

MOG Update

CIBO

Environmental, Energy & Sustainability Working
Group

Skipp Kropp

Steptoe & Johnson, PLLC

September 14, 2021

Overview

- Revised CSAPR Update (2008 Ozone NAAQS)
- Regional Haze
- NY 126 Petition
- MD 126 Petition
- Light Duty Vehicles/Heavy Duty Truck Initiative
- NY SCCT SIP Approval
- Good Neighbor SIPs (2015 ozone NAAQS)
- Alpine Geophysics Updates

**REVISED CSAPR UPDATE
(2008 OZONE NAAQS)**

Published in the Federal Register

- Revised CSAPR Update published in the April 30, 2021 Federal Register: <https://www.govinfo.gov/content/pkg/FR-2021-04-30/pdf/2021-05705.pdf>
- Final rule effective June 29, 2021
- MOG appeal filed on June 25, 2021; intervention deadline: July 26, 2021
- No appeal by others seeking to expand rule or to make more stringent.
- Appalachian Mountain Club, Environmental Defense Fund, Sierra Club, Downwinders at Risk, Clean Wisconsin, and Texas Environmental Justice Advocacy Services are interveners in MOG appeal

Concerns About Final Rule

- Improperly relied on the District Court order setting March 15, 2021
 - (1) not conducting photochemical modeling of 2021;
 - (2) not allowing comment on 1% significance test;
 - (3) not allowing comment on maintenance monitor flexibility; and
 - (4) not allowing adequate comment period
- Step 1: Failed to align the downwind compliance dates with Good Neighbor deadlines
 - New York delay until 2025 of NOx emission controls on SCCT/peaking units
 - Exceptional Events that would have brought problem monitors into attainment
- Step 1: Failure to consider on-the-books control requirements adopted after 2019
- Step 2: Assessing significant contribution on attainment/exceptional event days
- Step 3: Failure to address MOG cost assessment

Court Briefing Schedule

- June 25, 2021 MOG appeal
- July 26, 2021 Intervention deadline
- July 28, 2021 MOG Statement of Issues
- August 28, 2021 EPA Certified Index to Record
- October 6, 2021 Petitioner's Brief
- November 5, 2021 Respondents' Brief
- November 12, 2021 Intervenor for Respondents' Brief
- December 3, 2021 Petitioner's Reply Brief
- December 10, 2021 Deferred Appendix
- December 27, 2021 Final Briefs
- Motion to extend briefing schedule likely to be filed by EPA mid-September

REGIONAL HAZE

June 28, 2021, MANE-VU Comments on Ohio 2d Period Regional Haze SIP

- Objected to OEPA acceptance of demonstration of several sources that cost of controls because the source was a large company- MANE-VU said the 3% significant cost threshold was to prevent economic hardship on small companies
- Asks Ohio to reconsider MANE-VU low sulfur fuel standard request (of all upwind states) or provide a detailed analysis that considers the four statutory factors to demonstrate why the adoption of such a measure is not reasonable.
- Asks Ohio to reconsider its rejection of MANE-VU energy efficiency measures request (of all upwind states) as a visibility

June 28, 2021, MANE-VU Comments on Michigan 2d Period Regional Haze SIP

- MANE-VU objects to MI Dept of Environment, Great Lakes, and Energy (EGLE) repeatedly citing “low haze levels in this 10-year SIP cycle” as reason that no further controls are reasonable for many sources it selected for analysis when EPA Guidance does not allow using current visibility to justify failure to require future controls
- MANE-VU complains that Michigan cites being below the glidepath as justification for not requiring additional controls, noting that “EPA does not consider being below the glidepath as a “safe harbor” from considering additional controls that may be necessary to make reasonable further progress towards the RHR and CAA goals of natural conditions by 2064.”
- MANE-VU complains that EGLE failed to consider any of the “ask” of all upwind RPOs and says that “According to RHR § 40 CFR 51.308(f)(2)(ii)(B), States must consider in their Regional Haze SIPs the emission reduction measures identified by other States as being necessary to make reasonable progress in the mandatory Class I Federal area.”

