate of extinction of the light increases as AOD increases.

### **HRRR Smoke Model**

The HRRR-Smoke model is based on the Weather Research and Forecasting model coupled to Chemistry. The dynamics and physics packages and settings for the meteorology of HRRR-Smoke are based on the experimental version of the HRRR model<sup>9</sup>, which is run in real-time at NOAA/ESRL Global Systems Division (GSD). HRRR-Smoke has been developed to simulate the emissions and transport of smoke from wildfires in real time in high spatial resolution. Since HRRR-Smoke includes anthropogenic emissions of other particulate matter species, and includes an aerosol aware microphysics scheme, IDEM also looked at aerosol impacts on Numerical Weather Prediction (NWP).

The fire emissions are calculated using the fire detection and characterization data from the Visible Infrared Imaging Radiometer Suite (VIIRS) sensor on the Suomi National Polar-orbiting Partnership satellite. Fire Radiative Power (FRP) data from VIIRS determine fire size and are then applied in HRRR-Smoke to calculate injection heights

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<sup>9</sup> <https://rapidrefresh.noaa.gov/hrrr/HRRRsmoke/>

using a plume rise model. The real-time VIIRS data is provided by NOAA/NESDIS Center for Satellite Applications and Research.

Currently HRRR-Smoke is run in real time by NOAA/ESRL/GSD for the CONUS domain (3km horizontal grid resolution). HRRR-Smoke is initialized every day at 00 and 12UTC using input files for the meteorology from the real-time HRRR experimental runs. The model is then run to produce 36-hour forecasts.

### **GAM PMO3 Smoke Tool**

The GAM<sup>10</sup> is a statistical or machine learning framework that provides interpretability by applying smoothing functions to individual variables. Notably, GAMs can incorporate linear, nonlinear, and categorical predictors, providing flexibility for modeling complex relationships (Wood, 2017). In particular, such statistical/machine learning models can provide an efficient tool for analyzing air quality, especially in relation to wildfire smoke. For example, O<sub>3</sub> can be used as the response variable, modeled using meteorological data, satellite-derived measurements, and/or backward air trajectories (Lee and Jaffe, 2024). This study demonstrated the importance of wildfire smoke as contributors to exceedances of the health-based national air quality standards for PM<sub>2.5</sub> and O<sub>3</sub>. This app offers options to easily build a GAM using the 'mgcv' package (Wood, 2023) and also allows viewing the results of previously studied GAMs.

The GAM previous tab allows users to explore and understand previously developed GAMs for O<sub>3</sub> prediction and related air quality analyses. It provides an overview of different versions of GAMs, including historical versions such as UW GAM-v1 (Lee and Jaffe, 2024), as well as newer models like UW GAM-v3 and UW GAM-v3-EDM (not yet peer reviewed). In the Overview tab, users can view model metadata, compare different model outputs, and examine time-series and scatter plots of observed versus predicted values for selected sites. In the Layer map tab, users can load data for analysis and customize data visualization by choosing point, raster, or HMS layers. This functionality helps users assess the performance of various GAM models and compare different approaches to understanding air quality dynamics, particularly in the context of wildfires.

### **NOAA Satellite Smoke Forecast**

NOAA releases daily smoke and dust text narrative and forecasts based on Satellite imagery data. The text narrative is intended to describe significant areas of smoke associated with active fires and smoke transported longer distances from source fires. Blowing dust is also tracked and depicted in the narrative.

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<sup>10</sup> <https://westar.shinyapps.io/PMO3smokeTool/>

## **Fire Information For Resource Management System**

FIRMS distributes Near Real-Time (NRT) active fire data from the Moderate Resolution Imaging Spectroradiometer (MODIS) aboard the Aqua and Terra satellites, and the Visible Infrared Imaging Radiometer Suite (VIIRS) aboard S-NPP, NOAA 20 and NOAA 21 (formally known as JPSS-1 and JPSS-2). Globally these data are available within 3 hours of satellite observation, but for the U.S. and Canada active fire detections are available in real-time.

FIRMS provides maps of fires and hotspot locations throughout the U.S. and Canada for specific dates. This information can provide details on any local fires or prescribed burns that would impact a monitor.

## **IDEM Hourly Air Quality Monitoring data**

Historical data for monitors can be accessed graphically at IDEM's monitoring website<sup>11</sup>:

From the U.S. EPA wildfire smoke website<sup>12</sup>:

Wildfire smoke is comprised of a mixture of gaseous pollutants (e.g., carbon monoxide), hazardous air pollutants (HAPs) (e.g., polycyclic aromatic hydrocarbons [PAHs]), water vapor, and particle pollution. Particle pollution represents a main component of wildfire smoke and the principal public health threat.

“Particle pollution” (also referred to as particles, particulate matter, or PM) is a general term for a mixture of solid and liquid droplets suspended in the air. There are many sources of particle pollution; the most common is combustion-related activities, such as wildfires. Because of the variety of sources, particles come in many sizes and shapes. Some particles are so small that they are only visible using an electron microscope. Particles can be made up of different components, including acids (e.g., sulfuric acid), inorganic compounds (e.g., ammonium sulfate, ammonium nitrate, and sodium chloride), organic chemicals, soot, metals, soil or dust particles, and biological materials (e.g., pollen and mold spores).

The air we breathe, both indoors and outdoors, always contains particle pollution. Because of their small size, particles can easily penetrate homes and buildings, increasing indoor particle concentrations. During a wildfire or other combustion-related activities, concentrations of particles can substantially increase in the air to the point that particle pollution is visible to the naked eye.

Using the evidence from these tools, IDEM concluded that the following days should be excluded from the 24-hour and annual PM<sub>2.5</sub> design value calculations. IDEM used the

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<sup>11</sup> <https://www.in.gov/idem/airmonitoring/air-quality-data/>

<sup>12</sup> <https://www.epa.gov/wildfire-smoke-course/why-smoke-health-concern>

U.S. EPA design value tool<sup>13</sup> to calculate the new background concentration without the excess smoke influence.

Hourly PM<sub>2.5</sub> data are optional because many monitors operate on a 1-in-3 or 1-in-6 day schedule using 24-hour filter-based methods. Where hourly data were available, they were reviewed to identify diurnal patterns consistent with smoke influence. Black and organic carbon data were not uniformly available across the network.

Tables 10 through 12 list the days and monitors that IDEM excluded from the background concentration calculations for 2022 through 2024. These tables include the daily PM<sub>2.5</sub> concentrations and the Tier 2 threshold for the monitor. Tier 2 thresholds were determined using August 15, 2025 concentrations.

**Table 10 – Smoke Influenced Days on Daily PM<sub>2.5</sub> Concentrations for 2022**

Monitor name	AQS ID	Date	Daily average (µg/m <sup>3</sup> )	Tier 2 Threshold (µg/m <sup>3</sup> )
Jeffersonville - Bates-Bowyer Ave	180190010	3/5/2022	19.3	17.0
East Chicago - Franklin/Washington Sch	180890006	3/15/2022	17.7	16.1
Gary - Madison St	180890031	3/15/2022	18.8	16.0
Michigan City - Marsh Elem. Sch.	180910011	3/15/2022	16.3	15.9
Indianapolis - Washington Park	180970078	3/15/2022	22.3	17.8
Jeffersonville - Bates-Bowyer Ave	180190010	3/16/2022	23.0	17.0
Elkhart - Prairie St	180390008	3/16/2022	18.6	16.3
Hammond-167th St	180890036	3/16/2022	17.1	16.3
Indianapolis - Washington Park	180970078	3/16/2022	27.0	17.8
Indianapolis - W. 18th St.	180970081	3/16/2022	30.0	20.9
Indianapolis- I-70 E	180970087	3/16/2022	28.0	20.5
Ogden Dunes	181270024	3/16/2022	15.8	15.3
South Bend - Shields Dr.	181410015	3/16/2022	21.1	16.9
Terre Haute - Lafayette Ave	181670018	3/16/2022	24.3	18.8
Larwill	181830003	3/16/2022	19.1	15.0
Jeffersonville - Bates-Bowyer Ave	180190010	3/17/2022	16.8	16.6
East Chicago - Marina	180890034	3/17/2022	23.0	18.0
Hammond-167th St	180890036	3/17/2022	22.4	16.3
Anderson - Eastside Elem	180950011	3/17/2022	15.6	15.4
Indianapolis - Washington Park	180970078	3/17/2022	22.0	17.8
Indianapolis - W. 18th St.	180970081	3/17/2022	37.3	20.9
Indianapolis - I-70 E	180970087	3/17/2022	26.4	20.5

<sup>13</sup> <https://www.epa.gov/air-quality-analysis/exceptional-events-design-value-tool>

Ogden Dunes	181270024	3/17/2022	16.7	15.3
South Bend - Shields Dr.	181410015	3/17/2022	19.0	16.9
Terre Haute - Lafayette Ave	181670018	3/17/2022	24.3	18.8
Larwill	181830003	3/17/2022	16.5	15.0
Gary - Madison St	180890031	3/18/2022	23.5	16.0
Indianapolis - W. 18th St.	180970081	3/18/2022	21.7	20.9
Larwill	181830003	3/18/2022	16.6	15.0
Columbus - Rocky Ford Drive	180050008	5/11/2022	14.8	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	5/11/2022	17.5	17.0
Muncie - Central HS	180350006	5/11/2022	15.4	13.2
Jasper - Post Office	180372001	5/11/2022	19.1	15.7
Elkhart - Prairie St	180390008	5/11/2022	17.9	16.3
Fishers	180570007	5/11/2022	14.4	13.8
Carmel - Hazel Dell Parkway	180570008	5/11/2022	17.5	16.5
Mechanicsburg	180650003	5/11/2022	16.2	15.5
East Chicago - Franklin/Washington Sch	180890006	5/11/2022	21.6	16.1
Gary - Madison St	180890031	5/11/2022	24.5	16.0
East Chicago - Marina	180890034	5/11/2022	23.3	18.0
Hammond-167th St	180890036	5/11/2022	22.0	16.3
Michigan City - Marsh Elem. Sch.	180910011	5/11/2022	19.1	15.9
Anderson - Eastside Elem	180950011	5/11/2022	16.5	15.4
Indianapolis - Washington Park	180970078	5/11/2022	17.9	17.8
Indianapolis - School 21	180970084	5/11/2022	17.0	15.5
Bloomington - Binford	181050003	5/11/2022	16.1	13.9
Ogden Dunes	181270024	5/11/2022	21.7	15.3
South Bend - Shields Dr.	181410015	5/11/2022	18.0	16.9
Dale	181470009	5/11/2022	19.0	13.9
Lafayette - Greenbush St	181570008	5/11/2022	16.8	15.1
Evansville - U of E	181630016	5/11/2022	20.3	15.5
Evansville - Buena Vista	181630021	5/11/2022	21.0	16.4
Larwill	181830003	5/11/2022	16.1	15.0
South Bend - Shields Dr.	181410015	5/19/2022	16.9	16.9
Larwill	181830003	5/19/2022	18.1	15.0
Indianapolis - W. 18th St.	180970081	6/6/2022	21.3	20.9
Plummer	180550001	6/13/2022	16.9	14.7
Bloomington - Binford	181050003	6/13/2022	15.8	13.9
Evansville - U of E	181630016	6/13/2022	15.0	15.0
Columbus - Rocky Ford Drive	180050008	6/14/2022	23.3	13.7

