

PM2.5 Updates

August 28, 2024
Air Advisory Council Meeting

Marissa Vaerten

Designations

Attainment

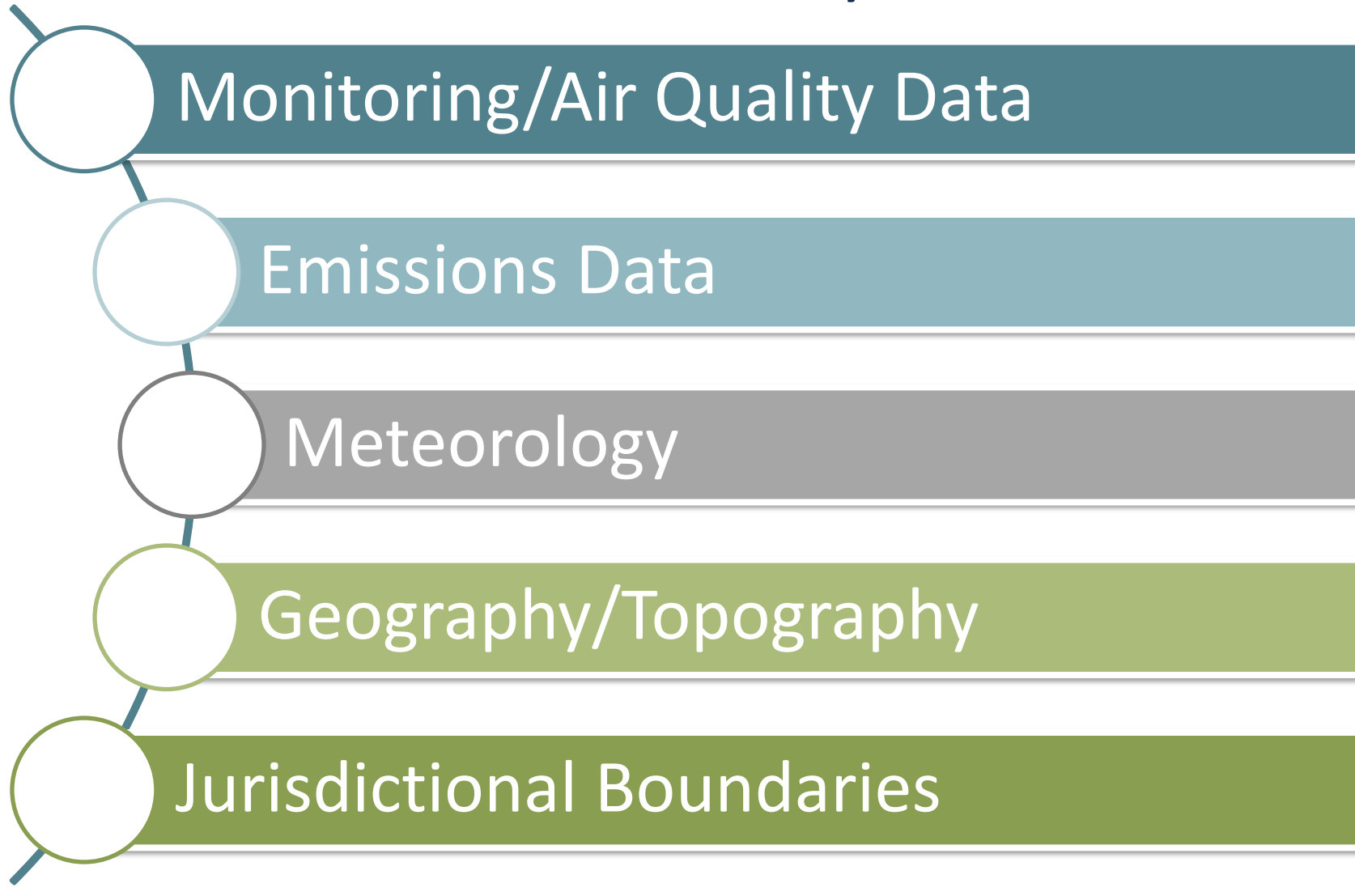
Nonattainment

Unclassifiable/
Attainment

- Nonattainment is determined based on a 3-year average of monitoring values.
- EGLE is basing recommendations on 2021-2023 monitoring values.
- EPA basing final designations on 2022-2024 monitoring values.
- All PM_{2.5} nonattainment areas are initially classified as Moderate.

