

Overview of the Annual 2024 PM_{2.5} Standard Area Designation Recommendation

May 10, 2024

Overview

- Final Rule Actions
- Monitoring Data Impacts and Trends
- Area(s) Designation Recommendation Approach
- Timeline

Final Rule Actions

- EPA strengthened the primary (health-based) annual standard for fine particles ($PM_{2.5}$) from 12.0 to 9.0 micrograms per cubic meter ($\mu\text{g}/\text{m}^3$)
- EPA retained all other PM standards:
 - The primary (health-based) and secondary (welfare-based) 24-hour $PM_{2.5}$ standards stay at $35 \mu\text{g}/\text{m}^3$
 - The primary and secondary 24-hour PM_{10} standards stay at the level of $150 \mu\text{g}/\text{m}^3$
 - The secondary annual $PM_{2.5}$ standard stays at the level of $15.0 \mu\text{g}/\text{m}^3$

Missouri Monitoring/Impact

- Preliminary 2021-2023 air quality monitoring data design values (DV) indicate only one monitor in Missouri violates the PM_{2.5} annual standard – Blair Street monitor (9.6 µg/m³)
- Missouri is evaluating whether to submit an Exceptional Events (EE) Demonstration to EPA due to Canadian Wildfires in late May and June 2023 that may have affected monitors in Missouri.
- Several monitors in that state of Illinois (St. Louis core-based statistical areas (CBSAs)) and the state of Kansas (Kansas City CBSA) violate the standard

Missouri, Illinois and Kansas Monitoring Data

Monitor Name	County	2021	2022	2023	2021-2023 Design Value (ppb)
St. Louis, MO-IL					
Arnold West	Jefferson	8.0	8.3	8.3	8.2
Blair Street (Comb.)	St. Louis City	9.2	8.2	11.4	9.6
Branch Street	St. Louis City	11.4	7.7	10.4	9.8
Forest Park, I-64	St. Louis City	9.4	8.3	9.4	9.0
Ladue (Comb.)	St. Louis	7.0	6.7	8.1	7.9
South Broadway	St. Louis City	7.5	6.9	7.0	7.1
Fire Station #1	Granite City (IL)	10.0	10.1	10.4	10.2
Horace Mann	Alton (IL)	9.3	8.9	9.2	9.1
Wood River	Wood River (IL)	9.7	9.6	9.7	9.7
East St. Louis	East St. Louis (IL)	10.4	10.2	11.6	10.7
Gateway	Granite City (IL)	10.2	10.3	11	10.5
Kansas, MO-KS					
Liberty	Clay	6.3	5.5	6.8	6.2
Richards Gebaur South	Cass	7.0	5.8	6.0	6.3
Troost	Jackson	7.7	6.9	8.5	7.7
Blue Ridge, I-70	Jackson	8.6	7.6	7.0	7.7
Jfk	Wyandotte (KS)	11.2	10.5	10.4	10.7
Heritage Park	Johnson (KS)	9.5	9.0	9.5	9.3
St. Joseph, MO-KS					
St. Joseph Pump Station	Buchanan	8.4	7.9	9.6	8.6
Springfield					
Hillcrest High School	Greene	6.0	7.7	7.1	6.9
Outstate					
El Dorado Springs	Cedar	7.6	5.9	6.8	6.8

Note: 2023 data and 2021-2023 design values are preliminary. Value in red indicates violation of the 2024 PM_{2.5} annual health-based standard

Monitors are classified as unique middle scale monitoring sites and not comparable to the 2024 PM_{2.5} annual health-based standard.

The highlighted field indicates that the data set does not meet the completeness criteria of 40 CFR Part 50 Appendix N, Section 4 for the given site. Use of incomplete data for designation purposes is subject to EPA approval consistent with 40 CFR Part 50 Appendix N, 4.(d).

Blue Ridge monitor shut down 4/29/2023 due to vandalism.

