

The Challenges of Ozone Nonattainment in Michigan November 2019

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Overview

2015 Ozone NAAQS nonattainment areas in Michigan

Timeline of State Implementation Plan (SIP) due dates

Classification requirements

Regulatory Options

- 179B of the Clean Air Act – International Transport
- Exceptional Events under Clean Air Act 319(b)

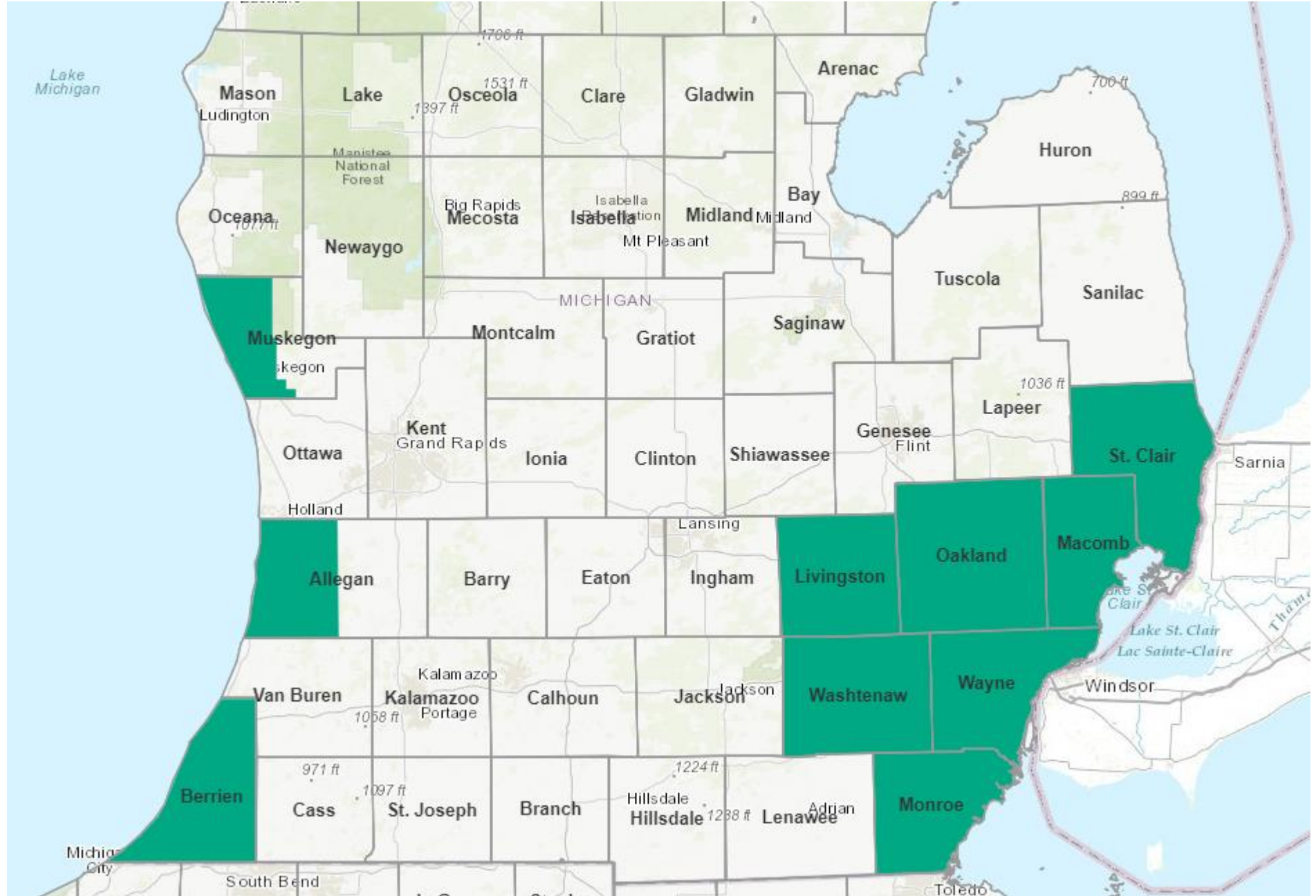
2015 Ozone NAAQS Nonattainment Areas in Michigan

Allegan
(partial county)

Berrien County

Detroit

Muskegon
(partial county)



2015 Ozone NAAQS Timeline

October 1, 2015

EPA finalized new health-based standard at 0.070 ppm (70 ppb)

April 30, 2018

EPA designates most of the nonattainment areas for this standard (**Effective August 3, 2018**)

October 1, 2018

2015 Ozone NAAQS state infrastructure SIPs including interstate transport due

August 3, 2020

Marginal area SIP requirements due 2 years after designation (inventory, emissions statements, NSR offsets 1.1 to 1)

August 3, 2021

Marginal attainment date

What happens at the attainment date?

- If the area is attaining, a determination of attainment by the attainment date can be made.
- If the area is violating, there are two possibilities:
 1. If the most recent 4th highest 8-hour value is at or below 70 ppb, a one-year extension to the attainment date can be given. This would make the new attainment date August 3, 2022.
 2. If the most recent 4th highest 8-hour value is higher than 70 ppb, the area will be reclassified of “bumped up” to the next highest classification. In all Michigan cases, this would be the Moderate classification.