LADCO 2D PLANNING PERIOD TSD

- Published June 17, 2021
- 2019 observed ambient PM_{2.5} concentrations in the LADCO region show 24-hour design values are at least 5 µg/m³ below PM NAAQS.
- Highest concentrations-urban areas; lowest concentrations -far northern parts of region, including near LADCO's Class I areas, and in Appalachian portions of Ohio and eastern Kentucky
- Annual and 24-hour PM_{2.5} DVs for all LADCO states decreased by 33% to 51% between 2002 and 2019.
- Chemical composition of the PM_{2.5} in the region has changed, from containing primarily ammonium sulfate aerosols in 2001 to containing similar proportions of ammonium nitrate, ammonium sulfate, and organic carbon at the more rural IMRPOVE monitoring sites in 2018.
- Reductions in PM concentrations yielded significant improvements to regional haze.
- Total light extinction from haze decreased ~40 percent 2000-2004 to 2014-2019 at all LADCO-region Class I monitors, with similar reductions on the clearest and most impaired days.

July 8, 2021, EPA Regional Haze “Clarification” Memo

- p.2: use of the uniform rate of progress (URP) - not a safe harbor
- p.6: 2017 RHR - four statutory factors are used to determine the emission reduction measures that are necessary to make reasonable progress and must, therefore, be included in a state’s long-term strategy.
 - Reasonable progress towards natural visibility conditions at any particular Class I area -achieved when all contributing states are implementing the measures in their long-term strategies.
 - RPGs are the modeled result of the measures in states’ long-term strategies, as well as other measures required under the CAA (that have compliance dates on or before the end of 2028).
 - RPGs cannot be determined before states have conducted four-factor analyses and determined control measures necessary to make reasonable progress.

July 8, 2021, EPA Regional Haze “Clarification” Memo

- P10. “...on-the-way measures, including anticipated shutdowns that are relied on to forgo a four-factor analysis or to shorten the remaining useful life of a source, are necessary to make reasonable progress and must be included in a SIP.”
- p13. “We are aware that some states are using the five additional regulatory factors, in particular 40 CFR 51.308(f)(2)(iv)(A) and (E), to reject controls that are otherwise reasonable based on the four statutory factors.”
- p13. “...a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas.”

July 8, 2021, EPA Regional Haze “Clarification” Memo

- p. 15: EPA has reviewed several draft second planning period regional haze SIPs that conclude that additional controls, including potentially cost-effective and otherwise reasonable controls, are not needed because all of the Class I areas in the state (and those out-of-state areas affected by emissions from the state) are below their uniform rates of progress (URPs).
- 2017 RHR and August 2019 Guidance clearly state that it is not appropriate to use the URP in this way, i.e., as a “safe harbor.”
- States must select a reasonable number sources and evaluate and determine emission reduction measures that are necessary to make reasonable progress by considering four statutory factors.
- Memo clarifies that new control methods, i.e., controls either more efficient or new technology that has become available since initial planning period SIP was approved, must be included in the four-factor analysis (which the language on page 12 seems to imply now may be expanded to include factors such as environmental justice) to determine RPGs.

July 8, 2021, EPA Regional Haze “Clarification” Memo

Summary

1. The Biden EPA will perform a much more robust review of second planning period RH SIPs than was done for the first planning period
2. States that either have not performed a four-factor analysis or have not provided detailed technical support for a four-factor analysis will have a much more difficult experience with the EPA review and approval process.

LIGHT DUTY VEHICLES/HEAVY DUTY TRUCKS

Proposed Revision to GHG Emission
Standards for Passenger Cars and Light Duty
Trucks

86 Fed. Reg, 43726 (August 10, 2021)

Comments due: September 27, 2021

Virtual Public Hearing: August 25,
2021

Executive Order 13990

- “Protecting Public Health and The Environment and Restoring Science to Tackle the Climate Crisis”
 - Directed EPA to consider whether to propose suspending, revising, or rescinding the standards previously revised in April 2020.

The Safer Affordable Fuel-Efficient (SAFE) Vehicles Rule for Model Years 2021-2026 Passenger Cars and Light Duty Trucks (4/2020)

- Because of significant contribution of light-duty vehicles to transportation sector GHG emissions, standards more stringent than those relaxed in the SAFE rule are appropriate under the Clean Air Act.
- EPA is proposing to revise the GHG standards to be more stringent than the SAFE rule standards in each model year from 2023 through 2026.

Transportation Sector Emissions

- Transportation= single largest source of GHG emissions in the US.
- Transportation- 29% of all emissions.
- Cars and trucks- 58% of all transportation sources.
- Cars and trucks- 17% of all US GHG emissions.

