



MICHIGAN DEPARTMENT OF
ENVIRONMENT, GREAT LAKES, AND ENERGY

Canadian Wildfire Smoke

Jim Haywood

Senior Meteorologist

Air Quality Division

Strategy Development Unit (SDU)

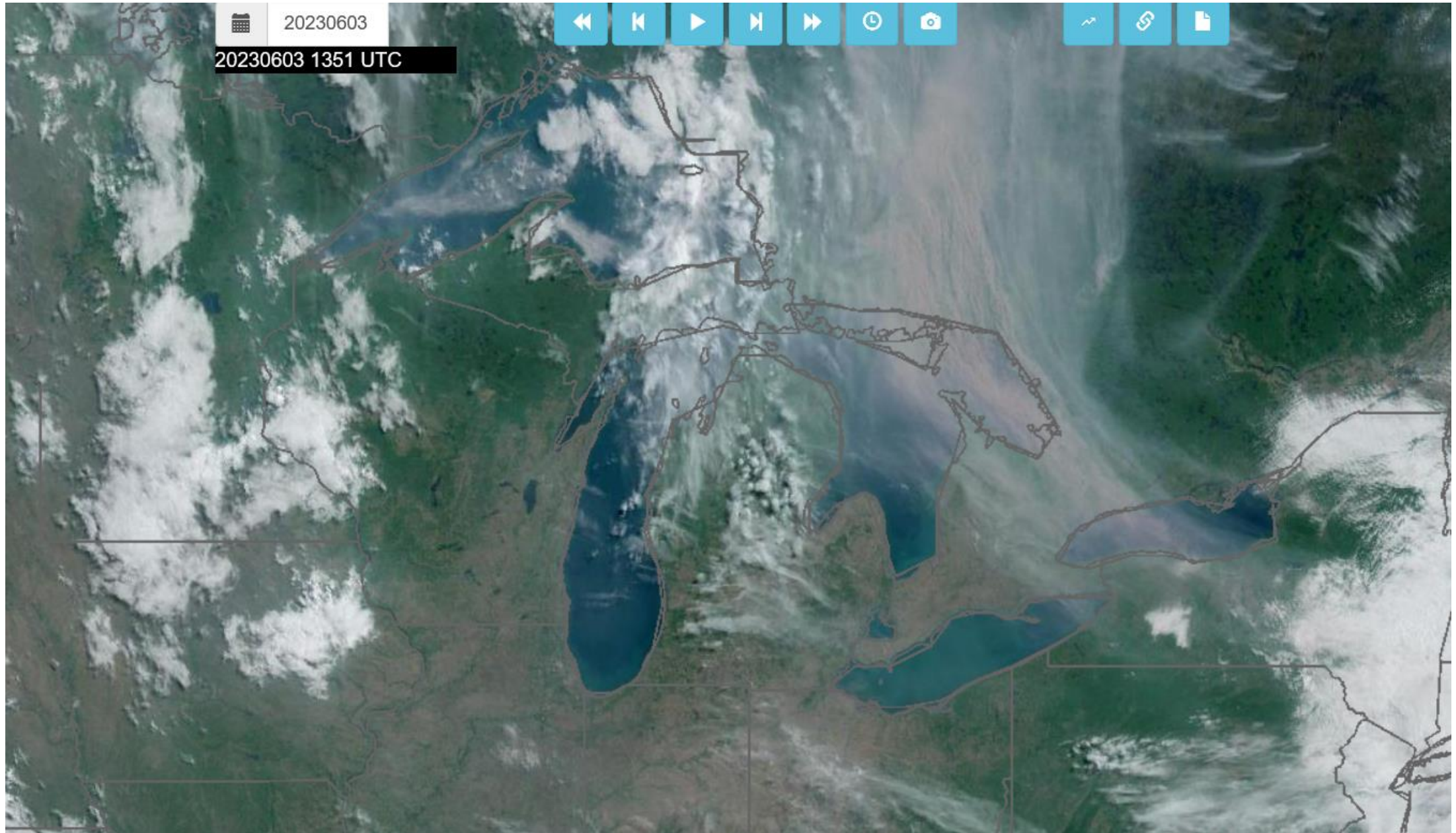
October 19, 2023

A photograph of a forest fire. The scene is dominated by thick, billowing plumes of orange and yellow smoke that rise from the ground, partially obscuring the dark silhouettes of trees in the background. The lighting is intense and warm, characteristic of a large fire. The overall atmosphere is one of a significant wildfire event.