Legend

- IMPROVE Monitor
- Near Road PM_{2.5} Monitor
- PM_{2.5} Monitor

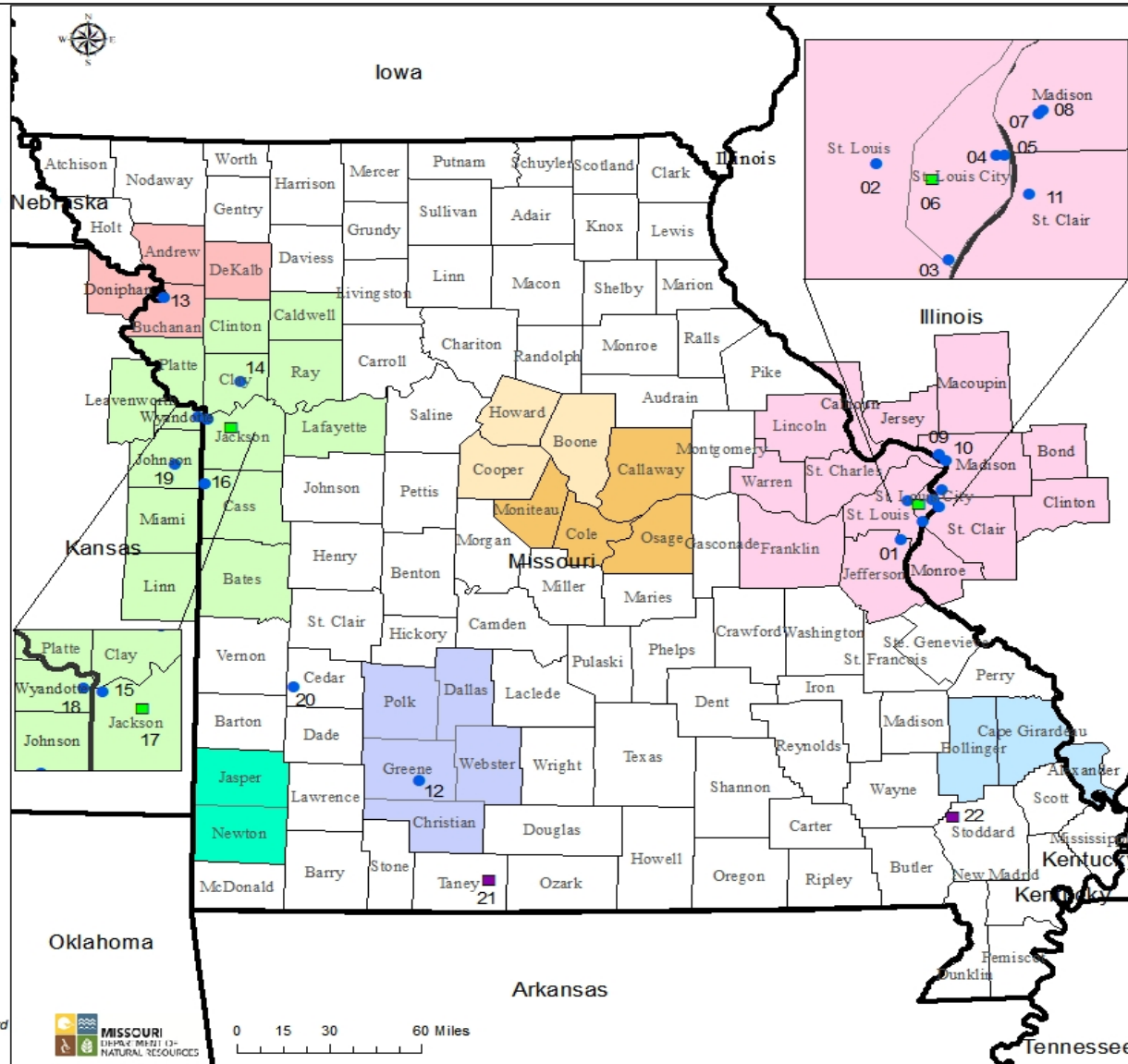
CBSA, Population Estimate 2022

- Cape Gir-Jackson-CBSA (MO-IL), 98,275
- St. Joseph-CBSA (MO-KS), 119,690
- Jefferson-CBSA, 150,350
- Joplin-CBSA, 184,086
- Columbia-CBSA, 214,630
- Springfield-CBSA, 487,061
- Kansas City-CBSA (MO-KS), 2,209,494
- St. Louis-CBSA (MO-IL), 2,801,319