Designation Recommendation

5 Factor Analysis



Outreach



Community Action to Promote Healthy Environments (CAPHE)



Asthma Collaborative of Detroit (ACD)



Ecology Center - Air Quality Sensor Learning Collaborative (AQSLC)



Eastside Community Network (ECN) - Climate Action Committee

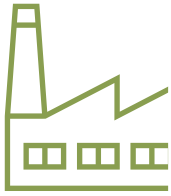


Michigan Tribal Environmental Group (MTEG) Conference

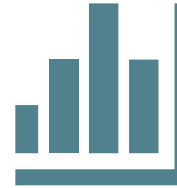


Kalamazoo Environmental Concerns Committee (ECC)

Data



Emissions data (point, nonpoint, mobile – MOVES4)



Monitoring data – including speciation data



Population density / urbanization



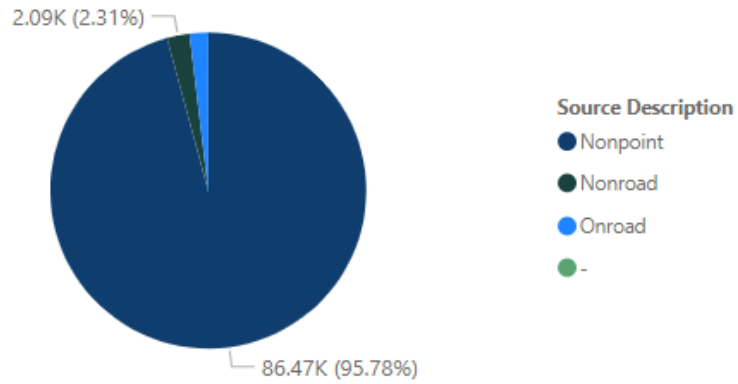
Traffic and commuting patterns



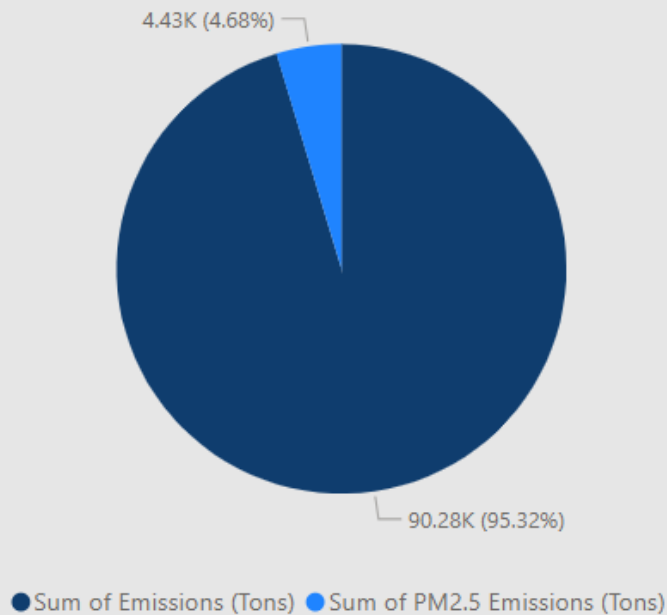
Meteorology data (HYSPLIT trajectories, wind rose and pollution roses)