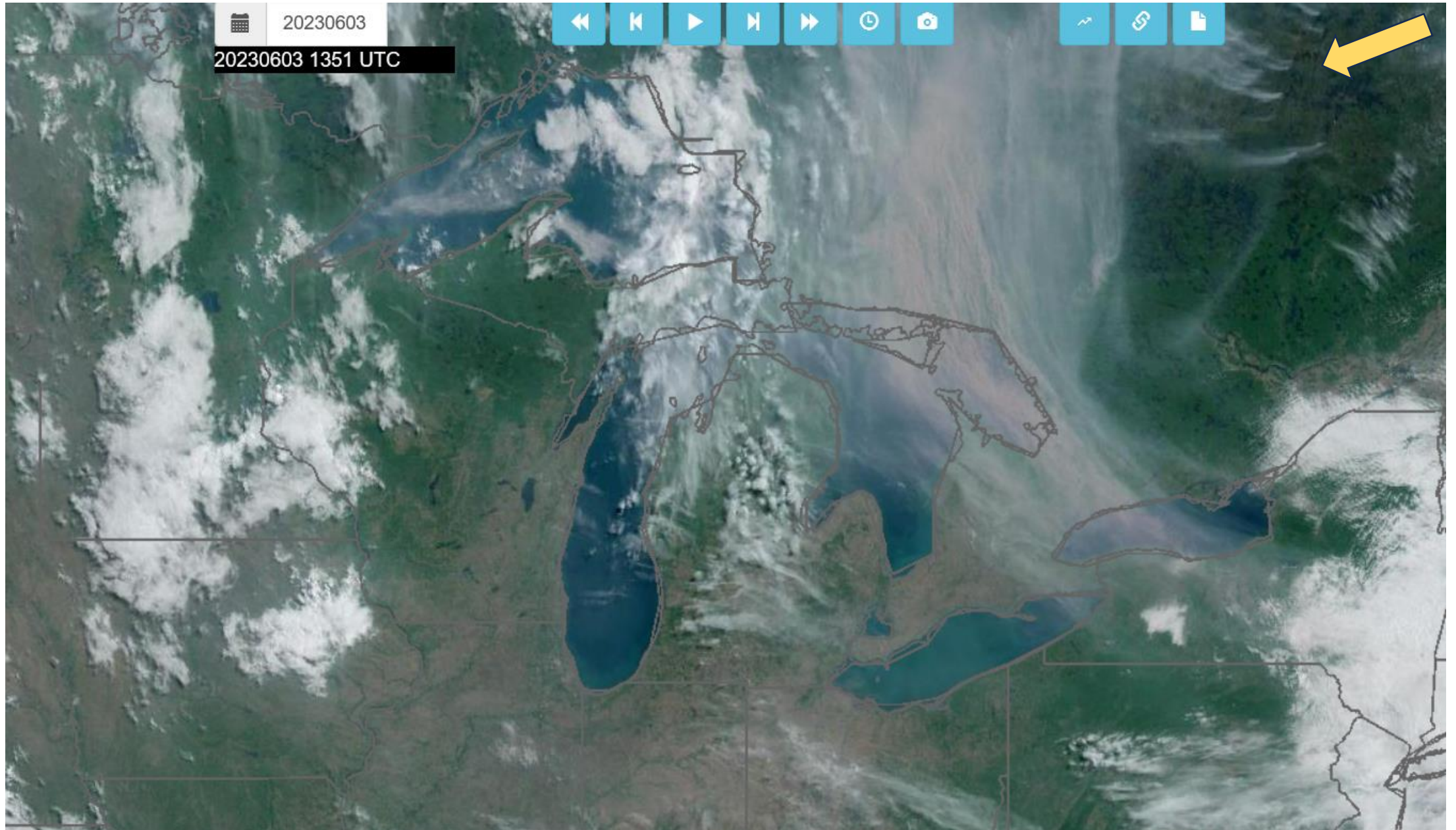
Air Quality During the Summer of 2023



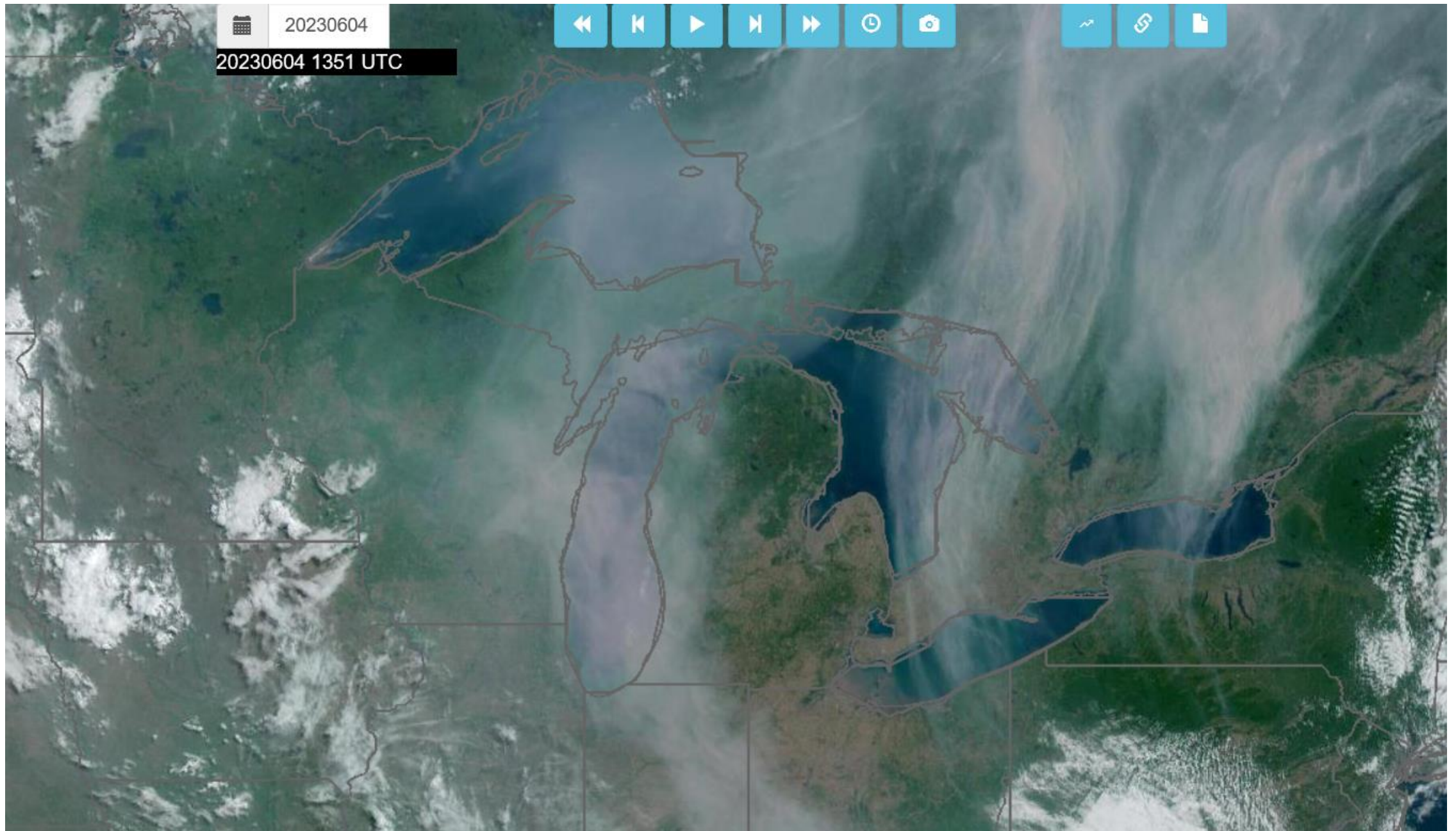
June 03, 2023



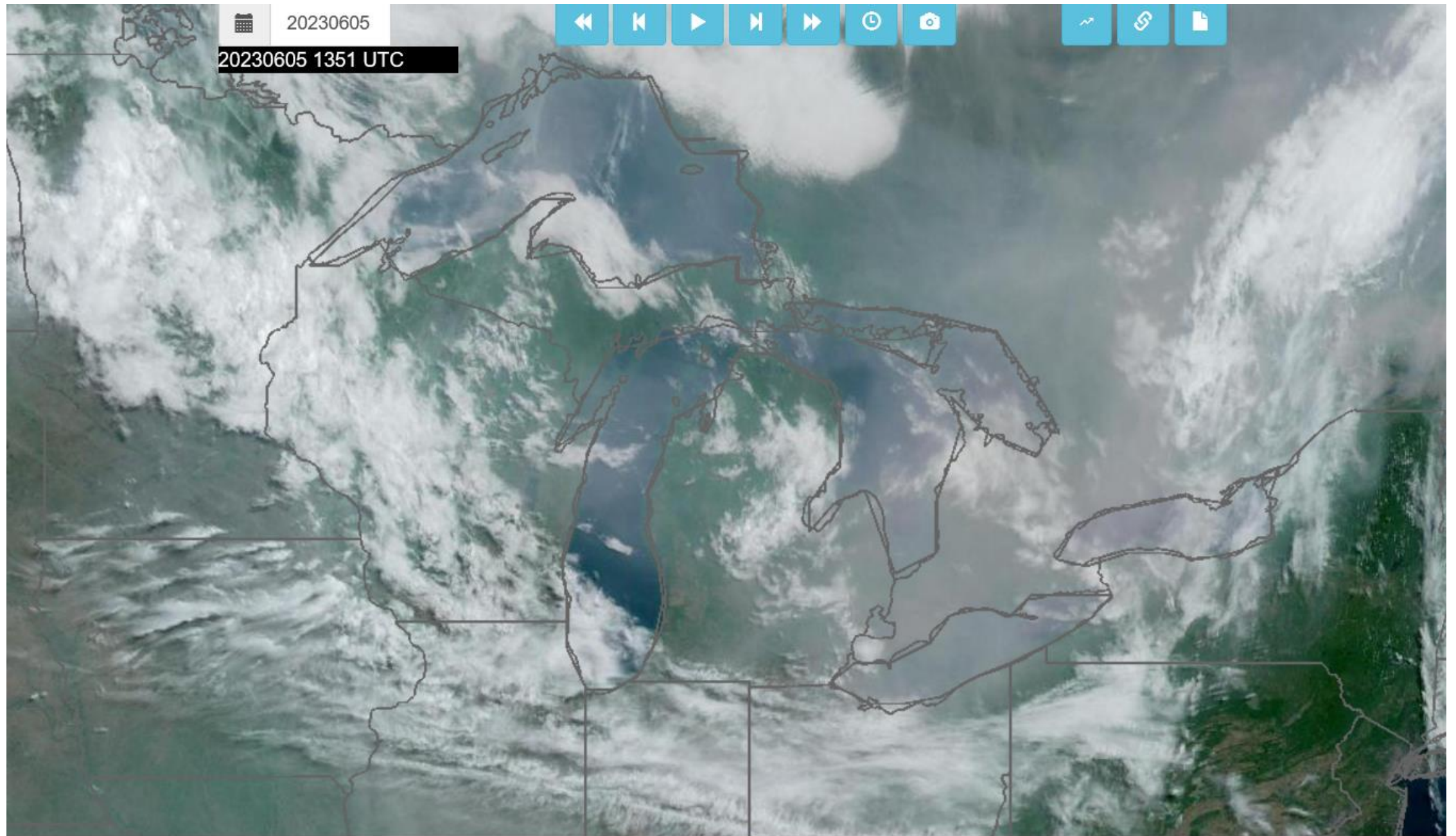
June 03, 2023



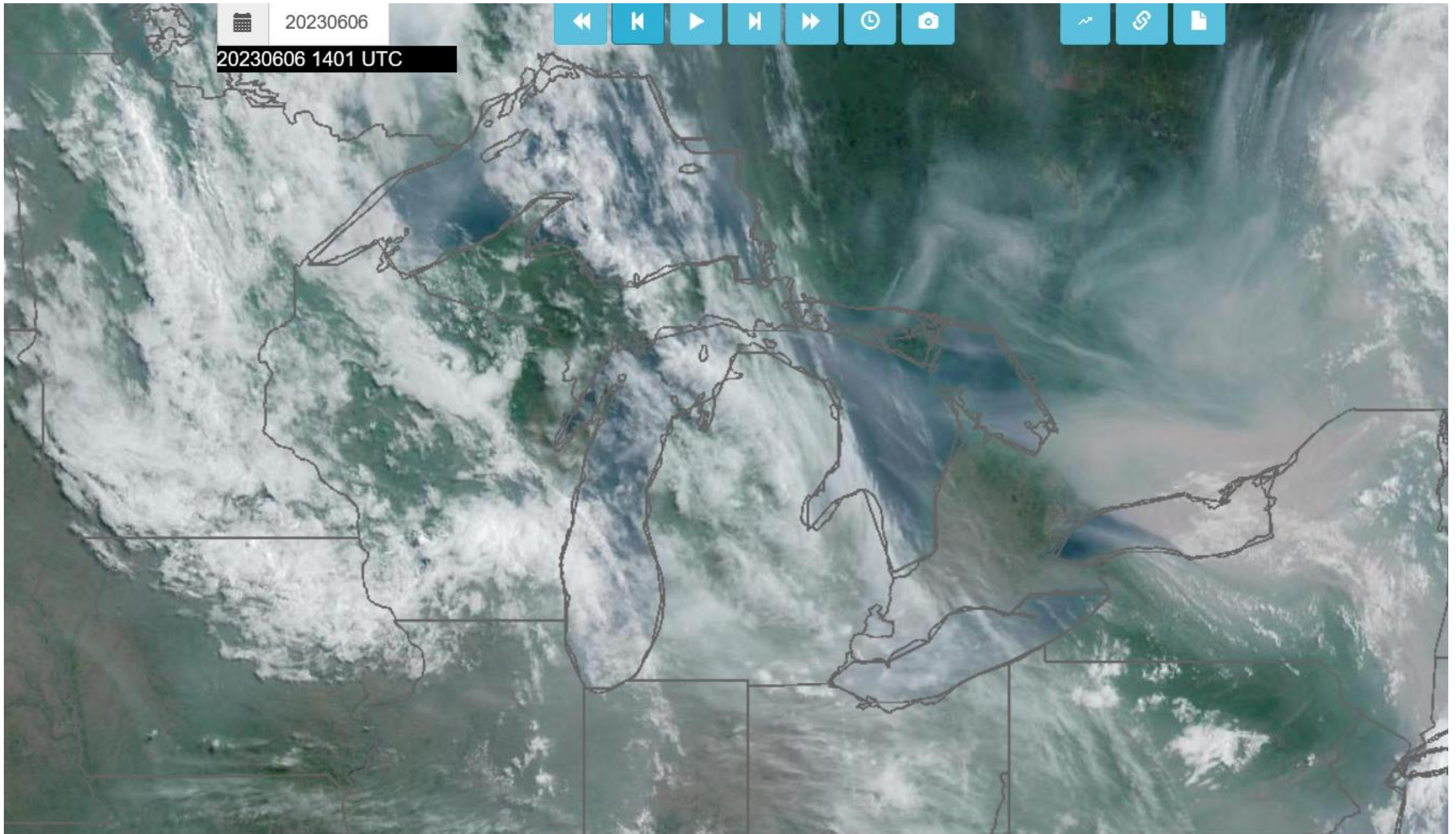
June 04, 2023



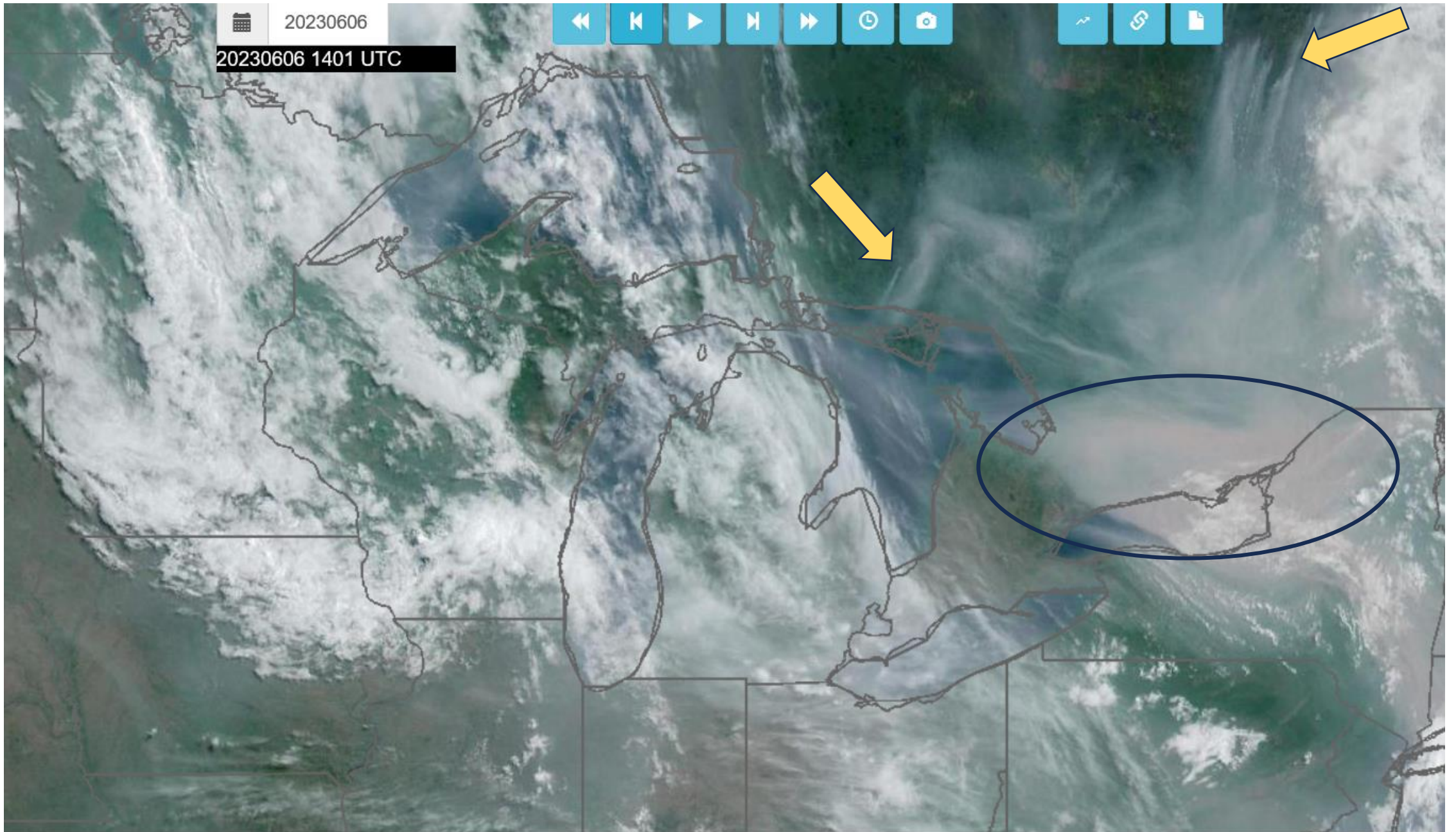
June 05, 2023



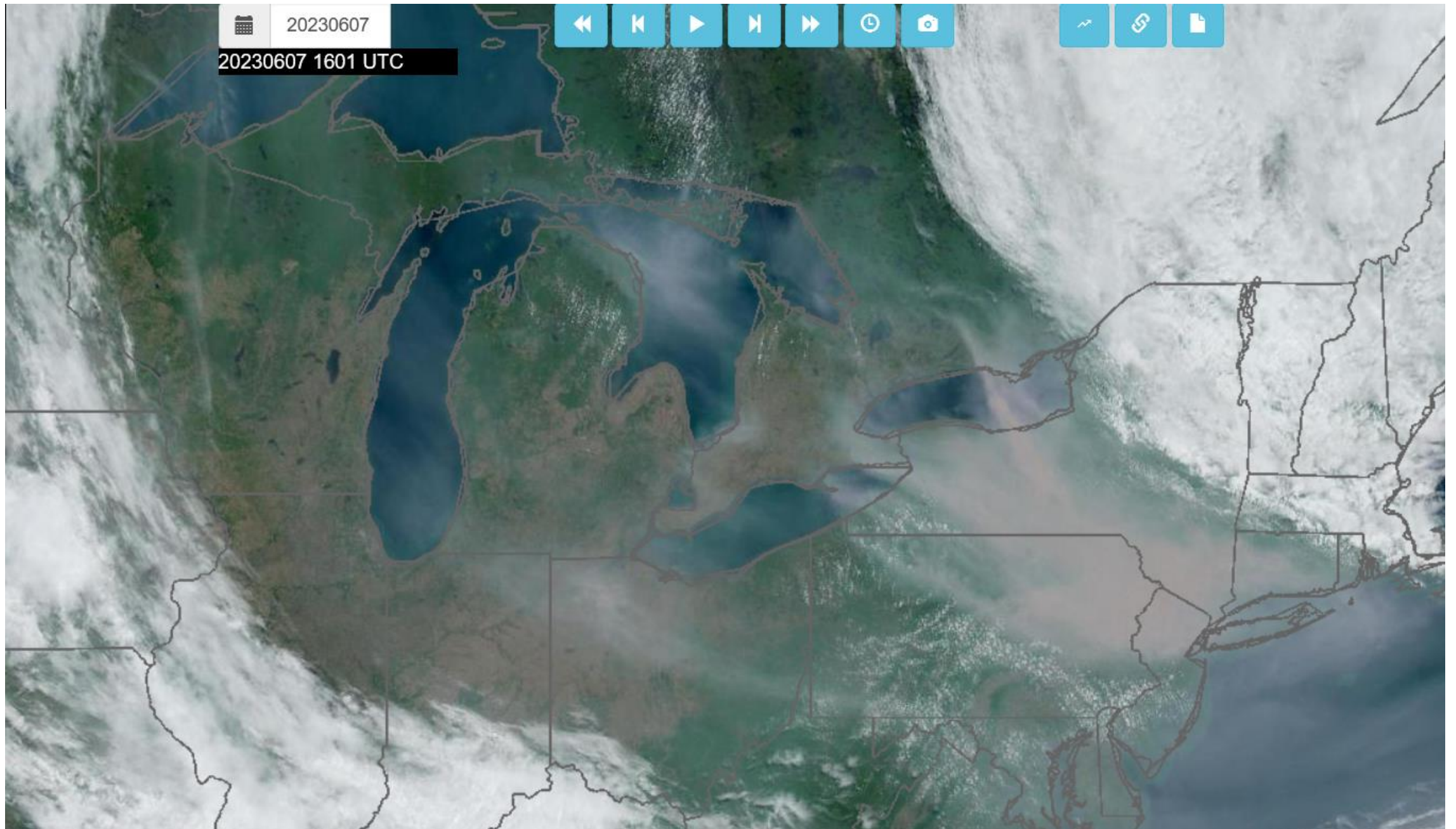
June 06, 2023



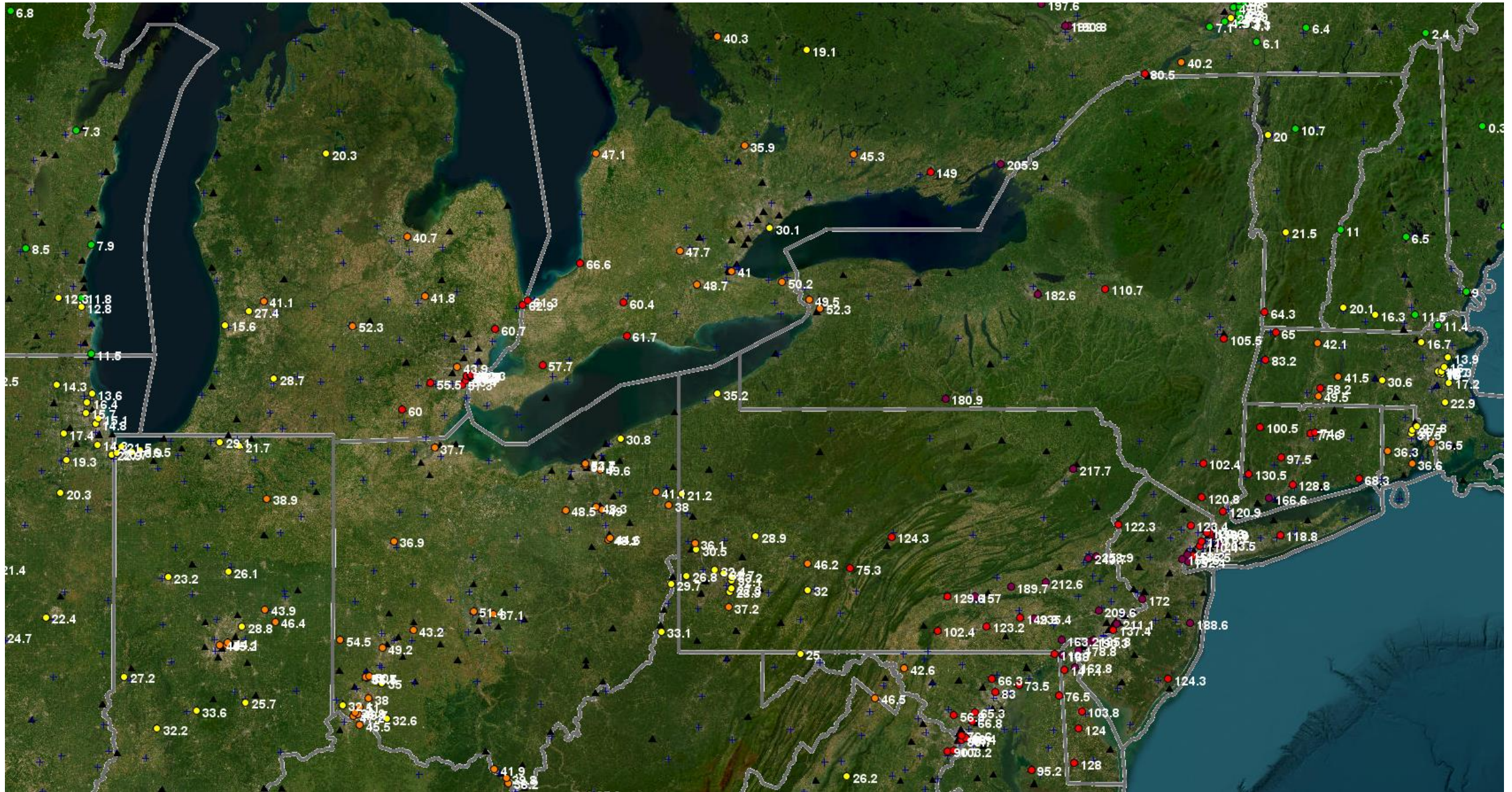
June 06, 2023



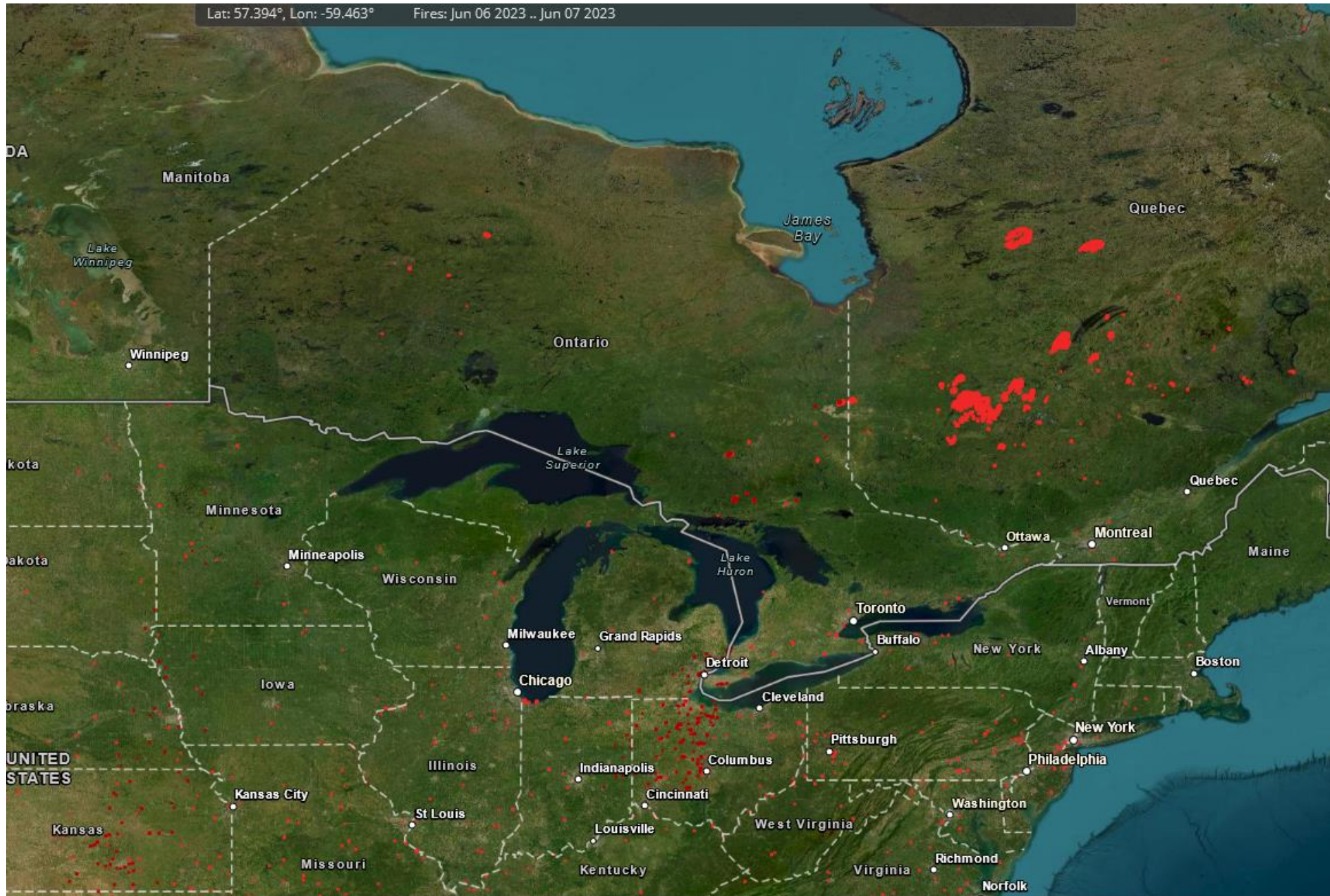
June 07, 2023



June 07, 2023



June 07, 2023



June 07, 2023



New York City





New York City

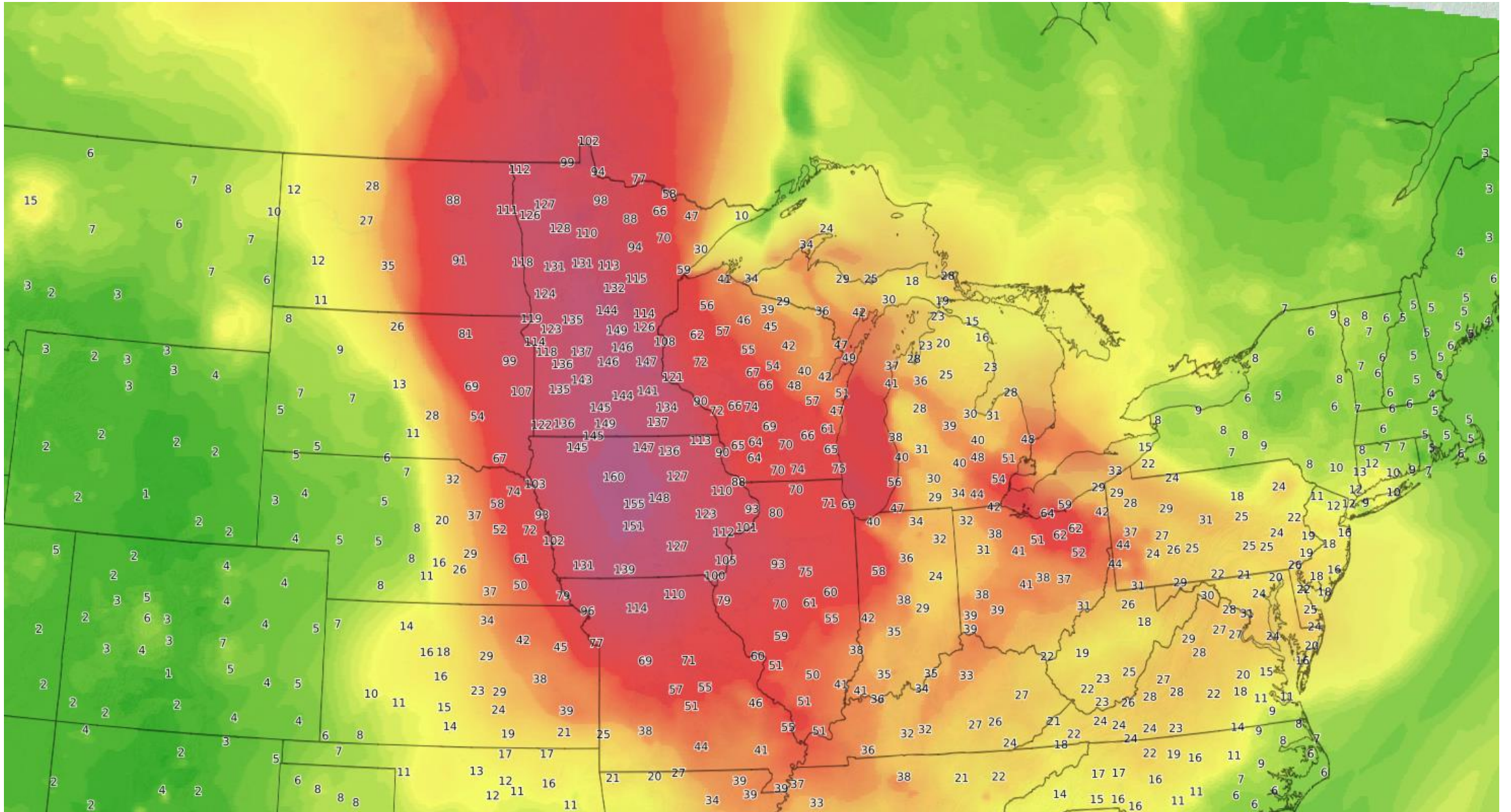


Date				7	7	6	6	6	2	9	8
yyyymmdd	Day	West	Central	Grand Rapids	Holland	Jenison	Kalamazoo	Flint	Houghton Lake	Lansing	Seney
