

EXCEPTIONAL EVENTS EXEMPTION RULE, GUIDANCE, AND CANDIDATE DATES

Sunil Kumar
Principal Environmental Engineer

MWAQC-TAC
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Exceptional Events Exemption Rule

- EPA promulgated Exceptional Events (EE) rule in 2007 to address CAA section 319(b), which allows for the exclusion of air quality monitoring data influenced by exceptional events from use in determinations of exceedances or violations of the NAAQS
- EPA revised the rule in 2016 based on implementation experiences with the exceptional events data exclusion process.

EE Demonstration Requirements

- A conceptual model describing event(s) and related emissions leading to exceedance or NAAQS violation at affected monitor(s);
- A demonstration of a clear causal relationship between the specific event and the monitored exceedance or violation;
- Analyses comparing the claimed event-influenced concentration(s) to concentrations at the same monitoring site at other times;
- A demonstration that the event was both not reasonably controllable and not reasonably preventable;
- A demonstration that the event was caused by human activity that is unlikely to recur at a particular location or was a natural event; and
- Documentation that the submitting air agency followed the public comment process

EE Demonstration Guidance

- EPA published a guidance document to assist air agencies preparing exceptional events demonstrations for wildfire influences on Ozone concentrations
- Guidance provides Tiered approach to establish “clear causal relationship” between a wildfire event and elevated ozone levels observed at a monitor
- Evidence requirements increase with increase in Tiers (e.g., Tier 1 analysis applies to more obvious and/or extreme events so needs less evidence)
- These tiers require analyses to establish the existence of wildfire emissions, transport to the exceeding monitor, and impact at the monitor

EE Demonstration Guidance

- Tier 1 – Exceedances are clearly higher than non-event related concentrations and have occurred from a nearby fire during a time or place of historically low ozone concentrations;
- Tier 2 – Exceedances are higher than non-event related concentrations although may not be “clearly” higher, and large fire emissions relative to the distance of the fire to the monitor indicate a clear causal relationship;
- Tier 3 – Wildfires or impacts that are more complex, but additional analyses submitted as part of a weight-of-evidence showing can establish a clear causal relationship.
- EPA and air agency work collaboratively to determine appropriate Tier based on regulatory significance (designations, reclassification, CDD, attainment determination, etc) and approvability considerations