Emissions Standards

- EPA's is proposing standards expressed as "footprint-based curves" for both passenger cars and trucks. Each manufacturer has a unique standard for the passenger car and truck categories, for each model year, based on sales-weighted foot-print based CO2 targets of vehicles produced in each MY (Model Year).

Impact of Rule on Criteria Pollutants In Addition to GHGs

- “This proposed action therefore serves as a critical building block for a comprehensive, multipollutant longer-term regulatory program implementing EPA's statutory authority under the CAA. We are at a pivotal moment in the history of the light-duty transportation sector—a shift to zero-emission vehicle technologies is already underway, and it presents a **strong potential for dramatic reductions in GHG and criteria pollutant emissions** over the longer term.” 86 Fed. Reg at 43729
- “EPA recognizes that in addition to substantially reducing GHG emissions, a longer-term rulemaking could also address **criteria pollutant and air toxics** emissions from the new light-duty vehicle fleet—especially important considerations during the transition to zero-emission vehicles.” 86 Fed. Reg. 43230

First Transition to Advanced Gasoline Vehicle Technologies

- “Although most automakers have launched ambitious plans to develop and produce increasing numbers of zero- and near-zero-emission vehicles, EPA recognizes that during the near-term timeframe of the proposed standards through MY 2026, the new vehicle fleet likely will continue to consist primarily of gasoline-fueled vehicles. In this preamble and in the DRIA, we provide our analyses supporting our assessment that **the proposed standards for MYs 2023 through 2026 would be achievable primarily through the application of advanced gasoline vehicle technologies.** We project that during the four-year ramping up of the stringency of the CO2 standards, the proposed standards could be met with **gradually increasing sales of plug-in electric vehicles** in the U.S., up to about 8 percent market share (including both electric vehicles (EVs) and plug-in hybrid electric vehicles (PHEVs)) by MY 2026.” 86 Fed. Reg. at 43731

Future Rules Beyond 2026

- “We note that EPA intends to develop a future rule to control emissions of GHGs as well as criteria and air toxic pollutants from light-duty vehicles for MYs beyond 2026. We are considering how to project air quality impacts from the changes in non-GHG emissions for that future rulemaking (see Section V.C).” 86 Fed. Reg. 43737

NY 126 PETITION

New York

- Filed: March 12, 2018
- Facility Targets: 123 EGUs; 166 “non-electric generating units”; 59 oil and gas facilities, 17 pulp and paper mills
- State Targets: Illinois, Indiana, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, Virginia and West Virginia.
- Requested relief: Daily emission limits of 0.15 lb/mmBtu

New York 126 Petition Remand

(*NY v. EPA*, DC Cir. No. 19-1231)

- Initial EPA Interpretation:
 - May only be necessary for EPA to develop a better Step 3 standard to support denial.
 - Now able to assert the industry/Griffith shared opinion on New York having identified a “group” that was too large.
- Alternative possibilities:
 - Revised CSAPR Update resolves the 2008 ozone NAAQS issues at least for EGUs.
 - Leaves open whether non-EGUs may be addressed in this remand.
 - Unsure of implications of any 2015 ozone NAAQS transport rule

EPA Regulatory Agenda

- **“Abstract:** This action will respond to a Clean Air Act section 126(b) petition from the state of New York dated March 12, 2018. The petition requests a finding from EPA that emissions from numerous sources in nine states (Illinois, Indiana, Kentucky, Maryland, Michigan, Ohio, Pennsylvania, Virginia and West Virginia) significantly contribute to nonattainment and interfere with maintenance of the 2008 and 2015 ozone national ambient air quality standards in New York State. EPA previously denied the petition in 2019. Petitioners challenged the denial and on July 14, 2020, the D.C. Circuit vacated and remanded EPA's denial. This action addresses the Court's vacatur and remand and **provides a revised response to the petition.”**
- NPRM: 08/00/2021 (but no NRPM as of September 2021)
- Final Rule: To Be Determined

MD 126 PETITION

MARYLAND

- §126 Petition filed November 16, 2016
- Cites violation of CAA §110(a)(2)(D)(i)
- Cites 36 EGUs located in Indiana, Kentucky, Ohio, Pennsylvania, and West Virginia, alleging that emissions “contribute significantly to nonattainment in, or interfere with maintenance by, any other State with respect to [the 2008 Ozone NAAQS].”.
- EPA final denial of Maryland petition (83 Fed Reg 50444, October 5, 2018)

Maryland v. EPA

(D.C. Cir. No. 18-1285)

- May 19, 2020 decision – D.C. Circuit denied all of the challenges Maryland and Delaware §126 petitions, with one exception.
- The exception relates to the four EGUs that do not have catalytic controls and whether operators should be required to operate those non-catalytic controls.
- Remand was directed at EPA explaining why the operation of those non-catalytic controls was not cost-effective.

