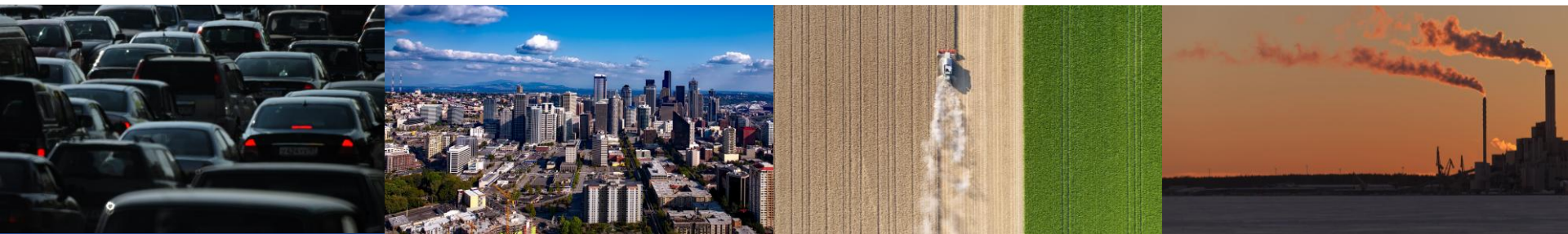


National Emissions Collaborative Update: The 2022 Emissions Modeling Platform and What Comes Next...

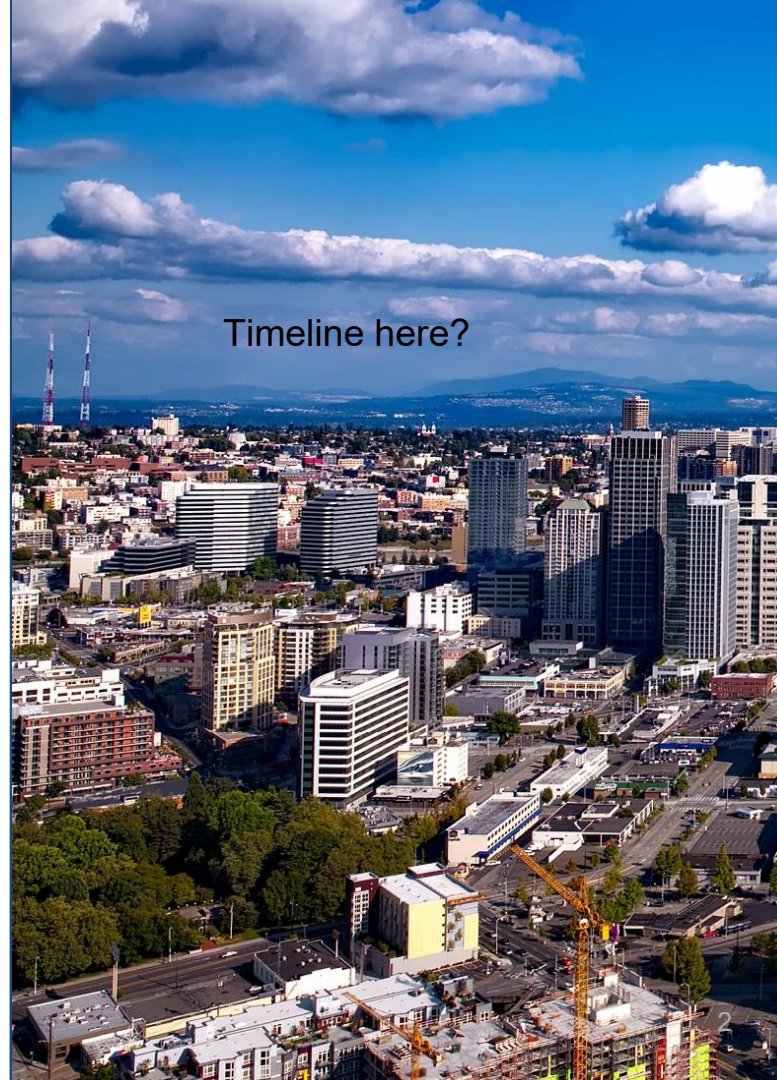
National Emissions Inventory Conference

September 16, 2025



Goals from the 2023 EIC

- In September 2023, we hosted a session with presenters from multiple organizations to present a vision of how we would develop the 2022 platform
- At that time, we planned to
 - Develop the 2022v1 platform including three future / analytic years by fall 2024
 - Develop a 2022v2 platform with specified updates: base year by summer 2025 and analytic years by fall 2025
 - Rely primarily on existing emissions workgroups instead of having many collaborative-specific workgroups
 - Focus more on projections methods than we did for the 2016 platform
 - Collect comments on data before they were used
 - Improve the processes for collecting comments and improve data accessibility
 - Do a better job getting the word out about the platform



Timeline here?

