

# 2022 Regulatory Emissions Modeling Platform Quarterly Update

National Emissions Collaborative

February 7, 2024



# Agenda

- Summary of activities and accomplishments to date
- 2022 EMP data submittals
- Updates by sector and workgroup
- 2022 EMP data review tool update
- Version 1 review period and kickoff
- Schedule reminders
- Next steps



# 2022 EMP Collaborative

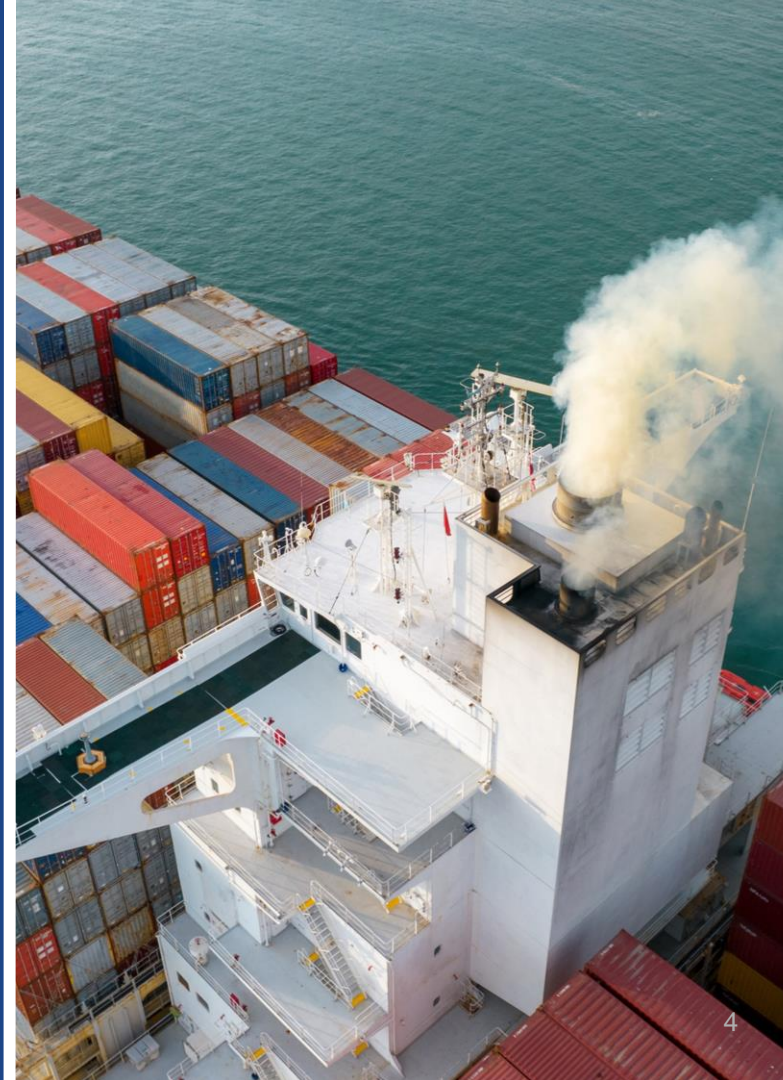
- Co-leads
  - Zac Adelman (LADCO), Mary Uhl (WESTAR), and Alison Eyth (EPA OAQPS)
- Communication support
  - Tom Richardson (OK DEQ), Tom Moore (Denver/NFR RAQC), Rhonda Payne (WESTAR/WRAP)
- Coordination Committee
  - 28 members from MJOs, state agencies, and US EPA staff from OAQPS, OTAQ, and CAMD
  - Monthly calls
  - Quarterly outreach webinars
- Workgroups
  - Leverage existing national emissions workgroups
  - Some 2022-specific workgroups have been created, e.g., fires and projection