20230527	Sat			9.9	9.6	9.8	12.5	12.1	8.6	11.9	5.9
20230528	Sun			12.8	10.9	12.0	18.1	15.7	10.0	13.9	7.4
20230529	Mon			11.1	12.9	14.0	17.1	15.5	10.9	11.1	9.3
20230530	Tue			13.3	11.5	12.4	14.0	14.4	11.0	12.8	10.3
20230531	Wed			9.5	6.6	8.9	9.7	14.4	12.6	9.8	12.0
20230601	Thu			11.1	11.4	10.4	11.6	13.4	11.5	10.7	13.9
20230602	Fri			14.0	10.9	12.9	18.7	14.2	13.4	14.4	12.9
20230603	Sat		1	25.2	16.0	23.3	25.6	23.3	33.1	28.5	36.8
20230604	Sun		1	26.7	23.2	26.2	14.2	13.5	27.2	17.9	47.6
20230605	Mon		1	23.6	15.1	22.3	21.9	20.3	26.5	22.1	40.4
20230606	Tue	1		31.2	28.1	32.7	37.2	26.8	23.7	27.0	10.1
20230607	Wed	1	2	36.1	15.7	27.5	28.8	41.8	20.4	52.4	8.7
20230608	Thu	2	1	37.3	20.4	40.9	29.1	28.1	19.8	49.8	7.8
20230609	Fri	1	1	23.6	14.3	19.6	37.5	29.2	25.2	38.2	12.5