2022 EMP Collaborative Structure

- Co-leads
 - Zac Adelman (LADCO), **Mary Uhl (WESTAR)***, US EPA OAQPS
- **Communication support team**
 - Tom Richardson (OK DEQ), Tom Moore (Denver/NFR RAQC), Rhonda Payne (WESTAR)
- Coordination Committee
 - 28 members from MJOs, state agencies, and US EPA staff from OAQPS, OTAQ, and CAMD
 - Monthly calls
 - Quarterly outreach webinars
- Workgroups
 - **2022-specific workgroups for fires and projections**
 - Leverage existing national emissions workgroups

* Orange items are new for the 2022 process

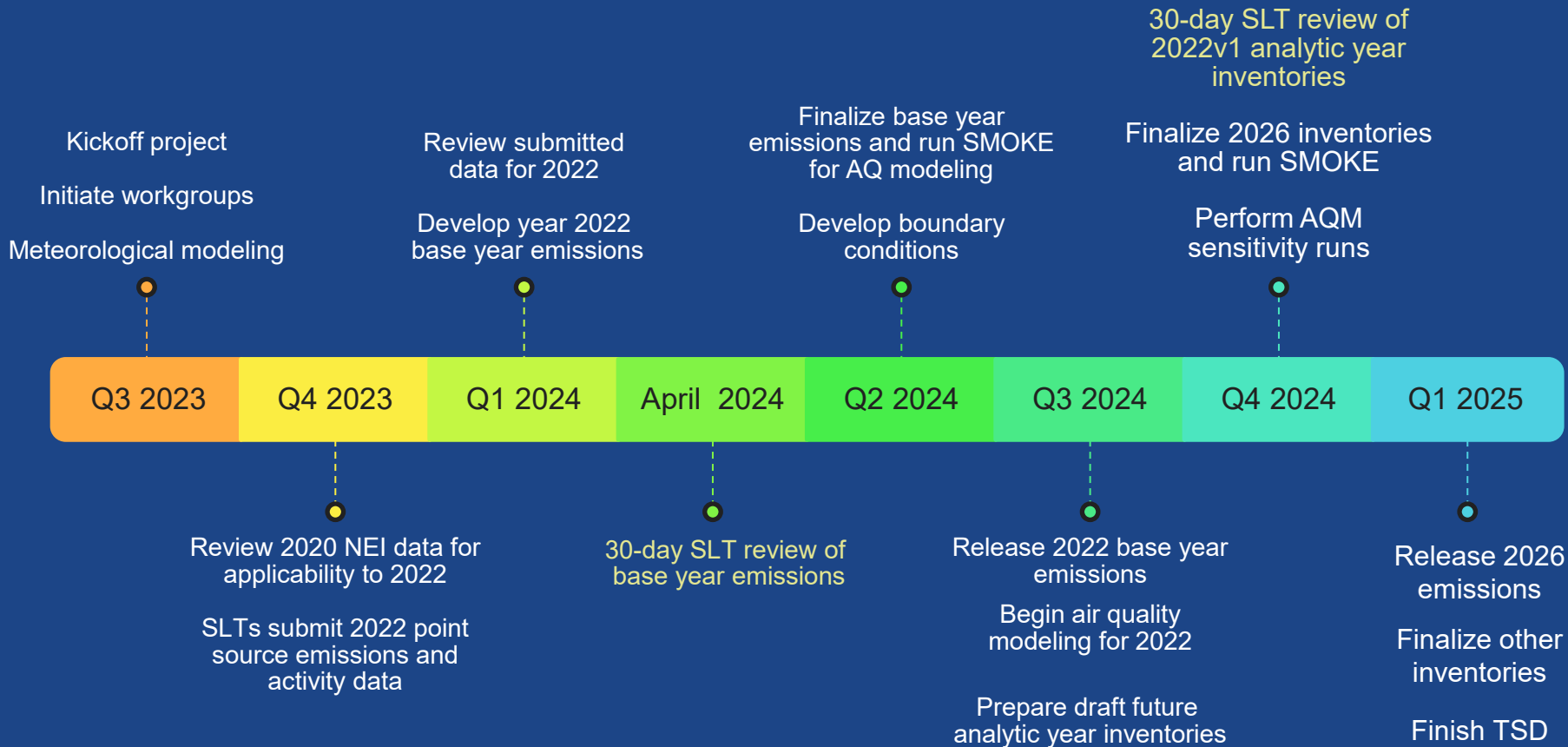


Why did we Plan for a v2?