Current Design Values

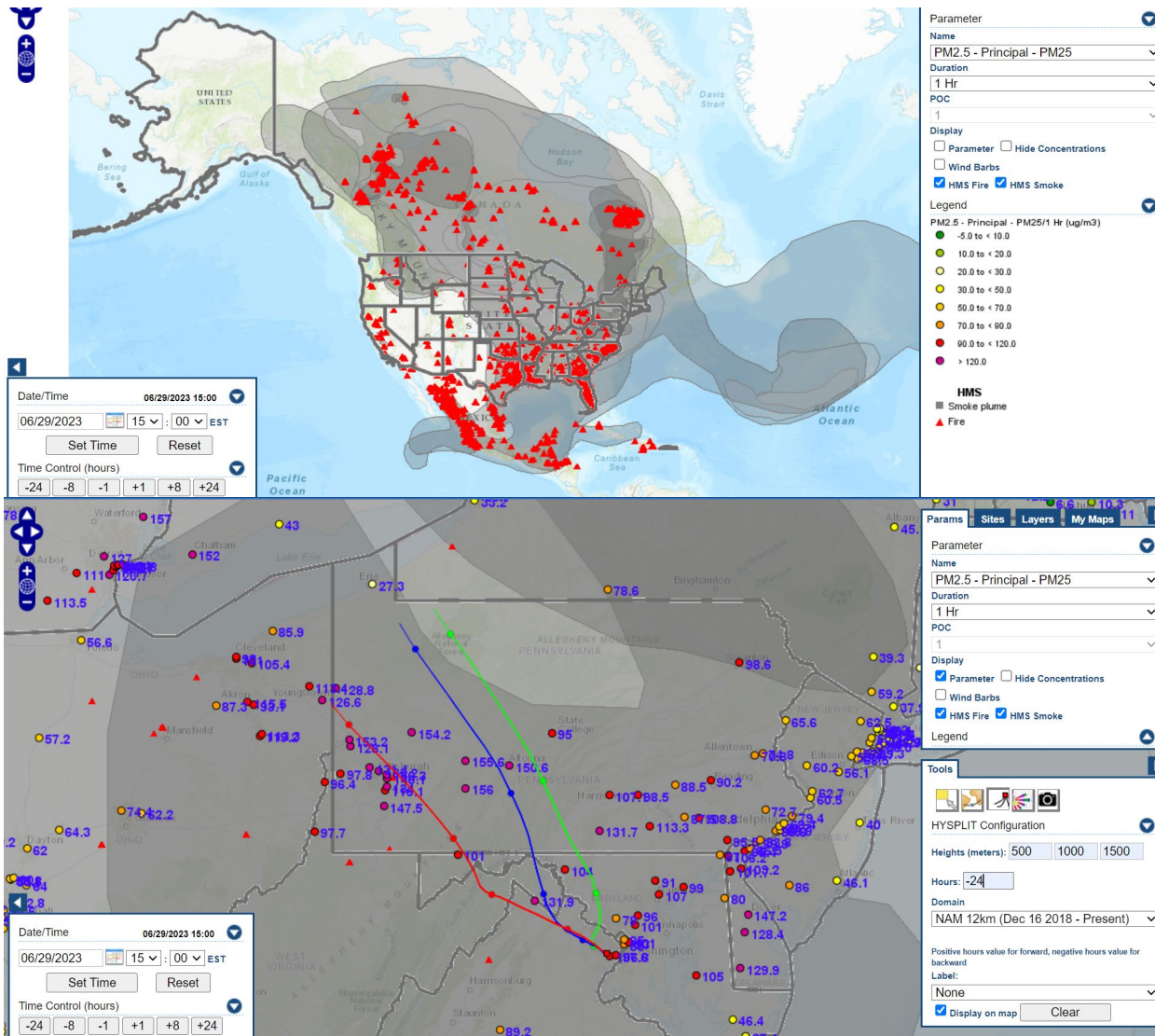
Monitor	Draft Design Value (ppb)*	Remark
McMillan (DC)	71	NAAQS violation
Beltsville (MD)	69	Close to NAAQS violation
Prince George's Eq. Center (MD)	69	Close to NAAQS violation
Frederick (MD)	67	Can pose issue for future lower NAAQS ?
Arlington (VA)	67	Can pose issue for future lower NAAQS ?
Franconia (VA)	67	Can pose issue for future lower NAAQS ?
Rockville (MD)	66	Can pose issue for future lower NAAQS ?
HU-Beltsville (MD)	66	Can pose issue for future lower NAAQS ?
S. Maryland (MD)	65	Currently don't seem to pose issue
Ashburn (VA)	64	Currently don't seem to pose issue
Long Park (VA)	63	Currently don't seem to pose issue
Calvert (MD)	62	Currently don't seem to pose issue
River Terrace (DC)	60	Currently don't seem to pose issue
Takoma Park (DC)	55	Currently don't seem to pose issue

Preliminary Analysis of Candidate Dates

Date	Daily 8-Hour Max Ozone Conc (ppb)	Smoke Level	Daily Avg PM2.5 Conc (ug/m3) at Nearest Monitor	Fire Source
April 13	McMillan (71), PGEQ (72)	Slightly high	10.6, 9.4	Flint Hills, KS, Eastern CONUS Fires
May 12	McMillan (76)	Slightly high	15.3	Alberta & Saskatchewan, Canada Fires
June 1	McMillan (81)	Slightly high	32.5	Nova Scotia, Canada & New Jersey Fires
June 2	McMillan (75), PGEQ (75), Beltsville (73)	Slightly high	26.3, 21.0, 21.0	Nova Scotia, Canada & New Jersey Fires
June 15	PGEQ (72)	Normal	6.0	Aged Quebec, Canada Smoke
June 29	McMillan (89), PGEQ (87), Beltsville (79)	Very high	80.0, 84.9, 84.9	Quebec, Canada Smoke
July 11	PGEQ (73)	Normal	7.4	Alberta & Saskatchewan, Canada Fires
July 12	Beltsville (72)	Normal	9.2	Alberta & Saskatchewan, Canada Fires
July 17	McMillan (72), Beltsville (73)	High	32.9, 31.3	British Columbia & Alberta, Canada Fires
July 18	PGEQ (73)	Slightly high	23.6	British Columbia & Alberta, Canada Fires
July 20	McMillan (72)	Slightly high	16.7	None