Jeffersonville - Bates-Bowyer Ave	180190010	6/14/2022	23.6	17.0
Elkhart - Prairie St	180390008	6/14/2022	17.6	16.3
Fishers	180570007	6/14/2022	21.6	13.8
Mechanicsburg	180650003	6/14/2022	20.0	15.5
Kokomo - E. Vaile Ave	180670004	6/14/2022	19.4	14.7
Anderson - Eastside Elem	180950011	6/14/2022	18.6	15.4
Indianapolis - Washington Park	180970078	6/14/2022	22.3	17.8
Indianapolis - W. 18th St.	180970081	6/14/2022	21.6	20.9
Indianapolis- I-70 E	180970087	6/14/2022	23.3	20.5
Bloomington - Binford	181050003	6/14/2022	26.7	13.9
Ogden Dunes	181270024	6/14/2022	21.9	15.3
Lafayette - Greenbush St	181570008	6/14/2022	21.1	15.1
Evansville - Buena Vista	181630021	6/14/2022	27.5	16.4
Terre Haute - Lafayette Ave	181670018	6/14/2022	25.5	18.8
Columbus - Rocky Ford Drive	180050008	6/15/2022	30.8	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/15/2022	25.6	17.0
Elkhart - Prairie St	180390008	6/15/2022	37.1	16.3
Fishers	180570007	6/15/2022	34.0	13.8
Mechanicsburg	180650003	6/15/2022	32.7	15.5
Kokomo - E. Vaile Ave	180670004	6/15/2022	34.7	14.7
East Chicago - Marina	180890034	6/15/2022	35.7	18.0
Hammond-167th St	180890036	6/15/2022	27.2	16.3
Anderson - Eastside Elem	180950011	6/15/2022	31.1	15.4
Indianapolis - Washington Park	180970078	6/15/2022	32.6	17.8
Indianapolis - W. 18th St.	180970081	6/15/2022	31.0	20.9
Indianapolis - I-70 E	180970087	6/15/2022	32.5	20.5
Bloomington - Binford	181050003	6/15/2022	33.3	13.9
Ogden Dunes	181270024	6/15/2022	31.7	15.3
South Bend - Shields Dr.	181410015	6/15/2022	28.8	16.9
Lafayette - Greenbush St	181570008	6/15/2022	33.2	15.1
Evansville - Buena Vista	181630021	6/15/2022	26.8	16.4
Terre Haute - Lafayette Ave	181670018	6/15/2022	33.1	18.8
Columbus - Rocky Ford Drive	180050008	6/16/2022	18.2	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/16/2022	22.7	17.0
Muncie - Central HS	180350006	6/16/2022	17.8	13.2
Jasper - Post Office	180372001	6/16/2022	21.5	15.7
Elkhart - Prairie St	180390008	6/16/2022	16.6	16.3
Plummer	180550001	6/16/2022	21.1	14.7
Fishers	180570007	6/16/2022	17.1	13.8

Carmel - Hazel Dell Parkway	180570008	6/16/2022	26.8	16.5
Mechanicsburg	180650003	6/16/2022	19.7	15.5
Kokomo - E. Vaile Ave	180670004	6/16/2022	16.0	14.7
Gary - Madison St	180890031	6/16/2022	16.5	16.0
Anderson - Eastside Elem	180950011	6/16/2022	17.8	15.4
Indianapolis - Washington Park	180970078	6/16/2022	18.8	17.8
Indianapolis - School 21	180970084	6/16/2022	19.5	15.5
Indianapolis - I-70 E	180970087	6/16/2022	20.6	20.5
Bloomington - Binford	181050003	6/16/2022	21.1	13.9
Lafayette - Greenbush St	181570008	6/16/2022	16.2	15.1
Evansville - U of E	181630016	6/16/2022	23.7	15.5
Evansville - Buena Vista	181630021	6/16/2022	21.6	16.4
Terre Haute - Lafayette Ave	181670018	6/16/2022	19.8	18.8
Carmel - Hazel Dell Parkway	180570008	7/1/2022	20.6	16.5
Ogden Dunes	181270024	7/2/2022	16.7	15.3
Elkhart - Prairie St	180390008	7/3/2022	19.7	16.3
Hammond-167th St	180890036	7/3/2022	18.9	16.3
Indianapolis - W. 18th St.	180970081	7/3/2022	22.2	20.9
Ogden Dunes	181270024	7/3/2022	25.4	15.3
South Bend - Shields Dr.	181410015	7/3/2022	26.1	16.9
Terre Haute - Lafayette Ave	181670018	7/3/2022	33.8	18.8
Jeffersonville - Bates-Bowyer Ave	180190010	7/4/2022	21.5	17.0
Muncie - Central HS	180350006	7/4/2022	16.8	13.2
Elkhart - Prairie St	180390008	7/4/2022	24.1	16.3
Fishers	180570007	7/4/2022	17.3	13.8
Carmel - Hazel Dell Parkway	180570008	7/4/2022	21.9	16.5
East Chicago - Franklin/Washington Sch	180890006	7/4/2022	17.3	16.1
Gary - Madison St	180890031	7/4/2022	18.3	16.0
East Chicago - Marina	180890034	7/4/2022	18.9	18.0
Indianapolis - Washington Park	180970078	7/4/2022	23.1	17.8
Indianapolis - W. 18th St.	180970081	7/4/2022	30.8	20.9
Indianapolis - School 21	180970084	7/4/2022	21.2	15.5
Indianapolis - I-70 E	180970087	7/4/2022	21.9	20.5
South Bend - Shields Dr.	181410015	7/4/2022	23.0	16.9
Evansville - Buena Vista	181630021	7/4/2022	18.9	16.4
Terre Haute - Lafayette Ave	181670018	7/4/2022	20.5	18.8
Bloomington - Binford	181050003	7/6/2022	22.8	13.9
Carmel - Hazel Dell Parkway	180570008	7/21/2022	25.6	16.5

Anderson - Eastside Elem	180950011	7/21/2022	17.0	15.4
Evansville - Buena Vista	181630021	7/21/2022	20.2	16.4
Larwill	181830003	7/21/2022	16.6	15.0
Jeffersonville - Bates-Bowyer Ave	180190010	7/22/2022	20.0	17.0
Jasper - Post Office	180372001	7/22/2022	21.0	15.7
Carmel - Hazel Dell Parkway	180570008	7/22/2022	17.6	16.5
Dale	181470009	7/22/2022	23.3	13.9
Evansville - U of E	181630016	7/22/2022	23.0	15.5
Evansville - Buena Vista	181630021	7/22/2022	25.6	16.4
Jeffersonville - Bates-Bowyer Ave	180190010	7/23/2022	19.6	17.0
Jasper - Post Office	180372001	7/23/2022	20.2	15.7
Evansville - Buena Vista	181630021	7/23/2022	19.7	16.4
Indianapolis - Washington Park	180970078	9/15/2022	19.5	17.8
Indianapolis - W. 18th St.	180970081	9/15/2022	23.0	20.9
Indianapolis - W. 18th St.	180970081	9/16/2022	25.5	20.9
Fishers	180570007	9/18/2022	15.3	13.8
Larwill	181830003	9/18/2022	15.0	15.0
Indianapolis - Washington Park	180970078	10/5/2022	19.3	17.8
Indianapolis - School 21	180970084	10/5/2022	18.5	15.5
Indianapolis - I-70 E	180970087	10/5/2022	25.3	20.5
Indianapolis - Washington Park	180970078	10/6/2022	21.5	17.8
Indianapolis - W. 18th St.	180970081	10/6/2022	21.1	20.9
Bloomington - Binford	181050003	10/6/2022	13.3	12.8
Indianapolis - Washington Park	180970078	11/4/2022	20.8	17.8
Ogden Dunes	181270024	11/8/2022	126.6	15.3
Ogden Dunes	181270024	11/9/2022	52.0	15.3

**Table 11 - Smoke Influenced Days on Daily PM<sub>2.5</sub> Concentrations for 2023**

Monitor name	AQS ID	Date	Daily average (µg/m <sup>3</sup> )	Tier 2 Threshold (µg/m <sup>3</sup> )
Indianapolis - W. 18th St.	180970081	4/10/2023	22.8	20.9
Indianapolis- I-70 E	180970087	4/10/2023	27.3	20.5
Jeffersonville - Bates-Bowyer Ave	180190010	4/11/2023	18.0	17.0
Indianapolis - Washington Park	180970078	4/11/2023	23.1	17.8
Indianapolis - W. 18th St.	180970081	4/11/2023	22.4	20.9
Indianapolis - I-70 E	180970087	4/11/2023	32.3	20.5
Columbus - Rocky Ford Drive	180050008	4/12/2023	13.4	13.4
Dale	181470009	4/12/2023	13.9	13.9
Evansville - U of E	181630016	4/12/2023	19.6	15.5
Evansville - Buena Vista	181630021	4/12/2023	17.0	16.4
Columbus - Rocky Ford Drive	180050008	4/13/2023	20.5	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	4/13/2023	18.1	17.0
Indianapolis - Washington Park	180970078	4/13/2023	19.2	17.8
Indianapolis - W. 18th St.	180970081	4/13/2023	27.3	20.9
Indianapolis - I-70 E	180970087	4/13/2023	25.2	20.5
East Chicago - Marina	180890034	4/14/2023	20.2	18.0
Hammond-167th St	180890036	4/14/2023	17.3	16.3
Indianapolis - W. 18th St.	180970081	4/14/2023	31.3	20.9
Indianapolis - I-70 E	180970087	4/14/2023	21.5	20.5
Gary - Madison St	180890031	5/9/2023	17.0	16.0
East Chicago - Franklin/Washington Sch	180890006	5/12/2023	19.5	16.1
Gary - Madison St	180890031	5/12/2023	17.5	16.0
Hammond-167th St	180890036	5/12/2023	16.3	16.3
Hammond-167th St	180890036	5/13/2023	20.0	16.3
Ogden Dunes	181270024	5/13/2023	18.5	15.3
Elkhart - Prairie St	180390008	5/19/2023	18.6	16.3
Kokomo - E. Vaile Ave	180670004	5/19/2023	15.4	14.7
East Chicago - Marina	180890034	5/19/2023	22.2	18
Hammond-167th St	180890036	5/19/2023	19.7	16.3
Indianapolis - Washington Park	180970078	5/19/2023	17.8	17.8
Indianapolis - W. 18th St.	180970081	5/19/2023	30.1	20.9
Indianapolis - I-70 E	180970087	5/19/2023	20.9	20.5
Ogden Dunes	181270024	5/19/2023	19.6	15.3
South Bend - Shields Dr.	181410015	5/19/2023	19.5	16.9