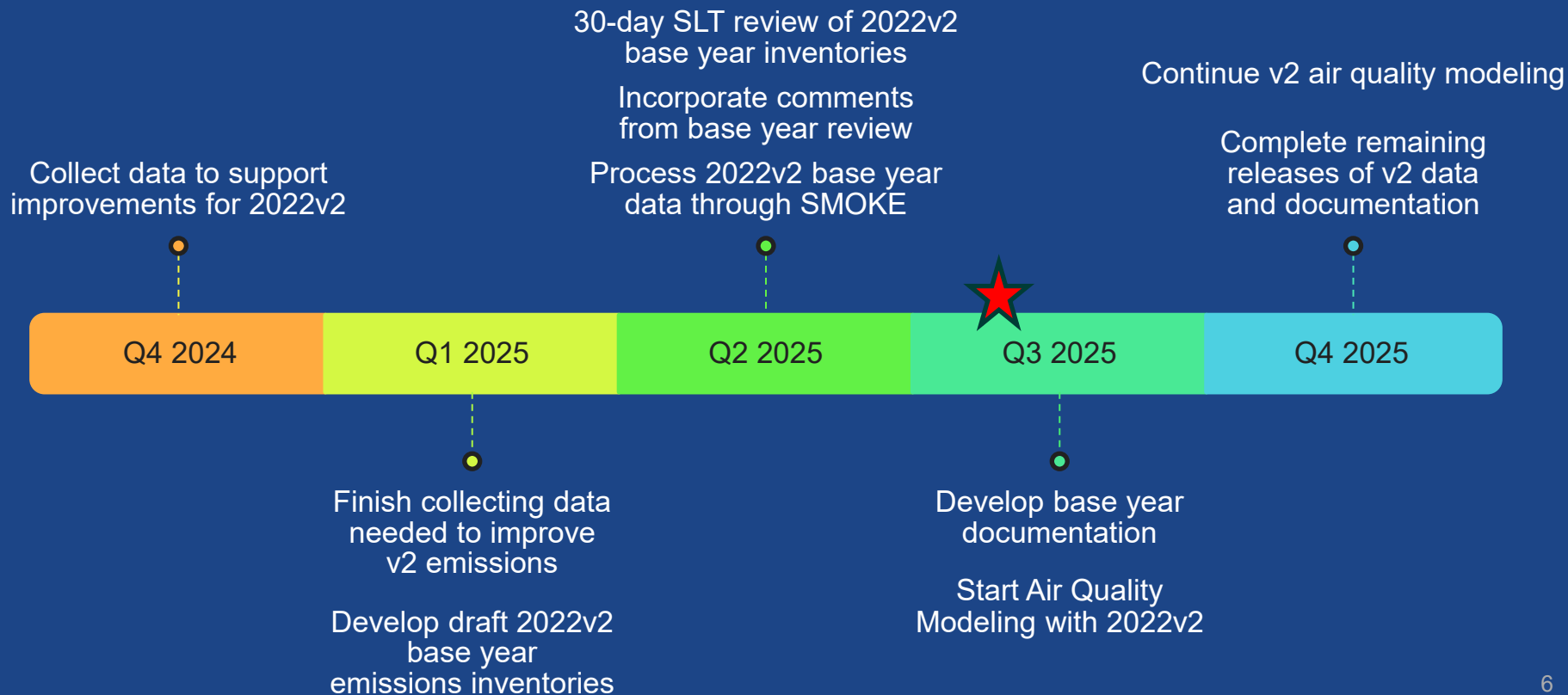
- 2022v2 would address issues identified during the use of 2022v1
- 2022v1 would use MOVES4 and 2022v2 would use MOVES5
- 2022v2 point source data will have been updated through the AirToxScreen S/L/T review process
- Some data could be incorporated into 2022v2 from the 2023NEI process
 - Review 2022v2 to determine if 2023 NEI data are representative of 2022 emissions
 - Projections could also change as a result