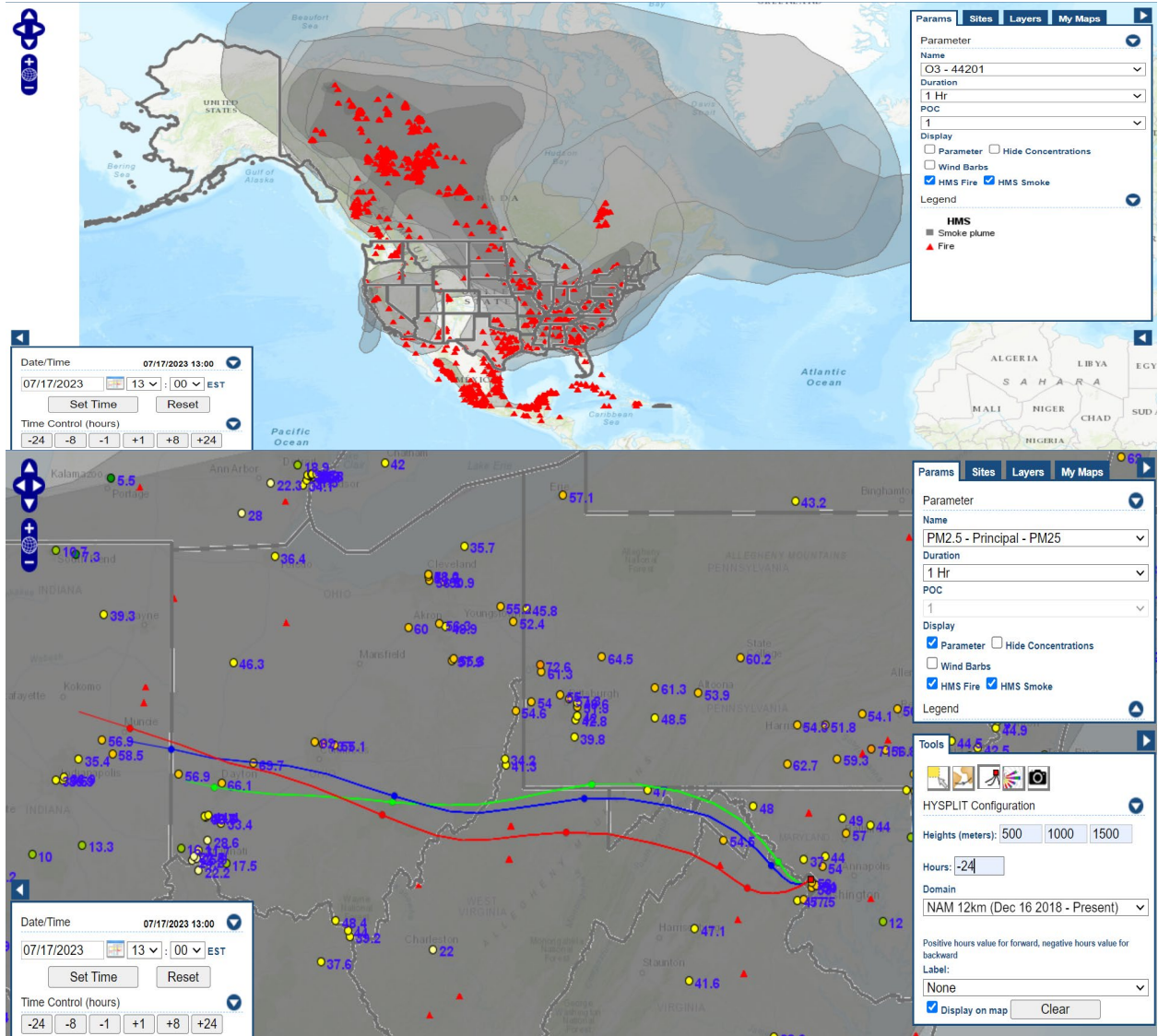
Fire Source Info:- MDE Presentation titled "Exceptional Event Discussion" dated 8.31.2023