Lafayette - Greenbush St	181570008	5/19/2023	18.4	15.1
Larwill	181830003	5/19/2023	16.2	15.0
Columbus - Rocky Ford Drive	180050008	5/20/2023	17.7	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	5/20/2023	25.1	17.0
Mechanicsburg	180650003	5/20/2023	18.7	15.5
Anderson - Eastside Elem	180950011	5/20/2023	18.1	15.4
Indianapolis - Washington Park	180970078	5/20/2023	19.3	17.8
Indianapolis - W. 18th St.	180970081	5/20/2023	22.2	20.9
Indianapolis - I-70 E	180970087	5/20/2023	20.5	20.5
Bloomington - Binford	181050003	5/20/2023	20.4	13.9
Evansville - Buena Vista	181630021	5/20/2023	21.2	16.4
Kokomo - E. Vaile Ave	180670004	5/24/2023	15.7	14.7
Indianapolis - School 21	180970084	5/24/2023	15.9	15.5
Bloomington - Binford	181050003	5/24/2023	13.5	12.8
Evansville - U of E	181630016	5/24/2023	15.0	15.0
Gary - Madison St	180890031	5/27/2023	22.2	16.0
Gary - Madison St	180890031	5/30/2023	26.1	16.0
Gary - Madison St	180890031	5/30/2023	26.4	16.0
Gary - Madison St	180890031	6/2/2023	40.8	16.0
Jeffersonville - Bates-Bowyer Ave	180190010	6/3/2023	18.8	17.0
Mechanicsburg	180650003	6/3/2023	16.2	15.5
Anderson - Eastside Elem	180950011	6/3/2023	15.4	15.4
Larwill	181830003	6/3/2023	16.9	15.0
Columbus - Rocky Ford Drive	180050008	6/4/2023	17.2	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/4/2023	29.5	17.0
New Albany	180430008	6/4/2023	20.9	20.9
Plummer	180550001	6/4/2023	29.1	14.7
East Chicago - Marina	180890034	6/4/2023	19.7	18.0
Hammond-167th St	180890036	6/4/2023	19.2	16.3
Bloomington - Binford	181050003	6/4/2023	24.9	13.9
Evansville - Buena Vista	181630021	6/4/2023	21.9	16.4
Terre Haute - Lafayette Ave	181670018	6/4/2023	18.9	18.8
Columbus - Rocky Ford Drive	180050008	6/5/2023	15.9	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/5/2023	38.8	17.0
Muncie - Central HS	180350006	6/5/2023	26.1	13.2
Fishers	180570007	6/5/2023	19.8	13.8
Carmel - Hazel Dell Parkway	180570008	6/5/2023	20.7	16.5
Mechanicsburg	180650003	6/5/2023	23.3	15.5
Kokomo - E. Vaile Ave	180670004	6/5/2023	27.7	14.7

East Chicago - Franklin/Washington Sch	180890006	6/5/2023	16.9	16.1
Gary - Madison St	180890031	6/5/2023	23.2	16.0
Gary - Madison St	180890031	6/5/2023	28.3	16.0
Hammond-167th St	180890036	6/5/2023	18.3	16.3
Anderson - Eastside Elem	180950011	6/5/2023	33.3	15.4
Indianapolis - Washington Park	180970078	6/5/2023	31.9	17.8
Indianapolis - W. 18th St.	180970081	6/5/2023	21.7	20.9
Indianapolis - School 21	180970084	6/5/2023	24.0	15.5
Indianapolis - I-70 E	180970087	6/5/2023	31.3	20.5
Bloomington - Binford	181050003	6/5/2023	14.6	13.9
Ogden Dunes	181270024	6/5/2023	15.5	15.3
Dale	181470009	6/5/2023	13.9	13.9
Lafayette - Greenbush St	181570008	6/5/2023	23.1	15.1
Terre Haute - Lafayette Ave	181670018	6/5/2023	23.8	18.8
Larwill	181830003	6/5/2023	20.4	15.0
Columbus - Rocky Ford Drive	180050008	6/6/2023	34.0	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/6/2023	30.1	17.0
Elkhart - Prairie St	180390008	6/6/2023	28.1	16.3
New Albany	180430008	6/6/2023	26.3	20.9
Plummer	180550001	6/6/2023	33.8	14.7
Fishers	180570007	6/6/2023	24.2	13.8
Mechanicsburg	180650003	6/6/2023	34.5	15.5
East Chicago - Marina	180890034	6/6/2023	22.8	18.0
Hammond-167th St	180890036	6/6/2023	26.1	16.3
Anderson - Eastside Elem	180950011	6/6/2023	34.8	15.4
Indianapolis - Washington Park	180970078	6/6/2023	38.8	17.8
Indianapolis - W. 18th St.	180970081	6/6/2023	42.8	20.9
Indianapolis - I-70 E	180970087	6/6/2023	38.6	20.5
Bloomington - Binford	181050003	6/6/2023	40.9	13.9
Ogden Dunes	181270024	6/6/2023	22.9	15.3
South Bend - Shields Dr.	181410015	6/6/2023	31.2	16.9
Lafayette - Greenbush St	181570008	6/6/2023	26.9	15.1
Evansville - Buena Vista	181630021	6/6/2023	27.5	16.4
Terre Haute - Lafayette Ave	181670018	6/6/2023	27.7	18.8
Larwill	181830003	6/6/2023	31.1	15.0
Columbus - Rocky Ford Drive	180050008	6/7/2023	25.7	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/7/2023	23.3	17.0
Elkhart - Prairie St	180390008	6/7/2023	21.7	16.3
New Albany	180430008	6/7/2023	23.5	20.9

Plummer	180550001	6/7/2023	30.8	14.7
Fishers	180570007	6/7/2023	28.8	13.8
Mechanicsburg	180650003	6/7/2023	44.9	15.5
East Chicago - Marina	180890034	6/7/2023	19.7	18.0
Hammond-167th St	180890036	6/7/2023	18.9	16.3
Anderson - Eastside Elem	180950011	6/7/2023	42.8	15.4
Indianapolis - Washington Park	180970078	6/7/2023	42.5	17.8
Indianapolis - W. 18th St.	180970081	6/7/2023	43.5	20.9
Indianapolis - I-70 E	180970087	6/7/2023	43.7	20.5
Bloomington - Binford	181050003	6/7/2023	32.1	13.9
Ogden Dunes	181270024	6/7/2023	16.5	15.3
South Bend - Shields Dr.	181410015	6/7/2023	27.6	16.9
Lafayette - Greenbush St	181570008	6/7/2023	23.2	15.1
Evansville - Buena Vista	181630021	6/7/2023	30.2	16.4
Terre Haute - Lafayette Ave	181670018	6/7/2023	27.2	18.8
Larwill	181830003	6/7/2023	37.3	15.0
Columbus - Rocky Ford Drive	180050008	6/8/2023	25.9	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/8/2023	27.9	17.0
Muncie - Central HS	180350006	6/8/2023	19.3	13.2
Jasper - Post Office	180372001	6/8/2023	26.0	15.7
Elkhart - Prairie St	180390008	6/8/2023	17.4	16.3
New Albany	180430008	6/8/2023	22.4	20.9
Plummer	180550001	6/8/2023	21.4	14.7
Fishers	180570007	6/8/2023	20.1	13.8
Carmel - Hazel Dell Parkway	180570008	6/8/2023	20.0	16.5
Mechanicsburg	180650003	6/8/2023	19.5	15.5
East Chicago - Franklin/Washington Sch	180890006	6/8/2023	19.8	16.1
Gary - Madison St	180890031	6/8/2023	27.4	16.0
East Chicago - Marina	180890034	6/8/2023	19.7	18.0
Hammond-167th St	180890036	6/8/2023	24.7	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/8/2023	16.9	15.9
Anderson - Eastside Elem	180950011	6/8/2023	27.9	15.4
Indianapolis - Washington Park	180970078	6/8/2023	28.6	17.8
Indianapolis - W. 18th St.	180970081	6/8/2023	21.0	20.9
Indianapolis - School 21	180970084	6/8/2023	21.8	15.5
Indianapolis - I-70 E	180970087	6/8/2023	30.7	20.5
Bloomington - Binford	181050003	6/8/2023	21.3	13.9
Ogden Dunes	181270024	6/8/2023	15.7	15.3
Dale	181470009	6/8/2023	27.9	13.9

Lafayette - Greenbush St	181570008	6/8/2023	18.8	15.1
Evansville - U of E	181630016	6/8/2023	24.6	15.5
Evansville - Buena Vista	181630021	6/8/2023	29.7	16.4
Terre Haute - Lafayette Ave	181670018	6/8/2023	19.1	18.8
Larwill	181830003	6/8/2023	21.7	15.0
Columbus - Rocky Ford Drive	180050008	6/9/2023	14.4	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/9/2023	25.1	17.0
Elkhart - Prairie St	180390008	6/9/2023	28.5	16.3
Plummer	180550001	6/9/2023	18.0	14.7
Fishers	180570007	6/9/2023	21.5	13.8
Mechanicsburg	180650003	6/9/2023	31.4	15.5
East Chicago - Marina	180890034	6/9/2023	20.3	18.0
Hammond-167th St	180890036	6/9/2023	18.7	16.3
Anderson - Eastside Elem	180950011	6/9/2023	33.9	15.4
Indianapolis - Washington Park	180970078	6/9/2023	27.2	17.8
Indianapolis - W. 18th St.	180970081	6/9/2023	27.7	20.9
Indianapolis - I-70 E	180970087	6/9/2023	27.8	20.5
Bloomington - Binford	181050003	6/9/2023	16.7	13.9
Ogden Dunes	181270024	6/9/2023	16.4	15.3
South Bend - Shields Dr.	181410015	6/9/2023	30.8	16.9
Lafayette - Greenbush St	181570008	6/9/2023	20.1	15.1
Evansville - Buena Vista	181630021	6/9/2023	25.7	16.4
Larwill	181830003	6/9/2023	32.0	15.0
Columbus - Rocky Ford Drive	180050008	6/10/2023	13.5	13.4
Jeffersonville - Bates-Bowyer Ave	180190010	6/10/2023	26.6	17.0
Elkhart - Prairie St	180390008	6/10/2023	19.0	16.3
Fishers	180570007	6/10/2023	26.8	13.8
Mechanicsburg	180650003	6/10/2023	38.4	15.5
Kokomo - E. Vaile Ave	180670004	6/10/2023	23.9	14.7
Anderson - Eastside Elem	180950011	6/10/2023	38.1	15.4
Indianapolis - Washington Park	180970078	6/10/2023	41.0	17.8
Indianapolis - W. 18th St.	180970081	6/10/2023	36.1	20.9
Indianapolis - I-70 E	180970087	6/10/2023	38.1	20.5
Bloomington - Binford	181050003	6/10/2023	13.6	12.8
South Bend - Shields Dr.	181410015	6/10/2023	21.4	16.9
Lafayette - Greenbush St	181570008	6/10/2023	20.6	15.1
Evansville - Buena Vista	181630021	6/10/2023	22.4	16.4
Larwill	181830003	6/10/2023	22.6	15.0
Columbus - Rocky Ford Drive	180050008	6/11/2023	14.1	13.7