Historic Timeline for 2022v1 Platform Development

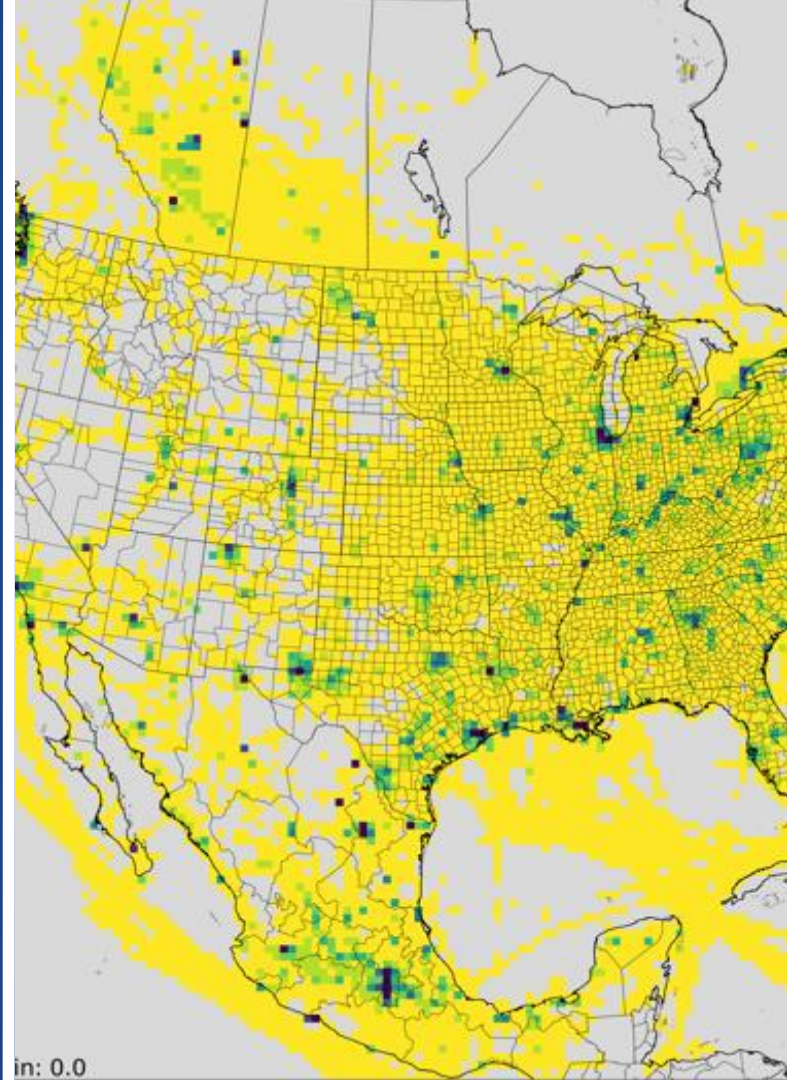


Timeline for 2022v2 Platform Development



Summary of Data Products and Accomplishments

- 2022v1 base year
 - Held data review
 - Released modeling platform package including [emissions, summaries](#), and [air quality model inputs](#)
 - [Model-ready emissions](#) are available for 36km and 12km grids
- 2022v1 analytic year emissions for 2026
 - Held data review; released platform package
 - [Model-ready \(CMAQ\) and CAMx emissions](#) are available for 12km grid (12US1)
- 2022v2 base year emissions
 - Held data review; EPA has released comments and responses
 - Release [final base year inventories](#) and AQM-ready emissions



2022 EMP Sharepoint site shows data, comments, and responses

The screenshot shows a SharePoint site titled "Comments on the 2022 EMP" with a red "CE" logo. The top navigation bar includes "Public group", "Not following", and "4 members". Below the title bar, there are tabs for "New", "Page details", "Preview", and "Analytics". The main content area features a large image of a mountain landscape with the text "2022v2 EMP Base Year Comments" and "Comment period is now closed →". To the right of this image are two smaller images: "View the 2022v2 Inventory" and "Instructions for Submitting a Comment". Further right is a "Frequently Asked Questions" section. On the left side, there is a sidebar menu with the following items: "Home", "2022v2 EMP Base Year Co...", "2022v1 EMP Analytic Year...", "2022v1 EMP Base Year Co...", "2022v1 Inventory" (highlighted with a yellow box and a yellow arrow), "2022v2 Inventory", "Instructions", "FAQ", "2022v1 EMP Website", "2022v1 Wiki", and "2022 EMP News".

Each picture is a button that can be clicked

The data and pages related to the 2022v1 EMP are still available on the left

Sharepoint Interface for Comments

2022v2 EMP Base Year Comments ☆ ☑



All Items ▾

+ Add view

Name	Date	Organization	EIS Sector	Geographi...	EPA Region	Brief description of comment	EPA Response
Steven Potter	6/4/2025 3:08 PM	Connecticut DEEP	Mobile - On-Road Diesel Heav	Connecticut	Region 1	Connecticut 2022 platform annual VMT for all source use types should be about 29,666 million miles a year rather than a value on the order of 31 billion miles.	
Lexie Wilson	6/9/2025 11:38 AM	Utah Division of Air Quality	Industrial Processes - Mining	Utah	Region 8	Emissions from big mining trucks at a Utah copper mine (Kennecott) are kicked out from EIS because they are reported under a mobile source SCC (2270002051). These emissions for 2022 are attached, and should be added back to the 2022 modeling platform. Utah has some other point sources that report mobile emissions from smaller sources (forklifts, construction equipment, some mining equipment, some lawn/garden etc.) that are also missing from the platform. These statewide emissions are generally small, so I've attached them separately from the mining truck emissions file. (527 TPY NOx statewide; 160 TPY PM2.5 statewide; 215 TPY VOC statewide)	
Allie Pindilli	6/9/2025 1:29 PM	NJDEP	Fires - Wildfires	NJ Statewide	Region 2	1. EPA Wildfire acres burned are lower than NJ for 2022V1 and V2 by 1652 acres. This comment was also made for 2022v1. 2. EPA wildfire emissions decreased ranging from 66 to 79% from 2022v1 to v2. 3. The county distribution for EPA's Wildfire acres burned are different for both 2022V1 and V2 than what NJ submitted, see attached summary, and especially by a significant amount in Burlington and Atlantic Counties.	

