

Anticipated NAAQS Revisions and Monitoring Network Changes



Ryan Biggerstaff & Bryan Sims
Air Quality Advisory Council Meeting
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Monitoring Network Changes

- **Current Site Status**
- **A Visual Look at Monitoring Sites**
- **Last FY's Network Changes**
- **Next FY's Network Changes**
- **Recent Challenges**

Site Status

■ 35 Total Sites – OKC, Tulsa, Others

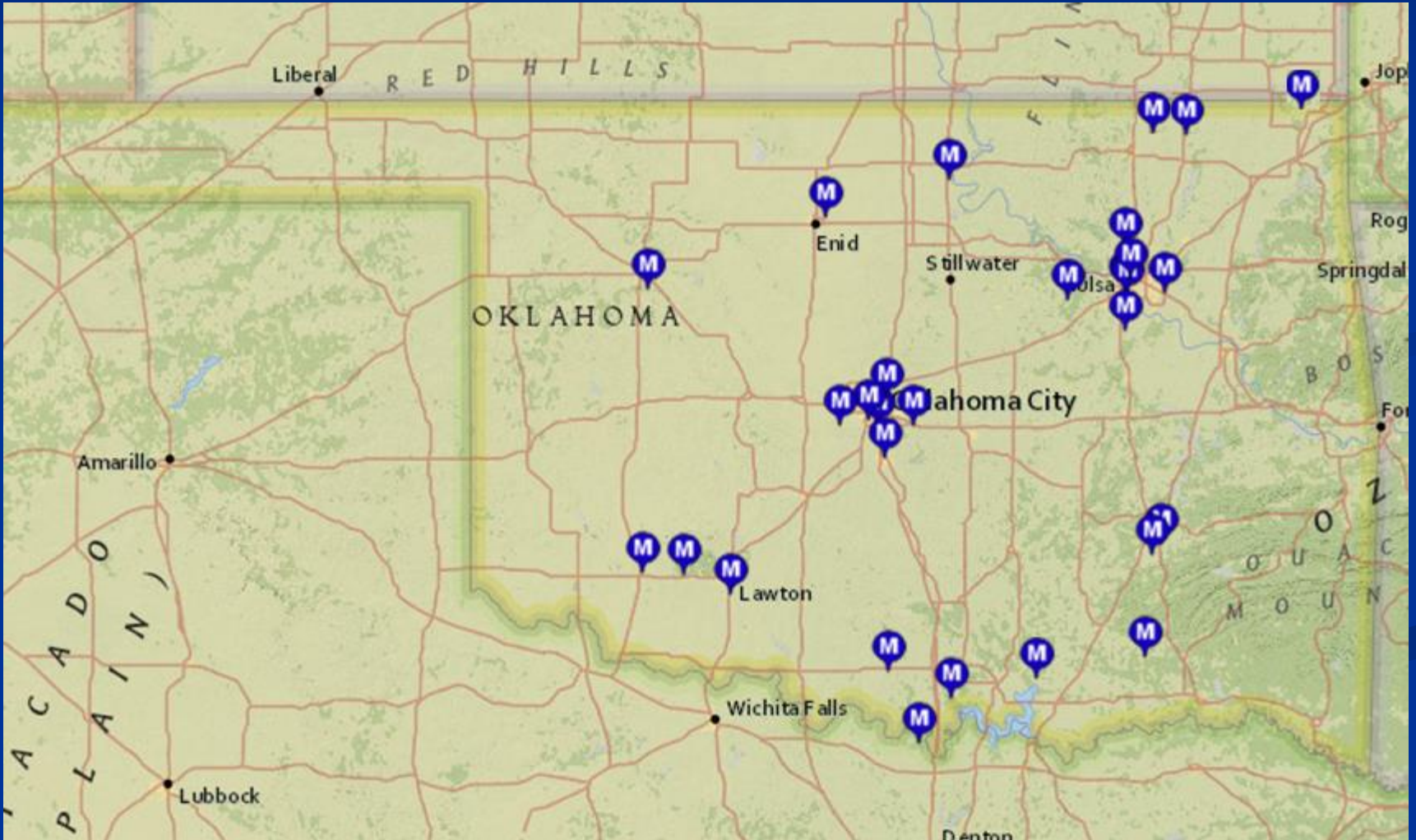
OKC Metro Sites			
Site #	Site Name	City	Pollutants
035	OKC Firestation	OKC	PM10, PM2.5
049	Moore	Moore	O3, PM2.5
096	Choctaw	Choctaw	O3
097	Will Rogers Park	OKC	CO, PM2.5, NO2, Black Carbon
101	Yukon	Yukon	O3
1037	OKC	North OKC	CO, O3, PM10, PM2.5, SO2, NO2, Toxics
VG	Myriad Garden	OKC	O3, PM2.5