Muncie - Central HS	180350006	6/11/2023	17.4	13.2
Elkhart - Prairie St	180390008	6/11/2023	17.5	16.3
Plummer	180550001	6/11/2023	14.9	14.7
Carmel - Hazel Dell Parkway	180570008	6/11/2023	17.5	16.5
Mechanicsburg	180650003	6/11/2023	16.1	15.5
Kokomo - E. Vaile Ave	180670004	6/11/2023	15.1	14.7
Anderson - Eastside Elem	180950011	6/11/2023	18.6	15.4
Indianapolis - Washington Park	180970078	6/11/2023	18.0	17.8
Indianapolis - School 21	180970084	6/11/2023	16.8	15.5
Larwill	181830003	6/11/2023	15.1	15.0
Bloomington - Binford	181050003	6/14/2023	14.2	13.9
Dale	181470009	6/14/2023	19.9	13.9
Columbus - Rocky Ford Drive	180050008	6/15/2023	19.0	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/15/2023	43.5	17.0
New Albany	180430008	6/15/2023	29.0	20.9
Plummer	180550001	6/15/2023	23.2	14.7
Fishers	180570007	6/15/2023	15.8	13.8
Mechanicsburg	180650003	6/15/2023	19.4	15.5
Kokomo - E. Vaile Ave	180670004	6/15/2023	17.5	14.7
East Chicago - Marina	180890034	6/15/2023	19.8	18.0
Hammond-167th St	180890036	6/15/2023	17.7	16.3
Anderson - Eastside Elem	180950011	6/15/2023	20.1	15.4
Indianapolis - Washington Park	180970078	6/15/2023	23.6	17.8
Indianapolis - W. 18th St.	180970081	6/15/2023	29.0	20.9
Indianapolis - I-70 E	180970087	6/15/2023	27.3	20.5
Bloomington - Binford	181050003	6/15/2023	28.5	13.9
South Bend - Shields Dr.	181410015	6/15/2023	17.8	16.9
Terre Haute - Lafayette Ave	181670018	6/15/2023	22.4	18.8
Larwill	181830003	6/15/2023	18.7	15.0
Columbus - Rocky Ford Drive	180050008	6/16/2023	14.9	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/16/2023	24.1	17.0
Plummer	180550001	6/16/2023	17.4	14.7
Mechanicsburg	180650003	6/16/2023	16.0	15.5
Anderson - Eastside Elem	180950011	6/16/2023	17.9	15.4
Indianapolis - I-70 E	180970087	6/16/2023	21.2	20.5
Bloomington - Binford	181050003	6/16/2023	18.0	13.9
Evansville - Buena Vista	181630021	6/16/2023	23.3	16.4
Larwill	181830003	6/16/2023	17.7	15.0
Columbus - Rocky Ford Drive	180050008	6/17/2023	24.0	13.7

Jeffersonville - Bates-Bowyer Ave	180190010	6/17/2023	25.4	17.0
Muncie - Central HS	180350006	6/17/2023	25.2	13.2
Jasper - Post Office	180372001	6/17/2023	19.0	15.7
Elkhart - Prairie St	180390008	6/17/2023	23.8	16.3
New Albany	180430008	6/17/2023	24.6	20.9
Plummer	180550001	6/17/2023	18.9	14.7
Fishers	180570007	6/17/2023	21.7	13.8
Carmel - Hazel Dell Parkway	180570008	6/17/2023	22.0	16.5
Mechanicsburg	180650003	6/17/2023	22.7	15.5
Kokomo - E. Vaile Ave	180670004	6/17/2023	22.8	14.7
East Chicago - Franklin/Washington Sch	180890006	6/17/2023	20.0	16.1
Gary - Madison St	180890031	6/17/2023	28.8	16.0
East Chicago - Marina	180890034	6/17/2023	19.7	18.0
Hammond-167th St	180890036	6/17/2023	29.0	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/17/2023	18.6	15.9
Anderson - Eastside Elem	180950011	6/17/2023	29.1	15.4
Indianapolis - Washington Park	180970078	6/17/2023	32.2	17.8
Indianapolis - W. 18th St.	180970081	6/17/2023	25.3	20.9
Indianapolis - School 21	180970084	6/17/2023	24.2	15.5
Indianapolis - I-70 E	180970087	6/17/2023	33.2	20.5
Bloomington - Binford	181050003	6/17/2023	27.1	13.9
Ogden Dunes	181270024	6/17/2023	22.3	15.3
South Bend - Shields Dr.	181410015	6/17/2023	23.4	16.9
Evansville - U of E	181630016	6/17/2023	18.1	15.5
Evansville - Buena Vista	181630021	6/17/2023	21.1	16.4
Terre Haute - Lafayette Ave	181670018	6/17/2023	27.1	18.8
Larwill	181830003	6/17/2023	21.7	15.0
Columbus - Rocky Ford Drive	180050008	6/18/2023	22.8	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/18/2023	31.8	17.0
Elkhart - Prairie St	180390008	6/18/2023	30.2	16.3
New Albany	180430008	6/18/2023	27.0	20.9
Plummer	180550001	6/18/2023	27.4	14.7
Fishers	180570007	6/18/2023	23.8	13.8
Mechanicsburg	180650003	6/18/2023	29.0	15.5
Kokomo - E. Vaile Ave	180670004	6/18/2023	24.7	14.7
East Chicago - Marina	180890034	6/18/2023	29.6	18
Hammond-167th St	180890036	6/18/2023	29.6	16.3
Anderson - Eastside Elem	180950011	6/18/2023	30.9	15.4
Indianapolis - Washington Park	180970078	6/18/2023	33.5	17.8

Indianapolis - W. 18th St.	180970081	6/18/2023	39.3	20.9
Indianapolis - I-70 E	180970087	6/18/2023	36.2	20.5
Bloomington - Binford	181050003	6/18/2023	26.7	13.9
Ogden Dunes	181270024	6/18/2023	29.4	15.3
South Bend - Shields Dr.	181410015	6/18/2023	35.7	16.9
Lafayette - Greenbush St	181570008	6/18/2023	26.3	15.1
Evansville - Buena Vista	181630021	6/18/2023	23.7	16.4
Terre Haute - Lafayette Ave	181670018	6/18/2023	30.1	18.8
Larwill	181830003	6/18/2023	29.8	15.0
Columbus - Rocky Ford Drive	180050008	6/19/2023	16.2	13.7
Elkhart - Prairie St	180390008	6/19/2023	17.1	16.3
Plummer	180550001	6/19/2023	15.0	14.7
Fishers	180570007	6/19/2023	19.4	13.8
Mechanicsburg	180650003	6/19/2023	23.6	15.5
Kokomo - E. Vaile Ave	180670004	6/19/2023	20.7	14.7
East Chicago - Marina	180890034	6/19/2023	19.9	18.0
Hammond-167th St	180890036	6/19/2023	23.4	16.3
Anderson - Eastside Elem	180950011	6/19/2023	23.4	15.4
Indianapolis - Washington Park	180970078	6/19/2023	22.7	17.8
Indianapolis - W. 18th St.	180970081	6/19/2023	24.6	20.9
Indianapolis - I-70 E	180970087	6/19/2023	23.5	20.5
Bloomington - Binford	181050003	6/19/2023	14.1	13.9
Ogden Dunes	181270024	6/19/2023	19.1	15.3
South Bend - Shields Dr.	181410015	6/19/2023	18.9	16.9
Lafayette - Greenbush St	181570008	6/19/2023	21.6	15.1
Terre Haute - Lafayette Ave	181670018	6/19/2023	20.4	18.8
Larwill	181830003	6/19/2023	17.2	15.0
Elkhart - Prairie St	180390008	6/20/2023	16.8	16.3
East Chicago - Franklin/Washington Sch	180890006	6/20/2023	19.9	16.1
East Chicago - Marina	180890034	6/20/2023	21.5	18
Hammond-167th St	180890036	6/20/2023	22.4	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/20/2023	18.1	15.9
Ogden Dunes	181270024	6/20/2023	20.3	15.3
South Bend - Shields Dr.	181410015	6/20/2023	18.4	16.9
Elkhart - Prairie St	180390008	6/21/2023	16.3	16.3
Mechanicsburg	180650004	6/21/2023	16.6	15.5
Kokomo - E. Vaile Ave	180670004	6/21/2023	13.9	13.9
East Chicago - Marina	180890034	6/21/2023	19.2	18.0

Hammond-167th St	180890036	6/21/2023	22.6	16.3
Anderson - Eastside Elem	180950011	6/21/2023	16.3	15.4
Bloomington - Binford	181050003	6/21/2023	14.0	13.9
Ogden Dunes	181270024	6/21/2023	21.0	15.3
South Bend - Shields Dr.	181410015	6/21/2023	20.3	16.9
Larwill	181830003	6/21/2023	18.9	15.0
East Chicago - Marina	180890034	6/22/2023	20.5	18.0
Hammond-167th St	180890036	6/22/2023	23.3	16.3
Ogden Dunes	181270024	6/22/2023	18.9	15.3
East Chicago - Franklin/Washington Sch	180890006	6/23/2023	23.2	16.1
Gary - Madison St	180890031	6/23/2023	31.9	16.0
East Chicago - Marina	180890034	6/23/2023	24.4	18.0
Hammond-167th St	180890036	6/23/2023	24.8	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/23/2023	20.2	15.9
Ogden Dunes	181270024	6/23/2023	23.1	15.3
Columbus - Rocky Ford Drive	180050008	6/24/2023	18.9	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/24/2023	22.6	17.0
Plummer	180550001	6/24/2023	20.2	14.7
Hammond-167th St	180890036	6/24/2023	17.1	16.3
Bloomington - Binford	181050003	6/24/2023	20.1	13.9
Ogden Dunes	181270024	6/24/2023	15.3	15.3
Lafayette - Greenbush St	181570008	6/24/2023	18.9	15.1
Evansville - Buena Vista	181630021	6/24/2023	17.7	16.4
Terre Haute - Lafayette Ave	181670018	6/24/2023	20.5	18.8
Fishers	180570007	6/25/2023	16.8	13.8
Kokomo - E. Vaile Ave	180670004	6/25/2023	14.5	13.9
Anderson - Eastside Elem	180950011	6/25/2023	15.6	15.4
Elkhart - Prairie St	180390008	6/26/2023	21.7	16.3
Kokomo - E. Vaile Ave	180670004	6/26/2023	17.3	14.7
East Chicago - Franklin/Washington Sch	180890006	6/26/2023	28.9	16.1
Gary - Madison St	180890031	6/26/2023	30.9	16.0
East Chicago - Marina	180890034	6/26/2023	32.3	18.0
Hammond-167th St	180890036	6/26/2023	33.6	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/26/2023	27.5	15.9
Ogden Dunes	181270024	6/26/2023	30.6	15.3
South Bend - Shields Dr.	181410015	6/26/2023	21.1	16.9
Lafayette - Greenbush St	181570008	6/26/2023	18.5	15.1
Larwill	181830003	6/26/2023	15.0	15.0