20230610	Sat			22.7	17.9	24.0	23.7	17.2	16.0	19.5	9.8
20230611	Sun			13.0	10.6	13.5	18.0	15.2	9.8	13.7	6.8
20230612	Mon			7.6	3.6	7.2	9.1	10.2	7.2	8.7	6.7
20230613	Tue			9.2	10.4	9.0	10.6	11.7	7.8	9.2	6.0
20230614	Wed			8.6		7.5	8.4	13.0	7.8	8.8	9.3
20230615	Thu			10.7		11.3	15.9	11.7	8.8	11.3	9.6
20230616	Fri			22.3	19.4	19.6	22.6	28.2	19.0	28.5	8.3
20230617	Sat			26.4	22.4	25.8		25.2	10.4	16.3	7.3
20230618	Sun			33.4	23.3	32.0		19.7	19.9	21.5	18.9
20230619	Mon			20.0	0.0	19.1		20.5	17.7	18.5	16.7
20230620	Tue			21.5	23.5	21.7		18.7	16.9	19.6	17.4
20230621	Wed			16.7	21.7	17.3		12.8	12.5	18.2	17.3

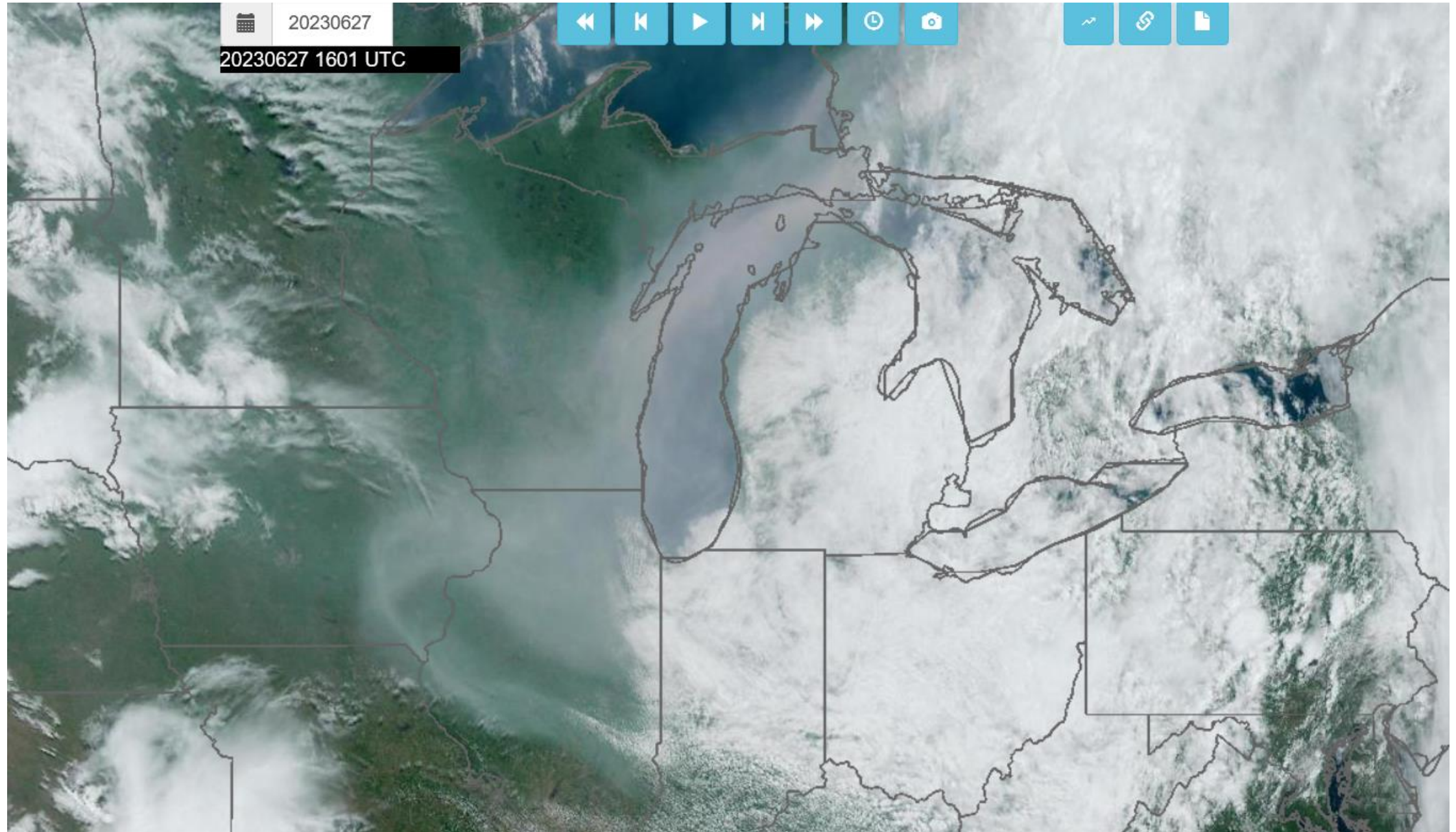
Phew!!! Glad That's Done!!!!



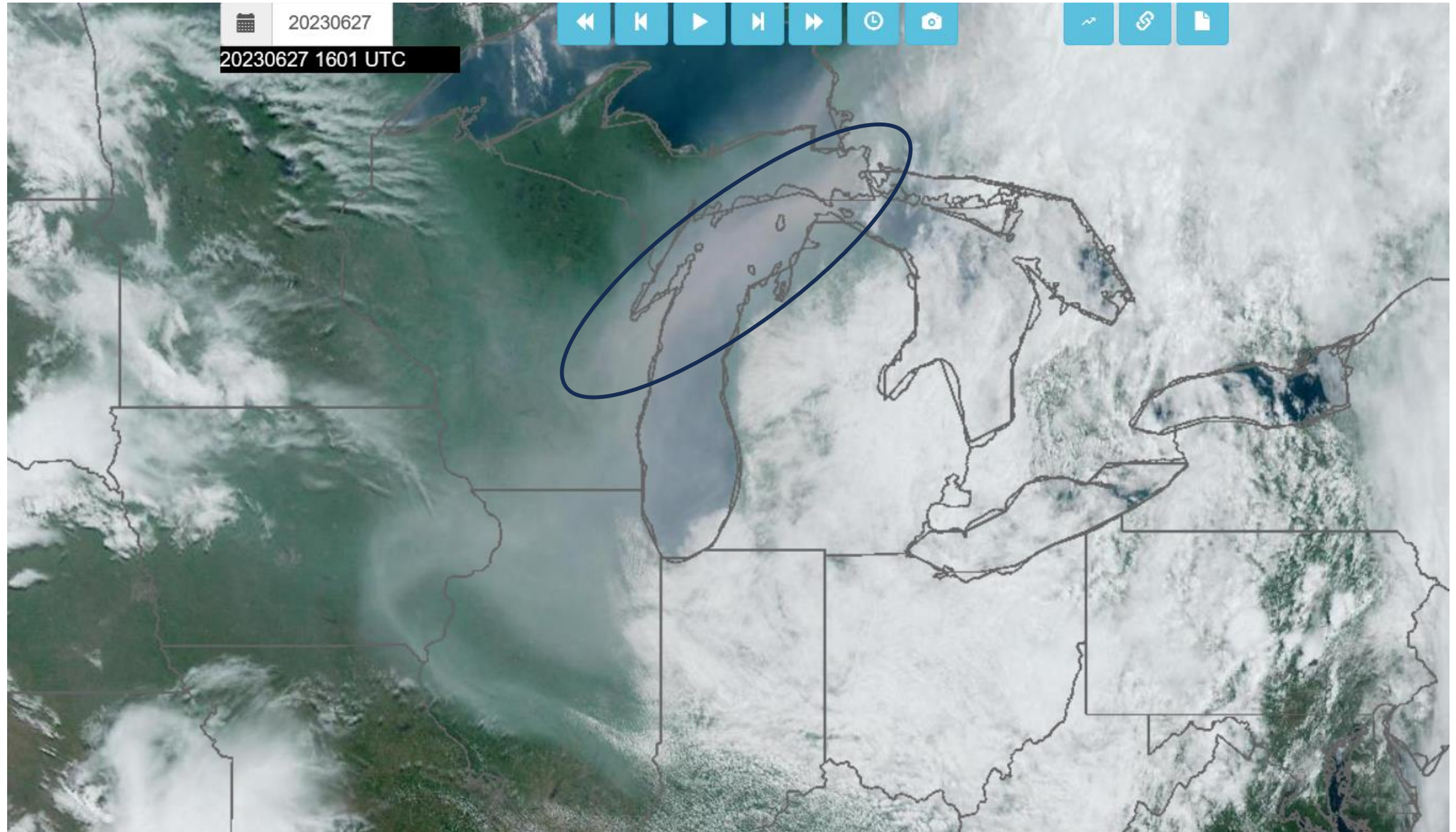
What are the Odds of That Ever Happening Again???