Maryland v. EPA

(D.C. Cir. No. 18-1285)

- **July 9, 2020** Order - D.C. Circuit denied EPA's Petition for Rehearing that urged the Court to concede it was wrong in stating that EPA is obligated to assess Good Neighbor obligation of the CAA with respect to the 2015 ozone NAAQS on the basis of 2021 as the attainment year - rather than 2023.

EPA Regulatory Agenda

- “**Abstract:** This action is a revised response to CAA section 126(b) petition from Maryland. In 2016, Maryland submitted a single petition alleging good neighbor violations by 36 electric generating units (EGUs) in five states with respect to the 2008 ozone NAAQS. Also, in 2016, Delaware submitted four petitions, each alleging good neighbor violations by individual sources located in Pennsylvania or West Virginia with respect to the 2008 and 2015 ozone NAAQS. EPA previously denied all of the petitions in 2018. Petitioners challenged the denial and on May 19, 2020, the D.C. Circuit remanded EPA's denial as to four EGUs with selective non-catalytic reductions identified in the Maryland petition. This action addresses the Court's remand and provides a revised response to the petition.”
- NPRM: 08/00/2021 (but no NPRM as of September 2021)

NEW YORK SCCT SIP APPROVAL

New York Submittal

- | | |
|---------------|--|
| March 2, 2020 | Submit plan |
| May 1, 2023 | First phase NOx emission
limit: 100 ppmvd |
| May 1, 2025 | Second phase NOx emission
limit: <ul style="list-style-type: none">- 25 ppmvd (gaseous fuel)- 42 ppmvd (oil/liquid fuel) |

Report operational data

MOG Comment

EPA's proposed approval fails to recognize the disconnect between the New York 2025 deadline and the 2023 attainment date

Wisconsin case stated: “it is the statutorily designed relationship between the good Neighbor’s Provision’s obligations for upwind states and the statutory attainment deadlines for downwind areas that generally calls for parallel timeframes.”

MOG Comment (cont.)

Proposed approval illegally shifts the burden of emission reduction responsibility to upwind states further away from non-attainment areas

EPA should require Second Phase reductions by 2023

NY SCCT Final Rule

- 86 Fed. Reg. 43956 (August 11, 2021)
- No response offered to MOG GNS comment
- EPA concurs with NYSDEC that compliance schedule provide adequate time for operators of SCCTs to comply
- Emission limits will reduce NO_x reductions in the NYMA as expeditiously as practicable and help attain the 2008 and 2015 ozone NNAQS.
- Appeal deadline October 12, 2021 to 2nd Circuit Court of Appeals in New York.

**GOOD NEIGHBOR SIPS
(2015 OZONE NAAQS)**

EPA “Framework”

Scott Mathias, EPA OAQPS, AAPCA webinar April 22, 2021

- With finalization of Revised CSAPR Update EPA is “now able to turn attention to the framework for assessing the 2015 ozone NAAQS Good Neighbor provisions

- Evaluation of the “framework” will require consideration of deadlines imposed by “court order” or “settlements” for review of state plans

EPA “Framework” (cont.)

Scott Mathias, EPA OAQPS, AAPCA webinar April 22, 2021

In response to question about the timing of any new transport rule, the following response was offered:

- OAQPS is talking with the new administration about the new framework

- new framework will call for consistent action on review of state SIP plans

- “failure to submit” states will be addressed by January 2022

- should SIPs be disapproved, a “2-year clock” begins for triggering a FIP (like CSAPR)

EPA Options For Addressing Good Neighbor SIP Obligations

- New transport rule: sources not considered in Revised CSAPR Update
- Promulgate a FIP by January 2022 for unresolved plans related to Maine, New Mexico, Pennsylvania, Rhode Island, South Dakota, Utah, Virginia
- 126 Petitions (Maryland, New York)
- Approval of state GNS submittals