Columbus - Rocky Ford Drive	180050008	6/27/2023	53.2	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/27/2023	35.8	17.0
Elkhart - Prairie St	180390008	6/27/2023	115.9	16.3
New Albany	180430008	6/27/2023	25.1	20.9
Plummer	180550001	6/27/2023	59.1	14.7
Fishers	180570007	6/27/2023	90.8	13.8
Mechanicsburg	180650003	6/27/2023	112.2	15.5
Kokomo - E. Vaile Ave	180670004	6/27/2023	114.6	14.7
East Chicago - Marina	180890034	6/27/2023	121.1	18.0
Hammond-167th St	180890036	6/27/2023	125.9	16.3
Anderson - Eastside Elem	180950011	6/27/2023	153.2	15.4
Indianapolis - Washington Park	180970078	6/27/2023	104.6	17.8
Indianapolis - W. 18th St.	180970081	6/27/2023	111.2	20.9
Indianapolis - I-70 E	180970087	6/27/2023	106.8	20.5
Bloomington - Binford	181050003	6/27/2023	62.1	13.9
Ogden Dunes	181270024	6/27/2023	97.0	15.3
South Bend - Shields Dr.	181410015	6/27/2023	145.4	16.9
Lafayette - Greenbush St	181570008	6/27/2023	117.5	15.1
Evansville - Buena Vista	181630021	6/27/2023	35.4	16.4
Terre Haute - Lafayette Ave	181670018	6/27/2023	74.3	18.8
Larwill	181830003	6/27/2023	146.3	15.0
Columbus - Rocky Ford Drive	180050008	6/28/2023	139.3	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/28/2023	98.9	17.0
Elkhart - Prairie St	180390008	6/28/2023	84.5	16.3
New Albany	180430008	6/28/2023	75.4	20.9
Plummer	180550001	6/28/2023	140.0	14.7
Fishers	180570007	6/28/2023	111.3	13.8
Mechanicsburg	180650003	6/28/2023	107.1	15.5
Kokomo - E. Vaile Ave	180670004	6/28/2023	119.0	14.7
East Chicago - Marina	180890034	6/28/2023	107.7	18.0
Hammond-167th St	180890036	6/28/2023	110.1	16.3
Anderson - Eastside Elem	180950011	6/28/2023	114.8	15.4
Indianapolis - Washington Park	180970078	6/28/2023	160.7	17.8
Indianapolis - W. 18th St.	180970081	6/28/2023	182.4	20.9
Indianapolis - I-70 E	180970087	6/28/2023	165.3	20.5
Bloomington - Binford	181050003	6/28/2023	153.1	13.9
Ogden Dunes	181270024	6/28/2023	84.8	15.3
South Bend - Shields Dr.	181410015	6/28/2023	114.1	16.9
Lafayette - Greenbush St	181570008	6/28/2023	130.6	15.1

Evansville - Buena Vista	181630021	6/28/2023	94.1	16.4
Terre Haute - Lafayette Ave	181670018	6/28/2023	156.8	18.8
Larwill	181830003	6/28/2023	121.0	15
Columbus - Rocky Ford Drive	180050008	6/29/2023	43.7	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	6/29/2023	36.2	17.0
Muncie - Central HS	180350006	6/29/2023	43.7	13.2
Jasper - Post Office	180372001	6/29/2023	22.7	15.7
Elkhart - Prairie St	180390008	6/29/2023	54.8	16.3
New Albany	180430008	6/29/2023	33.8	20.9
Plummer	180550001	6/29/2023	27.7	14.7
Fishers	180570007	6/29/2023	47.3	13.8
Carmel - Hazel Dell Parkway	180570008	6/29/2023	49.7	16.5
Mechanicsburg	180650003	6/29/2023	42.3	15.5
Kokomo - E. Vaile Ave	180670004	6/29/2023	47.0	14.7
East Chicago - Franklin/Washington Sch	180890006	6/29/2023	43.6	16.1
Gary - Madison St	180890031	6/29/2023	44.2	16.0
East Chicago - Marina	180890034	6/29/2023	43.3	18.0
Hammond-167th St	180890036	6/29/2023	47.9	16.3
Michigan City - Marsh Elem. Sch.	180910011	6/29/2023	43.5	15.9
Anderson - Eastside Elem	180950011	6/29/2023	51.0	15.4
Indianapolis - Washington Park	180970078	6/29/2023	60.4	17.8
Indianapolis - W. 18th St.	180970081	6/29/2023	53.3	20.9
Indianapolis - School 21	180970084	6/29/2023	48.3	15.5
Indianapolis - I-70 E	180970087	6/29/2023	97.6	20.5
Bloomington - Binford	181050003	6/29/2023	35.7	13.9
Ogden Dunes	181270024	6/29/2023	47.2	15.3
South Bend - Shields Dr.	181410015	6/29/2023	52.2	16.9
Dale	181470009	6/29/2023	19.8	13.9
Lafayette - Greenbush St	181570008	6/29/2023	44.7	15.1
Evansville - Buena Vista	181630021	6/29/2023	27.8	16.4
Terre Haute - Lafayette Ave	181670018	6/29/2023	28.6	18.8
Larwill	181830003	6/29/2023	50.8	15.0
Elkhart - Prairie St	180390008	6/30/2023	26.1	16.3
Kokomo - E. Vaile Ave	180670004	6/30/2023	14.0	13.9
East Chicago - Marina	180890034	6/30/2023	25.9	18.0
Hammond-167th St	180890036	6/30/2023	24.6	16.3
Ogden Dunes	181270024	6/30/2023	30.4	15.3
South Bend - Shields Dr.	181410015	6/30/2023	31.3	16.9

Larwill	181830003	6/30/2023	23.0	15.0
Ogden Dunes	181270024	7/1/2023	22.3	15.3
Hammond-167th St	180890036	7/3/2023	17.3	16.3
Lafayette - Greenbush St	181570008	7/3/2023	19.0	15.1
Columbus - Rocky Ford Drive	180050009	7/4/2023	14.8	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	7/4/2023	27.1	17.0
Elkhart - Prairie St	180390008	7/4/2023	27.6	16.3
New Albany	180430008	7/4/2023	40.7	20.9
Fishers	180570007	7/4/2023	18.0	13.8
Kokomo - E. Vaile Ave	180670004	7/4/2023	16.6	14.7
East Chicago - Marina	180890034	7/4/2023	31.3	18.0
Hammond-167th St	180890036	7/4/2023	28.7	16.3
Anderson - Eastside Elem	180950011	7/4/2023	15.6	15.4
Indianapolis - Washington Park	180970078	7/4/2023	34.2	17.8
Indianapolis - W. 18th St.	180970081	7/4/2023	43.4	20.9
Indianapolis - I-70 E	180970087	7/4/2023	34.5	20.5
Bloomington - Binford	181050003	7/4/2023	17.3	13.9
Ogden Dunes	181270024	7/4/2023	39.4	15.3
South Bend - Shields Dr.	181410015	7/4/2023	27.9	16.9
Lafayette - Greenbush St	181570008	7/4/2023	19.2	15.1
Evansville - Buena Vista	181630021	7/4/2023	27.2	16.4
Terre Haute - Lafayette Ave	181670018	7/4/2023	33.1	18.8
Jeffersonville - Bates-Bowyer Ave	180190010	7/5/2023	28.9	17.0
Muncie - Central HS	180350006	7/5/2023	15.0	13.2
New Albany	180430008	7/5/2023	32.4	20.9
Fishers	180570007	7/5/2023	17.8	13.8
Carmel - Hazel Dell Parkway	180570008	7/5/2023	35.9	16.5
Kokomo - E. Vaile Ave	180670004	7/5/2023	19.0	14.7
Anderson - Eastside Elem	180950011	7/5/2023	15.4	15.4
Indianapolis - Washington Park	180970078	7/5/2023	28.3	17.8
Indianapolis - W. 18th St.	180970081	7/5/2023	25.2	20.9
Indianapolis - School 21	180970084	7/5/2023	29.2	15.5
Indianapolis - I-70 E	180970087	7/5/2023	29.5	20.5
Bloomington - Binford	181050003	7/5/2023	15.2	13.9
Lafayette - Greenbush St	181570008	7/5/2023	15.1	15.1
Evansville - Buena Vista	181630021	7/5/2023	16.4	16.4
Jeffersonville - Bates-Bowyer Ave	180190010	7/16/2023	43.9	17.0
Jasper - Post Office	180372001	7/16/2023	47.2	15.7
Elkhart - Prairie St	180390008	7/16/2023	32.0	16.3

Plummer	180550001	7/16/2023	44.7	14.7
Fishers	180570007	7/16/2023	38.7	13.8
Mechanicsburg	180650003	7/16/2023	46.2	15.5
Kokomo - E. Vaile Ave	180670004	7/16/2023	43.4	14.7
East Chicago - Marina	180890034	7/16/2023	51.9	18.0
Hammond-167th St	180890036	7/16/2023	49.4	16.3
Anderson - Eastside Elem	180950011	7/16/2023	45.5	15.4
Indianapolis - Washington Park	180970078	7/16/2023	43.5	17.8
Indianapolis - W. 18th St.	180970081	7/16/2023	48.9	20.9
Indianapolis - I-70 E	180970087	7/16/2023	46.0	20.5
Bloomington - Binford	181050003	7/16/2023	42.8	13.9
Ogden Dunes	181270024	7/16/2023	39.6	15.3
South Bend - Shields Dr.	181410015	7/16/2023	39.6	16.9
Lafayette - Greenbush St	181570008	7/16/2023	47.9	15.1
Terre Haute - Lafayette Ave	181670018	7/16/2023	42.5	18.8
Larwill	181830003	7/16/2023	55.1	15.0
Jeffersonville - Bates-Bowyer Ave	180190010	7/17/2023	26.1	17.0
Jasper - Post Office	180372001	7/17/2023	18.6	15.7
Elkhart - Prairie St	180390008	7/17/2023	25.1	16.3
New Albany	180430008	7/17/2023	25.8	20.9
Plummer	180550001	7/17/2023	18.4	14.7
Fishers	180570007	7/17/2023	36.5	13.8
Carmel - Hazel Dell Parkway	180570008	7/17/2023	35.2	16.5
Mechanicsburg	180650003	7/17/2023	47.8	15.5
East Chicago - Franklin/Washington Sch	180890006	7/17/2023	19.3	16.1
East Chicago - Marina	180890034	7/17/2023	18.9	18.0
Hammond-167th St	180890036	7/17/2023	23.8	16.3
Michigan City - Marsh Elem. Sch.	180910011	7/17/2023	17.5	15.9
Anderson - Eastside Elem	180950011	7/17/2023	46.7	15.4
Indianapolis - Washington Park	180970078	7/17/2023	36.9	17.8
Indianapolis - W. 18th St.	180970081	7/17/2023	32.0	20.9
Indianapolis - I-70 E	180970087	7/17/2023	38.1	20.5
Bloomington - Binford	181050003	7/17/2023	22.2	13.9
Ogden Dunes	181270024	7/17/2023	21.2	15.3
South Bend - Shields Dr.	181410015	7/17/2023	23.7	16.9
Dale	181470009	7/17/2023	18.3	13.9
Evansville - U of E	181630016	7/17/2023	15.8	15.5
Terre Haute - Lafayette Ave	181670018	7/17/2023	22.0	18.8
Larwill	181830003	7/17/2023	36.2	15.0