Comments include submitter information, date, EIS sector, geography, and brief descriptions

2022v1 Data Retrieval Tool

2022v1 EMP Data Retrieval Tool

Overview

County Level Data

Facility Level Data

County-Level Process Data for Mobile, Point, and Nonpoint Emissions

All columns support filters

EPA R...	Q	State	Q	State-County	Q	Pollut...	Q	2022 E...	Q	2026 E...	Q	SCC Code	Q	Sector	Q
4		Alabama		AL-Autauga		CO		0.06351		0.06312		2203610080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		NH3		0.00048		0.00224		2203610080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		NOx		0.00131		0.00131		2203610080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		VOC		0.00117		0.00116		2203610080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		CO		0.49484		0.62104		2203530080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		NH3		0.00329		0.0				Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		NOx		0.02206		0.0				Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		PM10-PRI		0.00209		0.0				Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		PM25-PRI		0.00046		0.0				Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		VOC		0.01298		0.01604		2203530080		Mobile - On-Road non-Diesel Heavy Duty Vehi...	
4		Alabama		AL-Autauga		CO		65.71414		59.72430		2202620080		Mobile - On-Road Diesel Heavy Duty Vehicles	

View data

Export as an image

Export to PDF

Export data

All columns support filters

View data

Export as an image

Export to PDF

Export data

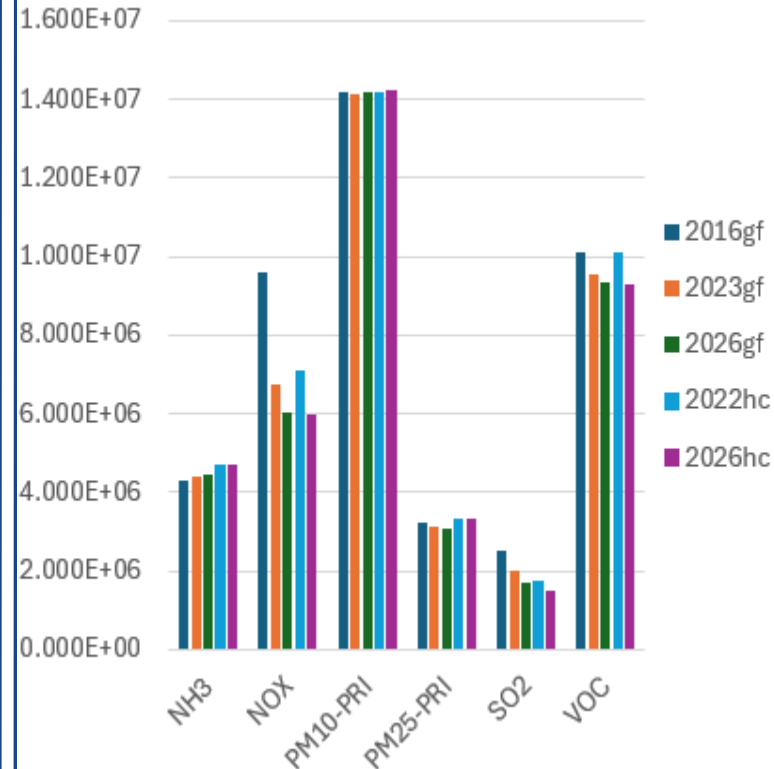
Anthropogenic Emissions Totals for 2016v3 and 2022v1

- 2016v3 platform cases: 2016gf, 2023gf, and 2026gf
- 2022v1 platform cases: 2022hc, 2026hc

Pollutant	2016gf	2023gf	2026gf	2022hc	2026hc
NH3	4.309	4.396	4.432	4.722	4.720
NOX	9.593	6.725	6.045	7.106	5.975
PM10-PRI	14.170	14.140	14.160	14.160	14.240
PM2.5-PRI	3.218	3.110	3.092	3.344	3.348
SO2	2.513	2.017	1.690	1.765	1.490
VOC	10.120	9.545	9.362	10.120	9.276

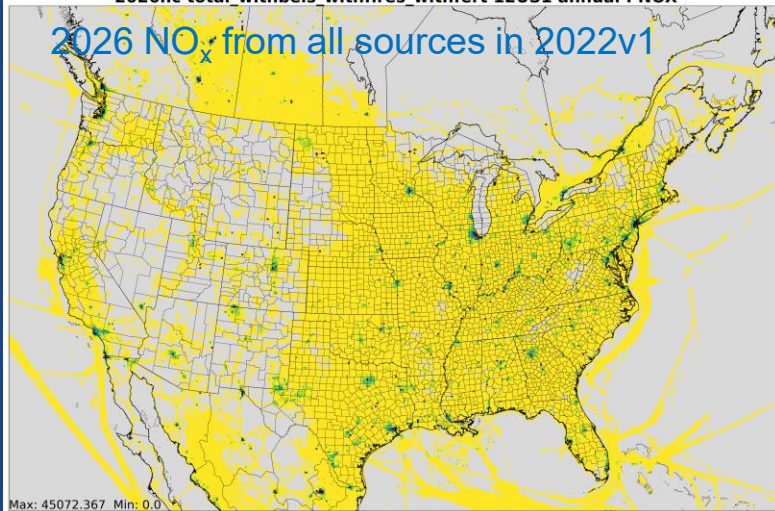
Data are for the Continental U.S. in millions of tons

2016v3 and 2022v1
Anthropogenic Emissions (tpy)