Tulsa Metro Sites			
Site #	Site Name	City	Pollutants
144	Mannford	Mannford	O3
174	Glenpool	Glenpool	O3, PM2.5
175	Tulsa	Tulsa	SO2, H2S
178	Lynn Lane	East Tulsa	O3
179	Tulsa Riverside	Tulsa	Storage
235	Tulsa	Tulsa	SO2, H2S, Toxics
226	Skiatook	Skiatook	O3
1127	Tulsa(NCCore)	North Tulsa	CO, NO2, NOy, O3, PM10, PM2.5, SO2, NATTS Toxics, Radnet

Other Sites			
Site #	Site Name	City	Pollutants
207	Okla Union School	Lenapah	O3, PM2.5
217	Copan	Copan	O3
297	Healdton	Healdton	O3, PM2.5
300	Burneyville	Burneyville	O3
313	OU Bio Station	Willis	O3 - Under Construction
324	Tish - Murray St.	Tishomingo	O3
415	McAlester	McAlester	O3, PM2.5, PM10
416	Savanna	Savanna	Lead
555	Kremlin	Kremlin	SO2
604	Ponca City	Ponca	SO2, PM2.5
651	Lawton	Lawton	O3, PM2.5
671	Waurika	Waurika	O3
711	Great Plains	Mountain Park	O3, NO2
860	Seiling	Seiling	O3, PM2.5
1074	Kessler	Woody Chapel	O3
522	Commerce	Commerce	Toxics
OK01	McGee Creek	Lane	Hg
OK04	Lake Murray	Ardmore	Hg
OK06	Wichita Mtns	Cache	Hg
OK31	Copan	Copan	Hg

Site Status

- 35 Total Sites – Map View



Site Types

Simple Outdoor Collection



Site 035 Downtown
OKC Firestation
Particulate Matter



OK06 Wichita Mtns.
Mercury Deposition
Network (MDN)

Site Types

Typical Site Buildings



Site 415 - McAlester
Ozone, Continuous & Filter
Based PM2.5, Visibility



Site 096 - Choctaw
Ozone, Met

Site Types

Typical Site Buildings



Site 175 – Tulsa Newblock Pk
SO₂ & H₂S



Site 860 - Seiling
Ozone and Continuous PM

Site Types

Temporary Monitoring Trailer



Site 522 - Commerce
Toxics VOC, Carbonyls & Metals

Site Types

Supersites



Site 1127 – North Tulsa NCore

Site Types

Supersites



Site 1127 – North Tulsa NCore

Site Types

Supersites



Site 1037 – OCUSA in North OKC

Site 1037 – OCUSA in North OKC

Educational Labeling



Last FY's Network Changes

- **Red River Ozone**

Out - Burneyville, Great Plains

In - Tishomingo, Healdton, Waurika

- **Commerce Site (near Miami)**

Toxics monitoring partnership with the Quapaw Nation.

- **Savanna and Glenpool Relocation**

Needed due to siting criteria issues.

Next FY's Network Changes

- **Flint Hills Special Purpose**

Out – Union Site

In – Copan Site

- **PAMS (Photochemical Assessment Monitoring Stations) Expansion at Tulsa NCore Site 1127**

>1 mil population CBSA

- **Tulsa Near Road (NO₂/PM_{2.5}/Bk Carbon)**

>500 K population CBSA & traffic count

Recent Challenges

- **Personnel woes.**

From the beginning of FY22 to the end of FY22, total Monitoring staff experience declined from 192 years to 62 years (now back up to 78 years).

- **Instruments, repairs and supply delays.**

Supply chain and purchasing problems has increased the time to get the network up and running smoothly. Constant need to be proactive!