Columbus - Rocky Ford Drive	180050008	7/18/2023	16.6	13.7
Plummer	180550001	7/18/2023	16.4	14.7
Fishers	180570007	7/18/2023	18.2	13.8
Mechanicsburg	180650003	7/18/2023	21.2	15.5
Anderson - Eastside Elem	180950011	7/18/2023	20.3	15.4
Indianapolis - Washington Park	180970078	7/18/2023	21.0	17.8
Indianapolis - W. 18th St.	180970081	7/18/2023	24.3	20.9
Indianapolis - I-70 E	180970087	7/18/2023	21.7	20.5
Bloomington - Binford	181050003	7/18/2023	16.0	13.9
Terre Haute - Lafayette Ave	181670018	7/18/2023	23.7	18.8
Bloomington - Binford	181050003	7/19/2023	14.5	13.9
Gary - Madison St	180890031	7/23/2023	16.3	16.0
Elkhart - Prairie St	180390008	7/24/2023	21.2	16.3
Kokomo - E. Vaile Ave	180670004	7/24/2023	15.1	14.7
East Chicago - Marina	180890034	7/24/2023	25.0	18.0
Hammond-167th St	180890036	7/24/2023	26.5	16.3
South Bend - Shields Dr.	181410015	7/24/2023	25.3	16.9
Lafayette - Greenbush St	181570008	7/24/2023	16.2	15.1
Larwill	181830003	7/24/2023	19.7	15
Columbus - Rocky Ford Drive	180050008	7/25/2023	17.4	13.7
Elkhart - Prairie St	180390008	7/25/2023	43.7	16.3
Fishers	180570007	7/25/2023	31.0	13.8
Mechanicsburg	180650003	7/25/2023	30.0	15.5
Kokomo - E. Vaile Ave	180670004	7/25/2023	41.9	14.7
East Chicago - Marina	180890034	7/25/2023	50.5	18.0
Hammond-167th St	180890036	7/25/2023	44.7	16.3
Anderson - Eastside Elem	180950011	7/25/2023	38.8	15.4
Indianapolis - Washington Park	180970078	7/25/2023	33.3	17.8
Indianapolis - W. 18th St.	180970081	7/25/2023	34.9	20.9
Indianapolis - I-70 E	180970087	7/25/2023	33.8	20.5
Bloomington - Binford	181050003	7/25/2023	16.7	13.9
South Bend - Shields Dr.	181410015	7/25/2023	52.9	16.9
Lafayette - Greenbush St	181570008	7/25/2023	35.5	15.1
Terre Haute - Lafayette Ave	181670018	7/25/2023	18.8	18.8
Larwill	181830003	7/25/2023	45.7	15.0
Columbus - Rocky Ford Drive	180050009	7/26/2023	16.3	13.7
Muncie - Central HS	180350006	7/26/2023	19.0	13.2
Elkhart - Prairie St	180390008	7/26/2023	20.3	16.3
Plummer	180550001	7/26/2023	15.1	14.7

Fishers	180570007	7/26/2023	18.2	13.8
Mechanicsburg	180650003	7/26/2023	17.3	15.5
Kokomo - E. Vaile Ave	180670004	7/26/2023	18.0	14.7
East Chicago - Franklin/Washington Sch	180890006	7/26/2023	19.2	16.1
Gary - Madison St	180890031	7/26/2023	20.8	16.0
East Chicago - Marina	180890034	7/26/2023	21.3	18.0
Hammond-167th St	180890036	7/26/2023	17.6	16.3
Michigan City - Marsh Elem. Sch.	180910011	7/26/2023	18.3	15.9
Anderson - Eastside Elem	180950011	7/26/2023	17.9	15.4
Bloomington - Binford	181050003	7/26/2023	14.5	13.9
South Bend - Shields Dr.	181410015	7/26/2023	20.3	16.9
Evansville - U of E	181630016	7/26/2023	15.5	15.5
Evansville - Buena Vista	181630021	7/26/2023	17.0	16.4
Larwill	181830003	7/26/2023	24.8	15.0
Columbus - Rocky Ford Drive	180050008	7/27/2023	21.1	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	7/27/2023	19.4	17.0
Jasper - Post Office	180372001	7/27/2023	21.9	15.7
Plummer	180550001	7/27/2023	15.3	14.7
Fishers	180570007	7/27/2023	22.6	13.8
Kokomo - E. Vaile Ave	180670004	7/27/2023	18.5	14.7
Anderson - Eastside Elem	180950011	7/27/2023	19.5	15.4
Indianapolis - Washington Park	180970078	7/27/2023	18.9	17.8
Indianapolis - W. 18th St.	180970081	7/27/2023	21.8	20.9
Bloomington - Binford	181050003	7/27/2023	15.4	13.9
Lafayette - Greenbush St	181570008	7/27/2023	17.9	15.1
Evansville - Buena Vista	181630021	7/27/2023	19.3	16.4
Terre Haute - Lafayette Ave	181670018	7/27/2023	20.4	18.8
Columbus - Rocky Ford Drive	180050008	7/28/2023	17.4	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	7/28/2023	20.5	17.0
Jasper - Post Office	180372001	7/28/2023	22.5	15.7
Plummer	180550001	7/28/2023	16.1	14.7
Fishers	180570007	7/28/2023	14.6	13.8
Bloomington - Binford	181050003	7/28/2023	13.9	13.9
Evansville - Buena Vista	181630021	7/28/2023	20.6	16.4
Columbus - Rocky Ford Drive	180050008	8/2/2023	13.6	13.4
Jeffersonville - Bates-Bowyer Ave	180190010	8/2/2023	17.3	17.0
Fishers	180570007	8/2/2023	14.8	13.8
Mechanicsburg	180650003	8/2/2023	17.4	15.5

Kokomo - E. Vaile Ave	180670004	8/2/2023	14.7	14.7
Anderson - Eastside Elem	180950011	8/2/2023	17.3	15.4
Larwill	181830003	8/2/2023	16.4	15.0
Elkhart - Prairie St	180390008	8/3/2023	19.0	16.3
Fishers	180570007	8/3/2023	14.2	13.8
Mechanicsburg	180650003	8/3/2023	16.8	15.5
Kokomo - E. Vaile Ave	180670004	8/3/2023	14.3	13.9
Anderson - Eastside Elem	180950011	8/3/2023	17.7	15.4
Ogden Dunes	181270024	8/3/2023	20.4	15.3
South Bend - Shields Dr.	181410015	8/3/2023	21.1	16.9
Larwill	181830003	8/3/2023	22.3	15.0
Columbus - Rocky Ford Drive	180050008	8/4/2023	16.0	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/4/2023	16.7	16.6
Muncie - Central HS	180350006	8/4/2023	16.2	13.2
Elkhart - Prairie St	180390008	8/4/2023	17.5	16.3
Fishers	180570007	8/4/2023	14.5	13.8
Carmel - Hazel Dell Parkway	180570008	8/4/2023	16.5	16.5
Kokomo - E. Vaile Ave	180670004	8/4/2023	15.7	14.7
Gary - Madison St	180890031	8/4/2023	23.8	16.0
Michigan City - Marsh Elem. Sch.	180910011	8/4/2023	15.9	15.9
Anderson - Eastside Elem	180950011	8/4/2023	15.5	15.4
Indianapolis - Washington Park	180970078	8/4/2023	18.9	17.8
Indianapolis - School 21	180970084	8/4/2023	19.2	15.5
Indianapolis - I-70 E	180970087	8/4/2023	23.6	20.5
Bloomington - Binford	181050003	8/4/2023	13.9	13.9
South Bend - Shields Dr.	181410015	8/4/2023	18.1	16.9
Larwill	181830003	8/4/2023	16.5	15
Elkhart - Prairie St	180390008	8/5/2023	20.4	16.3
Fishers	180570007	8/5/2023	15.7	13.8
Mechanicsburg	180650003	8/5/2023	21.6	15.5
Kokomo - E. Vaile Ave	180670004	8/5/2023	16.8	14.7
Hammond-167th St	180890036	8/5/2023	17.5	16.3
Anderson - Eastside Elem	180950011	8/5/2023	20.4	15.4
Ogden Dunes	181270024	8/5/2023	19.3	15.3
South Bend - Shields Dr.	181410015	8/5/2023	21.1	16.9
Larwill	181830003	8/5/2023	20.8	15.0
Ogden Dunes	181270024	8/9/2023	15.5	15.3
Michigan City - Marsh Elem. Sch.	180910011	8/10/2023	16.6	15.9
Ogden Dunes	181270024	8/10/2023	16.0	15.3