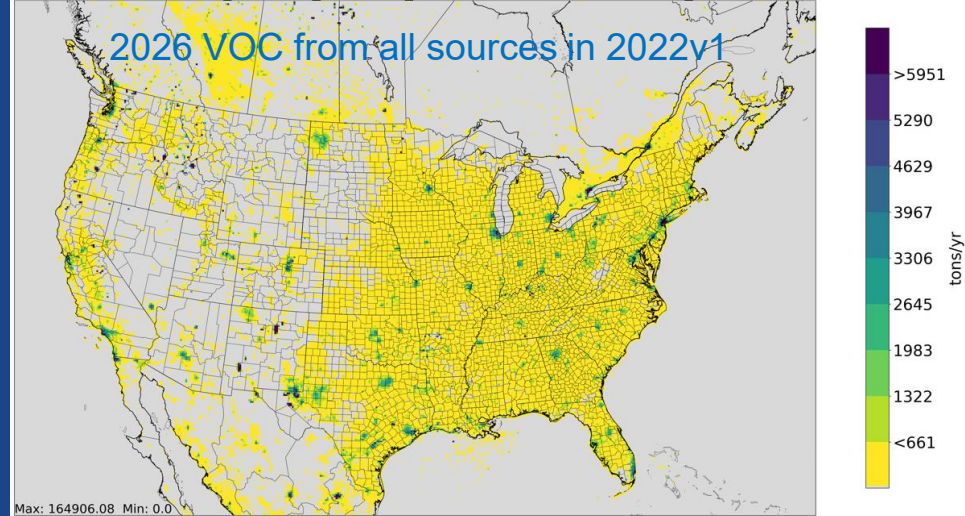
2026hc total withbeis withfires withfert 12US1 annual : NOX

2026 NO_x from all sources in 2022v1



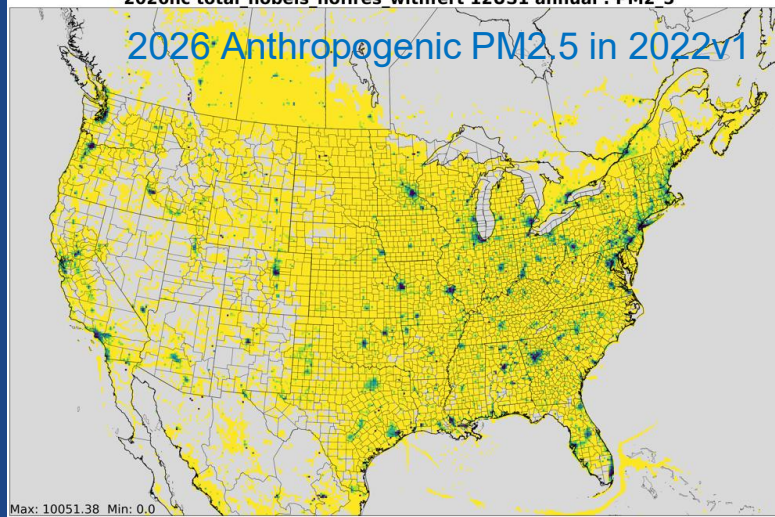
2026hc total withbeis withfires withfert 12US1 annual : VOC INV

2026 VOC from all sources in 2022v1



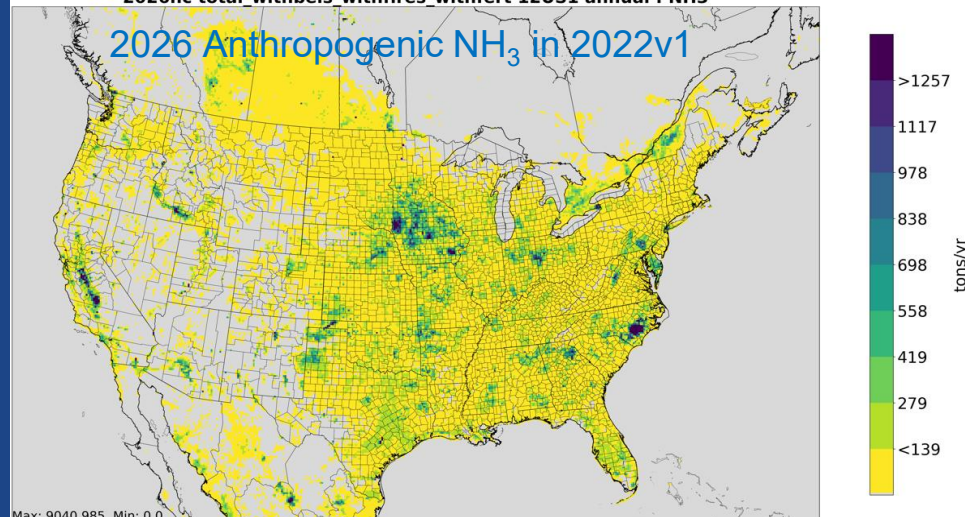
2026hc total nobeis_nofires withfert 12US1 annual : PM2 5

