

GRETCHEN WHITMER GOVERNOR

### STATE OF MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

EXECUTIVE OFFICE



PHILLIP D. ROOS DIRECTOR

February 6, 2025

### VIA ELECTRONIC SUBMISSION

Cheryl L. Newton, Acting Regional Administrator United States Environmental Protection Agency Region 5 77 West Jackson Boulevard (R-19J) Chicago, Illinois 60604-3507

Dear Acting Regional Administrator Newton:

### SUBJECT: 2023 PM<sub>2.5</sub> Exceptional Events Demonstration for the Grand Rapids-Wyoming Core Based Statistical Area (CBSA)

Pursuant to the United States Environmental Protection Agency's (USEPA) 2016 Exceptional Events Rule and Section 50.14, of Part 50, National Primary and Secondary Ambient Air Quality Standards, Title 40 of the Code of Federal Regulations, the Michigan Department of Environment, Great Lakes, and Energy's (EGLE) Air Quality Division (AQD) is submitting a 2023 PM<sub>2.5</sub> Exceptional Events Demonstration for the Grand Rapids-Wyoming CBSA. The demonstration establishes that plumes from Canadian wildfires adversely affected the Grand Rapids monitor on nine days in June and July 2023. As such, the AQD is requesting the PM<sub>2.5</sub> data from the days be excluded from regulatory determinations.

An electronic version of this submittal, in PDF format, has been submitted to the USEPA's Region 5 office using the State Planning Electronic Collaboration System.

We ask that the USEPA approve this Exceptional Events Demonstration. Questions on this submittal may be directed to Robert Irvine, Supervisor, SIP Development Unit, AQD, at 517-648-7367; IrvineR@Michigan.gov; or EGLE, P.O. Box 30260, Lansing, Michigan 48909-7760; or you may contact me.

Sincerely,

Millip D. Kno

Phillip D. Roos Director 517-284-6700

Enclosure

Cheryl L. Newton, Acting Regional Administrator Page 2 February 6, 2025

cc/enc: Krista Bizzotto, USEPA, Region 5 Michael Compher, USEPA, Region 5 Aaron B. Keatley, Chief Deputy Director, EGLE Annette Switzer, EGLE Dr. Eduardo Olaguer, EGLE Tom Shanley, EGLE Susan Kilmer, EGLE Robert Irvine, EGLE Stephanie Hengesbach, EGLE

# 2023 PM<sub>2.5</sub> Exceptional Events Demonstration for the Grand Rapids-Wyoming Core Based Statistical Area



MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

## February 2025

Michigan Department of Environment, Great Lakes, and Energy

**Air Quality Division** 

[This page intentionally left blank]

## Table of Contents

1	I	Introduction – Grand Rapids-Monroe Monitor 26-081-0020					
	1.1	L	Ove	rview	1		
	1.2	2	Exce	eptional Events Rule Requirements	4		
2	I	Narr	ative	e Conceptual Model	5		
	2.1	L	June	e 6-8, 2023 PM <sub>2.5</sub> Episode	5		
		2.1.1	1	Episode Description	5		
		2.1.2	2	Meteorology	5		
		2.1.3	3	Wildfire Description	8		
		2.1.4	1	Media Coverage	9		
	2.2	2	June	e 26-– 29, 2023 PM <sub>2.5</sub> Episode	10		
		2.2.1	1	Episode Description	10		
		2.2.2	2	Meteorology	11		
		2.2.3	3	Wildfire Description	14		
		2.2.4	1	Media Coverage and Public Health Messaging	15		
	2.3	3	July	25-26, 2023 PM <sub>2.5</sub> Episode	16		
		2.3.1	1	Episode Description	16		
		2.3.2	2	Meteorology	16		
		2.3.3	3	Wildfire Description	18		
		2.3.4	1	Media Coverage and Public Health Messaging	19		
3	(	Clea	r Cau	usal Relationship	20		
	3.1	L	June	e 6-8, 2023 PM <sub>2.5</sub> Episode	21		
	3.2	2	June	e 26-29, 2023 PM <sub>2.5</sub> Episode	24		
	3.3	3	July	25-26, 2023 PM <sub>2.5</sub> Episode	28		
4	ĺ	Not	Reas	onably Controllable or Not Reasonably Preventable	30		
5	Human Activity Unlikely to Recur at a Particular Location or Natural Event						
6	ļ	Publ	ic No	ptification	33		
7	I	Publ	ic Co	omment	36		
8	8 Summary						
Α	ppe	ndix	ά A		38		

Public Comment Period:	
EGLE Public Comment Postings:	38
EGLE Calendar:	38
EGLE AQD Public Notice document:	39
Public Comments Received:	41
Division Responses:	43
Appendix B	48

# 1 Introduction – Grand Rapids-Monroe Monitor 26-081-0020

### 1.1 Overview

On February 7, 2024, the United States Environmental Protection Agency (USEPA) promulgated a revised National Ambient Air Quality Standard (NAAQS) for fine particulate matter (PM<sub>2.5</sub>), with an effective date of May 6, 2024 (89 Federal Register [FR] 16202). The level of the new annual PM<sub>2.5</sub> NAAQS is set to 9.0  $\mu$ g/m<sup>3</sup>. Before the February 7, 2025, deadline for nonattainment area designation recommendations, the USEPA asked state and local air agencies to submit demonstrations to exclude days impacted by exceptional events from consideration in the designation process.

Air quality in the Grand Rapids-Wyoming Core Based Statistical Area (CBSA) was impacted in June and July 2023 by smoke entering the region from wildfires in Canada. Wildfires across Canada during this period produced smoke plumes that impacted surface air quality throughout the Great Lakes Basin. The smoke from these fires produced PM<sub>2.5</sub> pollution episodes across the region that had significant health and regulatory implications. One of the regulatory impacts of the fire smoke was the effect on the air quality design value in the Grand Rapids-Wyoming CBSA.

Table 1 shows the days in June and July 2023 which, if excluded from the three-year (2021-2023) PM<sub>2.5</sub> design value calculation at the Grand Rapids-Monroe monitor (26-081-0020, referred to as the Grand Rapids monitor), would result in a design value for the Grand Rapids-Wyoming CBSA below the 2024 PM<sub>2.5</sub> NAAQS. The days listed are Tier 1 category days according to the <u>USEPA PM<sub>2.5</sub> Tiering Tool</u>, and they rank in the top 18 observed concentration days at this monitor in the 2019-2023 period (Figure 1-1 and Figure 1-2).

Date	USEPA	24-hour	5-year	5-year
	PM <sub>2.5</sub> Tier	average PM <sub>2.5</sub>	Percentile	Rank
		<b>(</b> μg/m³)		
June 6, 2023	1	29.7	98.9%	14
June 7, 2023	1	39.5	99.5%	6
June 8, 2023	1	35.8	99.4%	8
June 26, 2023	1	27.8	98.6%	18
June 27, 2023	1	143.0	100.0%	1
June 28, 2023	1	100.9	99.9%	2
June 29, 2023	1	85.8	99.8%	3
July 25, 2023	1	44.8	99.6%	5
July 26, 2023	1	27.9	98.7%	17

Table 1. Requested fire smoke days for the Grand Rapids-Wyoming, MI CBSA -Grand Rapids monitor (26-081-0020)





R and All I Flags Excluded From Tiering Calculation

Figure 1-1. PM<sub>2.5</sub> Tiering Tool – for Exceptional Events Analysis – Grand Rapids monitor – Top four 2023 days in the demonstration



# Figure 1-2. PM<sub>2.5</sub> Tiering Tool – for Exceptional Events Analysis – Grand Rapids monitor – additional five 2023 days in the demonstration

The Michigan Department of Environment, Great Lakes, and Energy's (EGLE) Air Quality Division (AQD) requests that the USEPA exclude these dates from the Grand Rapids monitor  $PM_{2.5}$  design value calculations due to the influence of Canadian wildfire smoke on the monitored concentrations. It should be noted that an additional  $PM_{2.5}$  monitor, Jenison (26-139-005), also operates in the Grand Rapids-Wyoming CBSA. This site was also affected by the wildfire episodes during June and July 2023. The Jenison site currently has a 2021-2023 annual  $PM_{2.5}$  design value of 8.9 µg/m<sup>3</sup>, though this design value is considered invalid due to a data capture rate of less than 50% during the second quarter of calendar year 2022.

Table 2 shows the annual PM<sub>2.5</sub> design value for the Grand Rapids monitor with and without the requested event days. Excluding the observed data from these days has regulatory significance because it drops the Grand Rapids-Wyoming CBSA design value below the 2024 annual PM<sub>2.5</sub> NAAQS and will preclude the CBSA from being designated a nonattainment area for the 2024 annual PM<sub>2.5</sub> NAAQS.

Table 2. Annual PM <sub>2.5</sub> three-year design value at the Grand Rapids monitor with and withour
the requested event days

Metric	Annual average PM <sub>2.5</sub> DV ( $\mu$ g/m <sup>3</sup> )
2021-2023 DV	9.3 μg/m³
2021-2023 DV with requested days removed	8.9 μg/m³

The above information details exclusion of days that extend across three wildfire smoke influenced events during June and July 2023. This Exceptional Event Demonstration includes a separate Narrative Conceptual Model and Clear Causal Relationship sections for each event.

## 1.2 Exceptional Events Rule Requirements

The USEPA's Treatment of Data Influenced by Exceptional Events (Exceptional Event Rule, 81 FR 68216) provides the requirements that air agencies must meet when requesting the USEPA to exclude exceptional event-related concentrations from regulatory determinations. All the required elements under 40 CFR 50.14(c)(1)(i), 40 CFR 50.14(c)(3)(iv)(A–E), and 40 CFR 50.14(c)(3)(v)(A-C) are included in this demonstration.