June 29, 2023



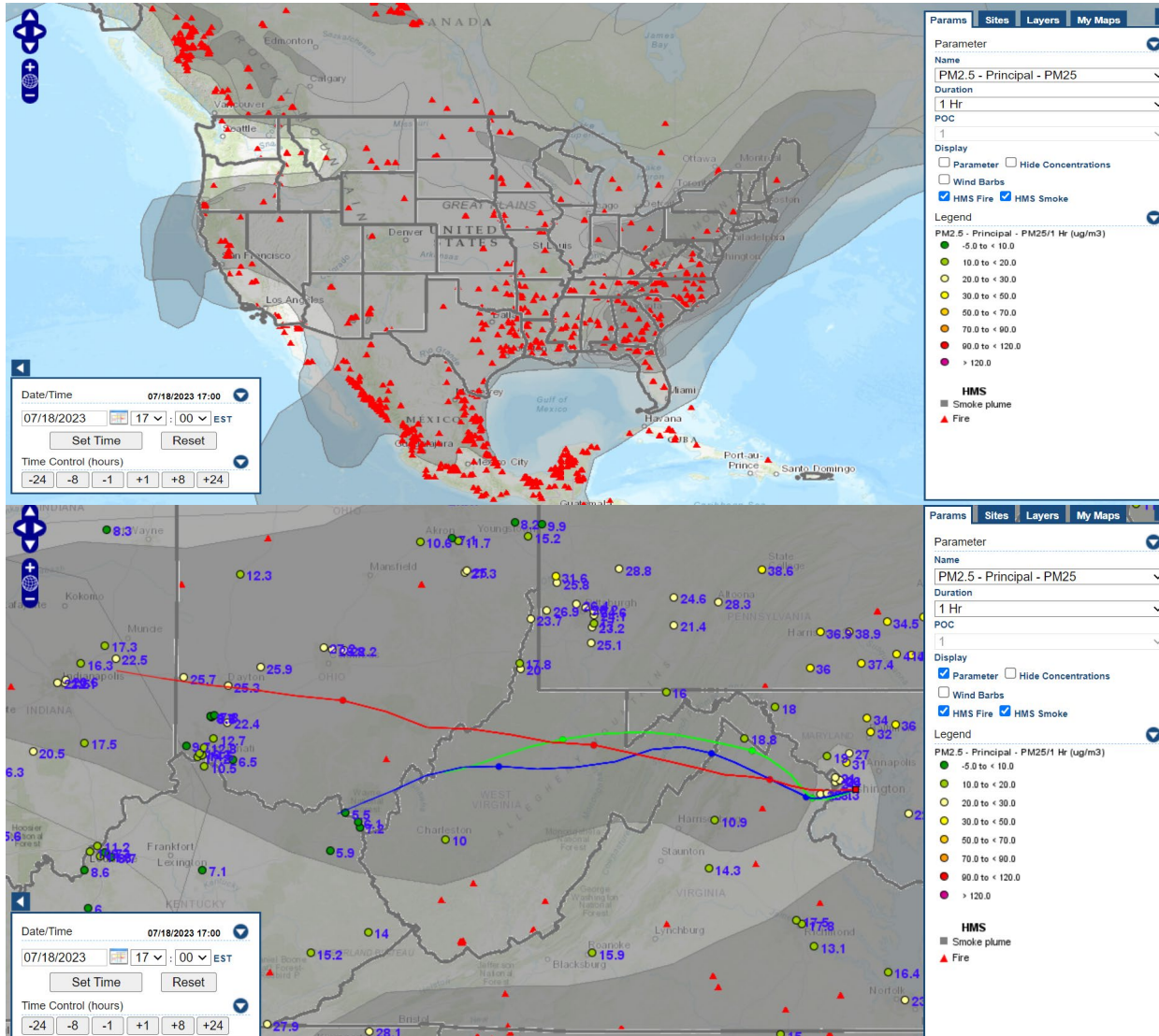
Fire Source:
Quebec, Canada

July 17, 2023



Fire Source:
British Columbia &
Alberta, Canada

July 18, 2023