June 27, 2023



June 27, 2023



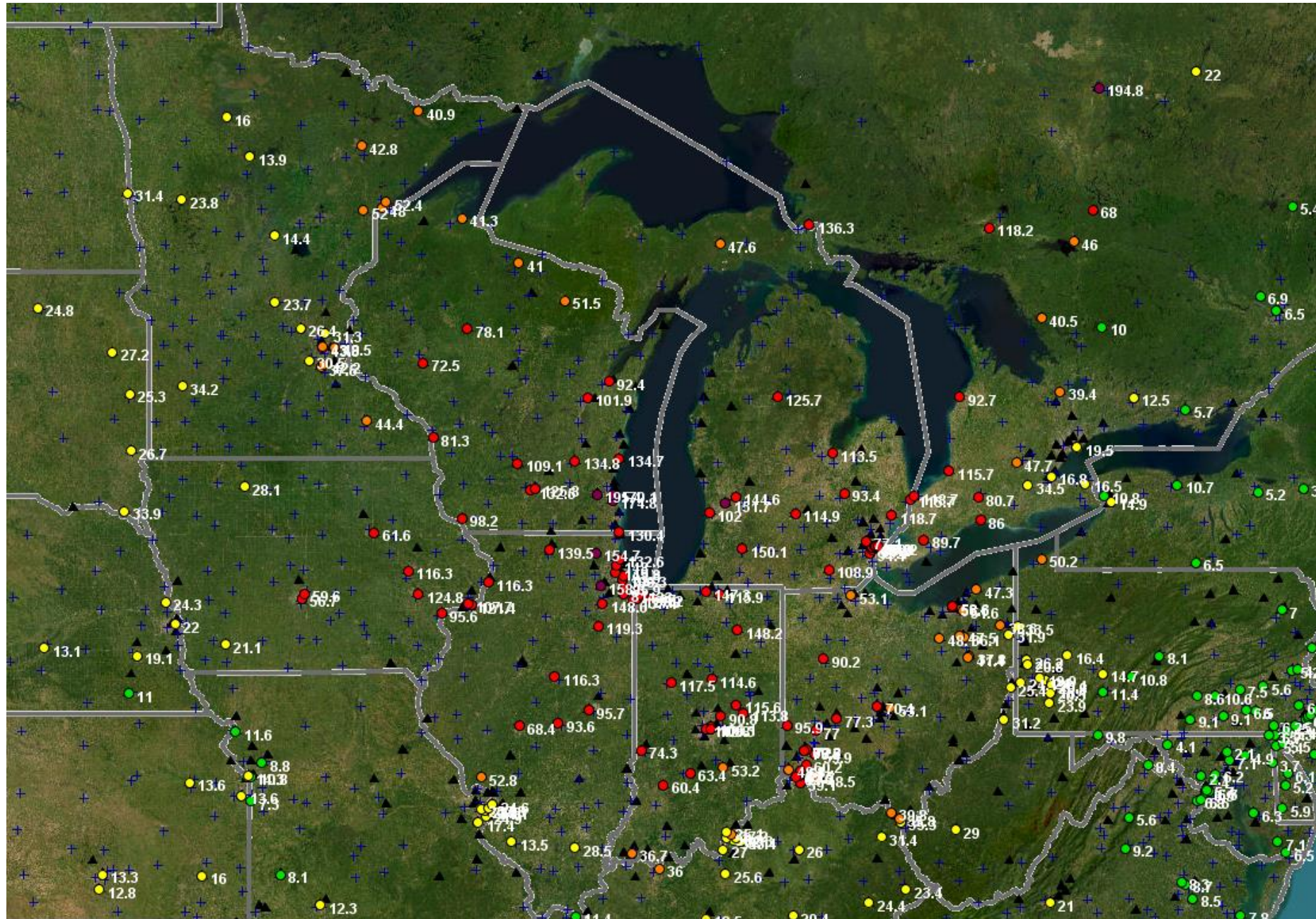
June 27, 2023 – PM-2.5

Mackinac Bridge

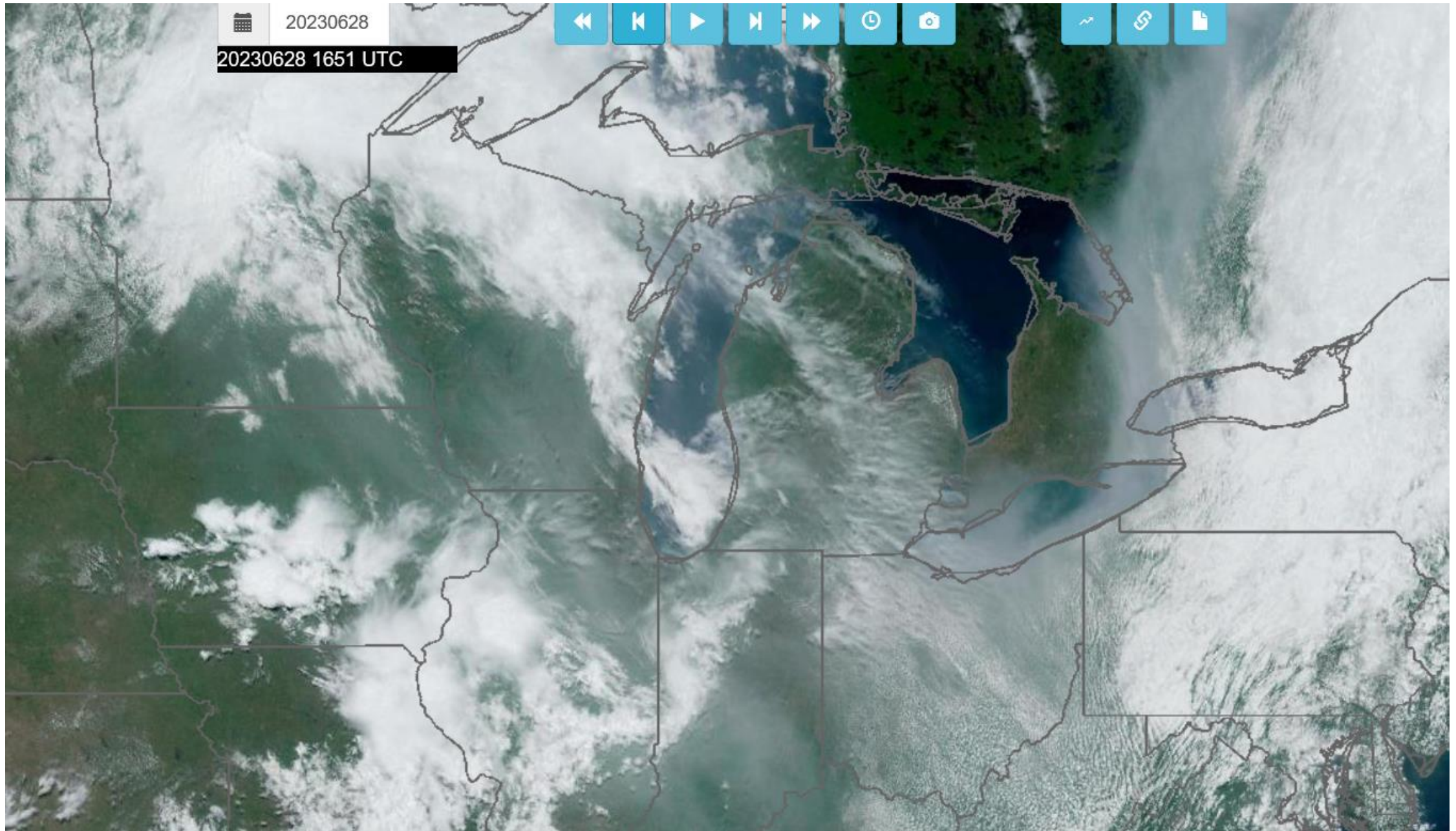
Live



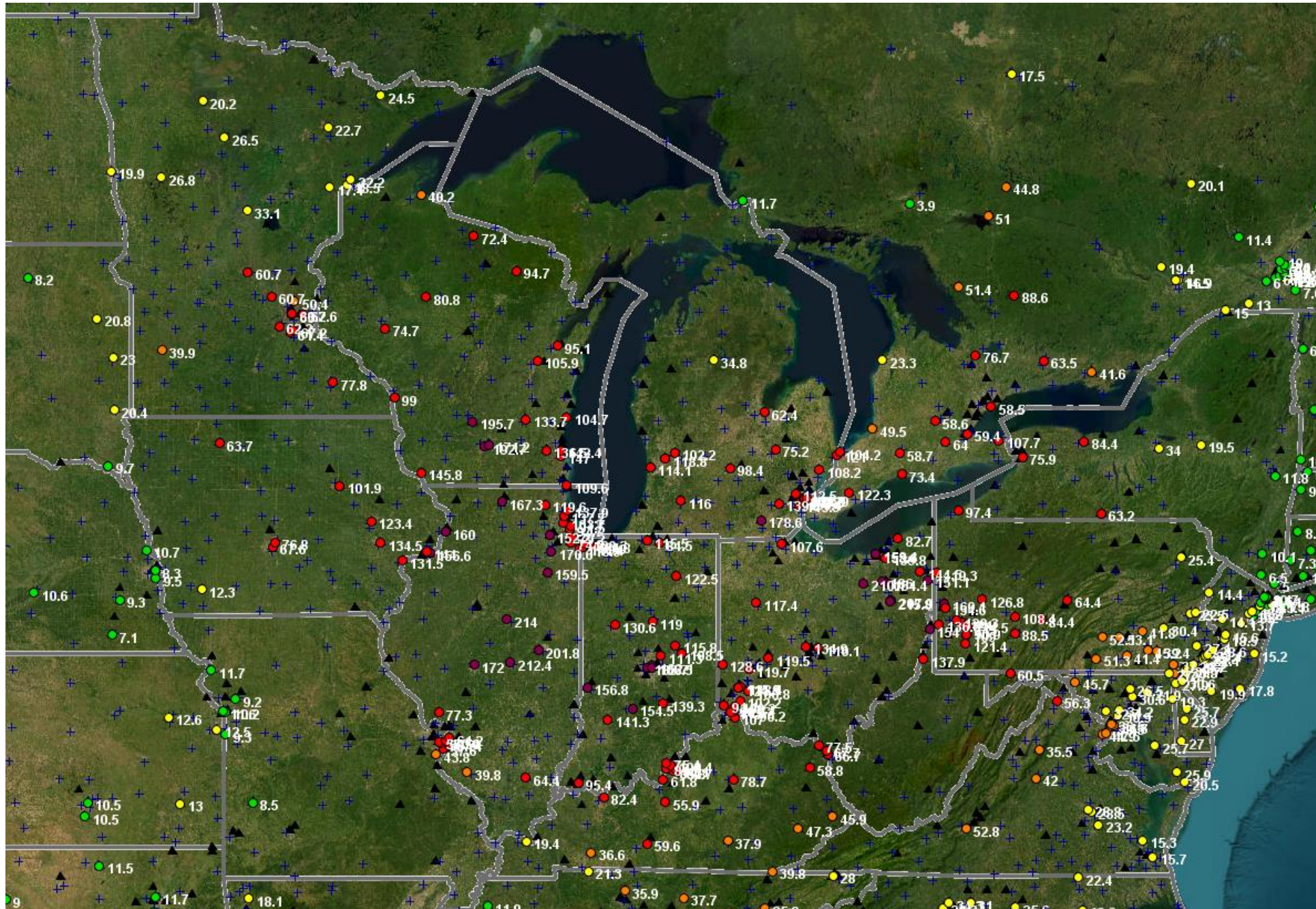
June 27, 2023 – PM-2.5 – 1st Statewide Action Day Advisory