- 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), including analyses comparing the claimed eventinfluenced concentrations to concentrations at the same monitoring site at other times. (Section 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. (Section 3)
- A demonstration that the event was both not reasonably controllable and not reasonably preventable. (Section 4)
- A demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event. (Section 5)
- A demonstration that the public was notified of the occurrence of the event(s). (Section 6)
- Documentation that EGLE followed the public comment process. (Section 7)

## 2 Narrative Conceptual Model

This section of the demonstration details the narrative conceptual model for each of the three PM<sub>2.5</sub> wildfire smoke influenced episodes.

## 2.1 June 6-8, 2023, PM<sub>2.5</sub> Episode

### 2.1.1 Episode Description

Air quality at the Grand Rapids monitor was impacted in June 2023 by wildfire smoke entering the region from Ontario and Quebec, Canada. Figure 2-1 shows daily average  $PM_{2.5}$  concentrations for the years 2019 – 2023 at the Grand Rapids  $PM_{2.5}$  monitor. This plot shows the average  $PM_{2.5}$  concentration by year on each day. The figure illustrates the severity of the

June PM<sub>2.5</sub> smoke episodes relative to other periods of the year and compared to the same period in the past five years. The event dates of June 6 through 8, 2023, are circled in red.



![](_page_11_Figure_2.jpeg)

### 2.1.2 Meteorology

By June 2 wildfires developed north and northeast of Michigan across Ontario and Quebec. Satellite images from June 2 and June 3 show large smoke plumes traveling southwest into the state. The movement of these plumes was driven by a surface frontal boundary moving southwest from Ontario and into the Ohio River Valley on June 3. At upper levels during this period, an upper-level high was retrograding west across the Great Lakes Basin as a lowpressure area was developing across the northeastern U.S. These weather conditions resulted in a primarily northeast wind flow across the region.

Satellite imagery and surface weather maps from June 2 and June 3 are shown in Figure 2-2. On June 2, the smoke plumes from the wildfires are clearly seen on satellite imagery (see red arrows). The rectangle on the satellite imagery from June 3 shows between June 2 and June 3, the smoke plumes moved into the Great Lakes Basin on a northeasterly wind and additional plumes from those fires continued developing.

![](_page_12_Figure_0.jpeg)

![](_page_12_Figure_1.jpeg)

Between June 4 and June 6, another cold front dropped into the region from central Ontario and Quebec. After this cold front passed south, surface high pressure moved in and remained positioned from the Hudson Bay region, south to the Great Lakes Basin through June 8. During this time, surface low-pressure deepened becoming positioned near Nova Scotia by June 6. At upper levels, a blocking 'omega' pattern had developed, remaining over the region through June 8. This blocking pattern featured two strong low-pressure systems sitting over California and the northeastern U.S. blocked by a ridge of high pressure over the northern Great Plains/south-central Canada.

This weather setup formed a persistent north/northeasterly wind flow pattern, which brought wildfire smoke plumes in from the active fires in Ontario and Quebec. Satellite imagery and surface weather maps from June 5 through June 8 are shown in Figure 2-3. Satellite imagery reveals wildfire smoke remained over the Great Lakes Basin during this period and the corresponding surface maps show the persistent wind pattern.

![](_page_13_Figure_0.jpeg)

![](_page_13_Figure_1.jpeg)

![](_page_13_Figure_2.jpeg)

![](_page_14_Figure_0.jpeg)

Figure 2-3. Satellite Image at 6:30 p.m. and Surface Analysis at 5:00 p.m. from June 5-8.

### 2.1.3 Wildfire Description

Starting on May 27, 2023, the Canadian Wildfire Information System (CWIFS)<sup>1</sup> began to report extreme fire danger conditions from the southwest border of Ontario northeast across Quebec to the Gulf of St. Lawrence. The area of Quebec centered around the southern end of James Bay remained almost continuously under high to extreme fire danger through most of the month. On June 2, the Quebec provincial fire-management authority, La Société de Protection des Forêts Contre le feu (SOPFEU<sup>2</sup>), reported to the Canadian Interagency Forest Fire Centre (CIFFC) a fire preparedness level 5 for the province, which is the highest alert level in Canada for mobilizing resources to fight wildfires and protect life and structures<sup>3</sup>. The province remained at a level 5 alert continuously until it was lowered to level 4 on July 17.

Figure 2-4 is a CWIFS map showing the active fires and fire hotspots in Ontario and Quebec on June 4, 2023. On June 4 there were 150 active fires burning 154,823.9 acres in the province of Quebec<sup>4</sup>. Most of these fires were in the area of Quebec located east of Lebel-sur-Quévillon and the area of Quebec located southeast of Sakami. These fires were located in the source regions intersected by the HYSPLIT back-trajectories shown in <u>Section 3.1</u> of this demonstration.

<sup>&</sup>lt;sup>1</sup> <u>https://cwfis.cfs.nrcan.gc.ca/home</u>

<sup>&</sup>lt;sup>2</sup> <u>https://sopfeu.qc.ca/</u>

<sup>&</sup>lt;sup>3</sup> <u>https://ciffc.net/situation/2023-06-02</u>

<sup>&</sup>lt;sup>4</sup> <u>https://ciffc.net/situation/2023-06-04</u>

![](_page_15_Figure_0.jpeg)

Figure 2-4. Map from CWIFS of active fires in Ontario and Quebec on June 4, 2023.

### 2.1.4 Media Coverage

News media across the country reported on the wildfire smoke in the Great Lakes Basin in June 2023. The coverage of the smoke impacts, particularly by media outlets that typically only report on extreme weather and air quality events, indicated the historic nature of the Canadian wildfire smoke impacts on surface air quality in the Great Lakes Basin. The list of news stories in

Table 3 illustrates the severe nature of the June PM<sub>2.5</sub> pollution episodes in the Midwest, including the Great Lakes Basin. The reports cited are further evidence that the early June 2023 episode was not local in nature but driven by transported wildfire smoke from Canada that blanketed the region.

# Table 3. News media reporting of the early June 2023 Canadian wildfire smoke in theGreat Lakes Basin

Date	Source	Headline (link)
June 5, 2023	MLive	More hazy skies for Michigan as
		wildfires in Quebec surge past 150 (link)
June 6, 2023	The Michigan	Omega Block Continues ( <u>link</u> )
	Weather Center	
June 7, 2023	CNN	Analysis: Canada's wildfire smoke could
		signal what's ahead for rest of the
		summer ( <u>link</u> )
June 8, 2023	NASA Earth	Hazardous Air Chokes Northeastern
	Observatory	States ( <u>link</u> )
June 8, 2023	The Michigan	Another Smokey Day
	Weather Center	( <u>link</u> )
June 8, 2023	WJR 760 AM Detroit	Detroit Air Quality Dips to "Unhealthy"
		Levels as Canadian Wildfire Smoke
		Pushes Closer to Michigan ( <u>link</u> )
June 8, 2023	NBS News National	U.S. sees reprieve from smoky haze, but
		Canadian wildfires are still raging ( <u>link</u> )
June 8, 2023	Reuters	US East Coast blanketed in veil of
		smoke from Canadian fires ( <u>link</u> )
June 8, 2023	Fox 17 West	West Michigan air quality: what you
	Michigan	need to know ( <u>link</u> )

## 2.2 June 26--- 29, 2023 PM<sub>2.5</sub> Episode

### 2.2.1 Episode Description

Air quality at the Grand Rapids monitor continued to be impacted through June 2023 by wildfire smoke entering the region from Ontario and Quebec. Figure 2-5 shows daily average PM<sub>2.5</sub> concentrations for the years 2019-2023 at the Grand Rapids PM<sub>2.5</sub> monitor. It also shows the average PM<sub>2.5</sub> concentration by year on each day. The figure illustrates the severity of the late June PM<sub>2.5</sub> smoke episodes relative to other periods of the year and compared to the same period in the past five years. The event dates of June 26-29, 2023, are circled in red.

![](_page_18_Figure_0.jpeg)

![](_page_18_Figure_1.jpeg)

### 2.2.2 Meteorology

From June 25 through June 30, distinct airmass transport patterns connected the upper Midwest with Canada and brought smoke into the Great Lakes Basin. During June 25-27, a large surface low-pressure area moved from west to east across the Lower Peninsula of Michigan. The cyclonic (e.g., counterclockwise) circulation around the system carried smoke into the upper Midwest from source regions in Ontario and Quebec. Thick smoke from the Canadian wildfires was transported along the trailing edge of the low-pressure system as it moved east through the Great Lakes Basin. Stable air featured during this period with a persistent northerly to northwesterly wind flow.

At upper levels a blocking 'omega' pattern formed during June 25-27, which featured two lowpressure systems sitting over the Pacific Northwest and the northern Great Lakes blocked by a ridge of high pressure over the Great Plains. This weather setup allowed smoke from Canada to transport into the Great Lakes region and build up at the surface across the region. Satellite imagery and surface weather maps from June 25-27 are shown in Figure 2-6.

![](_page_19_Figure_0.jpeg)

Figure 2-6. Satellite Image at 6:30 p.m. and Surface Analysis at 5:00 p.m. from June 25-27.