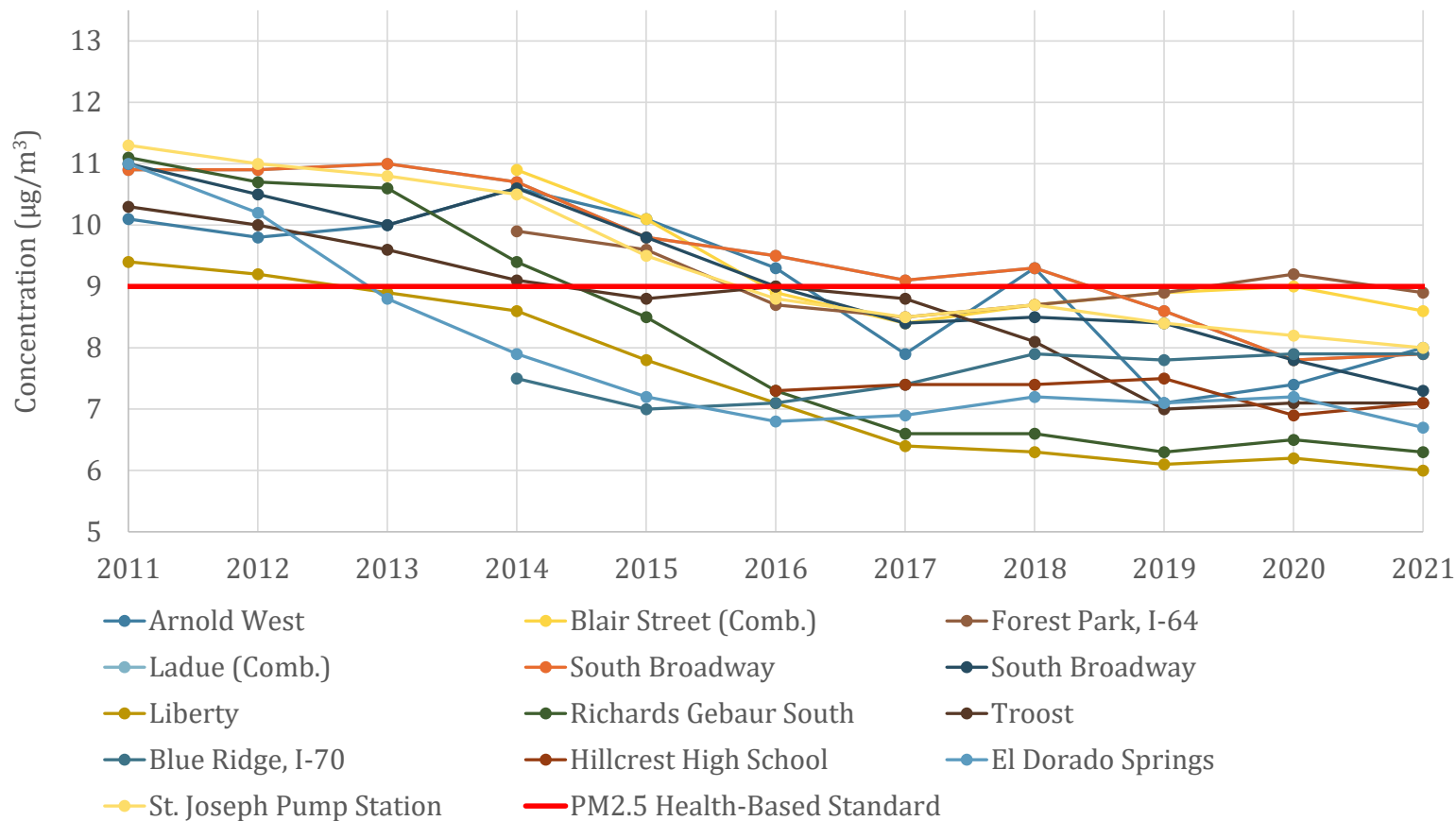
Site # Site Name (DV Annual)