2026 Anthropogenic PM_{2.5} in 2022v1



2026hc total withbeis withfires withfert 12US1 annual : NH3

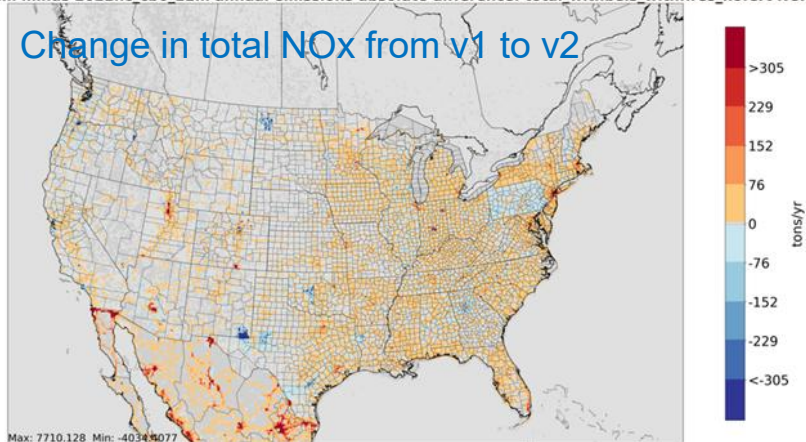
2026 Anthropogenic NH₃ in 2022v1



Changes from 2022v1 to 2022v2 Base Year Emissions

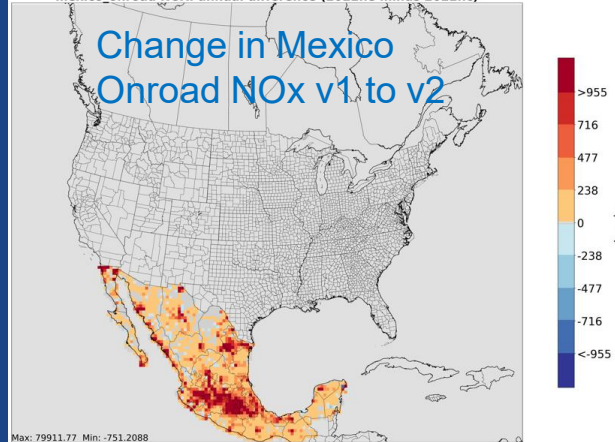
2022hd_cb6_22m minus 2022hc_cb6_22m annual emissions absolute difference: total withbeis withfires_nofert NOx

Change in total NOx from v1 to v2



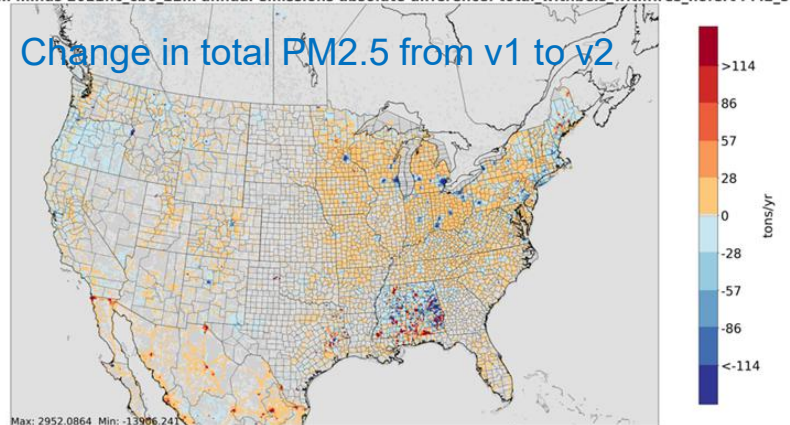
mexico_onroad NOx: annual difference (2022he minus 2022hc)

Change in Mexico Onroad NOx v1 to v2



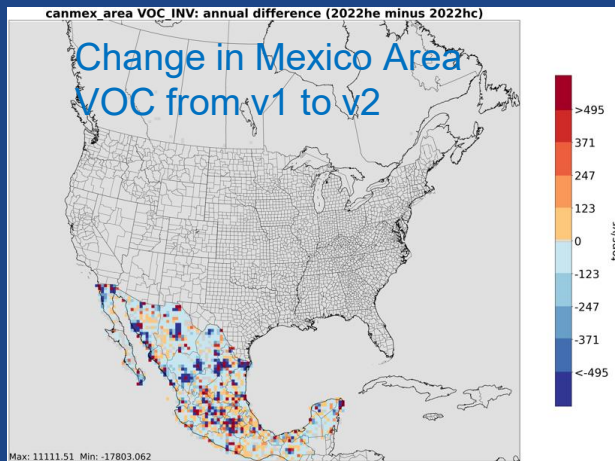
2022hd_cb6_22m minus 2022hc_cb6_22m annual emissions absolute difference: total withbeis withfires_nofert PM2.5

Change in total PM2.5 from v1 to v2



canmex_area VOC INV: annual difference (2022he minus 2022hc)

Change in Mexico Area VOC from v1 to v2



2022 EMP Communications Plan

Goals of Outreach:

- 2022v2 base year release
- Analytic years for v2 important for certain critical SIP obligations
 - Continue engaging with states and locals to share updates on the direction and timeline for v2 of the analytic years
 - Gather feedback from the community and communicate shared concerns with EMP leadership and EPA about continuing work on v2
 - Provide technical tools and capacity building assistance



Continued work on Analytic Years

The Projections Workgroup is evaluating different options and approaches.