# 2022 EMP Communications Plan

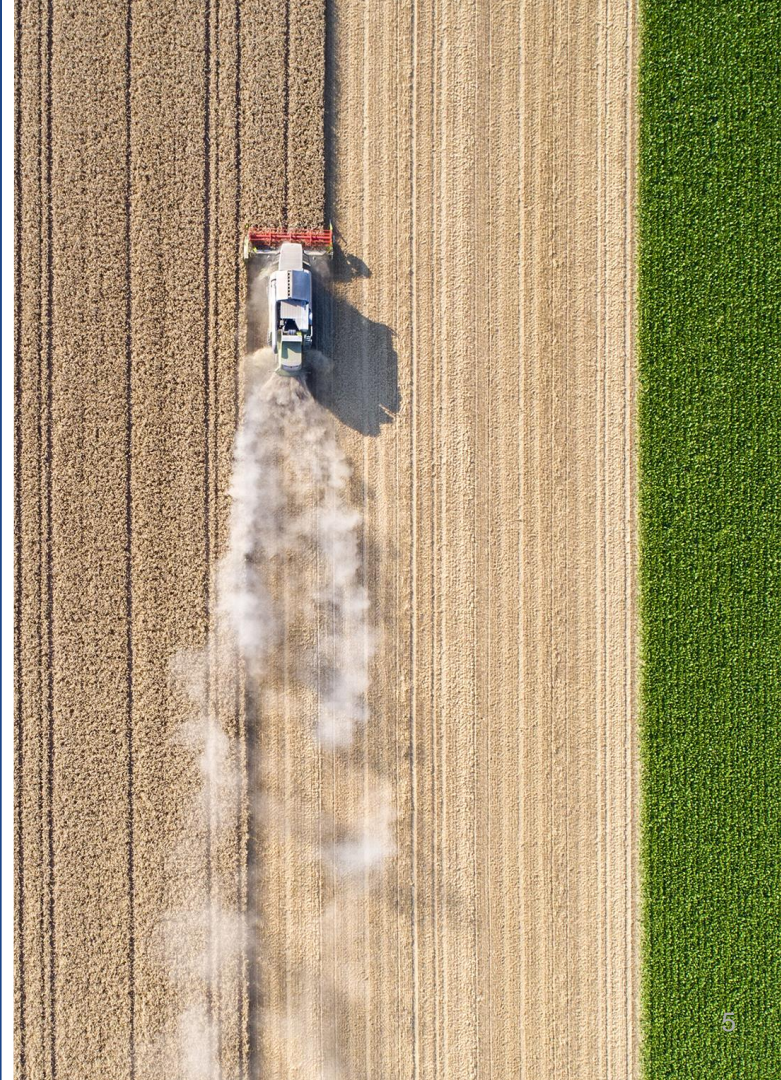
## Goals of Outreach

- Broaden engagement via targeted outreach to national and regional committee and workgroup meetings throughout the project lifecycle
- Augment and reinforce mainstream EMP work as communication facilitators and advocates
- Emphasize the importance of involvement in deciding EMP data to represent your jurisdiction



# Key Topics to Cover Q1 2024

- Summarize inputs EPA has received from SLTs by emission sector to be included in 2022v1 (today's slides)
- Status of 2022v1 development
- Status of tools for data sharing and review (wiki, evaluation & review tools)
- Purpose of April review window
- Connect SLTs with working groups
- Timeline, future key milestones



# 4th Quarter 2023 Meetings - Communications Outreach

October 2023

|         |  |  |
|---------|--|--|
| Oct. 12 | <a href="#">National Oil &amp; Gas Emissions Emissions Committee</a> | Contact: <a href="#">Jeff Vukovich</a> |
| 19      | <a href="#">MJO MOVES Workgroup</a>                                  | Contact: <a href="#">Debbie Wilson</a> |
| 24      | CenSARA Fall Business Meeting  | Contact: <a href="#">Michael Vince</a> |
| 25      | <a href="#">WRAP Technical Steering Committee</a>                    | Contact: <a href="#">Rhonda Payne</a>  |
| 26      | National EGU Workgroup / Projections Task Force                      | Contact: <a href="#">Serpil Kayin</a>  |
| 26      | AAPCA Emissions Inventory Committee                                  | Contact: <a href="#">Morgan Dickie</a> |

November – December 2023

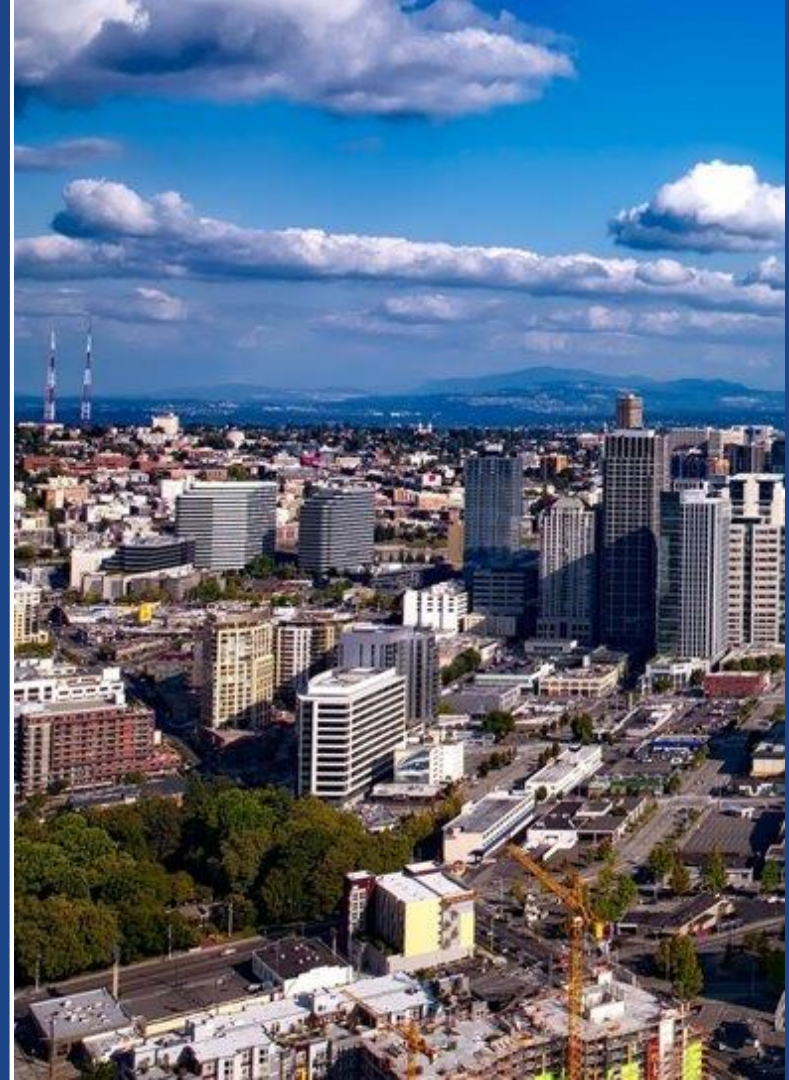
|        |  |  |
|--------|--|--|
| Nov. 1 | OTC Special Topics meeting                               | Contact: <a href="#">Paul Miller</a>     |
| 6      | Northeast EI Leads meeting                               | Contact: <a href="#">Susan McCusker</a>  |
| 13     | <a href="#">WRAP Fire and Smoke Workgroup</a>            | Contact: <a href="#">Rhonda Payne</a>    |
| 13     | <a href="#">CMV Committee</a>                            | Contact: <a href="#">Debbie Wilson</a>   |
| 15     | NOMAD Committee  | Contact: <a href="#">Jennifer Snyder</a> |
| 16     | <a href="#">NOGEC meeting</a>                            | Contact: <a href="#">Jeff Vukovich</a>   |
| Dec. 5 | NACAA Emissions and Modeling Committee                   | Contact: <a href="#">Karen Mongoven</a>  |
| 19     | <a href="#">NOGEC meeting</a> (projection methods panel) | Contact: <a href="#">Jeff Vukovich</a>   |