Starting on June 28, the low-pressure system aloft weakened and moved towards eastern Canada. As a result, a long, weak ridge of high-pressure centered in the Midwest covered most of the eastern U.S. This weak high-pressure system that persisted until the evening of June 29 produced a dry, stagnant air mass in the Great Lakes Basin that trapped smoke from the Canadian fires over the region and caused high PM<sub>2.5</sub> conditions at the surface. On June 28, a large low-pressure system formed east of Lake Winnipeg in Manitoba, Canada. At the same time, two well-established mesoscale convective systems that formed in Nebraska and Kansas moved into Illinois on the morning of June 29. Between these two features, a smoke transport corridor formed across the central Great Lakes Basin that brought smoke from Ontario and Quebec, along with a smoke-enriched airmass from the central Canadian provinces into the region. This corridor persisted until June 30 when the smoke started to clear out of the region to the east. Satellite imagery and surface weather maps from June 28-30 are shown in Figure **2-7**, below.

![](_page_20_Figure_1.jpeg)

![](_page_20_Figure_2.jpeg)

![](_page_21_Picture_0.jpeg)

Figure 2-7. Satellite Image at 6:30 p.m. and Surface Analysis at 5:00 p.m. from June 28-30.

### 2.2.3 Wildfire Description

Quebec continued to be in a state of fire preparedness level 5 for the province in late June 2023. Figure 2-8 is a CWIFS map showing the active fires and fire hotspots in Quebec, Canada on June 26, 2023. On June 26 there were 81 active fires burning 3,013,847 acres in the province<sup>5</sup>. The fires were clustered in three areas of western Quebec near James Bay. These fires were located in the source regions intersected by the HYSPLIT trajectories shown in <u>Section 3.2</u> of this demonstration.

![](_page_21_Figure_4.jpeg)

Figure 2-8. Map from CWIFS of active fires in Ontario and Quebec on June 26, 2023.

<sup>&</sup>lt;sup>5</sup> <u>https://ciffc.net/situation/2023-06-26</u>

### 2.2.4 Media Coverage and Public Health Messaging

Like the early June event, news media across the country reported on the wildfire smoke in the Midwest and Great Lakes Basin during the late June 2023 event. The coverage of the smoke impacts, particularly by media outlets that typically only report on extreme weather and air quality events, indicated the historic nature of the Canadian wildfire smoke impacts on surface air quality in the Great Lakes Basin. The list of news stories in Table 4 illustrates the severe nature of the late June PM<sub>2.5</sub> pollution episodes. The reports cited are further evidence that the late June 2023 episode was not local in nature but driven by transported wildfire smoke from Canada that blanketed the region.

Date	Source	Headline (link)
June 26, 2023	ABC WZZM 13	Wildfire Smoke Impacting West Michigan ( <u>link</u> )
June 27, 2023	Associated Press	Expect a hot, smoky summer in much of America.
	National	Here's why you'd better get used to it. ( <u>link</u> )
June 27, 2023	MLive	Air Quality in Michigan ( <u>link</u> )
June 27, 2023	The Weather Channel	PHOTOS: Midwest Choked by Canada Wildfire
		Smoke ( <u>link</u> )
June 27, 2023	Bridge Michigan	Michigan under statewide advisory as Canada
		wildfire smoke hits Midwest ( <u>link</u> )
June 28, 2023	WILX (NBC) News	Smoke and haze from Canadian wildfires leave
	central Michigan	Detroit with some of the worst air quality in the
		US ( <u>link</u> )
June 28, 2023	National Public Radio	Detroit, Chicago and the Midwest blanketed by
		wildfire haze from Canada ( <u>link</u> )
June 28, 2023	FOX Weather	Before-and-after photos show dramatic impact of
		Canadian wildfire smoke in Chicago, Detroit,
		Milwaukee ( <u>link</u> )
June 29, 2023	Michigan Advance	Michigan residents face another day of unhealthy
		air quality due to Canadian wildfires( <u>link</u> )
June 29, 2023	NOAA Air Resources	Wildfire Smoke Continues Across US ( <u>link</u> )
	Laboratory	
June 29, 2023	CNN	People urged to stay indoors as smoke from
		Canadian wildfires continues to create unhealthy
		air quality from the Midwest to the Northeast
		( <u>link</u> )
June 30, 2023	MLive	Unprecedented month of poor air quality in
		Michigan from wildfire smoke ( <u>link</u> )
June 30, 2023	CNN	Smoke from Canadian wildfires is still wafting
		south. Conditions for some are expected to
		improve soon ( <u>link</u> )
June 30, 2023	ABC News	Wildfire smoke updates: CDC issues health alert
		on wildfire smoke exposure ( <u>link</u> )

# Table 4. News media reporting of the late June 2023 Canadian wildfire smoke in theGreat Lakes Basin

## 2.3 July 25-26, 2023, PM<sub>2.5</sub> Episode

### 2.3.1 Episode Description

Air quality at the Grand Rapids monitor was impacted in June 2023 by fire smoke entering the region from Quebec, Canada and wildfire smoke continued over the Great Lakes Basin through the month of July. Figure 2-9 shows daily average PM<sub>2.5</sub> concentrations for the years 2019-2023 at the Grand Rapids PM<sub>2.5</sub> monitor. This plot shows the average PM<sub>2.5</sub> concentration by year on each day. The figure illustrates the severity of the late July PM<sub>2.5</sub> smoke episodes relative to other periods of the year and compared to the same period in the past five years. The event dates of July 25-26, 2023, are circled in red.

![](_page_23_Figure_3.jpeg)

Figure 2-9. 2019-2023 daily average PM<sub>2.5</sub> concentrations for Grand Rapids monitor

### 2.3.2 Meteorology

After the high pollution episode at the end of June, wildfire smoke lingered over most of the Great Lakes Basin through July. During this period, the impact on air quality conditions was not as widespread or as extreme in nature, and the region remained generally moderate for daily 24-hour average PM<sub>2.5</sub> concentrations. That changed, however, in the last full week of July as a thick smoke plume from wildfires in central Canada dropped in from the northwest on July 23 and July 24.

During this period a frontal boundary that originated northwest of the region in central Canada sank southeast, becoming positioned across the northern Great Lakes Basin on July 23.

Between June 24 and June 25, the front wavered near the Upper Peninsula of Michigan, before stalling for a time across central lower Michigan on July 26. At upper levels, the region was positioned between low pressure north of the Great Lakes Basin near Hudson Bay, and a large high-pressure area near the four corners region of the U.S. The upper-level wind flow was northwest to west through the period and the progression of increased PM<sub>2.5</sub> concentrations due to wildfire smoke could be seen starting in Minnesota on July 23, pushing southeast into Wisconsin on July 24, and into Michigan by July 25. The slow-moving surface boundary lingering over Michigan helped trap wildfire smoke at the surface during this period. Figure 2-10 shows the progression of the wildfire smoke plume as seen on satellite imagery, and associated surface maps are shown as well.

![](_page_24_Figure_1.jpeg)

![](_page_24_Figure_2.jpeg)

![](_page_25_Figure_0.jpeg)

![](_page_25_Figure_1.jpeg)

### 2.3.3 Wildfire Description

Preparedness levels across the Canadian providence of Saskatchewan and Manitoba were level 3 through July; Ontario started the month at level 4, but this was updated to level 3 on July 11; and Quebec started the month in preparedness at level 5, then the level was updated to 4 on July 15, and updated again on July 26 to level 3. Figure 2-11 is a CWIFS map showing the active fires and fire hotspots in these providences on July 24, 2023<sup>6</sup>. On July 24 there were nine active fires burning 353,162 acres in the province of Saskatchewan; and 14 active fires burning 56,794 acres in Manitoba; 26 active fires in Ontario burning 662,427 acres; and 21 active fires in Quebec burning 3,210,729 acres. Several wildfire areas were active and some of the largest parameters were located near Patuanak in Saskatchewan, northwest of Lake Winnipeg in Manitoba. Three were located north of Lake Nipigon in Ontario, and fires continued in western

<sup>&</sup>lt;sup>6</sup> <u>https://ciffc.net/situation/2023-06-26</u>

Quebec near James Bay. The fires in Ontario, Manitoba, and Saskatchewan were located in the source regions intersected by the HYSPLIT trajectories shown in <u>Section 3.3</u> of this demonstration.

![](_page_26_Figure_1.jpeg)

Figure 2-11. Map from CWIFS of active fires in Quebec on July 24, 2023.

### 2.3.4 Media Coverage and Public Health Messaging

The July 2023 event also created news media coverage across the country. Media reported on the wildfire smoke in the Midwest and the Great Lakes Basin. The coverage of the smoke impacts, particularly by media outlets that typically only report on extreme weather and air quality events, indicated the historic nature of the Canadian wildfire smoke impacts on surface air quality in the Great Lakes Basin. The list of news stories in Table 5 illustrates the severe nature of the July PM<sub>2.5</sub> pollution episode. The reports cited are further evidence that the late July 2023 episode was not local in nature but driven by transported wildfire smoke from Canada that blanketed the region.