Fishers	180570007	8/18/2023	15.4	13.8
East Chicago - Marina	180890034	8/18/2023	20.4	18.0
Hammond-167th St	180890036	8/18/2023	17.6	16.3
Anderson - Eastside Elem	180950011	8/18/2023	15.9	15.4
Indianapolis - Washington Park	180970078	8/18/2023	19.6	17.8
Ogden Dunes	181270024	8/18/2023	18.0	15.3
South Bend - Shields Dr.	181410015	8/18/2023	18.0	16.9
Larwill	181830003	8/18/2023	15.8	15.0
Columbus - Rocky Ford Drive	180050008	8/19/2023	14.0	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/19/2023	16.9	16.6
Muncie - Central HS	180350006	8/19/2023	17.8	13.2
Elkhart - Prairie St	180390008	8/19/2023	19.1	16.3
Fishers	180570007	8/19/2023	18.8	13.8
Carmel - Hazel Dell Parkway	180570008	8/19/2023	17.8	16.5
Kokomo - E. Vaile Ave	180670004	8/19/2023	15.9	14.7
Anderson - Eastside Elem	180950011	8/19/2023	20.8	15.4
Indianapolis - Washington Park	180970078	8/19/2023	25.4	17.8
Indianapolis - School 21	180970084	8/19/2023	19.5	15.5
Indianapolis - I-70 E	180970087	8/19/2023	29.2	20.5
Ogden Dunes	181270024	8/19/2023	16.4	15.3
South Bend - Shields Dr.	181410015	8/19/2023	18.8	16.9
Lafayette - Greenbush St	181570008	8/19/2023	16.0	15.1
Larwill	181830003	8/19/2023	16.1	15.0
Fishers	180570007	8/20/2023	13.8	13.8
Larwill	181830003	8/20/2023	15.0	15.0
Columbus - Rocky Ford Drive	180050008	8/21/2023	14.1	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/21/2023	17.1	17.0
Jasper - Post Office	180372001	8/21/2023	18.1	15.7
Elkhart - Prairie St	180390008	8/21/2023	18.8	16.3
Fishers	180570007	8/21/2023	14.9	13.8
Mechanicsburg	180650003	8/21/2023	15.5	15.5
East Chicago - Marina	180890034	8/21/2023	23.2	18.0
Hammond-167th St	180890036	8/21/2023	20.5	16.3
Ogden Dunes	181270024	8/21/2023	19.3	15.3
South Bend - Shields Dr.	181410015	8/21/2023	21.0	16.9
Evansville - Buena Vista	181630021	8/21/2023	17.9	16.4
Terre Haute - Lafayette Ave	181670018	8/21/2023	18.9	18.8
Larwill	181830003	8/21/2023	17.6	15.0
Columbus - Rocky Ford Drive	180050008	8/22/2023	17.5	13.7

Jeffersonville - Bates-Bowyer Ave	180190010	8/22/2023	20.7	17.0
Jasper - Post Office	180372001	8/22/2023	17.6	15.7
New Albany	180430008	8/22/2023	21.3	20.9
Plummer	180550001	8/22/2023	16.7	14.7
Fishers	180570007	8/22/2023	14.3	13.8
East Chicago - Franklin/Washington Sch	180890006	8/22/2023	17.6	16.1
Gary - Madison St	180890031	8/22/2023	16.2	16.0
Hammond-167th St	180890036	8/22/2023	16.2	16.2
Indianapolis - Washington Park	180970078	8/22/2023	17.9	17.8
Indianapolis - School 21	180970084	8/22/2023	17.1	15.5
Indianapolis - I-70 E	180970087	8/22/2023	20.7	20.5
Bloomington - Binford	181050003	8/22/2023	18.5	13.9
Ogden Dunes	181270024	8/22/2023	16.1	15.3
Dale	181470009	8/22/2023	17.3	13.9
Evansville - Buena Vista	181630021	8/22/2023	19.9	16.4
Columbus - Rocky Ford Drive	180050008	8/23/2023	15.6	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/23/2023	21.1	17.0
Jasper - Post Office	180372001	8/23/2023	23.9	15.7
Plummer	180550001	8/23/2023	18.1	14.7
Fishers	180570007	8/23/2023	19.0	13.8
Mechanicsburg	180650003	8/23/2023	18.6	15.5
Kokomo - E. Vaile Ave	180670004	8/23/2023	15.6	14.7
Anderson - Eastside Elem	180950011	8/23/2023	18.0	15.4
Indianapolis - Washington Park	180970078	8/23/2023	18.1	17.8
Indianapolis - W. 18th St.	180970081	8/23/2023	21.6	20.9
Indianapolis - I-70 E	180970087	8/23/2023	20.5	20.5
Bloomington - Binford	181050003	8/23/2023	16.7	13.9
Ogden Dunes	181270024	8/23/2023	18.4	15.3
Lafayette - Greenbush St	181570008	8/23/2023	17.6	15.1
Evansville - Buena Vista	181630021	8/23/2023	23.9	16.4
Terre Haute - Lafayette Ave	181670018	8/23/2023	18.8	18.8
Larwill	181830003	8/23/2023	15.9	15
Columbus - Rocky Ford Drive	180050008	8/24/2023	22.0	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/24/2023	25.2	17.0
Jasper - Post Office	180372001	8/24/2023	27.6	15.7
New Albany	180430008	8/24/2023	20.9	20.9
Plummer	180550001	8/24/2023	17.3	14.7
Fishers	180570007	8/24/2023	22.4	13.8
Mechanicsburg	180650003	8/24/2023	18.1	15.5

Kokomo - E. Vaile Ave	180670004	8/24/2023	19.0	14.7
Anderson - Eastside Elem	180950011	8/24/2023	17.4	15.4
Indianapolis - Washington Park	180970078	8/24/2023	21.2	17.8
Indianapolis - W. 18th St.	180970081	8/24/2023	25.1	20.9
Indianapolis - I-70 E	180970087	8/24/2023	24.6	20.5
Bloomington - Binford	181050003	8/24/2023	17.3	13.9
South Bend - Shields Dr.	181410015	8/24/2023	16.9	16.9
Lafayette - Greenbush St	181570008	8/24/2023	17.7	15.1
Evansville - U of E	181630016	8/24/2023	21.7	15.5
Evansville - Buena Vista	181630021	8/24/2023	23.9	16.4
Terre Haute - Lafayette Ave	181670018	8/24/2023	21.3	18.8
Columbus - Rocky Ford Drive	180050008	8/25/2023	14.6	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/25/2023	18.5	17.0
Jasper - Post Office	180372001	8/25/2023	18.0	15.7
Plummer	180550001	8/25/2023	15.3	14.7
Fishers	180570007	8/25/2023	15.5	13.8
Bloomington - Binford	181050003	8/25/2023	16.6	13.9
Dale	181470009	8/25/2023	17.9	13.9
Evansville - U of E	181630016	8/25/2023	18.2	15.5
Evansville - Buena Vista	181630021	8/25/2023	19.9	16.4
Columbus - Rocky Ford Drive	180050008	9/7/2023	15.3	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	9/7/2023	21.0	17.0
Jasper - Post Office	180372001	9/7/2023	22.5	15.7
Plummer	180550001	9/7/2023	19.6	14.7
Bloomington - Binford	181050003	9/7/2023	18.7	13.9
Evansville - Buena Vista	181630021	9/7/2023	23.1	16.4
Indianapolis - Washington Park	180970078	9/17/2023	20.4	17.8
Indianapolis - W. 18th St.	180970081	9/17/2023	24.0	20.9
Indianapolis - I-70 E	180970087	9/17/2023	27.9	20.5
Evansville - Buena Vista	181630021	9/21/2023	16.8	16.4
East Chicago - Marina	180890034	10/4/2023	18.7	18.0
Larwill	181830003	10/24/2023	15.1	15.0
Dale	181470009	10/30/2023	83.2	13.9
Elkhart - Prairie St	180390008	11/4/2023	19.2	16.3
Elkhart - Prairie St	180390008	11/5/2023	19.2	16.3
Hammond-167th St	180890036	11/5/2023	16.6	16.3
Indianapolis - Washington Park	180970078	11/5/2023	22.2	17.8
Indianapolis - W. 18th St.	180970081	11/5/2023	24.1	20.9
Indianapolis - School 21	180970084	11/5/2023	15.8	15.5

Indianapolis - I-70 E	180970087	11/5/2023	28.6	20.5
Ogden Dunes	181270024	11/5/2023	16.5	15.3
Lafayette - Greenbush St	181570008	11/5/2023	15.1	15.1
Terre Haute - Lafayette Ave	181670018	11/5/2023	25.0	18.8
Evansville - Buena Vista	181630021	11/7/2023	16.4	16.4
Elkhart - Prairie St	180390008	11/14/2023	30.7	16.3
Elkhart - Prairie St	180390008	11/15/2023	18.4	16.3
Indianapolis - Washington Park	180970078	11/15/2023	18.4	17.8
Indianapolis - W. 18th St.	180970081	11/15/2023	50.7	20.9
Indianapolis - I-70 E	180970087	11/15/2023	32.7	20.5
Terre Haute - Lafayette Ave	181670018	11/15/2023	19.2	18.8
Elkhart - Prairie St	180390008	11/16/2023	16.3	16.3
Indianapolis - W. 18th St.	180970081	11/16/2023	45.9	20.9
Indianapolis - I-70 E	180970087	11/16/2023	21.5	20.5

**Table 12 - Smoke Influenced Days on Daily PM<sub>2.5</sub> Concentrations for 2024**

Monitor name	AQS ID	Date	Daily average (µg/m <sup>3</sup> )	Tier 2 Threshold (µg/m <sup>3</sup> )
Kokomo - E. Vaile Ave	180670004	2/20/2024	14.8	14.7
Indianapolis - W. 18th St.	180970081	2/20/2024	30.9	20.9
Lafayette - Greenbush St	181570008	2/20/2024	15.8	15.1
Jasper - Post Office	180372001	2/21/2024	15.8	15.7
Elkhart - Prairie St	180390008	2/21/2024	17.9	16.3
Carmel - Hazel Dell Parkway	180570008	2/21/2024	21.3	16.5
Kokomo - E. Vaile Ave	180670004	2/21/2024	17.3	14.7
Hammond-167th St	180890036	2/21/2024	16.3	16.3
Indianapolis - I-70 E	180970087	2/21/2024	21.4	20.5
South Bend - Shields Dr.	181410015	2/21/2024	18.6	16.9
Evansville - Buena Vista	181630021	2/21/2024	16.5	16.4
Terre Haute - Lafayette Ave	181670018	2/21/2024	20.2	18.8
Columbus - Rocky Ford Drive	180050008	2/22/2024	16.2	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	2/22/2024	21.6	17.0
Muncie - Central HS	180350006	2/22/2024	21.0	13.2
Fishers	180570007	2/22/2024	14.6	13.8
Mechanicsburg	180650003	2/22/2024	22.2	15.5
Kokomo - E. Vaile Ave	180670004	2/22/2024	15.8	14.7
East Chicago - Marina	180890034	2/22/2024	30.4	18.0
Hammond-167th St	180890036	2/22/2024	23.9	16.3