# 1st Quarter 2024 Meetings - Communications Outreach

|         |   |  |
|---------|---|--|
| Jan. 11 | <a href="#">National Oil &amp; Gas Emissions Emissions Committee</a>                                    | Contact: <a href="#">Jeff Vukovich</a>   |
| 25      | National EGU Workgroup / Projections Task Force   | Contact: <a href="#">Serpil Kayin</a>    |
| 25      | AAPCA Emissions Inventory Committee   | Contact: <a href="#">Morgan Dickie</a>   |
| 31      | <a href="#">WRAP Technical Steering Committee</a>   | Contact: <a href="#">Rhonda Payne</a>    |
| Feb. 6  | NACAA Emissions and Modeling Committee  | Contact: <a href="#">Karen Mongoven</a>  |
| 7       | 2022 EMP Development Quarterly Update   | <i>you are here...</i>                   |
| 8       | <a href="#">NOGEC meeting</a> : Methane Rule ppt  | Contact: <a href="#">Jeff Vukovich</a>   |
| 15      | <a href="#">MJO MOVES Workgroup</a> (now a Teams Meeting) -<br>3rd Thursdays of each month at 3 Eastern | Contact: <a href="#">Marc Cone</a>       |
| 21      | <a href="#">CMV Committee</a> - 3rd Wednesdays at 11 Eastern  | Contact: <a href="#">Marc Cone</a>       |
| 22      | National EGU Workgroup / Projections Task Force –<br>4th Thursdays at 2 Eastern                         | Contact: <a href="#">Serpil Kayin</a>    |
| Mar. 14 | NOGEC meeting - 2nd Thursdays at 2 Eastern  | Contact: <a href="#">Jeff Vukovich</a>   |
| 26      | Northeast EI Leads meeting  | Contact: <a href="#">Susan McCusker</a>  |
| TBD     | Nonpoint Methods Advisory Committee (NOMAD)   | Contact: <a href="#">Jennifer Snyder</a> |

# 2022 EMP Data Submittal Overview

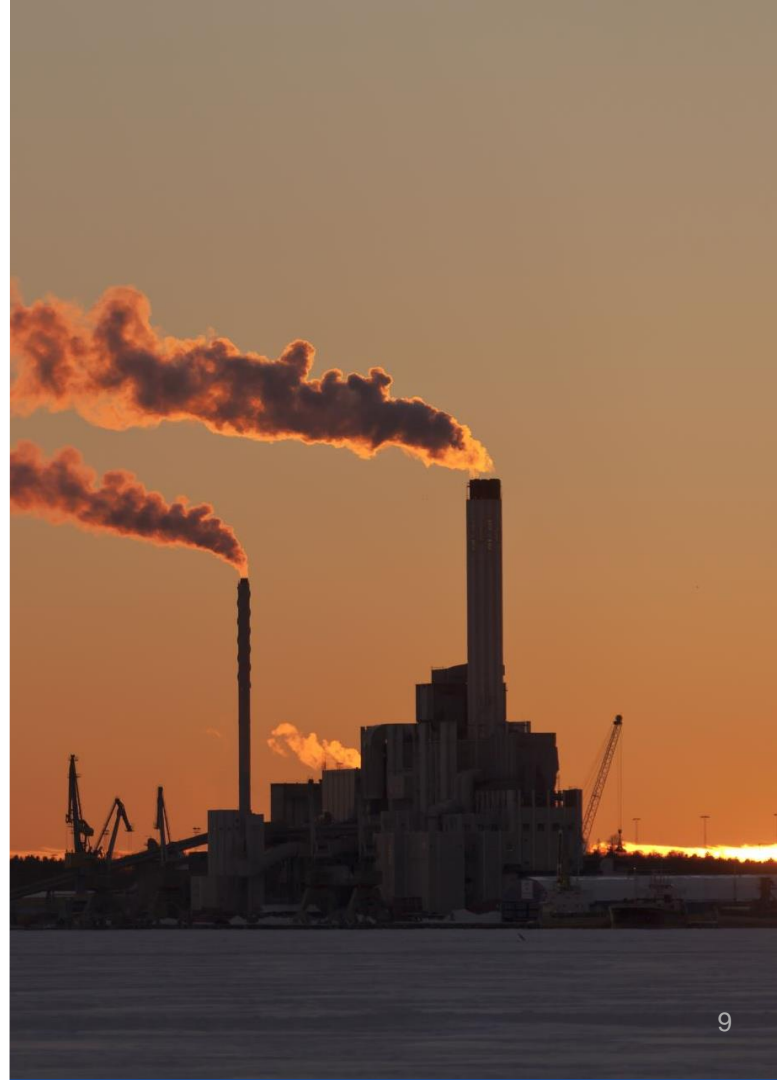
- Any data to be used in 2022v1 base year emissions were due by January 31, 2024
  - 2022 fire activity data (December)
  - 2022 VMT (December)
  - 2022 point sources into EIS (by Jan. 15)
  - Comments on 2020 nonpoint emissions except oil and gas for use as 2022 (Jan)
- Base year 2022 emissions review for all available sectors will be in April 2024