# Table 5. News media reporting of the July 2023 Canadian wildfire smoke in theGreat Lakes Basin

Date	Source	Headline (link)
July 19, 2023	CBS News	Canadian wildfire maps show where
		2023's fires continue to burn across
		Quebec, Ontario and other provinces
		( <u>link</u> )
July 23, 2023	Bridge Michigan	Smokey skies are ahead in Michigan
		( <u>link</u> )
July 24, 2023	MLive	See the next blob of smoke heading
		toward Michigan; Whole state in air
		alert ( <u>link</u> )
July 24, 2023	ABC WZZM 13	Clean Air Action Day Declared ( <u>link</u> )
July 24, 2023	Lansing State Journal	Air quality alert issued for Tuesday in
		Lansing and southern lower Michigan
		( <u>link</u> )
July 25, 2023	The Michigan	Heat-Storms & Smoke ( <u>link</u> )
	Weather Center	
July 26, 2023	WDIV Local 4	Wildfire smoke continues to
		encapsulate Michigan, affect air quality
		Wednesday ( <u>link</u> )
July 26, 2023	+IQAir	Michigan Air Quality Alert: Ongoing
		Canadian Wildfire Smoke ( <u>link</u> )

## 3 Clear Causal Relationship

The clear causal relationship between the Canadian wildfires and PM<sub>2.5</sub> concentrations in the Grand Rapids-Wyoming CBSA for the June 6-8, June 26-29, and July 25-26, 2023, episodes are detailed in this section. One key factor during these periods is that the 24-hour PM<sub>2.5</sub> concentrations were distinctively higher when compared to historical or annual 24-hour levels of PM<sub>2.5</sub>. The 24-hour PM<sub>2.5</sub> concentrations measured on the event dates all fall within the USEPA's Tier 1 analysis threshold because they are greater than 1.5 times the monitor's calculated tiering threshold. In this Tier 1 analysis, clear evidence must show that wildfire emissions were transported from the wildfires to the Grand Rapids monitor during the event dates.

Regional wildfire smoke episodes spanned multiple days in the summer of 2023 and this section details the three most significant episodes experienced at the Grand Rapids monitor. The wildfire smoke episodes detailed in this demonstration were seen in satellite imagery, remote sensing products, and in the surface PM<sub>2.5</sub> monitored concentrations. The figures in this section establish a clear causal relationship between the Canadian wildfires and the PM<sub>2.5</sub> episodes that affected the Grand Rapids monitor.

Data shown from AirNowTech.gov includes the following information:

- Hazard Mapping System smoke layers;
- Air Quality System 24-hour average PM<sub>2.5</sub> surface concentrations; and
- 48-hour forward and backward HYSPLIT trajectories released at 50, 250, and 1,000 meters.

The data from NASA Worldview<sup>7</sup> include the following information:

- 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; and
- MODIS Aqua corrected reflectance (true color) and Visible Infrared Imaging Radiometer Suite Fire and Thermal Anomalies (day and night, 375 m) layer showing active fire detections and thermal anomalies.

## 3.1 June 6-8, 2023, PM<sub>2.5</sub> Episode

The HYSPLIT trajectory maps show the origin, transport, and fate of the smoke plumes that caused the high surface PM<sub>2.5</sub> concentrations in Grand Rapids from June 6-8, 2023. The forward trajectories were released on June 4, June 5, and June 6 to correspond with the backward trajectories that were released on June 6, June 7, and June 8, respectively (Figures 3-1 through 3-6). The coincidence of the forward and backward trajectories for each of the high-concentration days is clear evidence that smoke from the wildfires in Ontario and Quebec caused the high PM<sub>2.5</sub> concentrations in Grand Rapids on these days. The forward and backward trajectories are shown below.

The accompanying AOD and imagery maps for each of the high-concentration days provide further evidence that dense smoke from the Canadian fires was present in the Grand Rapids area on these days and that this smoke was the cause of the high concentrations of PM<sub>2.5</sub> at the surface monitor. The AOD and imagery maps are also shown below.

<sup>&</sup>lt;sup>7</sup> <u>https://worldview.earthdata.nasa.gov/</u>

![](_page_29_Figure_0.jpeg)

Figure 3-1. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in southeast Ontario and southern Quebec, Canada on June 6, 2023.

![](_page_29_Picture_2.jpeg)

Figure 3-2. June 6, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_30_Figure_0.jpeg)

Figure 3-3. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in southeast Ontario and southern Quebec, Canada on June 7, 2023.

![](_page_30_Picture_2.jpeg)

Figure 3-4. June 7, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_31_Figure_0.jpeg)

Figure 3-5. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in southeast Ontario and southern Quebec, Canada on June 8, 2023.

![](_page_31_Picture_2.jpeg)

Figure 3-6. June 8, 2023, MAIAC AOD (left) and satellite true color imagery (right).

## 3.2 June 26-29, 2023, PM<sub>2.5</sub> Episode

The HYSPLIT trajectory maps show the origin, transport, and fate of the smoke plumes that caused the high surface PM<sub>2.5</sub> concentrations in Grand Rapids from June 26-29, 2023. The forward trajectories were released on June 24, June 25, June 26, and June 27 to correspond with the backward trajectories that were released on June 26, June 27, June 28, and June 29, respectively (Figures 3-7 through 3-14). The coincidence of the forward and backward trajectories for each of the high-concentration days is clear evidence that smoke from the wildfires in Ontario and Quebec caused the high PM<sub>2.5</sub> concentrations in Grand Rapids on these days. The forward and backward trajectories are shown below.

The accompanying AOD and imagery maps for each of the high-concentration days provide further evidence that dense smoke from the Canadian fires was present in the Grand Rapids area on these days and that this smoke was the cause of the high concentrations of PM<sub>2.5</sub> at the surface monitor. The AOD and imagery maps are also shown below.

![](_page_32_Figure_1.jpeg)

Figure 3-7. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in central and southern Quebec, Canada on June 26, 2023.

![](_page_32_Figure_3.jpeg)

Figure 3-8. June 26, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_33_Figure_0.jpeg)

Figure 3-9. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in central and southern Quebec, Canada on June 27, 2023.

![](_page_33_Figure_2.jpeg)

Figure 3-10. June 27, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_34_Figure_0.jpeg)

Figure 3-11. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in central and southern Quebec, Canada on June 28, 2023.

![](_page_34_Figure_2.jpeg)

Figure 3-12. June 28, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_34_Figure_4.jpeg)

Figure 3-13. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in central and southern Quebec, Canada on June 29, 2023.

![](_page_35_Picture_0.jpeg)

Figure 3-14. June 29, 2023, MAIAC AOD (left) and satellite true color imagery (right).

## 3.3 July 25-26, 2023, PM<sub>2.5</sub> Episode

The HYSPLIT trajectory maps show the origin, transport, and fate of the smoke plumes that caused the high surface PM<sub>2.5</sub> concentrations in Grand Rapids from July 25-26, 2023. The forward trajectories were released on July 23 and July 24 to correspond with the backward trajectories that were released on July 25 and July 26, respectively (Figures 3-15 through 3-18). The coincidence of the forward and backward trajectories for each of the high-concentration days is clear evidence that smoke from the wildfires in central Canada into Quebec caused the high PM<sub>2.5</sub> concentrations in Grand Rapids on these days. The forward and backward trajectories are shown below.

The accompanying AOD and imagery maps for each of the high-concentration days provide further evidence that dense smoke from the Canadian fires was present in the Grand Rapids area on these days and that this smoke was the cause of the high concentrations of PM<sub>2.5</sub> at the surface monitor. The AOD and imagery maps are also shown below.

![](_page_36_Figure_0.jpeg)

Figure 3-15. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke sources in central Canada on July 25, 2023.

![](_page_36_Picture_2.jpeg)

Figure 3-16. July 25, 2023, MAIAC AOD (left) and satellite true color imagery (right).

![](_page_37_Figure_0.jpeg)

Figure 3-17. 48-hour forward (left) and backward (right) trajectories between Grand Rapids and wildfire smoke from central Canada that moved into the Great Lakes Basin prior to July 26, 2023.

![](_page_37_Figure_2.jpeg)

Figure 3-18. July 26, 2023, MAIAC AOD (left) and satellite true color imagery (right).

# 4 Not Reasonably Controllable or Not Reasonably Preventable

Section 40 CFR 50.14 (c)(3)(iv)(D) requires a demonstration that the event was both not reasonably controllable and not reasonably preventable. For wildfires, it is presumed according to 40 CFR 50.14(b)(4) that wildfires on wildland will satisfy both factors of not reasonably controllable and not reasonably preventable unless there is evidence that demonstrates otherwise. Section 40 CFR 50.1(n) defines a wildfire as "any fire started by an unplanned ignition caused by lightning; volcanoes; other acts of nature; unauthorized activity; or

accidental, human-caused actions, or a prescribed fire that has developed into a wildfire. A wildfire that predominantly occurs on wildland is a natural event." Section 40 CFR 50.1(o) defines wildland as "an area in which human activity and development are essentially non-existent, except for roads, railroads, power lines, and similar transportation facilities. Structures, if any, are widely scattered."

As seen from the satellite imagery shown in Figure 4-1 and Figure 4-2, the areas in which the June and July 2023 fires occurred are wildlands, namely the area east of Lebel-sur-Quévillon, and the area southeast of Sakami in June 2023, both in Quebec, and near Patuanak in Saskatchewan, northwest of Lake Winnipeg in Manitoba, and north of Lake Nipigon in Ontario in July 2023.

![](_page_38_Picture_2.jpeg)

Figure 4-1. Satellite imagery of the wildland areas in Quebec east of Lebel-sur-Quévillon (left) and southeast of Sakami (right).

![](_page_38_Picture_4.jpeg)

![](_page_39_Picture_0.jpeg)

# Figure 4-2. Satellite imagery of the wildland areas near Patuanak in Saskatchewan (upper left), northwest of Lake Winnipeg in Manitoba (upper right), and north of Lake Nipigon in Ontario (bottom).