June 28, 2023



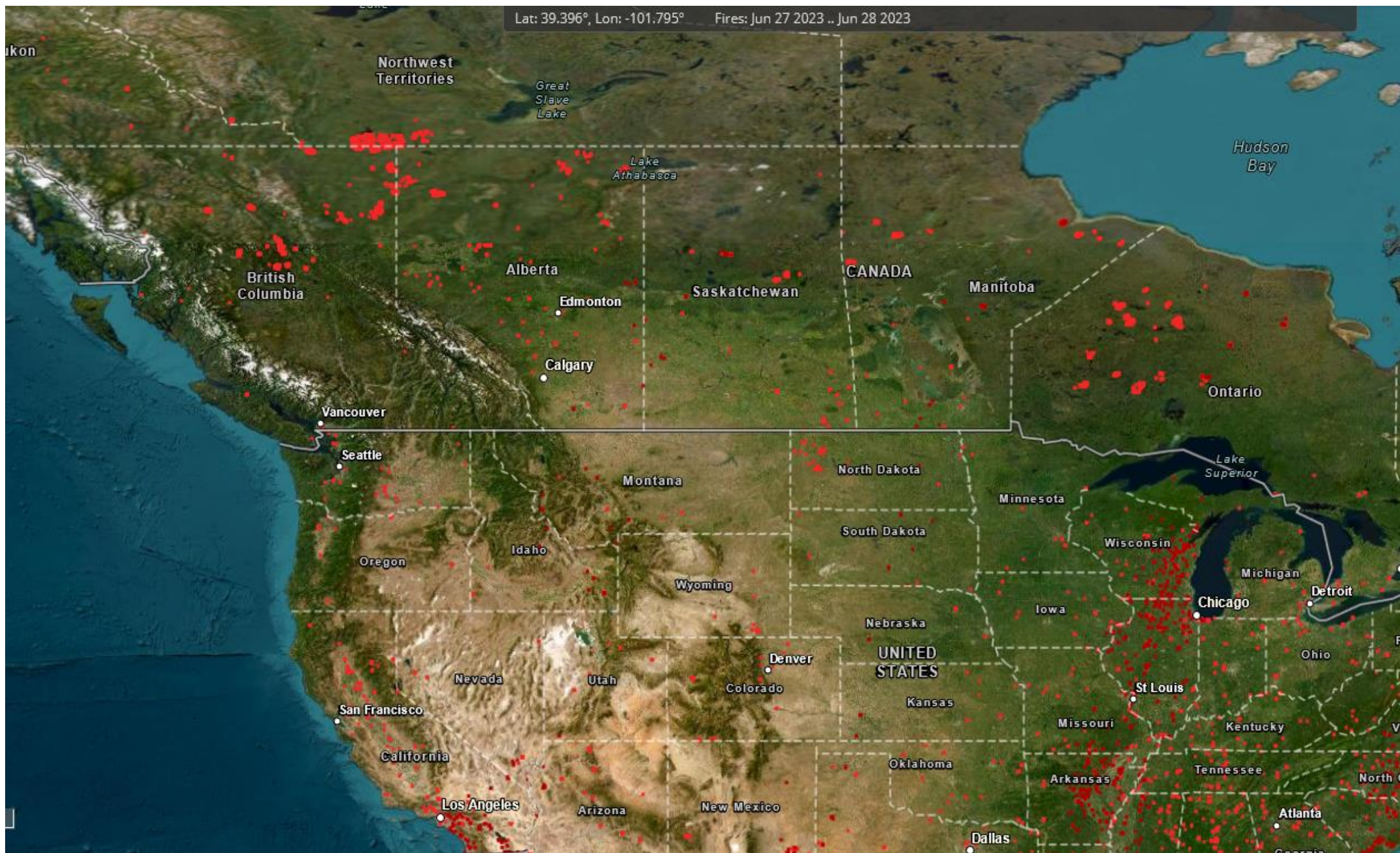
June 28, 2023 – PM-2.5



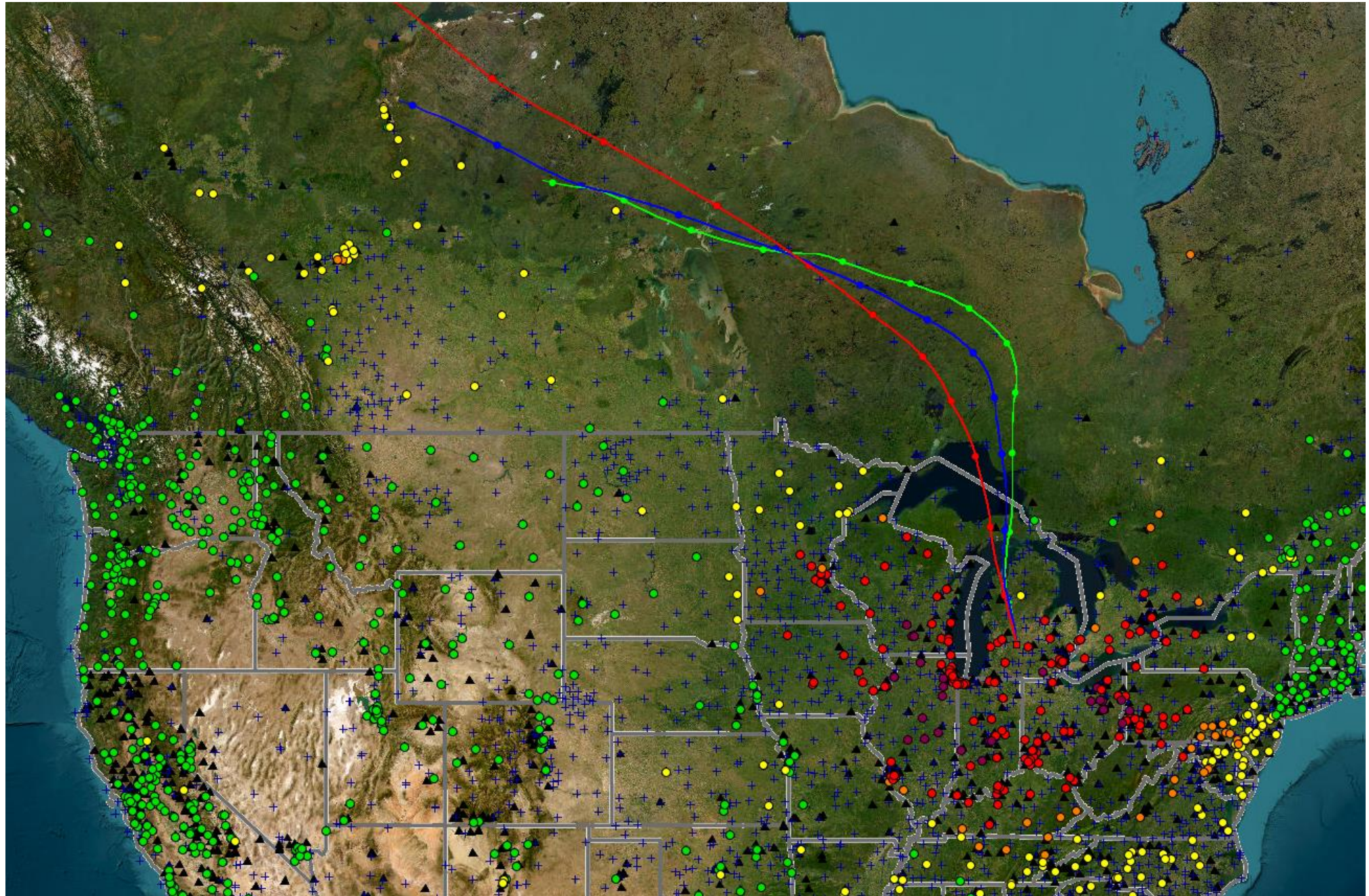
June 28, 2023 – PM-2.5



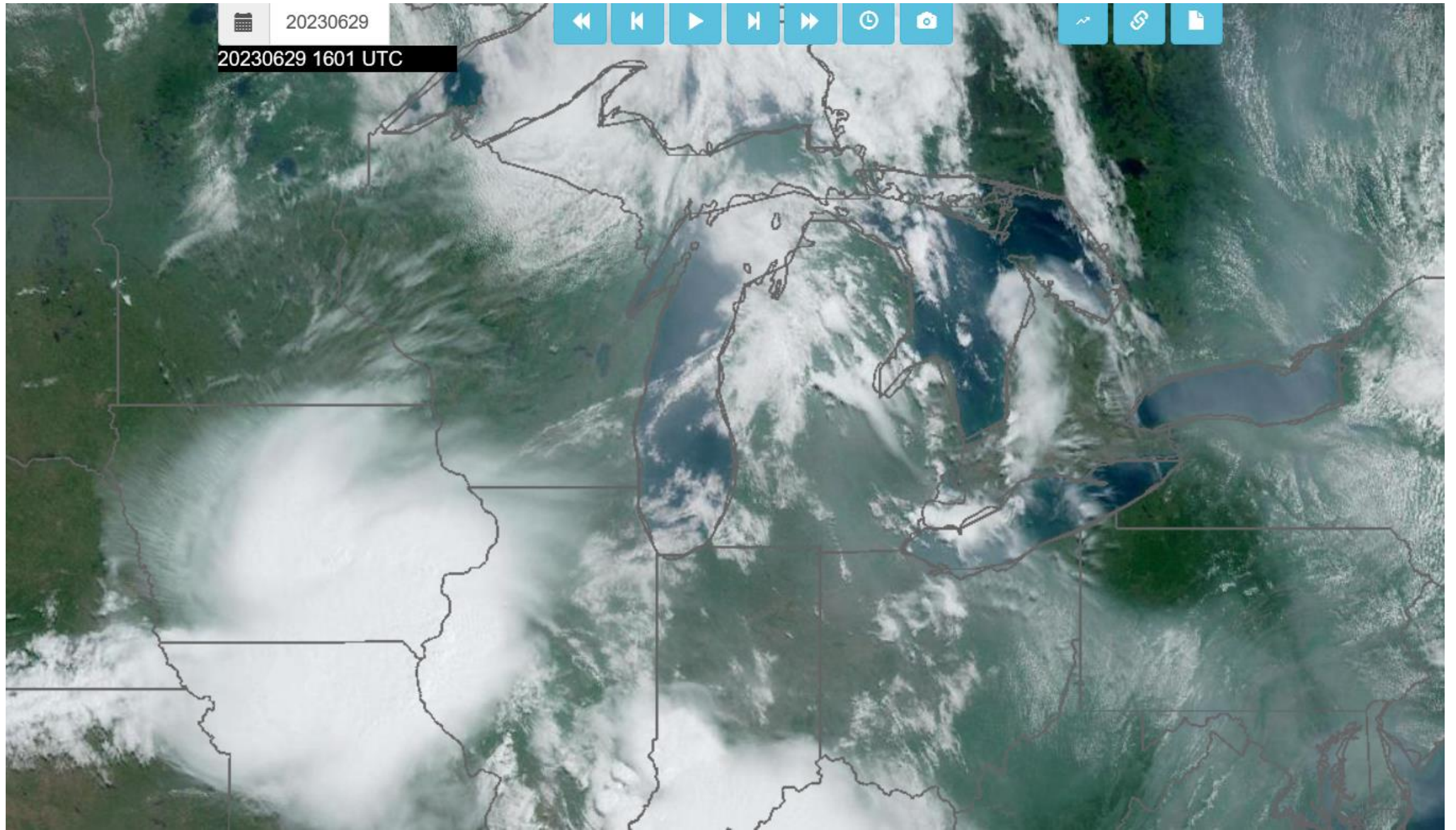
June 28, 2023 – PM-2.5



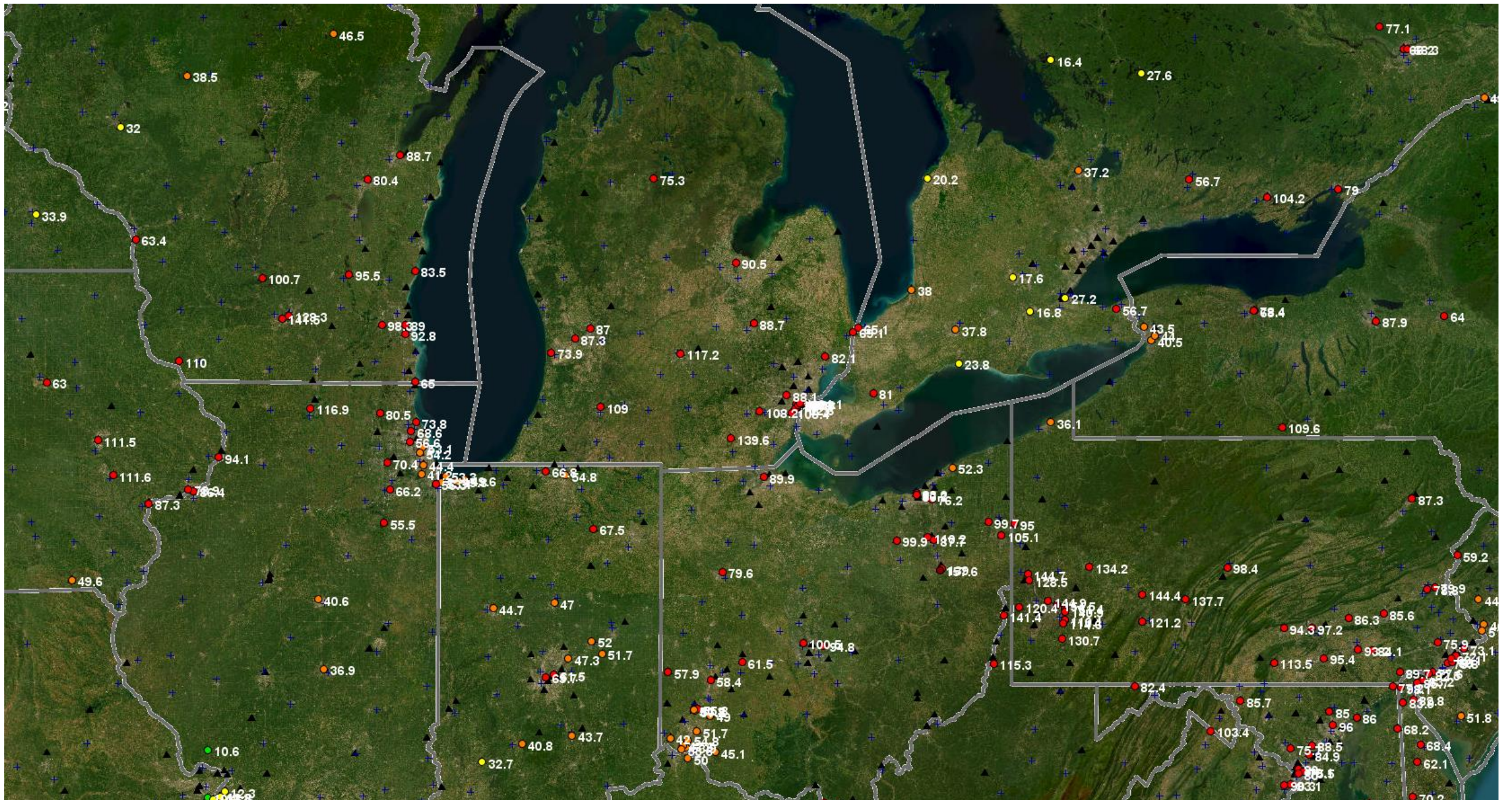
June 28, 2023 – PM-2.5



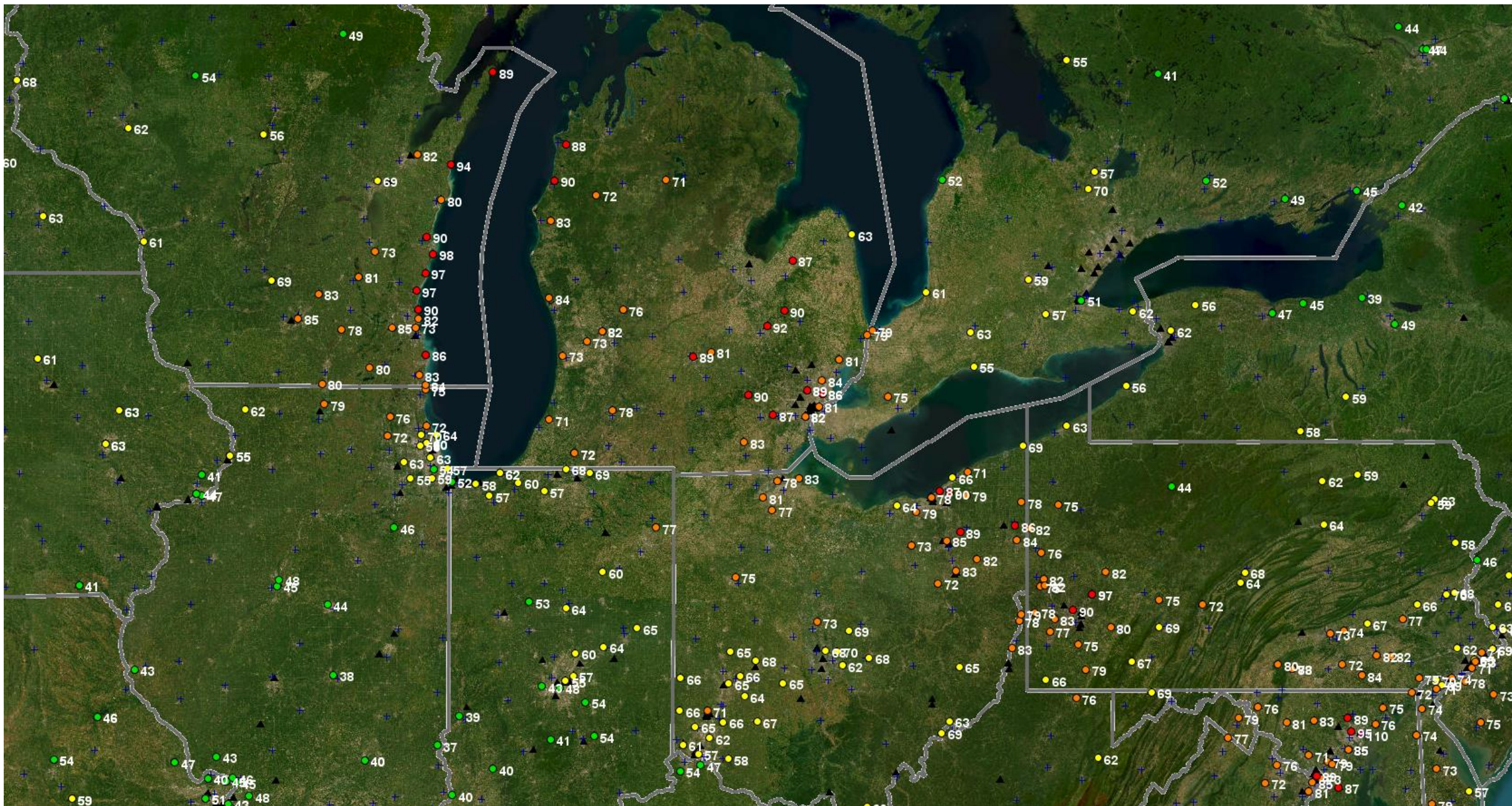
June 29, 2023



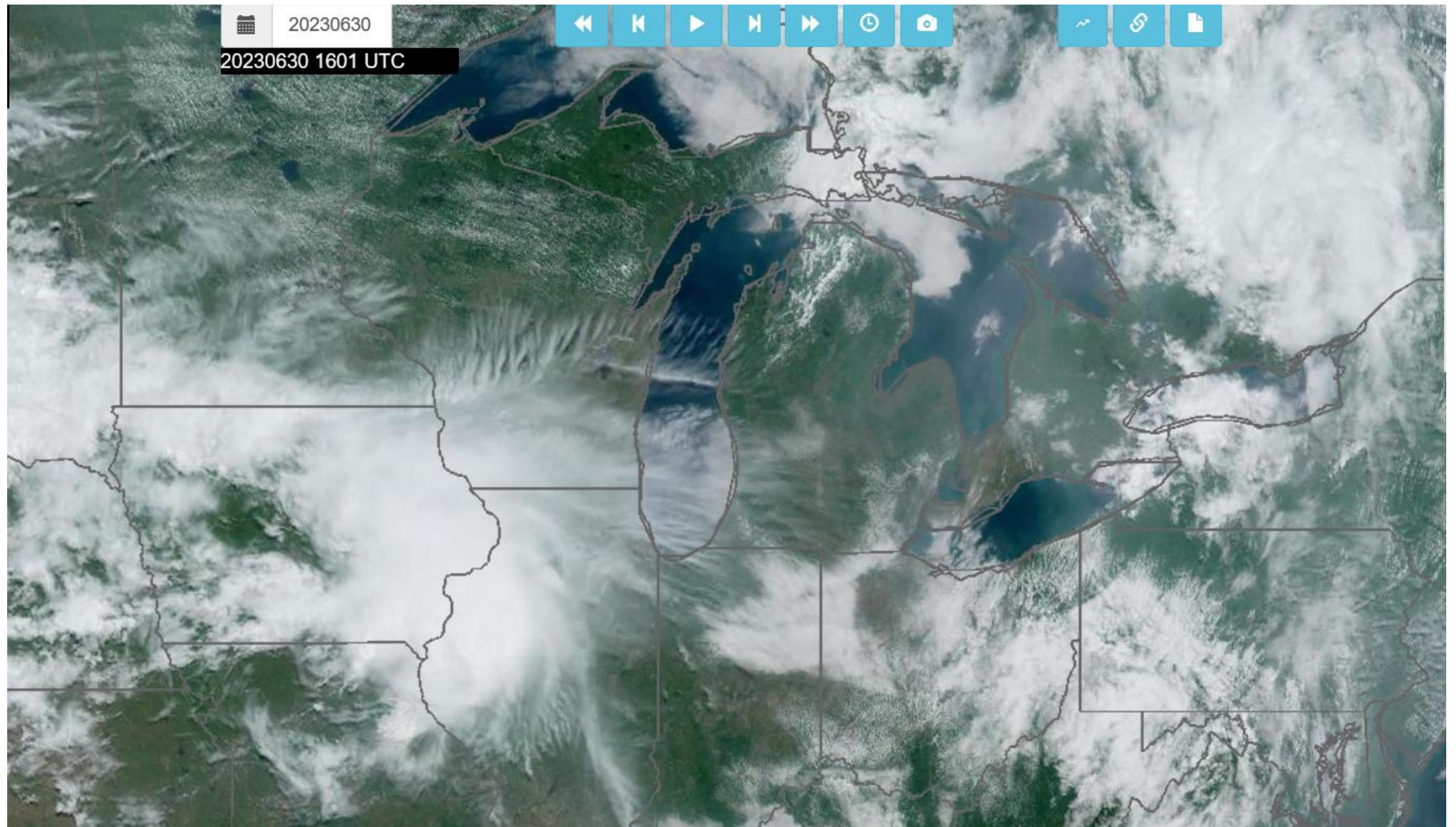
June 29, 2023 – PM-2.5



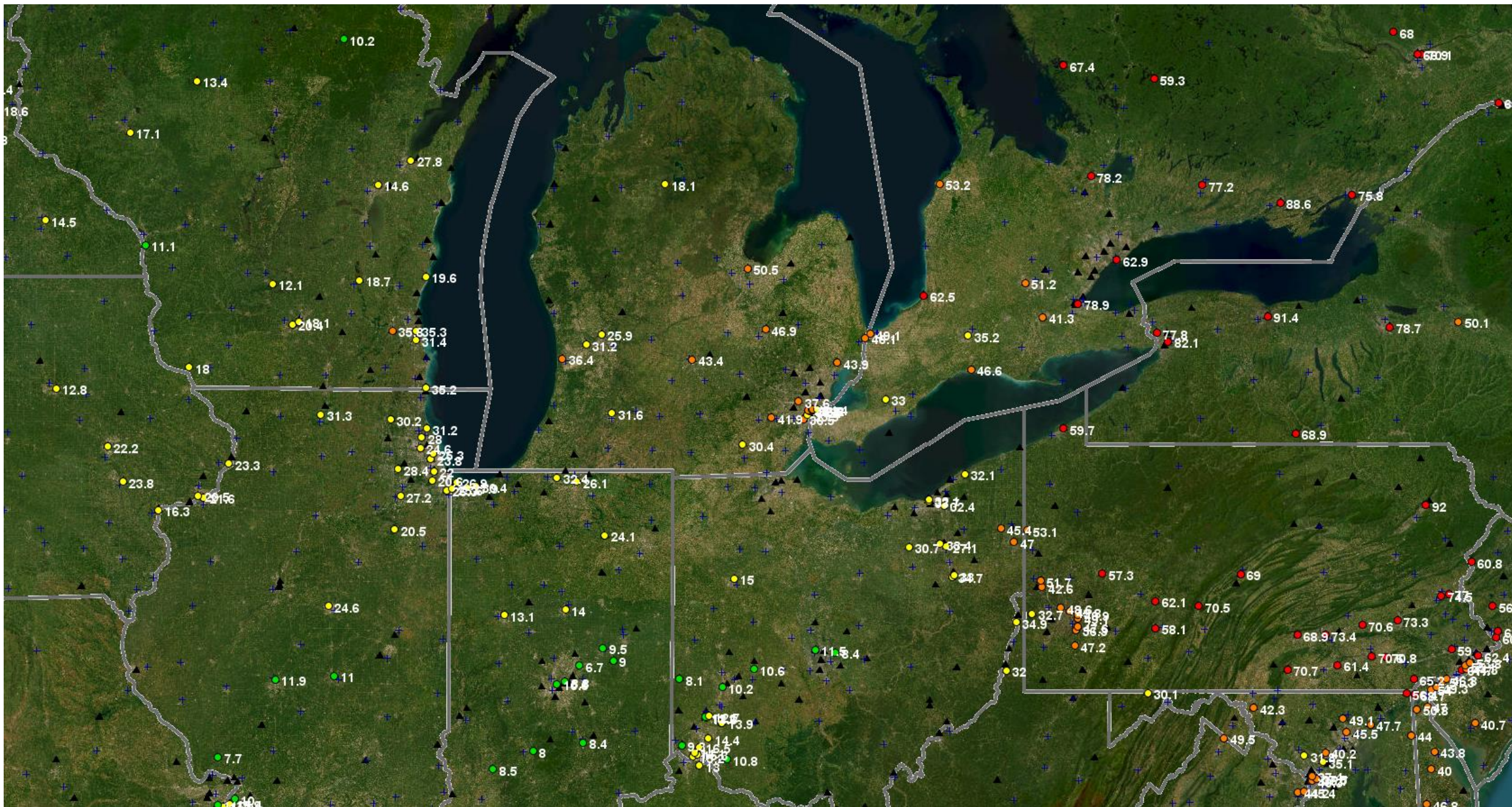
June 29, 2023 – Ozone



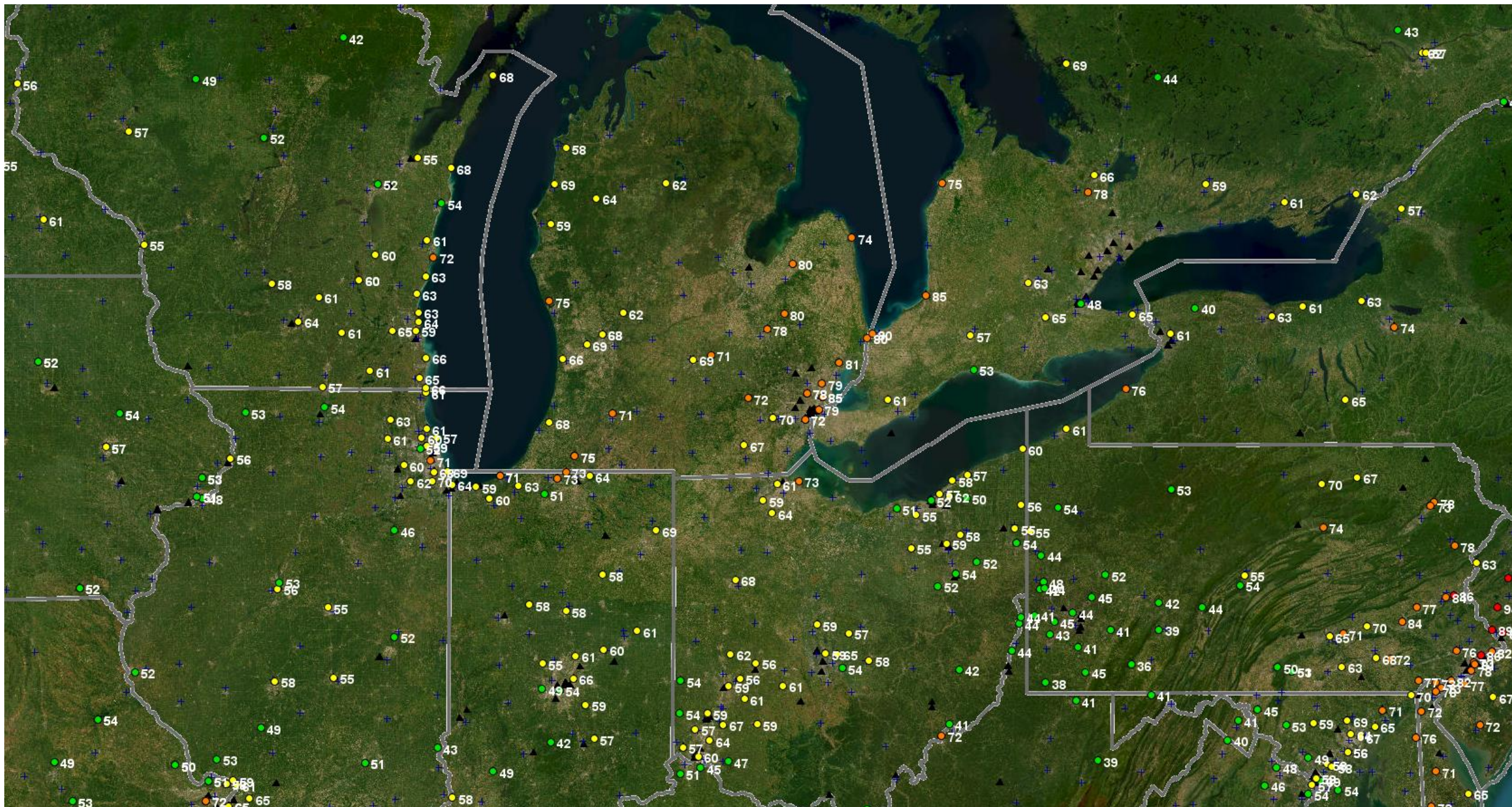
June 30, 2023



June 30, 2023 – PM-2.5



June 30, 2023 – Ozone

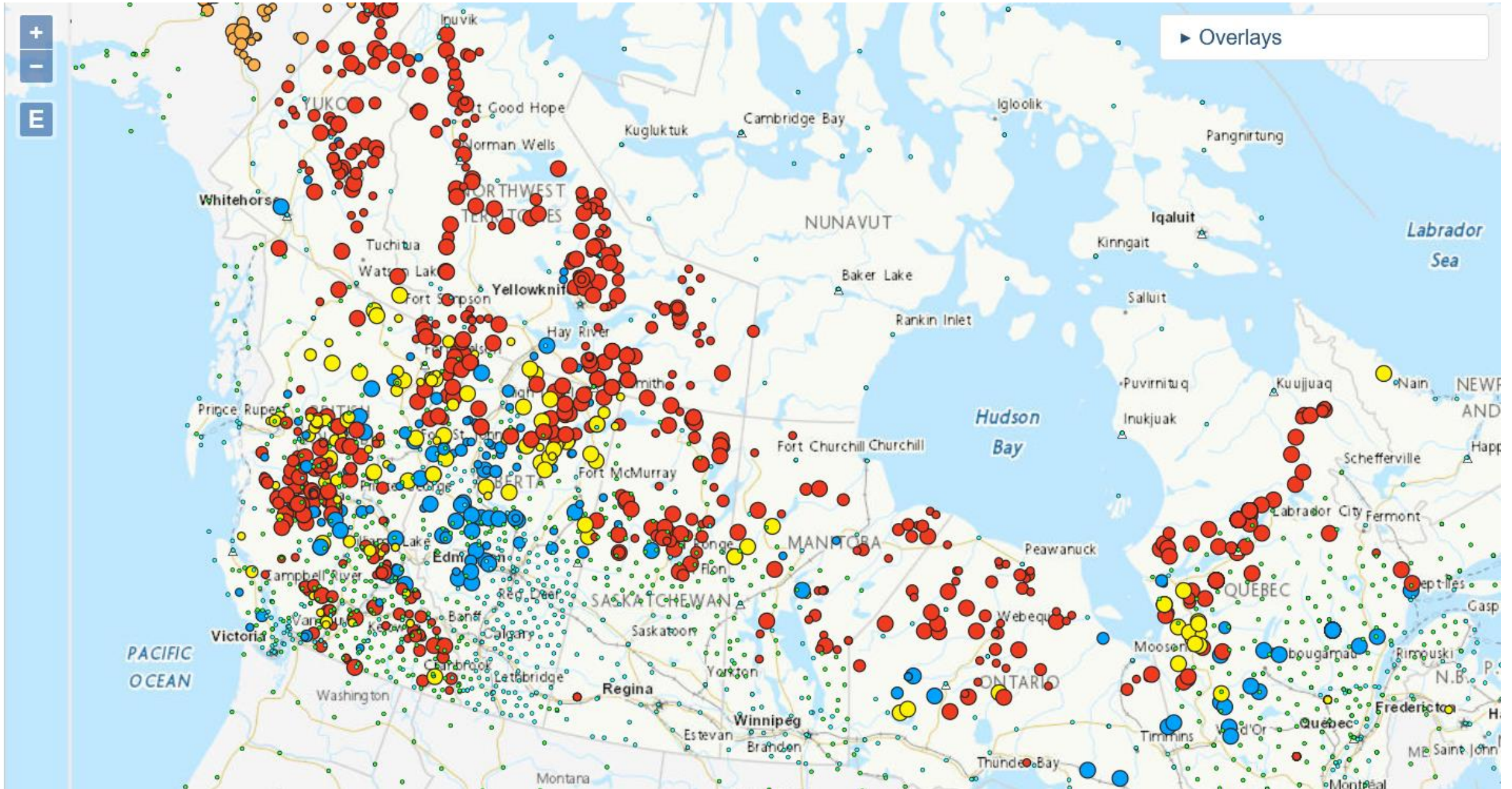


Date				7	7	6	6	6	2	9	8
yyyymmdd	Day	West	Central	Grand Rapids	Holland	Jenison	Kalamazoo	Flint	Houghton Lake	Lansing	Seney
20230602	Fri			14.0	10.9	12.9	18.7	14.2	13.4	14.4	12.9
20230603	Sat		1	25.2	16.0	23.3	25.6	23.3	33.1	28.5	36.8
20230604	Sun		1	26.7	23.2	26.2	14.2	13.5	27.2	17.9	47.6
20230605	Mon		1	23.6	15.1	22.3	21.9	20.3	26.5	22.1	40.4
20230606	Tue	1		31.2	28.1	32.7	37.2	26.8	23.7	27.0	10.1
20230607	Wed	1	2	36.1	15.7	27.5	28.8	41.8	20.4	52.4	8.7
20230608	Thu	2	1	37.3	20.4	40.9	29.1	28.1	19.8	49.8	7.8
20230609	Fri	1	1	23.6	14.3	19.6	37.5	29.2	25.2	38.2	12.5
20230610	Sat			22.7	17.9	24.0	23.7	17.2	16.0	19.5	9.8