Initial Statewide PM2.5 Emissions Inventory

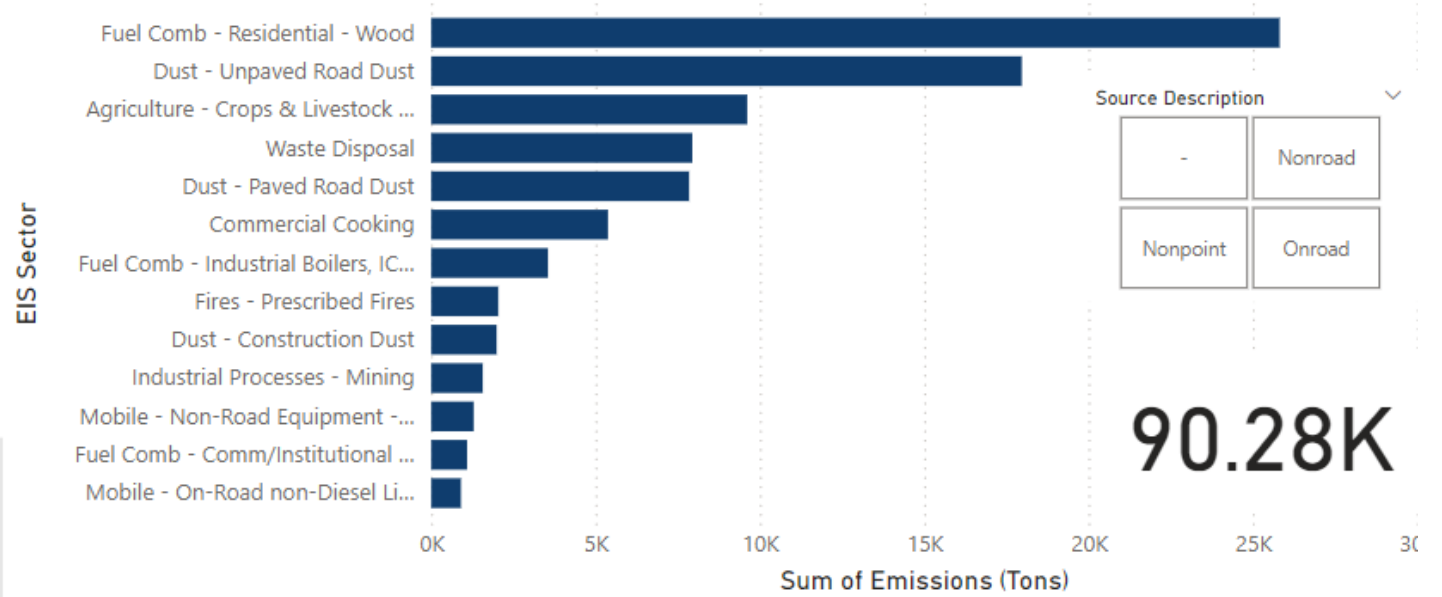
Nonpoint Source Contributions



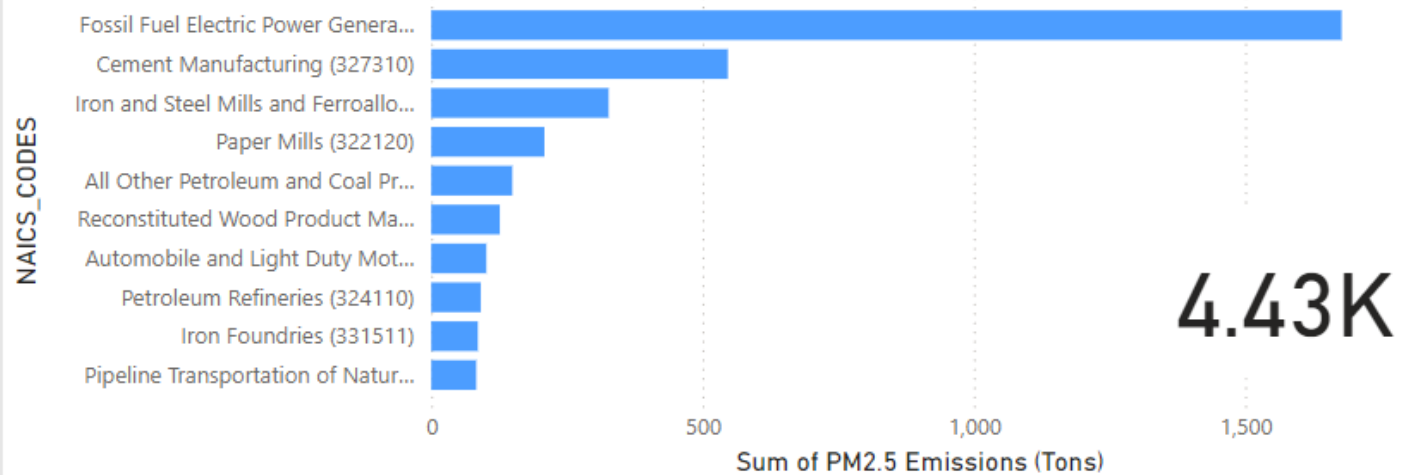
PM2.5 Point & Nonpoint Contributions



Nonpoint Emissions (Tons) by EIS Sector



Point Emissions (Tons) by NAICS_CODES (SLEIS)