# 2022 Point Sources Update

- The draft 2022 point source inventory is available in the draft/point folder on FTP for 2022v1
  - FTP: <https://gaftp.epa.gov/Air/emismod/2022/v1>
- Comparisons with other recent point inventories will soon be developed and posted to the reports folder on the 2022 platform FTP site
- EGU and non-EGU projection task forces will be looking at these from various perspectives
  - Stack parameters and locations
  - Matching of IDs between NEI, CAMD, etc
  - Emissions values including data pulled forward from earlier years and where CEMS replaced EIS data
  - Base year control technologies



# Onroad and Nonroad Update

- Preparing onroad emissions requires activity data and MOVES emission factors
- 2022 Vehicle Miles Traveled (VMT) activity data
  - Data have been submitted by CT, GA, MA, NY, MD, WA, ME, VA, CO, TN, AK, WV, KS, NH, NJ, OR, DE, SC, NC, TX, WI, MI, NC and Jefferson Co. KY
  - EPA *just received* VMT by county from FHWA
- Schedule
  - Nonroad emissions were computed in January
  - Available onroad activity data will be shared with MOVES MJO workgroup in February
  - EPA will run MOVES4 for representative counties
  - Emissions will be computed in early March once all activity data and emission factors are finalized

Questions?

Contact Janice Godfrey  
([godfrey.janice@epa.gov](mailto:godfrey.janice@epa.gov))

# Other Mobile Sources Update

- **Commerical Marine Vessels**
  - Most 2022 activity data were received in January
  - Hourly C1C2 and C3 emissions will be computed over the next couple of months
- **Locomotives**
  - Will be based on 2020 NEI with updates from readily available data sources
  - Work is ongoing for line haul and rail yards
- **Aircraft**
  - Inventories are being computed for approx. the top 50 busiest U.S. airports
  - Other airport emissions will be adjusted from 2020 based on activity changes



Questions?

Contact Janice Godfrey  
([godfrey.janice@epa.gov](mailto:godfrey.janice@epa.gov))

# Collaborative Fires Workgroup

- Includes wildland, prescribed, and agricultural burn emissions
- Python SMARTFIRE2 used for daily acres burned
- Bluesky Pipeline (BSP) used for daily emissions
- Draft 2022 inventory created by EPA and shared with SLTs/MJOs/others on Nov 20, 2023
- Fire activity data received from SLTs
- Draft pile burn emissions provided to select states: feedback due Feb 16th
- **Next Workgroup meeting after SLT data incorporated (late March or early April )**
- Updated 2022 inventory generated and shared **(by April 2024)**
- 2022v1 fire inventory finalized **(May/June 2024)**

## Interested in Participating?

Reach out to Jeff Vukovich  
(vukovich.jeffrey@epa.gov)  
or Rhonda Payne  
(rpayne@westar.org)

## Data Submitted for 2022 Fires

- SLTs that submitted activity data after the draft version included the following:
  - NJ, OR, TX, NM, DE, IA, ID, AZ, LA, ME, CT, SC, AR, CO, MD, PA, MN, MO, MT, ND, NV, UT, WY (23)
  - Tribes: Nez Perce and Coeur D'Alene
- States that supplied activity data for the draft version:
  - CA, GA, FL, NC, WA, Flint Hills (KS/OK)

### Interested in Participating?

Reach out to Jeff Vukovich  
(vukovich.jeffrey@epa.gov)  
or Rhonda Payne  
(rpayne@westar.org)

# Biogenics Update

- Using Biogenic Emissions Inventory System version 4 (BEIS4) along with Biogenic Emissions Landcover Database version 6 (BELD6)
- Same configuration as used for the 2020NEI
- See 2020NEI TSD for details on BEIS4:  
[https://www.epa.gov/system/files/documents/2023-03/NEI2020\\_TSD\\_Section8\\_Biogenics\\_0.pdf](https://www.epa.gov/system/files/documents/2023-03/NEI2020_TSD_Section8_Biogenics_0.pdf)
- EPA will make emissions summaries available during the 30-day review period
- CMAQv5.4 does also have BEIS4 available inline