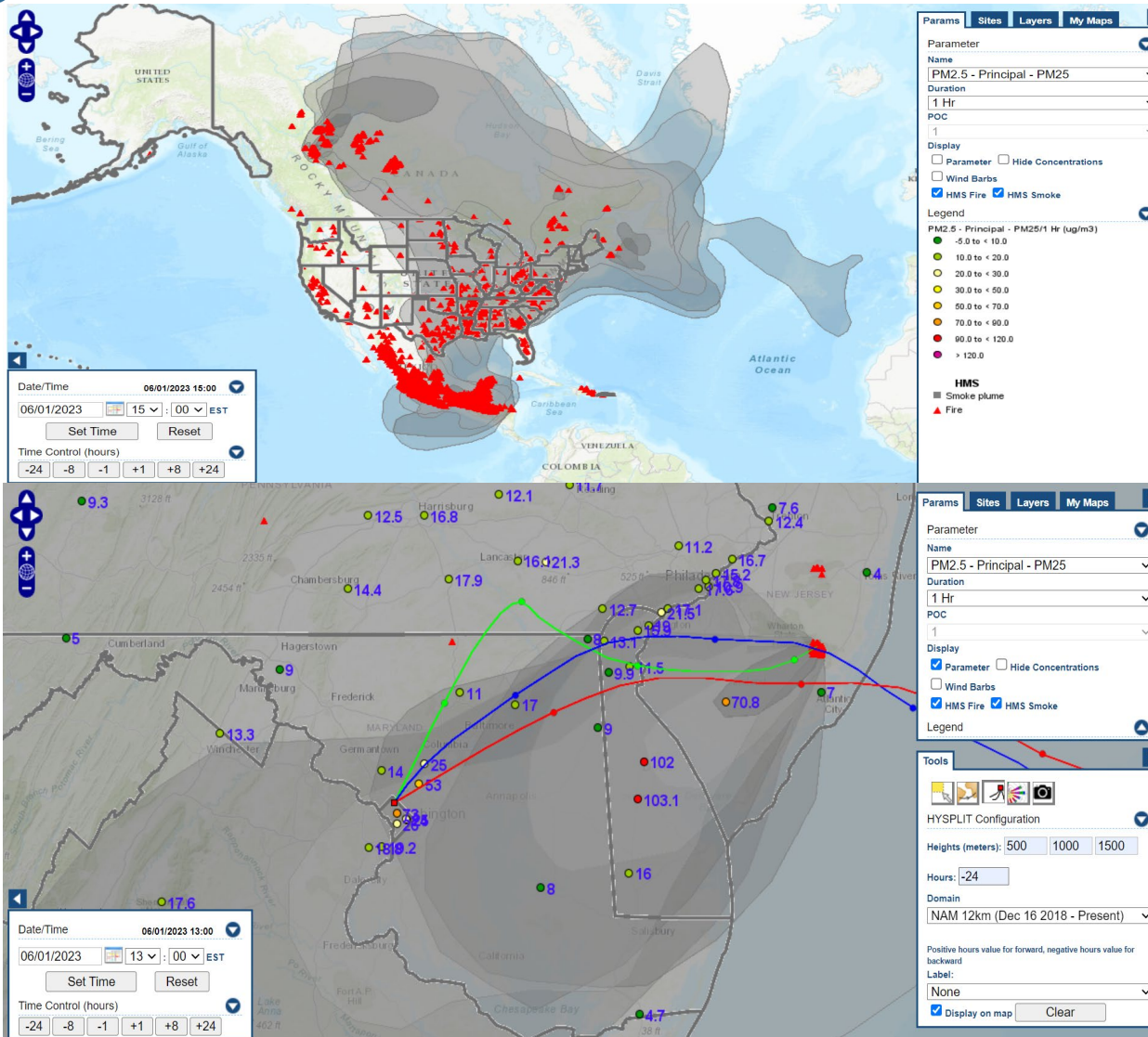


Fire Source:
British Columbia &
Alberta, Canada



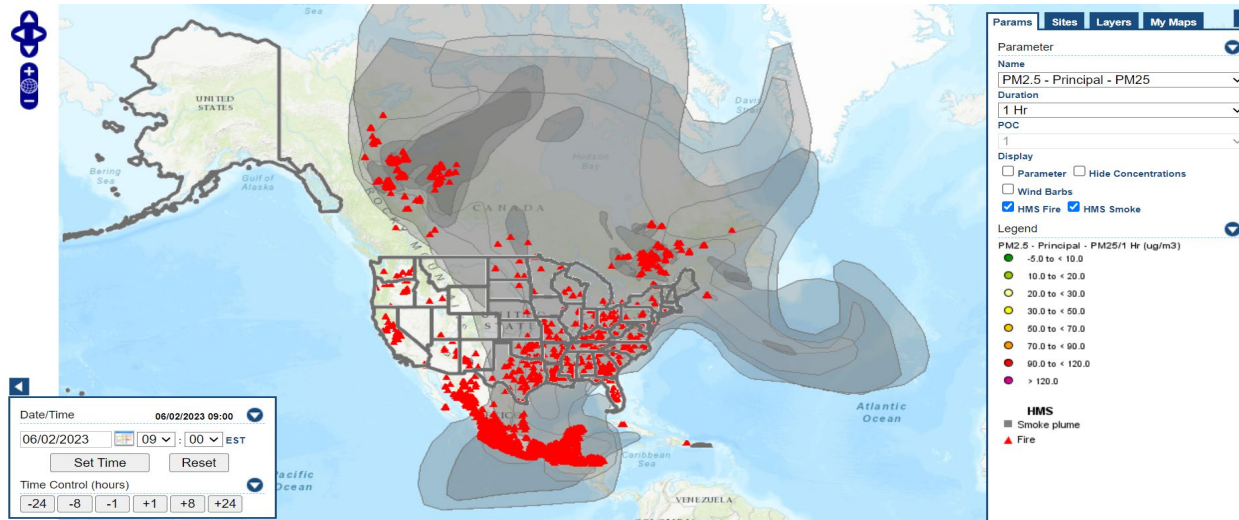
Metropolitan Washington
Council of Governments