Extensive wildfire activity occurred on wildlands across Canada during the late spring and summer of 2023. The Canadian government estimates that on average 67% of the area burned in Canada from wildfires is due to lightning-caused fires<sup>8</sup>. CIFCC reported that on June 1, 2023, "a major lightning strike hit Quebec, igniting 182 forest fires in a single day." <sup>9</sup>

As the June and July 2023 fires in Canada were natural, wildfire smoke events and the wildfires occurred on wildlands, they meet the not reasonably controllable and not reasonably preventable criterion in the Exceptional Event Rule. The wildfires burning in June and July could not have been prevented and could not have been controlled by state or federal natural resources managers in the U.S. The excessive wildfire smoke emissions that caused violations of the PM<sub>2.5</sub> NAAQS in the Grand Rapids-Wyoming CBSA were caused by the wildfires and not the result of emissions from anthropogenic sources.

# 5 Human Activity Unlikely to Recur at a Particular Location or Natural Event

The Exceptional Event Rule requires a demonstration that the event was a human activity that is unlikely to recur at a particular location or was a natural event (40 CFR 50.14(c)(3)(iv)(E)). As stated in <u>Section 4</u>, the definition of wildfire in the Exceptional Events Rule is: "...any fire started by an unplanned ignition caused by lightning; ...or accidental, human-caused actions; ... A wildfire that predominately occurs on wildland is a natural event." As described in this demonstration, the origin and evolution of the June and July 2023 wildfires occurred across wildlands in Quebec, Ontario, Manitoba, and Saskatchewan, Canada. The USEPA generally

<sup>&</sup>lt;sup>8</sup> <u>https://natural-resources.canada.ca/our-natural-resources/forests/wildland-fires-insects-disturbances/forest-fires/fire-behaviour/13145</u>

<sup>&</sup>lt;sup>9</sup> https://ciffc.ca/sites/default/files/2024-03/03.07.24\_CIFFC\_2023CanadaReport%20%281%29.pdf

considers the emissions of PM<sub>2.5</sub> from wildfires on wildland to meet the regulatory definition of a natural event. A natural event is defined in 40 CFR 50.1(k), as "an event and its resulting emissions, which may recur at the same location, in which human activity plays little or no direct causal role," and further states that for purposes of this definition, "anthropogenic sources that are reasonably controlled shall be considered to not play a direct role in causing emissions."

Based on the documentation provided in this demonstration, the June and July 2023 events qualify as wildfires because lightning or accidental, human-caused actions (unplanned ignitions) most likely caused the wildfire events. As the wildfire events detailed in this demonstration occurred on wildlands and were caused by unplanned ignitions, they were natural and should be considered for treatment as exceptional events.

## 6 Public Notification

As required by Appendix D in 40 CFR Part 58, EGLE operates and maintains a network of instruments to measure ambient air quality at monitoring sites across the state. The Grand Rapids-Wyoming CBSA had two sites with continuous particulate monitors operating in 2023 during the smoke event dates in question (June 6-8, June 26-29, and July 25-26, 2023). The Grand Rapids monitor is a Teledyne-API T640x monitor that samples for PM<sub>2.5</sub> as well as PM<sub>10</sub> and coarse PM (PM<sub>10-2.5</sub>) simultaneously. The Jenison monitor is a Teledyne-API T640x monitor that samples for PM<sub>2.5</sub>. The Teledyne-API T640x monitors operate using the USEPA-approved Federal Equivalent Methods, and they operate under the measurement principle of Broadband spectroscopy using 90° white-light scattering with Polychromatic LED.

Figure 6-1 shows Michigan's active  $PM_{2.5}$  monitoring network and Figure 6-2 shows the  $PM_{2.5}$  monitors operating in 2023 within the Grand Rapids-Wyoming CBSA.

Real-time monitor concentrations can be found at: http://www.michigan.gov/MiAir.

![](_page_41_Figure_0.jpeg)

Figure 6-1. Map of active PM<sub>2.5</sub> monitoring sites in Michigan.

![](_page_41_Figure_2.jpeg)

Figure 6-2. Map of active PM<sub>2.5</sub> monitoring sites in Grand Rapids-Wyoming CBSA.

The Exceptional Events Rule [40 CFR 50.14(c)(1)(i)] requires air agencies to "notify the public promptly whenever an event occurs or is reasonably anticipated to occur which may result in the exceedance of an applicable air quality standard."

AQD forecasters issue air quality forecasts at a minimum weekly, but daily forecasts are issued during anticipated elevated pollution events. If the next day pollution levels (PM<sub>2.5</sub> and/or ozone) are expected to reach the Unhealthy for Sensitive Groups range (Orange AQI), EGLE forecasters will issue an Air Quality Action Day (Action Day), but an Action Day will also be issued the day of an event if deteriorating conditions warrant one. The Michigan air quality forecasts are available at: <u>http://www.michigan.gov/MiAir</u> and information is submitted to the National Weather Service and news media outlets when an Action Day is called.

The events of June and July 2023 resulted in several days where AQD forecasters issued Action Days to notify the public of the threat of elevated PM<sub>2.5</sub> and/or ozone concentrations, primarily due to wildfire smoke. Table 6 below summarizes when Action Days were called in 2023 by AQD forecasters, for what pollutant(s) the Action Day covered, and what part of the state was included in the Action Day. Table 7 below lists public notices and air quality alerts issued regarding the June and July events detailed in this demonstration.

EGLE 2023 Michigan Action Days					
Pollutant		utant	Coverage Area		
	Date	Ozone	PM2.5	Ozone	PM2.5
	4/14/2023	1		West and Southeast	
	5/30/2023	1		West and Southeast	
	5/31/2023	1		West and Southeast	
	6/1/2023	1		West/Central/Southeast	
	6/2/2023	1		West/Central/Southeast	
	6/4/2023		1		Upper Peninsula
	6/5/2023		1		Upper Peninsula
	6/7/2023		1		South half Lower Peninsula
	6/8/2023		1		South half Lower Peninsula
	6/9/2023		1		East
	6/21/2023	1		West and Southeast	
	6/22/2023	1		West	
	6/24/2023	1	1	West	Upper Peninsula
	6/26/2023		1		Upper Peninsula
	6/27/2023		1		State
	6/28/2023		1		State
	6/29/2023		1		State
	6/30/2023	1	1	State*	State
	7/1/2023	1	1	West and Southeast	State
	7/4/2023	1		West and Southeast	
	7/5/2023	1		West and Southeast	
	7/10/2023	1		West and Southeast	
	7/15/2023		1		West and Central Upper Peninsula
	7/16/2023		1		State
	7/17/2023		1		Central and South
	7/24/2023		1		Upper Peninsula
	7/25/2023		1		State
	7/27/2023	1		West and Southeast	
	7/28/2023	1		West and Southeast	
	8/23/2023	1		West	
	8/24/2023	1		West	

### Table 6. 2023 Michigan Action Days (Air Quality Alerts) issued by EGLE forecasters

Numbers in **bold blue** indicate Action Days were called for both Ozone and PM2.5

Total Calendar Days	Ozone Days	PM2.5 Days
31	17	17

17 Last Updated 9/13/2023

\* initially called for West and Southeast on 6/29/2023; updated to statewide day on 6/30/2023

Date	Agency	Message
June 7, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 7, 2023	Michigan Department of Health and Human	Clean Air Action Day
	Services	
June 7, 2023	EGLE	Air Quality Action Day
June 8, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 8, 2023	EGLE	Press Release
June 8, 2023	Detroit Health Dept	Public Health Guidance
June 26, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 27, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 27, 2023	Michigan Department of Health & Human	Press Release
	Services	
June 27, 2023	EGLE	Press Release
June 28, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 29 <i>,</i> 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 30, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	
June 30, 2023	CDC	Health Advisory
July 24, 2023	AQD - Relayed by National Weather Service	Air Quality Alert
	Grand Rapids, MI	

# Table 7. Public health and air quality alerts for the June and July 2023 Canadian wildfiresmoke episodes

## 7 Public Comment

According to 40 CFR 50.14(c)(3)(v), air agencies must "document [in their exceptional events demonstration] that the [air agency] followed the public comment process and that the comment period was open for a minimum of 30 days...." Further, air agencies must submit any received public comments to the USEPA and address in their submission those comments disputing or contradicting the factual evidence in the demonstration.

To solicit comments from the public, EGLE began a public comment period for the draft 2023 PM<sub>2.5</sub> Exceptional Events Demonstration for the Grand Rapids-Wyoming CBSA on November 18, 2024. EGLE posted notice of the comment period on EGLE's Calendar at: <u>https://www.trumba.com/calendars/deq-events</u>, and on EGLE's AQD Public Notice website at: <u>https://www.michigan.gov/egle/about/organization/air-quality/public-notice</u>. The comment period remained open through December 17, 2024. Two letters with comments were received during the public comment period. <u>Appendix A</u> contains the web postings for the public comment period, the comments received, and EGLE's response to these comments.

## 8 Summary

The 2023 wildfire season in Canada was unprecedented and according to the Natural Resources of Canada, the season was "the most destructive ever recorded."<sup>10</sup> The 2023 wildfire season in Canada brought a recorded total of 7,131 fires burning a total of 17,203,625 hectares (ha)<sup>11</sup>. According to the CIFFC Canada Report for the 2023 season, 462 fires burned 1,850,829 ha in Saskatchewan, 300 fires burned 189,782 ha in Manitoba, 743 fires burned 441,474 ha in Ontario, and 713 fires burned 4,322,888 ha in Quebec.<sup>11</sup> Table 8 documents how extreme the 2023 wildfire season was compared to the 10-year average.