Anticipated NAAQS Revisions

New Proposed PM_{2.5} NAAQS Standard

- On January 6, 2023, EPA announced its proposed revision to the annual PM_{2.5} standard from its current level of 12.0 µg/m³ to within the range of 9.0 to 10.0 µg/m³. EPA also proposed not to change the current:
 - secondary (welfare-based) annual PM_{2.5} standard,
 - primary and secondary 24-hour PM_{2.5} standards, and
 - primary and secondary PM₁₀ standards.
- In addition, EPA proposed revisions to other key aspects related to the PM NAAQS, including revisions to the Air Quality Index (AQI) and monitoring requirements

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Calculation and Anticipated Timeline

- Annual mean, averaged over 3 years.
- The anticipated level is still under consideration by EPA.
 - Public comments have been received.
 - EPA expects to issue a final decision by the end of this year.
 - Attainment designations are generally made within 2 years of setting/revising a NAAQS.

Current Standing vs Anticipated

PM _{2.5} Annual Means, Averaged Over 3 Years						
Site Name	Annual Mean (µg/m ³)				3-Yr Avg.	
	2020	2021	2022	2023*	2020-2022	2021-2023*
OKC Downtown	7.2	8.4	7.4	8.3	7.6	8.0
Moore	9.9	11.1	9.9	10.9	10.3	10.6
OKC Near Road	9.6	11.2	9.4	10.3	10.0	10.3
Glenpool	8.9	10.1	8.5	9.8	9.1	9.4
Healdton	9.2	9	7.7	9	8.6	8.5
McAlester	8.2	9.7	8.8	9.6	8.9	9.3
Ponca City	9.4	11.7	8.6	9.8	9.9	10.0
Lawton	7.4	8.6	8.1	8.4	8.0	8.3
Seiling	7.3	7.9	7.8	8.4	7.6	8.0
OKC North	9.9	10.7	9.5	9.6	10.0	9.9
Tulsa Central	8.1	9.9	9	10.4	9.0	9.7

* All 2023 data is preliminary and subject to change

Complications

- Continuous particulate analyzers originally designated as being equivalent to the Federal Reference Method have been seen to have a high bias.
- EPA has permitted the manufacturer of these devices to release firmware that will correct this going forward.
- This will not be retroactive, and will not correct already collected data.
 - However, EPA has taken comments on this issue from many states and has expressed that they do plan to address this in the final rule or a separate ruling shortly after.

Ozone

New Review of Ozone NAAQS

- On Aug. 21, 2023, EPA announced a new review of the Ozone NAAQS.
- Next steps include:
 - convening a public science and policy workshop in spring 2024 to gather input from the scientific community and the public;
 - in summer 2024, EPA will summarize the proceedings of the workshop;
 - in fall 2024 the agency plans to release its Integrated Review Plan, Volume 2 to guide CASAC consideration and development of the Integrated Science Assessment.

Current Standing vs Anticipated

Ozone Annual Means, Averaged Over 3 Years						
Site Name	4th Highest Value (ppm)				3-Yr Avg.	
	2020	2021	2022	2023*	2020-2022	2021-2023*
Tulsa West	0.062	0.063	0.070	0.070	0.065	0.067
Tulsa East	0.059	0.068	0.073	0.078	0.066	0.073
Tulsa Central	0.058	0.064	0.073	0.075	0.065	0.070
Tulsa North	0.062	0.066	0.075	0.074	0.067	0.071
Tulsa South	0.061	0.063	0.070	0.072	0.064	0.068
OKC North	0.069	0.069	0.072	0.072	0.070	0.071
Moore	0.063	0.067	0.070	0.072	0.066	0.069
Choctaw	0.065	0.068	0.073	0.067	0.068	0.069
Yukon	0.065	0.070	0.069	0.073	0.068	0.070
Lawton	0.066	0.065	0.068	0.071	0.066	0.068
McAlester	0.066	0.066	0.064	0.072	0.065	0.067
Seiling	0.062	0.062	0.069	0.068	0.064	0.066

* All 2023 data is preliminary and subject to change

Anticipated Timeline on a Possible Nonattainment Designation

- The CAA requires EPA to complete the initial designation process within 2 years of promulgation of a new or revised NAAQS.
- EPA can, but has no statutory requirement to, make designations between these changes of the standard.

Questions?

- Ryan Biggerstaff – 405-702-4141 (Monitoring East)
- Bryan Sims – 405-702-4139 (Monitoring West)