- Looking at a *de minimis* control scenario approach
 - Include activity projections based on work already completed in v1
 - Re-evaluate analytic year controls, focusing on rules expected to remain OTB
 - States could apply additional controls as warranted.
 - Need to evaluate technical challenges.

Continued Collaboration with EPA would be immensely helpful due to EPA's technical abilities, past program experience, etc.



Needs for 2022v2 of EMP

States need v2 of the 2022EMP for:

- Serious ozone SIPs – States plan to use 2026v1 data, but would prefer v2 & need 2032 if not attaining standard by 2027
- 2032 for PM2.5 transport SIPs
- Regional Haze SIPs
- Specific AQ mgmt. agency needs – examples:
 - Permitting actions that require analysis of project emissions' contributions to ozone or PM2.5
 - EPA Hemispheric CMAQ evaluation of international anthropogenic transport contributions - States may benefit if they are developing §179(b) demonstrations



Continued work on Analytic Years

The Projections Workgroup is evaluating different options and approaches.

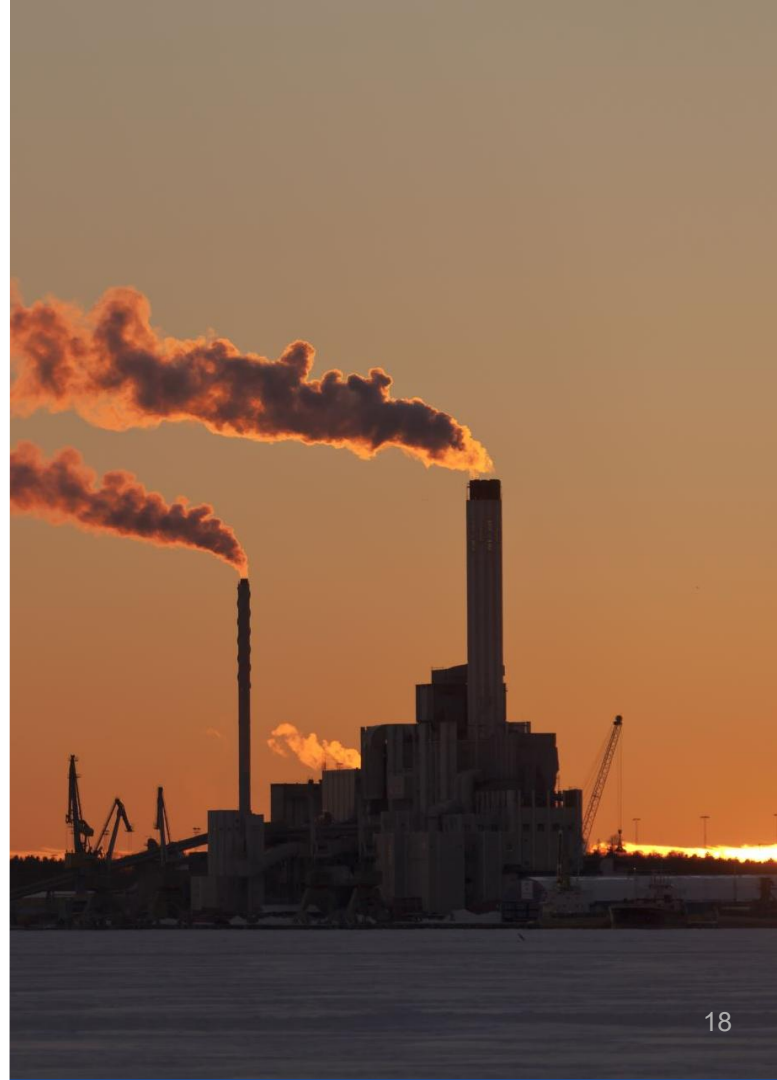
- Looking at a *de minimis* control scenario approach
 - Include activity projections based on work already completed in v1
 - Re-evaluate analytic year controls, focusing on rules expected to remain OTB
 - States could apply additional controls as warranted.
 - Need to evaluate technical challenges including changing regulations

Continued Collaboration with EPA would be very helpful due to EPA's technical expertise



Current Challenges with the EMP

- Requires time and resources
- SLTs need certainty in the recurrence of the EIC
- National expertise and knowledge are at EPA
- Lots of data to review, some SLTs struggle to review or review in a timely manner.
- Lack of knowledge/expertise can hinder effective review.



Successes of the 2022 EIC

- Addition of the Communications team for enhanced outreach
- Projections workgroup to explore how we develop analytic years
- On-time delivery for local, regional and national modeling needs
- SLTs and EPA using one platform saves time and resources, avoids dueling results
- EPA/MJO tool development to ease data review process resulted in more SLT review and more comprehensive review



Lessons Learned

- Enhanced outreach is worth the resources and time
- EPA expertise and innovation with tools for review eased the SLT review process
- The best emissions inventories result from SLTs and EPA working in concert
- Quarterly updates are a good way to provide information to all interested parties
 - **Next quarterly call:** November 5, 2025 @ 2 PM Eastern
 - [Email Mary Uhl at WESTAR](#) if you are not already on the email list and want to be added