	Number of Fires	Area Burned (ha)
2023 Wildfire Season	7,131	17,203,625
10-Year Average	5,350	2,718,762

Table 8. Comparison of Canada's 2023 Wildfire Season with Canada's 10-year average<sup>11</sup>

This Exceptional Event Demonstration shows that an extreme number of wildfires in Canada affected PM<sub>2.5</sub> concentrations in a regulatorily significant way at the Grand Rapids monitor, located in the Grand Rapids-Wyoming CBSA. The measured PM<sub>2.5</sub> data from June 6 through 8, June 26 through 29, and July 25 through 26, 2023, at the Grand Rapids monitor satisfies the requirements to be classified as exceptional events, and the elements in this Exceptional Event Demonstration meet all applicable requirements of the Exceptional Events Rule by clearly demonstrating that wildfire smoke from Canada had unprecedented impacts on ambient PM<sub>2.5</sub> concentrations in the Grand Rapids-Wyoming CBSA on the event dates highlighted in this demonstration. Therefore, the AQD is requesting that the USEPA exclude these dates from the Grand Rapids monitor PM<sub>2.5</sub> design value calculations due to the influence of Canadian wildfire smoke on the monitored concentrations.

<sup>&</sup>lt;sup>10</sup> <u>https://natural-resources.canada.ca/simply-science/canadas-record-breaking-wildfires-2023-fiery-wake-call/25303</u>

<sup>&</sup>lt;sup>11</sup> <u>https://www.ciffc.ca/sites/default/files/2024-03/CIFFC\_2023CanadaReport\_.pdf</u>

## Appendix A

## Public Comment Period:

On November 18, 2024, the Michigan Department of Environment, Great Lakes, and Energy (EGLE) submitted for public comment a 2023 PM<sub>2.5</sub> Exceptional Events (EE) Demonstration for the Grand Rapids-Wyoming CBSA. In the draft EE Demonstration, the Air Quality Division (AQD) analyzed the fine particulate matter (PM<sub>2.5</sub>) data collected and determined that during days in June and July 2023, smoke from Canadian wildfires adversely affected PM<sub>2.5</sub> concentrations at the Grand Rapids ambient air monitor in Kent County. Due to this influence, the AQD is requesting that the United States Environmental Protection Agency (USEPA) exclude this PM<sub>2.5</sub> data from regulatory decision making.

Notice that EGLE's EE Demonstration was out for public comment and was published on the EGLE Calendar and the AQD's Public Notice website on November 18, 2024. These postings are shown below. The public comment period ran through December 17, 2024. This appendix summarizes all comments received during the 30-day public comment period, including responses to those comments from EGLE staff.

### **EGLE Public Comment Postings:**

EGLE posted notice of the EE Demonstration on EGLE's Calendar and on the EGLE AQD Public Notice website. Below are both postings:

### EGLE Calendar:

Beginning of Public comment period on the draft 2023 PM2.5 Exceptional Event Demonstration for the Grand
Rapids-Wyoming Core-based Statistical Area
MONDAY, NOVEMBER 18, 2024, 12PM

A public comment period begins November 18 and ends December 17, 2024. This is an opportunity to comment on the draft 2023 PM2.5 Exceptional Events Demonstration for the Grand Rapids-Wyoming Core-based Statistical Area (CBSA).

In the draft Exceptional Events Demonstration, EGLE's Air Quality Division has analyzed the fine particulate matter (PM2.5) data collected, and determined that smoke from Canadian wildfires during episodes in June and July of 2023 adversely affected PM2.5 concentrations at the Grand Rapids-Monroe monitor in the Grand Rapids-Worming CBSA. Due to this influence, the Air Quality Division is proposing to request that the United States Environmental Protection Agency exclude this PM2.5 data from regulatory decision-making.

Send comments by email to Stephanie Hengesbach, Meteorologist, Air Quality Division, at HengesbachSl@michigan.gov or via mail to Stephanie Hengesbach, EGLE Air Quality Division, P.O. Box 30260, Lansing, MI 48909-7760. For questions call 517-648-7015 or email HengesbachSl@michigan.gov.

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

Event Type		Public Comment Periods	
Public comment begins		Monday, November 18, 2024 8:00 AM	
Public comment ends		Tuesday, December 17, 2024 11:59 PM	
Counties		Ionia, Kent, Montcalm, Ottawa	
Divisions		Air Quality Division	
Information contact		Stephanie Hengesbach	
Information contact email		HengesbachS1@michigan.gov	
Information contact phone 517-648-7015			
Link		www.michigan.gov	
f X	Add to My Calendar	Forward To Friends More Event Actions	

Back to Previous View

🖶 Print 🕒 Permalink 🎇

### EGLE AQD Public Notice document:

![](_page_46_Picture_1.jpeg)

MICHIGAN DEPARTMENT OF ENVIRONMENT, GREAT LAKES, AND ENERGY

### Public Notice for Air Quality Rules and State Implementation Plans

EGLE's Air Quality Division (AQD) has portions of its State Implementation Plan (SIP) and/or Air Pollution Control Rules open for comment from the public. The complete Michigan SIP is a cumulative record of hundreds of documents developed in phases and for various purposes over many years. As federal requirements change, states must add to, delete from, or revise components in the SIP. The Michigan SIP contains rules, statutes, permits, consent orders, plans, emissions inventories, and budgets. The plan also contains binding commitments to take future actions under specific circumstances: Michigan's Air Pollution Control Rules are made up of multiple "parts," each covering its own subject matter and/or pollutants, which often need updating. It is also possible the AQD needs to create new rules to address air quality issues in the state. More information on any actions open for comment is provided below.

#### The following action(s) are open for comment as indicated in their respective announcements:

Public Comment Period for the 2023  $\rm PM_{2.5}$  Exceptional Events Demonstration for the Grand Rapids-Wyoming Core Based Statistical Area (CBSA).

## Public Comment Period for the Revisions to the 2023 $\mathsf{PM}_{2.5}$ Exceptional Events Demonstration for the Grand Rapids-Wyoming CBSA

The Michigan Department of Environment, Great Lakes, and Energy (EGLE) opened a public comment period for the draft Exceptional Event Demonstration on November 18, 2024, which will remain open until 11:59 PM on December 17, 2024. The purpose of the public comment period is to allow all interested parties an opportunity to comment on the proposed Exceptional Event Demonstration.

### Proposed SIP Revision:

 2023 PM2.5 Exceptional Events Demonstration for the Grand Rapids-Wyoming CBSA

In the draft Exceptional Event Demonstration, EGLE's Air Quality Division has analyzed the fine particulate matter (PM<sub>2.5</sub>) data collected and determined that smoke from Canadian wildfires during episodes in June and July of 2023 adversely affected PM<sub>2.5</sub> concentrations at the Grand Rapids-Monroe monitor in the Grand Rapids-Wyoming CBSA. Due to this influence, the Air Quality Division is proposing to request that the United States Environmental Protection Agency (USEPA) exclude this PM<sub>2.5</sub> data from regulatory decisionmaking.

Michigan.gov/Air

800-662-9872

November 2024

The public is encouraged to review the proposed documents, which can be found posted on our <u>EGLE – State Implementation Plan (SIP) and Attainment</u> page under *Other Submittals to USEPA* and present comments through the end of the public comment period. The AQD will consider all statements received during the public comment period. After consideration, EGLE may submit the SIP to the USEPA as written, submit it with minor revisions, or make major changes, requiring a repeat of the public comment period.

### Submitting Comments:

There are several ways to submit comments on the proposed SIP revisions.

![](_page_47_Picture_3.jpeg)

Email your comment to <u>HengesbachS1@Michigan.gov</u>. Please include "Comments on SIP Revision" in the subject line.

Mail your comment to Stephanie Hengesbach, EGLE, Air Quality Division, SIP Development Unit, P.O. Box 30260, Lansing, Michigan 48909-7760.

Individuals without internet access and who are interested in receiving printed copies of the documents related to the proposed draft document or who need assistance to effectively participate in this comment period should contact Lorraine Hickman at 517-582-3494 or HickmanL@Michigan.gov.

This public notice is given in accordance with federal regulations.

EGLE promotes the equitable treatment and meaningful involvement of Michigan's residents regarding the development, implementation, and enforcement of laws, regulations, and policies. Equitable treatment means that no group of people bears a disproportionate share of the negative consequences resulting from governmental, industrial, or commercial operations and policies. Meaningful involvement means all people have an opportunity to participate in decisions that affect their environment and/or health.

EGLE does not discriminate on the basis of race, sex, religion, age, national origin, color, marital status, disability, political beliefs, height, weight, genetic information, or sexual orientation in the administration of any of its programs or activities, and prohibits intimidation and retaliation, as required by applicable laws and regulations.

### Public Comments Received:

1. December 16, 2024, letter from the West Michigan Clean Air Coalition (WMCAC) (received by email on December 16, 2024).

![](_page_48_Picture_2.jpeg)

that could improve the air quality on such days due to the meteorological transport of PM<sub>2.5</sub> emissions. Therefore, we do not believe it is warranted to impose regulatory oversight on businesses and industry in our communities due to such circumstances.

We would like to thank EGLE-AQD for the work they did in analyzing the monitoring data in conjunction with meteorological and other information available in order to develop this demonstration.