June 1, 2023

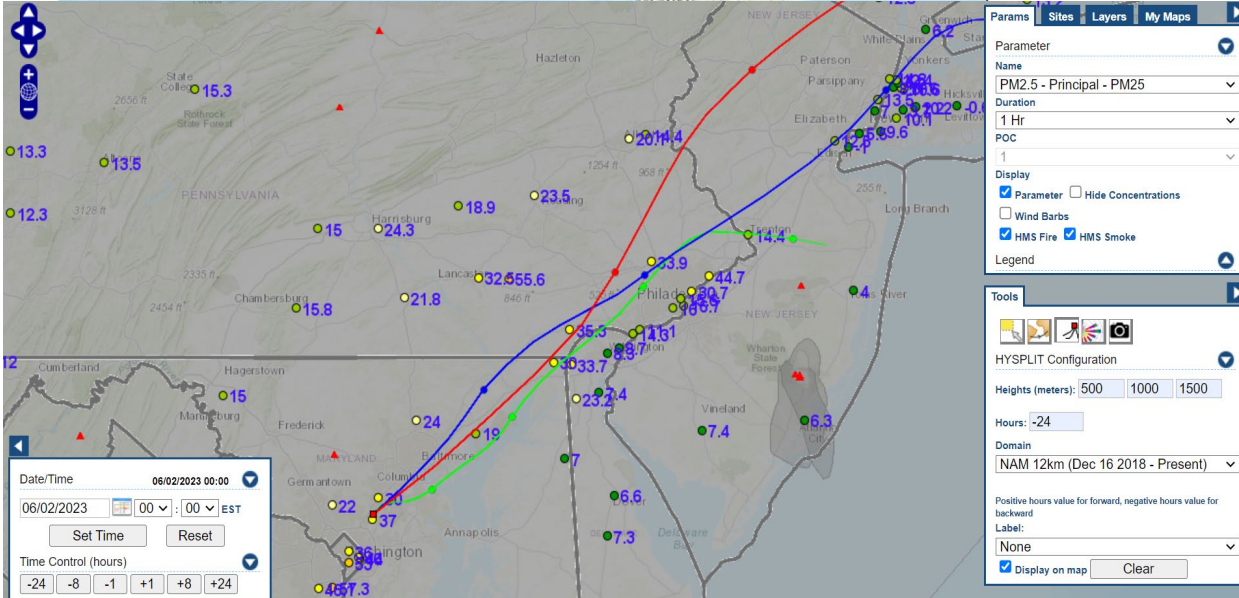


Fire Source:
Nova Scotia, Canada
New Jersey

June 2, 2023



Fire Source:
Nova Scotia, Canada
New Jersey



Impact of Exemption on Design Values

Monitor Name	Current draft 2021-23 DV	DV- Data exempted (6/29)	DV- Data exempted (6/29, 7/17)	DV- Data exempted (6/29, 7/17-18)	DV- Data exempted (6/29, 7/17-18, 6/1)	DV- Data exempted (6/29, 7/17-18, 6/1-2)
McMillian PG Equestrian Center	0.071	0.070	0.070	0.070	0.070	0.069
Beltsville	0.069	0.068	0.068	0.068	0.068	0.067



Conclusion

- There seems to be a good chance for the above five dates to be granted exceptional events exemption.
- If that happens, design values of the three monitors will come down bringing the Washington region back into attainment as well as providing some cushion for any future tougher ozone standard.