What happens in a bump up?

- **For Marginal Areas that Fail to Attain**

- Clean Air Act timeline of 6 months for EPA to reclassify or “bump-up”
~February 3, 2022
- Moderate Attainment Planning Requirements due date TBD (estimated to be prior to start of 2023 ozone season)
- Moderate attainment date: **August 3, 2024**

Overview of CAA Ozone Planning & Control Mandates by Classification

On May 9, 2012, EPA waived the requirement for Stage II vapor recovery systems on gasoline pumps, due to widespread use of onboard vapor recovery.

		NSR offset ratio	Major source threshold
EXTREME (20 years to attain)	TRAFFIC CONTROLS DURING CONGESTION	1.5 : 1	10
	CLEAN FUELS REQUIREMENT FOR BOILERS	Extreme	25
	PENALTY FEE PROGRAM FOR MAJOR SOURCES		
SEVERE (15/17 years to attain)	LOW VOC REFORMULATED GAS	Severe	50
	VMT GROWTH OFFSET;		
	VMT DEMONSTRATION (& TCMs IF NEEDED)	1.2 : 1	
	NSR REQUIREMENTS FOR EXISTING SOURCE MODS		
	ENHANCED I/M CLEAN FUELS PROGRAM (IF APPLICABLE)		
SERIOUS (9 years to attain)	MODELED DEMO OF ATTAINMENT MILESTONE CONTINGENCY MEASURES FOR RFP	1.15 : 1	100
	18% RFP OVER 6 YEARS ENHANCED MONITORING PLAN		
	STAGE II GASOLINE VAPOR RECOVERY	Moderate	
	BASIC I/M CONTINGENCY MEASURES FOR FAILURE TO ATTAIN		
	15% RFP OVER 6 YEARS		
MODERATE (6 years to attain)	MAJOR SOURCE VOC/NO _x RACT ATTAINMENT DEMONSTRATION	1.1 : 1	100
	TRANSPORTATION CONFORMITY DEMONSTRATION		
	NEW SOURCE REVIEW PROGRAM MAJOR SOURCE EMISSION STATEMENTS	Marginal	
MARGINAL (3 years to attain)	BASILENE EMISSION INVENTORY (EI) PERIODIC EMISSION INVENTORY UPDATES		

Additional information on classification requirements

Vehicle Inspection and Maintenance (I/M) Programs

The **population threshold is 200,000** using either a 1990 Census-defined urbanized area for Moderate areas or 1980 Census-defined urbanized area for Serious or worse areas

Based on 1990 Census Data:

Allegan – 90,509 (county wide)

Berrien – 161,378 (county wide)

Muskegon – 106,252

Detroit – 3,697,529 (1,027,974 Detroit city)

179B of the Clean Air Act

- Allows relief from an attainment demo for moderate and above ozone nonattainment areas if area would have attained but for emissions emanating from outside the U.S.
- Allows for protection from reclassification (bump-up) for marginal and above ozone nonattainment areas if area would have attained but for emissions emanating from outside the U.S.

What 179B does NOT do

- 179B does NOT relax any mandatory control measures associated with an area's classification
- 179B does NOT redesignate an area to attainment
- 179B does NOT exclude monitoring data influenced by international transport

Technically strong analytical 179B demonstrations

Would include multiple pieces of evidence such as:

- A comparison of the magnitude of precursor emissions emanating from the upwind international area to the magnitude of precursor emissions from the local/domestic area
- An analysis of the meteorology (e.g. back trajectories and possibly wind roses on ozone exceedance days versus non-exceedance days) to determine whether there is evidence that ozone exceedance days were impacted by anthropogenic emissions coming from upwind international areas
- Photochemical modeling analyses

- EPA is drafting guidance on 179B demonstrations, contact your Regional EPA office if you are working on a 179B
- EPA recently on November 1st proposed approval of a 179B demo Imperial County California 84 FR 58641

Exceptional Events

The Environmental Protection Agency (EPA) promulgated the Exceptional Events Rule to address Clean Air Act (CAA) section 319(b), which allows for the exclusion of air quality monitoring data influenced by exceptional events from use in determinations of exceedances or violations of the national ambient air quality standards (NAAQS).

EPA revised the 2007 Exceptional Events Rule in 2016 based on implementation experiences with the exceptional events data exclusion process.

The revised Exceptional Events Rule at 40 CFR 50.14(c)(3) clarifies that an exceptional events demonstration must include the following elements:

- 1) A narrative conceptual model that describes the event(s) causing the exceedance or violation and a discussion of how emissions from the event(s) led to the exceedance or violation at the affected monitor(s);
- 2) A demonstration that the event affected air quality in such a way that there *exists a clear causal relationship* between the specific event and the monitored exceedance or violation;
- 3) Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times.
- 4) A demonstration that the event was both *not reasonably controllable and not reasonably preventable*;
- 5) A demonstration that the event was caused by human activity that is *unlikely to recur at a particular location* or was a natural event; and
- 6) Documentation that the submitting air agency followed the public comment process

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