Sincerely,

Jethy K. Post

Kathryn Ross Chair West Michigan Clean Air Coalition <u>kate.ross@cmsenergy.com</u>

John Weiss Executive Director, GVMC john.weiss@gvmc.org

L. fl

Jason Latham Executive Director, MACC ilatham@the-macc.org

CE D

Christopher Occhipinti Vice-Chair cocchipinti@nthconsultants.com

Skar

Erin Kuhn Executive Director, WMSRDC

ekuhn@wmsrdc.org

West Michigan Clean Air Coalition • c/o Grand Valley Metropolitan Council 678 Front Ave NW, Suite 200, Grand Rapids, MI 49504 PH: (616) 776-3876 • FAX: (616) 774-9292 • Clean Air Action! Hotline: 1-800-65-OZONE • Web Site: www.wmcac.org

 December 17, 2024, letter from the Great Lakes Environmental Law Center (received by email on December 17, 2024). Below is the cover letter received by EGLE. The full letter can be found in Appendix B.

![](_page_50_Picture_0.jpeg)

December 17, 2024

Submitted via email at: Hengesbachs1@michigan.gov

Stephanie Hengesbach Michigan Department of Environment, Great Lakes, and Energy Air Quality Division, SIP Development Unit P.O. Box 30260 Lansing, MI 48909

Dear Ms. Hengesbach:

Please accept these comments submitted by the Great Lakes Environmental Law Center on behalf of the undersigned individuals and organizations regarding the draft Exceptional Event Demonstration regarding ambient monitoring fine particulate matter data collected on several days in 2023 at the Grand Rapids monitoring station in Kent County.

Sincerely,

Nick Leonard Executive Director Great Lakes Environmental Law Center 4444 Second Avenue Detroit, MI 48201

nicholas.leonard@glelc.org | 313-782-3372

### **Division Responses:**

Comment 1: Comments were received from the WMCAC in support of the EE Demonstration. The full comment letter can be found above. (Kathryn Ross and others, WMCAC)

Response 1: Thank you for your comments.

Comment 2: Joint comments were received from the Great Lakes Environmental Law Center opposing the demonstration. The full letter is broken down into comment

sections A-D. Each section is listed below with EGLE's response following each section.

# Section A: EGLE Should Withdraw Its Exceptional Event Demonstration and Shift Its Resources to Lowering PM2.5 Pollution

- Comment: "As a matter of policy, the Great Lakes Environmental Law Center and the undersigned commenters are opposed to exceptional event demonstrations, particularly in environmental justice areas. As discussed above, PM2.5 pollution is not only one of the deadliest and most ubiquitous forms of air pollution, it also disproportionately impacts people of color and lower income. As such, we urge Michigan to withdraw its exceptional event demonstration and shift its focus to identifying measures to lower PM2.5 pollution in the Grand Rapids area."
- Response: An exceptional event demonstration describes an event that was not reasonably controllable and not reasonably preventable. For wildfires, such as what occurred in the summer of 2023, this criterion is met. The purpose of reclassifying an area to nonattainment of a National Ambient Air Quality Standard (such as PM2.5) is to compel agencies to develop regulatory strategies for reducing pollution. The USEPA recognizes that uncontrollable and unpreventable events, such as wildfires, should not be factored into the yearly averages for attainment determinations because regulations would not have an impact of such unpredictable events.

### Section B: EGLE Should Identify Pollution Reduction and Public Health Protection Measures for Implementation as Soon as Possible

Comment: "Regardless of what caused the Grand Rapids monitor to exceed the PM2.5 standard, the essential point remains the same: there is an unsafe level of PM2.5 pollution in Grand Rapids. Even if EGLE decides to pursue this exceptional event demonstration further, it should promptly identify strategies to reduce PM2.5 pollution and to protect public health as soon as possible.

EGLE has made similar promises in the context of other exceptional event demonstrations, but has failed to deliver. After EPA approved an exceptional event demonstration regarding ozone pollution in Southeast Michigan, EGLE noted that "[o]ur work is not done" and that it was "working diligently to address neighborhoods where proximity to industry and transportation corridors continues to have a disproportionate impact."<sup>6</sup> To date, no additional actions to lower ozone pollution in the Southeast Michigan region have been taken nor do

any seem imminent despite the area still struggling to attain the ozone air quality standard.

We request that even if EGLE moves forward with its exceptional event demonstration that it commits to identifying pollution reduction and public health protection measures that it can implement as soon as possible."

Response: EGLE continues to regulate and control air pollution through the review and issuance of permits, conducting industrial source inspections, and requiring source emission testing (stack testing). These and other regulatory actions have resulted in a sustained improvement in ambient pollutant concentrations statewide, including Grand Rapids. EGLE will continue these actions and will ensure attainment of the standards through our robust ambient air monitoring network. Grand Rapids has two ambient air monitoring stations in the city that measure fine particulate matter in addition to the monitoring station in Jenison. The City of Grand Rapids also sponsors a low-cost sensor network that is operated and broadcasted by JustAir. This sensor network, while not regulatory, provides real-time local data for fine particulate matter.

### Section C: EGLE Must Adopt an Environmental Justice Policy to Inform Its Exceptional Event Demonstrations

Comment: "In the past, EGLE has often complained that it wished it could do more to address environmental justice concerns but it is constrained by the laws. This has frequently arisen in the context of air permitting decisions. The common refrain is that EGLE is legally obligated to issue a permit if it meets the legal criteria for approval.

> For exceptional events, there are no such legal limitations. Since the Clean Air Act grants states unfettered discretion in determining when to submit an exceptional event demonstration, EGLE is free to incorporate environmental justice as much or as little as it would like into its decision-making process.

To date, EGLE has taken zero steps to incorporate the concept of environmental justice into the exceptional event demonstration at issue or any others previously submitted. In fact, neither the words "justice" or "environmental justice" appear anywhere in this exceptional event demonstration. EGLE has also not utilized its newly finalized MiEJScreen tool to even identify potential environmental justice concerns.

If EGLE is serious about furthering environmental justice, it must do more than lament its inability to address such issues. It must identify where it can take immediate action to engrain environmental justice considerations into its decision-making processes and then adopt policies to do just that.

Fortunately for EGLE exceptional event demonstrations provide it with the perfect opportunity. EGLE should immediately begin working on an environmental justice policy for future exceptional event demonstrations that it will use to determine when it will submit such requests to EPA."

Response: EGLE prioritizes environmental justice concerns and appreciates your recommendation. Since 2019, EGLE has worked through the Office of the Environmental Justice Public Advocate (OEJPA) to integrate the consideration of environmental justice concerns throughout the department. The OEJPA worked with the Michigan Advisory Council on Environmental Justice and the Interagency Environmental Justice Response Team to develop a Michiganspecific <u>definition of environmental justice</u> based on the USEPA definition, which prioritizes equitable access and meaningful engagement for all Michiganders. In each case, EGLE considers the regulatory framework, as well as public input. To ensure meaningful engagement for communities, EGLE air quality staff has enhanced its work with potentially impacted communities and advocates related to air quality actions that may impact them.

Specifically for this demonstration, in addition to the required 30-day public comment period, EGLE also posted the notice online and notified both environmental justice organizations and Grand Rapids-area organizations who have expressed interest in this work.

The USEPA sets the criteria for exceptional event consideration, and currently environmental justice is not a specified requirement. However, potential impact on communities, as well as public input help guide and inform how we address environmental concerns. Due to the unique nature of each occurrence of this kind, a specific policy related to addressing environmental justice would not supersede the federally regulated considerations. Moving forward EGLE will continue to look at each specific incident in the context of potential impact on communities as determinations are made on next steps.

### Section D: EGLE Should Hold a Public Meeting Regarding PM2.5 Pollution in Grand Rapids

Comment: "To date, EGLE has done a poor job engaging with the public regarding this and other exceptional event demonstrations. Despite such requests carrying massive consequences for local air quality and public health, EGLE has refused to host any in-person public meeting either in connection with its 2022 exceptional event regarding ozone pollution in Detroit or this exceptional event. While EGLE is not legally obligated to do so, it should hold a public meeting regarding this exceptional event demonstration and PM2.5 pollution in Grand Rapids so that the public can be aware of the health risks that accompany living with unsafe levels of PM2.5 pollution."

Response: The Exceptional Events rule (40 CFR 50.14(c)(3)(v)), states that air agencies must "document [in their exceptional events demonstration] that the [air agency] followed the public comment process and that the comment period was open for a minimum of 30 days...." EGLE opened the public comment period on November 18, 2024, and the comment period lasted through December 17, 2024. To notify the public of the comment period for the Exceptional Event Demonstration, EGLE posted notice of the comment period on EGLE's Calendar and on EGLE's AQD Public Notice website.

> To further notify individuals of the Exceptional Events public comment period, EGLE reached out and notified several groups in the Grand Rapids area, some of which include: the Michigan Environmental Justice Coalition, the Ecology Center, the Great Lakes Environmental Law Center, MI Air MI Health, Michigan Environmental Council, Moms Clean Air Force, Michigan Clinicians for Climate Action, WMEAC - West Michigan Environmental Action Council, JustAir, C4 – Community Collaboration on Climate Change, NCAAP – Greater Grand Rapids, and West Michigan Clean Air Coalition.

It should be noted that in 2024 EGLE staff has attended community meetings in West Michigan to educate the public on upcoming PM<sub>2.5</sub> State Implementation Planning (SIP) activities. EGLE staff will continue to assess whether a public informational meeting will benefit the communities, industry, and advocates associated with future Exceptional Event demonstrations and PM<sub>2.5</sub> SIP work. Moving forward should a community, industry member, or advocate request a meeting with EGLE to discuss upcoming PM<sub>2.5</sub> SIP planning work or Exceptional Event work, EGLE will strive to accommodate such a request.

## Appendix B

December 17, 2024, joint letter received from the Great Lakes Environmental Law Center.