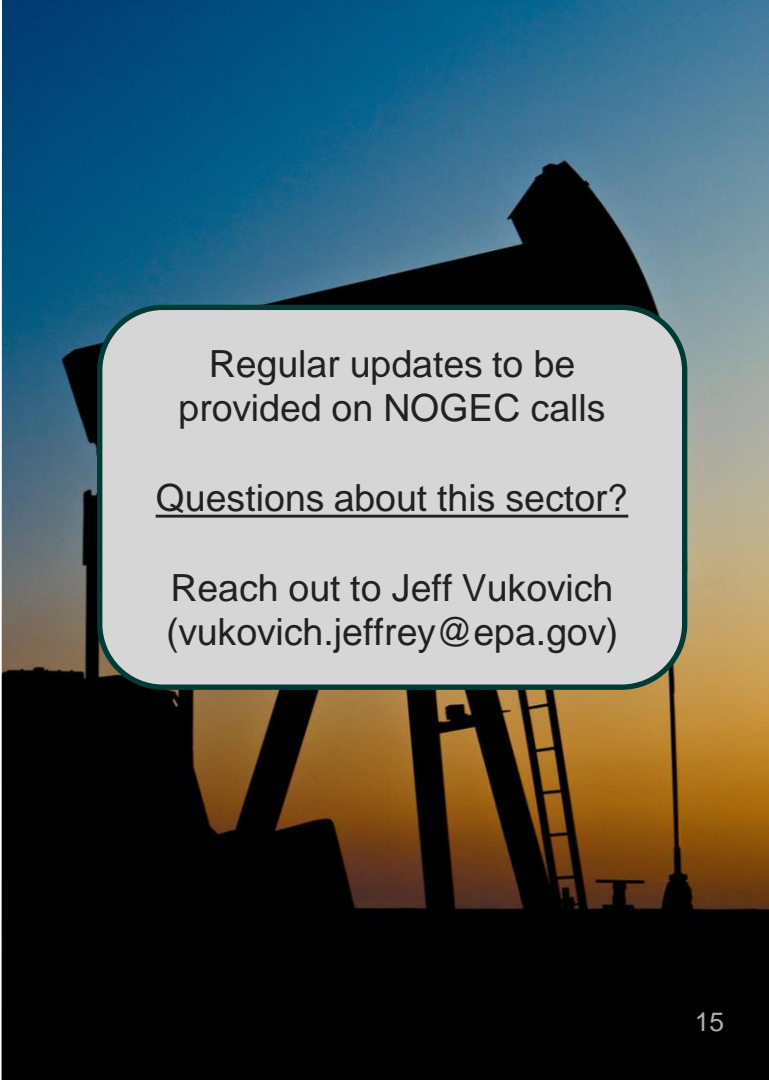
## Questions?

Reach out to Jeff Vukovich  
(vukovich.jeffrey@epa.gov)



# 2022 Oil and Gas Update

- Draft county activity provided on Jan 17
- SLTs have until Feb 19 to provide feedback on activity
- Oil and Gas Tool 2020NEI version with slight modifications to be used to compute emissions
- Draft emissions available (~March 2024)
- Oil and Gas point source information available (Feb 2024)
- Abandoned well emissions and Blowdowns/Pigging emissions to be estimated outside of Tool (Feb/Mar 2024)
- SLT/MJO/stakeholder review (April 2024)
- Year 2022 inventory finalized (May/June 2024)
- NOGEC Workgroup calls: Feb 8, March 14 and April 11




Regular updates to be provided on NOGEC calls

Questions about this sector?

Reach out to Jeff Vukovich  
(vukovich.jeffrey@epa.gov)

# 2022 Oil and Gas Submitted Data

- Feedback and inventory data for base year submitted by the following states:
  - North Dakota: Capture Efficiency update
  - Colorado: 2022 Production-related emissions
  - Oklahoma: Technical direction for 2022 inventory
  - Wyoming: County activity for 2022
  - West Virginia: submitting Tool emissions
  - Kansas: interest in point source subtraction



Regular updates to be provided on NOGEC calls

Questions about this sector?

Reach out to Jeff Vukovich  
([vukovich.jeffrey@epa.gov](mailto:vukovich.jeffrey@epa.gov))



# Projections Workgroup Update

- Organized into 6 Task Forces
  - EGUs, Other Point, Nonpoint, Mobile, Oil & Gas, & Marine/Airport/Rail
- December and January spent reviewing methods to estimate to 2022 emissions
  - Various approaches being used depending on the sector: 2022 actual, 2020 -> 2022, 2020 actual
  - Working to document the approach for each sector and reaching out to MJOs and states to facilitate reviews of the methods/data used for 2022v1
- February through May will focus on review of projection methods/data for each sector
  - Upcoming outreach to air agencies for non-EGU point control and shut-down information

Interested in Participating?