Revised CSAPR Update

86 Fed. Reg. 23054

- p. 23074 This action does not address obligations of any state related to the 2015 ozone NAAQS
- p. 23097 EPA may address additional New York SCCT reductions “under a different NAAQS”
- p. 29059 Further emission reductions (e.g., from non-EGUs or from other EGU control strategies) have been determined to be unjustified for this NAAQS
- P. 23102 “...it would be counterproductive to assume EGUs should install the less effective SNCR control technology to address a short-run air quality concern under an older and less stringent NAAQS when it may later prove necessary to require the more effective SCR control technology to address longer-run air quality concerns under a more stringent NAAQS for the same pollutant.”

Proposed Approval of FL, GA, NC, SC, 2015 ozone NAAQS GNS

<https://www.govinfo.gov/content/pkg/FR-2021-07-19/pdf/2021-15097.pdf>

- EPA is using the analytic year of 2021 to evaluate Good Neighbor obligations
- Action on Alabama and Tennessee is being deferred
- In the December 30, 2019, NPRM, EPA relied on the modeling results included in the March 2018 memorandum. *See* 84 FR 71855–71856, 71859–71861
- EPA now using the Revised CSAPR Update “interpolation” technique based on modeling for 2023 and measured ozone data to determine ozone design values for 2021
- MOG opted not to file comments by August 18 deadline

New York et al v EPA; Southern District of New York
No: 1:21-cv-252 (S.D.N.Y)

- New York, Connecticut, Delaware, Massachusetts, and the City of New York seeking order directing EPA to approve or disapprove 2015 ozone NAAQS for Indiana, Kentucky, Michigan, Ohio, Texas, West Virginia
- Proposed Consent Decree:
 - 4/30/22 – Final approval/disapproval of plans; or
 - 12/15/22- Final approval/disapproval of plans, if by 2/28/22 EPA proposes approval/disapproval of plans and proposes FIP
- 86 Federal Register 40825 (July 29, 2021)
<https://www.govinfo.gov/content/pkg/FR-2021-07-29/pdf/2021-16155.pdf> –
Comment period closed August 30, 2021

New York et al v EPA; Southern District of New York
No: 1:21-cv-252 (S.D.N.Y)

- Proposed Consent Decree:
 - 4/30/22 – Final approval/disapproval of plans;
- Notwithstanding Paragraph 3, for each SIP submission in Paragraph 3 for which EPA signs by **February 28, 2022** for publication in the *Federal Register* (i) a proposal of full or partial disapproval, and (ii) a proposed federal implementation plan to implement any such fully or partially disapproved SIP submission pursuant to section 110(c) of the CAA, 42 U.S.C. § 7410(c), EPA shall have until **December 15, 2022**, to sign a final action to approve, disapprove, conditionally approve, or approve in part and conditionally approve or disapprove in part, each such SIP submission pursuant to sections 110(k)(2)-(4) of the CAA, 42 U.S.C. §§ 7410(k)(2)-(4).

New York et al v EPA; Southern District of New York
No: 1:21-cv-252 (S.D.N.Y)

- MOG Comments on Proposed Consent Decree filed August 30, 2021
- MOG objects to proposed consent as inconsistent with the Clean Air Act because:
 - (1) it creates an alternative course of action for EPA that calls for a FIP to be proposed in the absence of the disapproval of the underlying SIP,
 - (2) it does not address EPA's authority to issue a SIP call under Clean Air Act §110(k)(5)
 - (3) it fails to provide EPA with the time that will be necessary to promulgate any FIP or SIP call that may be required.

New York et al v EPA; Southern District of New York
No: 1:21-cv-252 (S.D.N.Y)

- MOG Comments on Proposed Consent Decree filed August 30, 2021
- MOG concerned that proposed consent decree schedule will result in development of FIP which would result in the:
 - failure of EPA to conduct comprehensive photochemical modeling;
 - failure of EPA to consider its own flexibilities related to maintenance monitors;
 - failure of EPA to consider its own flexibilities related to significant contribution limits;
 - failure of EPA to update the "on-the-books" emissions control requirements;
 - failure of EPA to align compliance deadlines applicable to sources in nonattainment areas to be consistent with the deadlines applicable to Good Neighbor Provisions; and
 - failure of EPA to provide a comment period adequate for stakeholders to fully assess and comment on any proposed FIP