![](_page_55_Picture_2.jpeg)

December 17, 2024

Submitted via email at: Hengesbachs1@michigan.gov

Stephanie Hengesbach Michigan Department of Environment, Great Lakes, and Energy Air Quality Division, SIP Development Unit P.O. Box 30260 Lansing, MI 48909

Dear Ms. Hengesbach:

Please accept these comments submitted by the Great Lakes Environmental Law Center on behalf of the undersigned individuals and organizations regarding the draft Exceptional Event Demonstration regarding ambient monitoring fine particulate matter data collected on several days in 2023 at the Grand Rapids monitoring station in Kent County.

Sincerely,

Nick Leonard Executive Director Great Lakes Environmental Law Center 4444 Second Avenue Detroit, MI 48201

nicholas.leonard@glelc.org | 313-782-3372

### Submitted on behalf of:

Flint Rising

Community Collaboration on Climate Change

Southwest Detroit Community Benefits Coalition

Amy Schulz, PhD, MPH Professor, Department of Health Behavior and Health Equity University of Michigan School of Public Health

Ecology Center

Clear the Air

Southwest Detroit Environmental Vision

48217 Zip Code Air Monitoring Committee

Dolores Leonard, Detroit Resident

Environmental Transformation Movement of Flint

Sierra Club

### I. Introduction

Fine particulate matter (PM2.5) pollution is one of the most pervasive public health and environmental justice issues in Michigan and throughout the country. Fine particulate matter, or PM2.5, is the deadliest form of air pollution and even small increases in annual concentrations result in a corresponding increase in mortality.1 The U.S. Environmental Protection Agency (EPA) has also determined that there is no safe level of PM2.5 exposure at which it can be confidently concluded that health effects will not occur.<sup>2</sup> Exposure to PM2.5 pollution can have a wide range of severe health effects, with children and the elderly being the most vulnerable. In general, PM2.5 has been associated with cardiovascular, respiratory, and neurological health impacts. Children are uniquely vulnerable to the respiratory health effects caused by long-term exposure to elevated levels of PM2.5.3 Scientific studies have found a strong relationship between PM2.5 exposure and decrements in lung function growth, asthma development, and increased bronchitis symptoms for children. PM2.5 pollution also does not impact everyone in the same manner. Numerous studies have found that people of color and low income are disproportionately exposed to higher levels of PM2.5 compared to more affluent or predominantly White communities.4

### II. Exceptional Event Demonstrations

At their most basic level, exceptional event demonstrations represent a policy choice for states. As made clear by federal regulations, a State may, but is never required to, request that EPA exclude data showing exceedances or violations of a national ambient air quality standard that are directly due to an exceptional event.<sup>5</sup> As such, when a state finds that a monitor has exceeded one of the health-based air quality standards established by the Clean Air Act to ensure everyone has safe air to breathe, it can choose

<sup>&</sup>lt;sup>1</sup> U.S. Env't. Protect. Agency, Supplement to the 2019 Integrated Science Assessment for Particulate Matter at 3-113.

<sup>&</sup>lt;sup>2</sup> U.S. EPA, Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, 88 Fed. Reg. 5,558, 5,561 (Jan. 27, 2023).

<sup>3</sup> Id. at 5591.

<sup>&</sup>lt;sup>4</sup> See generally, U.S. EPA Supplement to the 20189 Integrated Science Assessment for Particulate Matter; Reconsideration of the National Ambient Air Quality Standards for Particulate Matter, 88 Fed. Reg. 16,204, 16,234-16,236 (Mar. 6, 2024).

<sup>5 40</sup> CFR 50.14(a)(1)(ii).

to do one of two things: it can either get to work enacting measures to lower such air pollution and in doing so protect residents from unsafe levels of air pollution or it can search for days with high levels of air pollution that may be been impacted by an exceptional event, such as wildfire smoke, and spend dozens if not hundreds of hours preparing an exceptional event demonstration to submit to EPA all in the hopes that its request will be approved and it will be excused from taking action to lower air pollution.

If the former path is chosen, then EGLE is making a policy choice that prioritizes people and public health. It is asserting that it does not matter what ultimately tipped the scales such that air pollution exceeded the health-based standard. After all, in many places, particularly urban places such as Grand Rapids, wildfire smoke, even when the result of a truly extreme event, makes up a relatively small portion of total air pollution. Local sources of air pollution, such as industrial facilities, power plants, and mobile sources, are still the predominant source of PM2.5 pollution even during virtually all exceptional events. Human lungs also do not care where air pollution originated - be it from the tailpipe of a car or smoke from a wildfire - because the health impacts are all the same. If EGLE refuses to pursue an exceptional event, it is stating through its actions that what matters is ensuring Michiganders have air quality that meets the national, health-based standards set by EPA and if any Michigander is living in a community with unsafe levels of air pollution EGLE will use its scarce resources to lower air pollution and protect public health.

If the latter path is chosen, EGLE is making a policy choice that prioritizes polluters over people. It is asserting that even though the predominant source of air pollution in a community is coming from local sources, since something outside of its control - in this case wildfire smoke - tipped the scale it is not EGLE's problem. It also choosing to leave the Michiganders living in these areas with unsafe levels of air pollution.

Notably, these two paths are not mutually exclusive. Even if Michigan decides to pursue an exceptional event it can also take actions to address the public health risks that accompany living with elevated levels of air pollution.

### III. Comments

A. EGLE Should Withdraw Its Exceptional Event Demonstration and Shift Its Resources to Lowering PM2.5 Pollution

As a matter of policy, the Great Lakes Environmental Law Center and the undersigned commenters are opposed to exceptional event demonstrations, particularly in environmental justice areas. As discussed above, PM2.5 pollution is not only one of the deadliest and most ubiquitous forms of air pollution, it also disproportionately impacts people of color and lower income. As such, we urge Michigan to withdraw its exceptional event demonstration and shift its focus to identifying measures to lower PM2.5 pollution in the Grand Rapids area.

B. EGLE Should Identify Pollution Reduction and Public Health Protection Measures for Implementation as Soon as Possible

Regardless of what caused the Grand Rapids monitor to exceed the PM2.5 standard, the essential point remains the same: there is an unsafe level of PM2.5 pollution in Grand Rapids. Even if EGLE decides to pursue this exceptional event demonstration further, it should promptly identify strategies to reduce PM2.5 pollution and to protect public health as soon as possible.

EGLE has made similar promises in the context of other exceptional event demonstrations, but has failed to deliver. After EPA approved an exceptional event demonstration regarding ozone pollution in Southeast Michigan, EGLE noted that "[o]ur work is not done" and that it was "working diligently to address neighborhoods where proximity to industry and transportation corridors continues to have a disproportionate impact."<sup>6</sup> To date, no additional actions to lower ozone pollution in the Southeast Michigan region have been taken nor do any seem imminent despite the area still struggling to attain the ozone air quality standard.

<sup>&</sup>lt;sup>6</sup> EGLE statement on Southeast Michigan meeting ozone standards, May 16, 2023, available at https://www.michigan.gov/egle/newsroom/press-releases/2023/05/16/egle-statement-southeast-michigan

We request that even if EGLE moves forward with its exceptional event demonstration that it commits to identifying pollution reduction and public health protection measures that it can implement as soon as possible.

C. EGLE Must Adopt an Environmental Justice Policy to Inform Its Exceptional Event Demonstrations

In the past, EGLE has often complained that it wished it could do more to address environmental justice concerns but it is constrained by the laws. This has frequently arisen in the context of air permitting decisions. The common refrain is that EGLE is legally obligated to issue a permit if it meets the legal criteria for approval.

For exceptional events, there are no such legal limitations. Since the Clean Air Act grants states unfettered discretion in determining when to submit an exceptional event demonstration, EGLE is free to incorporate environmental justice as much or as little as it would like into its decision-making process.

To date, EGLE has taken zero steps to incorporate the concept of environmental justice into the exceptional event demonstration at issue or any others previously submitted. In fact, neither the words "justice" or "environmental justice" appear anywhere in this exceptional event demonstration. EGLE has also not utilized its newly finalized MiEJScreen tool to even identify potential environmental justice concerns.

If EGLE is serious about furthering environmental justice, it must do more than lament its inability to address such issues. It must identify where it can take immediate action to engrain environmental justice considerations into its decision-making processes and then adopt policies to do just that.

Fortunately for EGLE exceptional event demonstrations provide it with the perfect opportunity. EGLE should immediately begin working on an environmental justice policy for future exceptional event demonstrations that it will use to determine when it will submit such requests to EPA. D. EGLE Should Hold a Public Meeting Regarding PM2.5 Pollution in Grand Rapids

To date, EGLE has done a poor job engaging with the public regarding this and other exceptional event demonstrations. Despite such requests carrying massive consequences for local air quality and public health, EGLE has refused to host any inperson public meeting either in connection with its 2022 exceptional event regarding ozone pollution in Detroit or this exceptional event.

While EGLE is not legally obligated to do so, it should hold a public meeting regarding this exceptional event demonstration and PM2.5 pollution in Grand Rapids so that the public can be aware of the health risks that accompany living with unsafe levels of PM2.5 pollution.

IV. Conclusion

EGLE's actions speak for themselves. While the agency has stated an intention to become a leader in environmental justice and has expressed a desire to incorporate environmental justice into its decision-making when it is legally allowed to do so, it has failed to do so here and in the context of other exceptional events. Unless EGLE rectifies this in short order, their statements that environmental justice is a priority will begin to ring hollow as they once again choose a path prioritizing polluters over people.