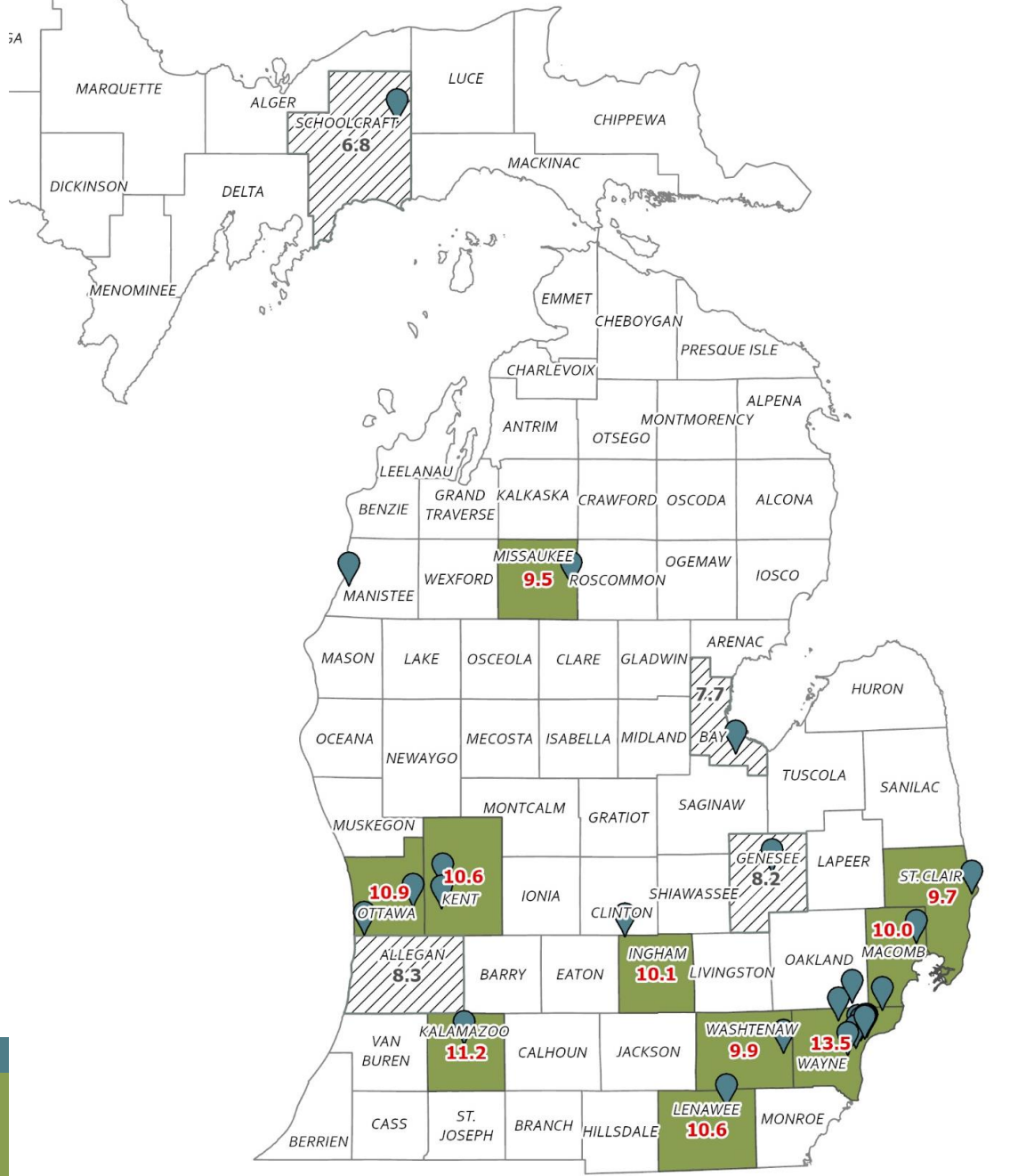


Updated Final Design Values

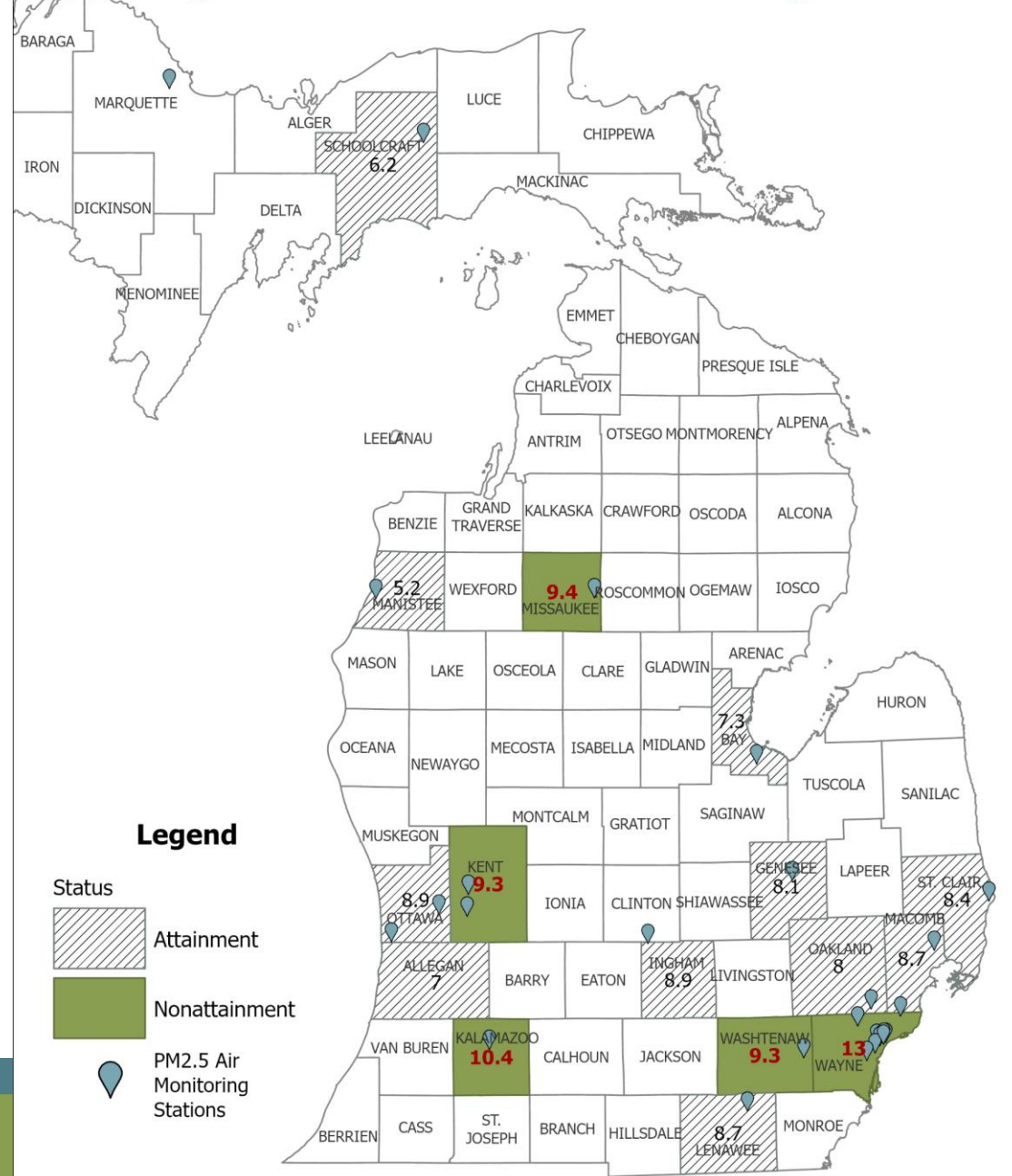
- The Feb. 2024 data was based on preliminary data with 4th quarter 2023 average estimates.
- Generally, most sites saw a decrease averaging 0.9 $\mu\text{g}/\text{m}^3$
- Military Park had some invalidated data and met data was used from trinity to assist in the Teledyne calculation.