20230622	Thu			21.0	24.4	20.7	13.7	9.3	25.1	15.2	30.1
20230623	Fri		1	10.3	16.6	11.3	11.0	4.1	12.1	5.7	41.8
20230624	Sat			15.2	17.4	17.0	19.9	4.5	20.2	8.4	30.6
20230625	Sun			13.9	16.9	13.6	16.5	8.6	15.5	12.0	25.7
20230626	Mon	2	1	29.4	37.7	37.9	34.1	0.5	17.5	14.0	97.8
20230627	Tue	4	4	144.6	102.1	151.8	150.1	93.4	125.7	115.0	47.6
20230628	Wed	4	2	102.2	114.1	118.9	116.1	75.3	34.9	98.4	14.3
20230629	Thu	4	4	87.0	74.0	87.3	109.1	88.7	75.3	117.2	58.6
20230630	Fri	1	3	26.0	36.4	31.3	31.6	47.0	18.2	43.4	47.2
20230701	Sat	1		23.5	38.0	28.2	15.7	11.0	14.4	18.9	13.5
20230702	Sun			13.7	33.7	16.7	19.3	6.0	13.9	10.0	8.8
20230703	Mon			16.9	17.9	15.9	18.4	3.4	13.9	10.4	13.2
20230704	Tue	1	2	38.8	16.8	20.4	22.1	36.6	13.3	42.2	11.0
20230705	Wed			28.6	23.8	19.7	22.2	20.6	11.0	27.8	11.3
20230706	Thu			10.4	14.5	11.2	9.2	2.1	8.9	7.7	8.7
20230709	Sun			9.2	13.6	10.0	10.4	1.8	9.2	7.2	7.5
20230710	Mon			11.4	14.3	11.4	11.8	6.0	10.5	11.2	10.4
20230712	Wed			5.4	10.5	5.3	8.4	2.0	5.2	5.8	2.4
20230713	Thu			6.3	11.1	6.1	5.1		6.7	5.3	4.0
20230714	Fri			8.8	14.3	11.4	9.3	3.9	8.9	8.0	1.9
20230715	Sat			7.2	12.5		6.7	2.2	14.8	6.0	12.0
20230716	Sun			25.1	29.9		27.7	14.2	21.1	21.1	8.1
20230717	Mon			14.2	19.9		22.9	6.6	7.5	14.2	1.3
20230718	Tue			6.7	10.3	7.9	11.6	1.9	7.8	13.6	2.4