Reach out to Zac Adelman  
([adelman@ladco.org](mailto:adelman@ladco.org)) or  
Alison Eyth  
([eyth.alison@epa.gov](mailto:eyth.alison@epa.gov))

# Nonpoint Taskforce

- Nonpoint Projections Taskforce Meeting #3 was held on January 22, 2024
  - Draft final base year projections method for nonpoint sources (Cremation still pending)
  - Updated documentation on the draft final approach for each sector - to be posted on the wiki page (linked below)
- Next meeting: not yet scheduled
  - Next tasks – finalize cremation method, data review, future year projection methods
- Meeting notes and additional information can be found on the Nonpoint Wiki Page:  
<https://views.cira.colostate.edu/wiki/wiki/12213>

## Interested in Participating?

Reach out to Andy Bollman  
([andrew.bollman@deq.nc.gov](mailto:andrew.bollman@deq.nc.gov))  
or Lindsay Dayton  
([dayton.lindsay@epa.gov](mailto:dayton.lindsay@epa.gov))

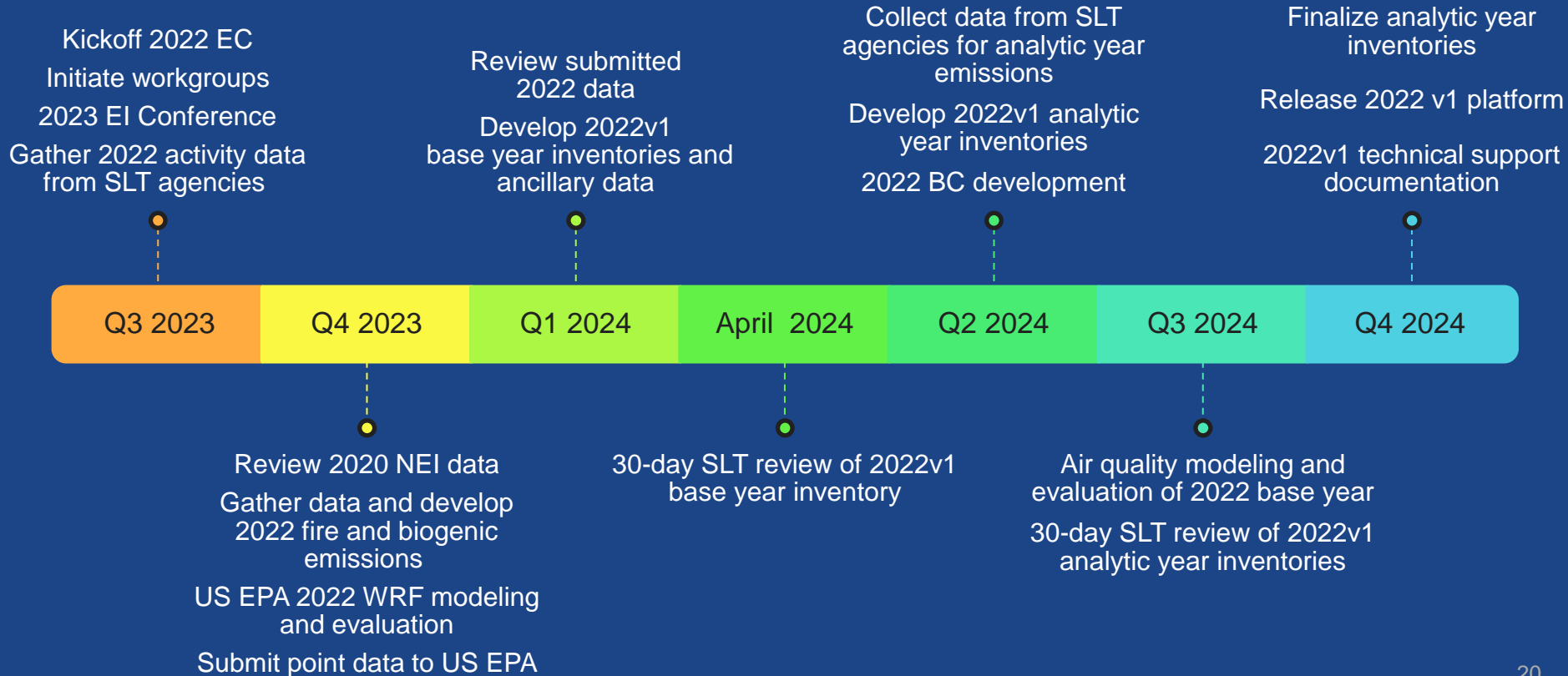
# Nonpoint Taskforce Sectors

| Source Category   | Draft Final Proposed Projection Method   |
|---|--|
| Fugitive Dust (Construction, Ag –Crops, Mining and Quarrying), Commercial Cooking, Portable Fuel Containers, Asphalt Paving, Open Burning, Landfills/POTWs, Charcoal Grilling                             | Hold Constant  |
| RWC, All Other Stationary Nonpoint Source Fuel Combustion, Stage I Unloading at Gas Stations and Stage I Gasoline Unloading at Bulk Terminals/Plants, Aviation Gasoline Stage I and II, Pipeline Gasoline | Apply the appropriate EIA State Energy Data System (SEDS) consumption ratios     |
| Solvents, Ag Livestock, and Cremation(pending final discussion)   | EPA to calculate emissions (2020/2022 emissions ratios applied to 2020 NEI data) |
| Paved Roads   | VMT- based growth rates  |
| Fugitive Dust (Ag – Livestock)  | Apply 2020/2022 livestock count  |
| Ag Fertilizer   | EPA running CMAQ/EPIC  |