Area	County	Monitor	February 2024 Preliminary DV	August 2024 Final DVs	Incomplete	Difference
Detroit-Ann Arbor	Lenawee	Tecumseh	10.6	8.7	*	-1.9
Detroit-Ann Arbor	Macomb	New Haven	10.0	8.7		-1.3
Detroit-Ann Arbor	Oakland	Oak Park		8.0	*	
Detroit-Ann Arbor	St. Clair	Port Huron	9.7	8.4		-1.3
Detroit-Ann Arbor	Washtenaw	Ypsilanti	9.9	9.3		-0.6
Detroit-Ann Arbor	Wayne	Allen Park	10.3	9.1		-1.2
Detroit-Ann Arbor	Wayne	Detroit-E 7 Mile		8.0		
Detroit-Ann Arbor	Wayne	Detroit-SW	11.9	10.4		-1.5
Detroit-Ann Arbor	Wayne	Dearborn	11.0	10.6		-0.4
Detroit-Ann Arbor	Wayne	Eliza Howell-NR	12.3	11.6		-0.7
Detroit-Ann Arbor	Wayne	NMH 48217	11.7	10.0	*	-1.7
Detroit-Ann Arbor	Wayne	DP4	11.8	10.8		-1.0
Detroit-Ann Arbor	Wayne	Trinity	13.5	12.1		-1.4
Detroit-Ann Arbor	Wayne	Military Park	12.0	13.0		1.0
Flint	Genesee	Flint	8.2	8.1		-0.1
Grand Rapids	Ottawa	Jenison	10.9	8.9	*	-2.0
Grand Rapids	Kent	Grand Rapids	10.6	9.3		-1.3
Allegan County	Allegan	Holland	8.3	7.0	*	-1.3
Kalamazoo-Battle Cree	Kalamazoo	Kalamazoo	11.2	10.4		-0.8
Lansing-East Lansing	Ingham	Lansing	10.1	8.9		-1.2
Bay County	Bay	Bay City	7.7	7.3		-0.4
Missaukee County	Missaukee	Houghton Lake	9.5	9.4		-0.1
Manistee County	Manistee	Manistee		5.2	*	
Schoolcraft County	Schoolcraft	Seney	6.8	6.2	*	-0.6
AVERAGE Reductio						-0.9

February 2024 – Preliminary Design Values



August 2024 - EPA Final Design Values




Legend

Status

 Attainment

 Nonattainment

 PM2.5 Air Monitoring Stations

Initial historical trends for violating monitors

County	CBSA Name	Local Site Name	2012-2014 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2013-2015 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2014-2016 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2015-2017 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2016-2018 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2017-2019 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2018-2020 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2019-2021 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2020-2022 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]	2021-2023 Annual Design Value ($\mu\text{g}/\text{m}^3$) [1,2]
Kalamazoo	Kalamazoo-Portage, MI	Kalamazoo Fairgrounds	9.2	9.0	8.9	8.4	8.2	7.9	7.8	8.1	8.6	10.4
Kent	Grand Rapids-Wyoming	Gr-Monroe	9.1	9.1	9.0	8.5	8.2	8.1	8.0	8.3	8.3	9.3
Missaukee	Cadillac, MI	Located About 1/4 Mile West Of Site	5.7	5.6	5.4	5.1	5.0	5.4	6.4	7.6	8.6	9.4
Washtenaw	Ann Arbor, MI	Ypsilanti Towner St, South;	9.2	9.2	9.0	8.4	8.1	8.2	8.3	8.4	8.5	9.3
Wayne	Detroit-Warren-Dearbor	Allen Park	9.9	9.8	9.5	8.9	8.8	8.8	8.4	8.5	8.2	9.1
Wayne	Detroit-Warren-Dearbor	Detroit-Southwest (Det-Sw)	10.7	10.8	11.2	11.2	11.3	11.6	10.9	10.4	9.9	10.4
Wayne	Detroit-Warren-Dearbor	East 7 Mile	9.4	9.4	9.2	8.6	8.1	8.0	7.8	7.8	7.6	8.0
Wayne	Detroit-Warren-Dearbor	Dearborn	11.5	11.4	11.3	10.9	10.6	10.4	10.0	9.9	9.7	10.6
Wayne	Detroit-Warren-Dearbor	Eliza-Nr									10.9	11.6
Wayne	Detroit-Warren-Dearbor	Dp4th - Detroit Police 4th Precinct (Ghib)								9.9	9.4	10.8
Wayne	Detroit-Warren-Dearbor	Trinity St Marks - Gordy Howe International Bridge (Ghib)								10.9	10.6	12.1
Wayne	Detroit-Warren-Dearbor	Military Park (Ghib)								10.6	10.3	13.0

Questions/Discussion

Thank you!