- St. Louis CBSA (MO-IL)**
- 01. Arnold West (8.2)
 - 02. Ladue (7.9)
 - 03. South Broadway (7.1)
 - 04. Blair Street (9.6)
 - 05. Branch Street** (9.8)
 - 06. Forest Park (9.0)
- Springfield CBSA**
- 07. Gateway**, IL (10.5)
 - 08. Granite City, IL (10.2)
 - 09. Alton, IL (9.1)
 - 10. Wood River, IL (9.1)
 - 11. East St. Louis, IL (10.7)
- St. Joseph CBSA (MO-KS)**
- 12. Hillcrest High School (6.9)
- Kansas City CBSA (MO-KS)**
- 13. St. Joseph Pump Station (8.6)
 - 14. Liberty (6.2)
 - 15. Troost (7.7)
 - 16. Richards Gebaur- South (6.3)
 - 17. Blue Ridge, I-70+ (7.7)
- Outstate Area MO**
- 18. JFK, KS (10.7)
 - 19. Heritage Park, KS (9.3)
 - 20. El Dorado Springs (6.8)
 - 21. Hercules Glades
 - 22. Mingo

** Middle Scale; Not to be compared to the annual standard
 + Site discontinued, to be relocated by 1/1/2024
 Value in red indicates violation of the annual standard



Missouri PM_{2.5} Design Value Monitor Trends



Area(s) Designation Recommendation Approach

- Air program will utilize EPA's February 7, 2024, document "Memorandum on the Area Designations for the 2024 Revised Annual PM_{2.5} NAAQS"
- Five-Factor Analysis
 - Air quality (monitoring) data
 - Emissions and emissions-related data
 - Meteorological data
 - Geography/Topography
 - Jurisdictional boundaries

Timeline – EPA’s Designations

Milestone	Date
EPA promulgates 2024 PM _{2.5} Annual Standard	February 7, 2024
States submit area designation recommendations	No later than February 6, 2025
EPA notifies states/tribes regarding any intended modifications to their recommendations (120-day letters)	No later than October 9, 2025
The EPA publishes public notice of availability of state recommendations and the EPA’s intended modifications, if any, and initiates 30-day public comment period	Mid-October 2025
End of 30-day public comment period	Mid-November 2025
States/tribes submit additional information, if any, to respond to EPA’s modifications of a recommended designation	Mid-December 2025
EPA promulgates final 2024 PM _{2.5} Health-Based Standard area designations	February 6, 2026

Timeline – EPA’s Exceptional Events

Action	Anticipated Deadline	Applicable Data Year
Initial notifications for intent to submit exceptional events demonstrations for the purpose of initial area designations recommendations	No later than January 1, 2025	2021, 2022, 2023
Exceptional Events demonstration submittal	No later than February 7, 2025	2021, 2022, 2023
State and Tribal initial area designations recommendations	No later than February 7, 2025	2021, 2022, 2023
Initial notification and exceptional events demonstration submittal	No later than September 30, 2025	2024
The EPA sends out 120-day Letters for initial area designations	October 9, 2025	2022, 2023, 2024
The EPA promulgates final 2024 PM2.5 NAAQS area designations	February 6, 2026	2022, 2023, 2024

Timeline (Tentative) - Air Program

Milestone	Date
Proposed Area Designation Recommendation Document	November 2024
Public Comment Period Opens	November 4, 2024
Public Hearing	December 5, 2024
Adoption	January 30, 2025
EPA Submittal	Early February 2025

Thank you

Thank you for your time and attention.

Air Pollution Control Program
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