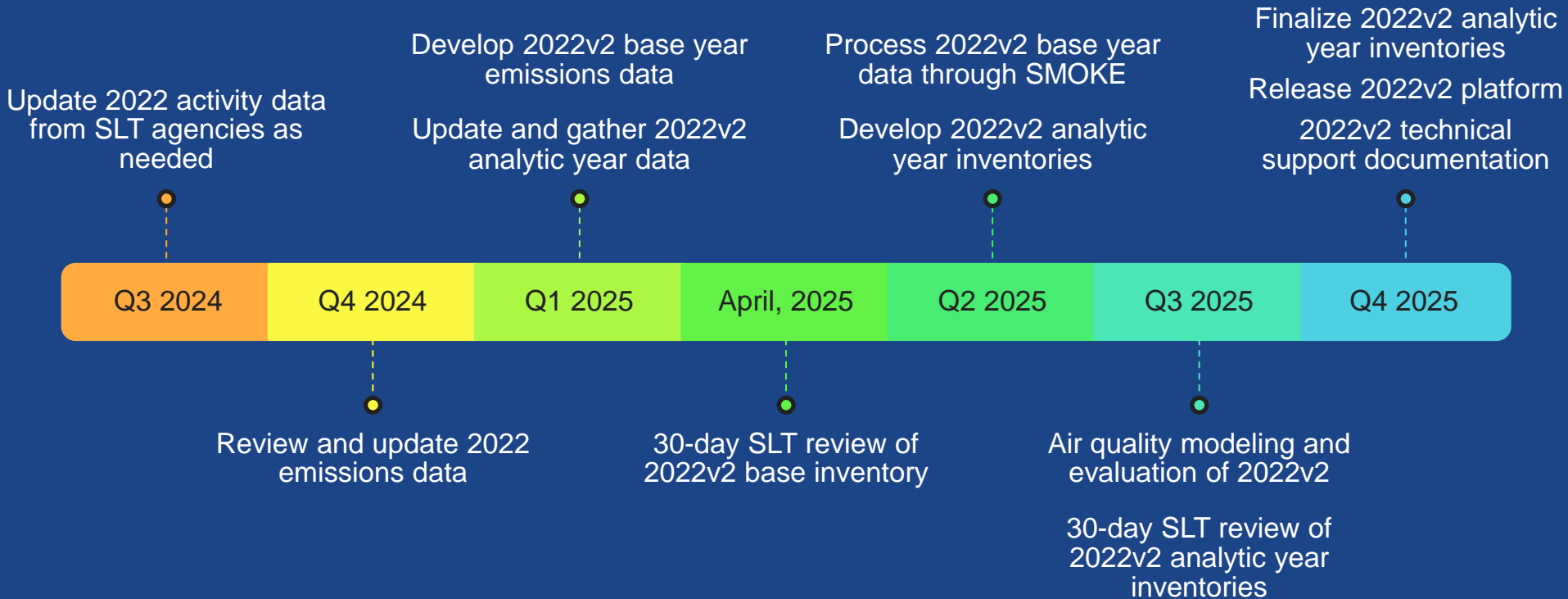
Interested in Participating?

Reach out to Andy Bollman  
([andrew.bollman@deq.nc.gov](mailto:andrew.bollman@deq.nc.gov))  
or Lindsay Dayton  
([dayton.lindsay@epa.gov](mailto:dayton.lindsay@epa.gov))