Anderson - Eastside Elem	180950011	2/22/2024	18.9	15.4
Indianapolis - Washington Park	180970078	2/22/2024	19.6	17.8
Indianapolis - W. 18th St.	180970081	2/22/2024	26.3	20.9
Indianapolis - I-70 E	180970087	2/22/2024	25.1	20.5
Ogden Dunes	181270024	2/22/2024	18.4	15.3
Lafayette - Greenbush St	181570008	2/22/2024	17.4	15.1
Larwill	181830003	2/22/2024	16.8	15.0
Terre Haute - Lafayette Ave	181670018	2/26/2024	23.7	18.8
Kokomo - E. Vaile Ave	180670004	2/27/2024	15.9	14.7
Lafayette - Greenbush St	181570008	2/27/2024	15.4	15.1
Elkhart - Prairie St	180390008	3/2/2024	19.1	16.3
East Chicago - Marina	180890034	3/2/2024	20.8	18.0
South Bend - Shields Dr.	181410015	3/2/2024	20.0	16.9
Lafayette - Greenbush St	181570008	3/2/2024	15.9	15.1
Evansville - Buena Vista	181630021	3/2/2024	16.4	16.4
Larwill	181830003	3/2/2024	16.9	15.0
Elkhart - Prairie St	180390008	3/13/2024	20.3	16.3
East Chicago - Franklin/Washington Sch	180890006	3/13/2024	17.7	16.1
Gary - Madison St	180890031	3/13/2024	22.5	16.0
Hammond-167th St	180890036	3/13/2024	18.3	16.3
Muncie - Central HS	180350006	3/29/2024	16.9	13.2
Mechanicsburg	180650003	3/29/2024	18.2	15.5
Anderson - Eastside Elem	180950011	3/29/2024	15.4	15.4
Gary - Madison St	180890031	4/15/2024	21.4	16.0
Terre Haute - Lafayette Ave	181670018	5/12/2024	21.7	18.8
Michigan City - Marsh Elem. Sch.	180910011	5/14/2024	16.7	15.9
Muncie - Central HS	180350006	5/16/2024	13.2	13.2
Indianapolis - W. 18th St.	180970081	5/19/2024	21.1	20.9
Terre Haute - Lafayette Ave	181670018	5/19/2024	22.1	18.8
Muncie - Central HS	180350006	6/17/2024	13.5	13.2
Columbus - Rocky Ford Drive	180050008	6/19/2024	13.8	13.7
Muncie - Central HS	180350006	6/19/2024	14.4	13.2
Muncie - Central HS	180350006	6/20/2024	14.4	13.2
Columbus - Rocky Ford Drive	180050008	6/21/2024	17.7	13.7
Muncie - Central HS	180350006	6/21/2024	17.7	13.2
Jasper - Post Office	180372001	6/21/2024	16.8	15.7
Fishers	180570007	6/21/2024	16.6	13.8
Mechanicsburg	180650003	6/21/2024	17.7	15.5
Hammond-167th St	180890036	6/21/2024	19.5	16.3
Anderson - Eastside Elem	180950011	6/21/2024	15.7	15.4

Indianapolis - Washington Park	180970078	6/21/2024	19.1	17.8
Indianapolis - W. 18th St.	180970081	6/21/2024	23.7	20.9
Columbus - Rocky Ford Drive	180050008	6/22/2024	15.1	13.7
Muncie - Central HS	180350006	6/22/2024	16.8	13.2
Fishers	180570007	6/22/2024	16.1	13.8
Muncie - Central HS	180350006	7/4/2024	15.8	13.2
Elkhart - Prairie St	180390008	7/4/2024	19.7	16.3
East Chicago - Marina	180890034	7/4/2024	24.0	18.0
Hammond-167th St	180890036	7/4/2024	27.8	16.3
Michigan City - Marsh Elem. Sch.	180910011	7/4/2024	24.8	15.9
Indianapolis - Washington Park	180970078	7/4/2024	20.2	17.8
Indianapolis - W. 18th St.	180970081	7/4/2024	35.9	20.9
Ogden Dunes	181270024	7/4/2024	31.4	15.3
South Bend - Shields Dr.	181410015	7/4/2024	22.6	16.9
Lafayette - Greenbush St	181570008	7/4/2024	17.6	15.1
Terre Haute - Lafayette Ave	181670018	7/4/2024	40.0	18.8
Fishers	180570007	7/5/2024	14.1	13.8
Gary - Madison St	180890031	7/5/2024	18.3	16.0
Indianapolis - Washington Park	180970078	7/5/2024	24.2	17.8
Indianapolis - W. 18th St.	180970081	7/5/2024	28.0	20.9
Indianapolis - School 21	180970084	7/5/2024	33.5	15.5
Indianapolis- I-70 E	180970087	7/5/2024	21.6	20.5
South Bend - Shields Dr.	181410015	7/5/2024	24.4	16.9
Terre Haute - Lafayette Ave	181670018	7/5/2024	24.0	18.8
Elkhart - Prairie St	180390008	7/6/2024	17.1	16.3
Indianapolis - Washington Park	180970078	7/7/2024	20.3	17.8
Indianapolis - W. 18th St.	180970081	7/7/2024	26.0	20.9
Indianapolis - I-70 E	180970087	7/7/2024	21.4	20.5
Evansville - Buena Vista	181630021	7/7/2024	17.9	16.4
Terre Haute - Lafayette Ave	181670018	7/7/2024	22.5	18.8
Ogden Dunes	181270024	7/20/2024	16.5	15.3
Ogden Dunes	181270024	7/21/2024	16.0	15.3
Indianapolis - Washington Park	180970078	7/23/2024	18.0	17.8
Muncie - Central HS	180350006	7/24/2024	17.2	13.2
Fishers	180570007	7/24/2024	14.6	13.8
Kokomo - E. Vaile Ave	180670004	7/24/2024	16.6	14.7
Lafayette - Greenbush St	181570008	7/24/2024	16.0	15.1
Fishers	180570007	7/25/2024	14.2	13.8
Jeffersonville - Bates-Bowyer Ave	180190010	7/26/2024	18.4	17.0
Jasper - Post Office	180372001	7/26/2024	17.8	15.7
Dale	181470009	7/26/2024	18.1	13.9

Evansville - U of E	181630016	7/26/2024	18.0	15.5
Evansville - Buena Vista	181630021	7/26/2024	21.5	16.4
Evansville - Buena Vista	181630021	7/27/2024	20.3	16.4
Muncie - Central HS	180350006	8/3/2024	15.2	13.2
Fishers	180570007	8/3/2024	16.2	13.8
Kokomo - E. Vaile Ave	180670004	8/3/2024	14.9	14.7
Hammond-167th St	180890036	8/3/2024	18.3	16.3
Anderson - Eastside Elem	180950011	8/3/2024	15.8	15.4
Indianapolis - Washington Park	180970078	8/3/2024	18.1	17.8
Lafayette - Greenbush St	181570008	8/3/2024	15.6	15.1
Larwill	181830003	8/3/2024	16.6	15.0
Columbus - Rocky Ford Drive	180050008	8/4/2024	14.7	13.7
Muncie - Central HS	180350006	8/4/2024	16.2	13.2
Fishers	180570007	8/4/2024	17.4	13.8
Anderson - Eastside Elem	180950011	8/4/2024	18.0	15.4
Indianapolis - Washington Park	180970078	8/4/2024	20.1	17.8
Dale	181470009	8/4/2024	13.9	13.9
Evansville - Buena Vista	181630021	8/4/2024	16.6	16.4
Jeffersonville - Bates-Bowyer Ave	180190010	8/5/2024	19.3	17.0
Muncie - Central HS	180350006	8/5/2024	14.2	13.2
Fishers	180570007	8/5/2024	14.2	13.8
Evansville - Buena Vista	181630021	8/5/2024	16.9	16.4
Columbus - Rocky Ford Drive	180050008	8/6/2024	14.3	13.7
Jeffersonville - Bates-Bowyer Ave	180190010	8/6/2024	19.2	17.0
Muncie - Central HS	180350006	8/6/2024	14.0	13.2
Jasper - Post Office	180372001	8/6/2024	16.5	15.7
Fishers	180570007	8/6/2024	15.7	13.8
Ogden Dunes	181270024	8/14/2024	15.5	15.3
Muncie - Central HS	180350006	8/24/2024	14.4	13.2
Elkhart - Prairie St	180390008	8/24/2024	17.0	16.3
Fishers	180570007	8/24/2024	14.1	13.8
Hammond-167th St	180890036	8/24/2024	16.4	16.3
Michigan City - Marsh Elem. Sch.	180910011	8/24/2024	16.2	15.9
Indianapolis - W. 18th St.	180970081	8/24/2024	21.5	20.9
Ogden Dunes	181270024	8/24/2024	16.0	15.3
Muncie - Central HS	180350006	8/25/2024	13.4	13.2
Fishers	180570007	8/25/2024	16.2	13.8
Muncie - Central HS	180350006	8/26/2024	14.6	13.2
Fishers	180570007	8/26/2024	14.4	13.8
Muncie - Central HS	180350006	8/27/2024	16.9	13.2
Fishers	180570007	8/27/2024	17.7	13.8

Anderson - Eastside Elem	180950011	8/27/2024	15.6	15.4
Dale	181470009	8/28/2024	15.1	13.9
Evansville - U of E	181630016	8/28/2024	15.6	15.5
Evansville - Buena Vista	181630021	8/28/2024	17.8	16.4
Jasper - Post Office	180372001	8/29/2024	16.4	15.7
Evansville - Buena Vista	181630021	8/29/2024	18.9	16.4
Muncie - Central HS	180350006	8/30/2024	14.0	13.2
Plummer	180550001	8/30/2024	14.7	14.7
Fishers	180570007	8/30/2024	14.6	13.8
South Bend - Shields Dr.	181410015	9/12/2024	20.0	16.9
Indianapolis - Washington Park	180970078	10/2/2024	18.3	17.8
Indianapolis - Washington Park	180970078	10/3/2024	18.7	17.8
Indianapolis - W. 18th St.	180970081	10/3/2024	24.7	20.9
Indianapolis - W. 18th St.	180970081	10/9/2024	22.5	20.9
Indianapolis - W. 18th St.	180970081	10/12/2024	21.0	20.9
Indianapolis - W. 18th St.	180970081	10/18/2024	24.5	20.9
Indianapolis - I-70 E	180970087	10/18/2024	24.6	20.5
Muncie - Central HS	180350006	10/19/2024	15.7	13.2
Indianapolis - Washington Park	180970078	10/19/2024	21.7	17.8
Indianapolis - W. 18th St.	180970081	10/19/2024	41.1	20.9
Indianapolis - I-70 E	180970087	10/19/2024	29.0	20.5
Jeffersonville - Bates-Bowyer Ave	180190010	10/20/2024	20.3	17.0
Muncie - Central HS	180350006	10/20/2024	17.0	13.2
Indianapolis - Washington Park	180970078	10/20/2024	27.2	17.8
Indianapolis - W. 18th St.	180970081	10/20/2024	50.7	20.9
Indianapolis - I-70 E	180970087	10/20/2024	28.7	20.5
Terre Haute - Lafayette Ave	181670018	10/20/2024	23.0	18.8
Jeffersonville - Bates-Bowyer Ave	180190010	10/21/2024	18.4	17.0
Muncie - Central HS	180350006	10/21/2024	18.6	13.2
Indianapolis - Washington Park	180970078	10/21/2024	18.3	17.8
Indianapolis - W. 18th St.	180970081	10/21/2024	30.8	20.9
Columbus - Rocky Ford Drive	180050008	10/29/2024	13.7	13.7
Muncie - Central HS	180350006	10/29/2024	15.5	13.2
Plummer	180550001	10/29/2024	16.9	14.7
Bloomington - Binford	181050003	10/29/2024	15.7	13.9
Evansville - Buena Vista	181630021	10/29/2024	19.4	16.4
Muncie - Central HS	180350006	10/30/2024	13.7	13.2