20230723	Sun			12.0	13.2	12.0	15.3	5.4	9.7	16.8	0.0
20230724	Mon			23.3	21.5	22.0	26.6	10.0	14.5	34.5	0.0
20230725	Tue	4	1	46.2	42.0	46.9	51.4	29.5	28.1	59.7	10.4
20230726	Wed			29.0	32.2	28.1	26.6	20.5	25.7	32.4	25.1
20230727	Thu			17.9	17.7	14.3	11.9	8.1	23.4	15.3	11.3
20230728	Fri			11.7	15.1	9.8	8.8	7.0	9.9	10.3	4.4
20230729	Sat			5.9	11.3	5.5	5.7		6.6	4.8	3.0

July 31, 2022



July 31, 2023



Air Quality Action! Day Forecasting

AN EMISSIONS
REDUCTION
STRATEGY

A PUBLIC HEALTH
AWARENESS
MESSAGE



Wildfires Required Changing Our Action Day Program Messaging







Avoid Strenuous Activity

Indoor Air
Can be Just
as Bad as
Outdoor Air





Install High Efficiency Filters



When
Outdoors,
Consider
Mask
Protection



Surgical
Masks May
not be
Enough



Construction Masks with Good Seal is a Better Option





**CLEANING
THE AIR?**



CBS NEWS
DETROIT

69° 7:14 PM MICHIGAN REP. CARRIE RHEINGANS INTRODUCES BILL TO 01:50 / 10:49

Michigan EGLE meteorologist speaks on air quality alerts as Canadian wildfire smoke spreads across US

Senior meteorologist Jim Haywood, with the Michigan Department of Environment, Great Lakes and Energy, speaks on the smoke covering portions of the United States as Canadian Wildfire worsens air quality.

JUN 7, 2023