# Timeline for 2022v1 Platform Development



# Timeline for 2022v2 Platform Development



# 2022 Platforms and Planning Timelines

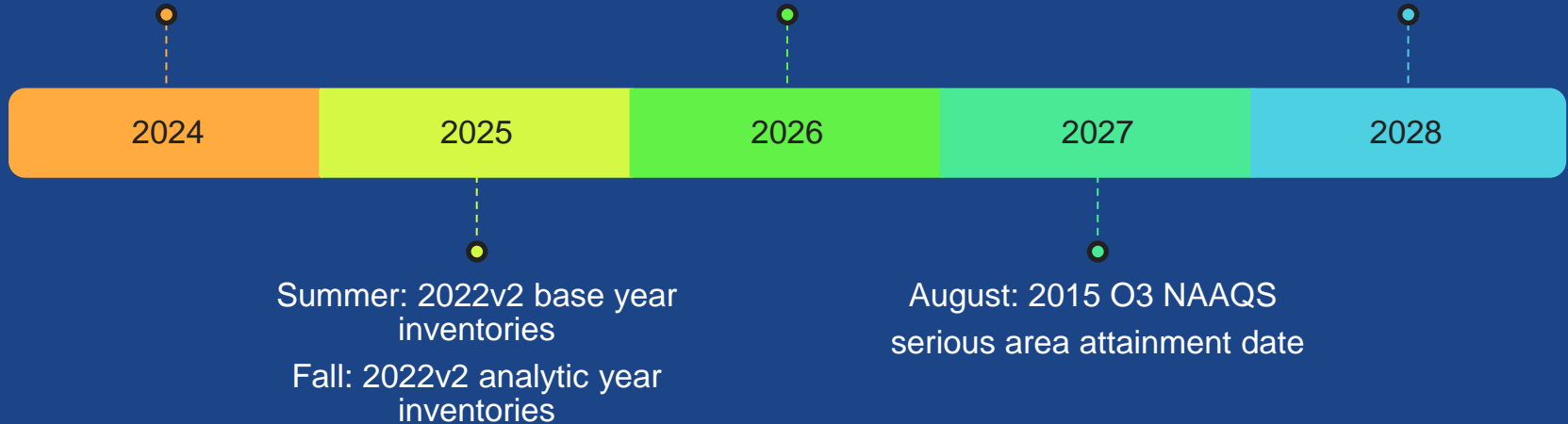
Summer: 2022v1 base year inventories

August: 2015 O3 NAAQS moderate area attainment date

Fall: 2022v1 analytic year inventories

January: 2015 O3 NAAQS Serious NAA SIPs

Summer/Fall: Haze 3rd implementation period SIPs



# Data review for 2020 and 2022

- The [2020 NEI Data Retrieval Tool](#) allows users to view and download data from the 2020 NEI at the SCC- and county-level for onroad, nonroad, and nonpoint sources, and at the facility-level for point sources.
- Data from the 2022v1 EMP will be imported into this tool, enabling targeted review of emissions for this effort.
- Comments on the 2022v1 EMP can be submitted using a SharePoint form that will be distributed to platform developers and reviewers.



# Example use of the 2020 NEI Data Retrieval Tool

| Location  |   |                   |   | Pollutant                   |   |                    |         |   |            |   |                                |
|---|---|-------------------|---|-----------------------------|---|--------------------|---------|---|------------|---|--------------------------------|
| ☰ Select one or more  |   |                   |   | ☰ Pollutant Type-Pollutant  |   |                    |         |   |            |   |                                |
| To download data selection, right click on table and select Export data |   |                   |   |                             |   |                    |         |   |            |   |                                |
| Overview  |   | County Level Data |   | Facility Data               |   |                    |         |   |            |   |                                |
| <b>2020 County-Level Process Data for Mobile and Nonpoint Emissions</b> |   |                   |   |                             |   |                    |         |   |            |   |                                |
| State   | Q | State-County      | Q | POLLUTANT                   | Q | Emissions (To...   | POLL... | Q | SCC Code   | Q | EIS Sector                     |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 204.22710          | CAP     |   | 2104009000 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 374.77710          | CAP     |   | 2104008100 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 418.12060          | CAP     |   | 2104008700 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 233.20000          | CAP     |   | 2104008230 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 307.74590          | CAP     |   | 2104008220 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 469.48080          | CAP     |   | 2104008210 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 226.29040          | CAP     |   | 2104008330 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 298.62750          | CAP     |   | 2104008320 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 455.57030          | CAP     |   | 2104008310 |   | Fuel Comb - Residential - Wood |
| Washington  |   | WA - King         |   | PM2.5 Primary (Filt + Cond) |   | 23.77316           | CAP     |   | 2104008400 |   | Fuel Comb - Residential - Wood |
| <b>Totals</b>   |   |                   |   |                             |   | <b>3,011.81286</b> |         |   |            |   |                                |



# Example use of the 2020 NEI Data Retrieval Tool

**Location**

Select one or more

**Pollutant**

Pollutant Type-Pollutant

To download data selection, right click on table and select Export data

Overview
County Level Data
Facility Data

### 2020 County-Level Process Data for Mobile and Nonpoint Emissions

| State         | State-County | POLLUTANT                   | Emissions (To...   | POLL... | SCC Code   | EIS Sector                     |
|---------------|--------------|-----------------------------|--------------------|---------|------------|--------------------------------|
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04009000   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008100   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008700   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008230   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008220   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008210   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) |                    |         | 04008330   | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) | 298.62750          | CAP     | 2104008320 | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) | 455.57030          | CAP     | 2104008310 | Fuel Comb - Residential - Wood |
| Washington    | WA - King    | PM2.5 Primary (Filt + Cond) | 23.77316           | CAP     | 2104008400 | Fuel Comb - Residential - Wood |
| <b>Totals</b> |              |                             | <b>3,011.81286</b> |         |            |                                |

- View data
- Export as an image
- Export to PDF
- Export data

# 2022v1 Data Review Kickoff

- Wednesday March 27 @ 1 PM Eastern
- Webinar to learn how to use the online Emissions Data Retrieval Tool to review 2022 data and enter comments for the April review

## **Notice!!!**

The 2022v1 data review is the process through which air agencies and stakeholders can review/comment on the 2022 base year data

## **Microsoft Teams meeting**

[Click here to join the meeting](#)

Meeting ID: 214 896 643 619

Passcode: ukK3Br

[Join on the web](#)

**Or call in (audio only)** [+1 323-676-6261](#)

Phone Conference ID: 390 220 484#

# Stay Informed

- 2022EMP Wiki at Intermountain West Data Warehouse (IWDW)
- 2022v1 web page now available on EPA site: <https://www.epa.gov/air-emissions-modeling/2022v1-emissions-modeling-platform>
- Quarterly outreach calls
  - 1st Wednesday in May, August, November @ 2 p.m. Eastern
- Attend workgroup meetings
  - MJO MOVES, EGU, NOMAD, NOGEC, projections, fires, ...
- Participate in data reviews



[2022 EMP Wiki](#)

# Next Steps

- S/L/T agencies can:
  - Participate in workgroup meetings
  - Work with other inventory contacts in your region to review the data
    - Explore the 2022v1 data available in April
- Workgroups will proceed with reviewing data
- Next quarterly call: May 1, 2024 @ 2 PM Eastern
- Email [Mary Uhl](#) if you are not already on the email list and want to be added