ALPINE GEOPHYSICS UPDATES

EXCEPTIONAL EVENTS

Upwind States That Have Submitted Exceptional Events Demonstrations

- MOG submitted comments in support of
 - Michigan*
 - Ohio
 - Illinois

*While Michigan has prepared demonstrations for the western part of the state, these demonstrations have not yet been submitted to EPA

Michigan

- March 2021 draft,
 - “Wildfire Exceptional Events Demonstration for Ground-Level Ozone in Western Michigan 2015 Ozone Nonattainment Areas of Allegan, Berrien, and Muskegon Counties – June 17-20, 2020 Episode” and
 - “Wildfire Exceptional Events Demonstration for Ground-Level Ozone in Western Michigan 2015 Ozone Nonattainment Areas of Allegan and Muskegon Counties – August 26, 2020 Episode”
- May allow the Muskegon 2015 ozone nonattainment area to be eligible for a 1-year extension of the attainment date for the 2015 ozone NAAQS
- May allow the Allegan and Berrien 2015 ozone nonattainment areas to be eligible for redesignation to attainment for the 2015 NAAQS

Ohio

- February 2021 draft,
 - “Wildfire Exceptional Events Demonstration for Ground-Level Ozone in the Cincinnati 2015 Ozone Nonattainment Area”
- June 17 – 20, 2020 Impact of Arizona Wildfires.
- Exclusion of the June 20, 2020 data may allow the Cincinnati, OH-KY 2015 ozone nonattainment area to be eligible for one-year extension of the attainment date for the 2015 ozone NAAQS

Illinois

- January 2021 draft,
 - “Wildfire Exceptional Events Demonstration for Ground-Level Ozone in the Chicago 2008 Ozone Nonattainment Area.”
- June 18-19, 2020 Impact from Arizona Wildfires.
- Would have allowed the Chicago-Naperville, IL-IN-WI 2008 ozone nonattainment area (Chicago NAA) to be eligible for redesignation for the 2008 ozone
- Nonconcurrency sent by EPA to Illinois EPA on July 30, 2021

CURRENT OZONE AND PM DVS

2015 Ozone NAAs – 2018/2020 DVs

Designated Area	2018-2020 Design Value (ppb)
Allegan County, MI	73
Amador County, CA	69
Atlanta, GA	70
Baltimore, MD	72
Berrien County, MI	72
Butte County, CA	73
Calaveras County, CA	72
Chicago, IL-IN-WI	77
Cincinnati, OH-KY	74
Cleveland, OH	74
Columbus, OH	67
Dallas-Fort Worth, TX	76
Denver Metro/North Front Range, CO	81
Detroit, MI	72
Dona Ana County (Sunland Park), NM	78
Door County, WI	72
Greater Connecticut, CT	73
Houston-Galveston-Brazoria, TX	79
Imperial County, CA	78
Kern County (Eastern Kern), CA	86
Las Vegas, NV	74
Los Angeles-San Bernardino Counties (West Mojave Desert), CA	90
Los Angeles-South Coast Air Basin, CA	114
Louisville, KY-IN	72
Manitowoc County, WI	70
Mariposa County, CA	79

Designated Area	2018-2020 Design Value (ppb)
Milwaukee, WI	73
Morongo Band of Mission Indians, CA	99
Muskegon County, MI	76
Nevada County (Western part), CA	82
New York-Northern New Jersey-Long Island, NY-NJ-CT	82
Northern Wasatch Front, UT	77
Pechanga Band of Luiseno Mission Indians, CA	78
Philadelphia-Wilmington-Atlantic City, PA-NJ-MD-DE	74
Phoenix-Mesa, AZ	79
Riverside County (Coachella Valley), CA	88
Sacramento Metro, CA	84
San Antonio, TX	72
San Diego County, CA	79
San Francisco Bay Area, CA	69
San Joaquin Valley, CA	93
San Luis Obispo (Eastern part), CA	73
Sheboygan County, WI	75
Southern Wasatch Front, UT	69
St. Louis, MO-IL	71
Sutter Buttes, CA	76
Tuolumne County, CA	77
Tuscan Buttes, CA	74
Uinta Basin, UT	76
Ventura County, CA	77
Washington, DC-MD-VA	71
Yuma, AZ	68

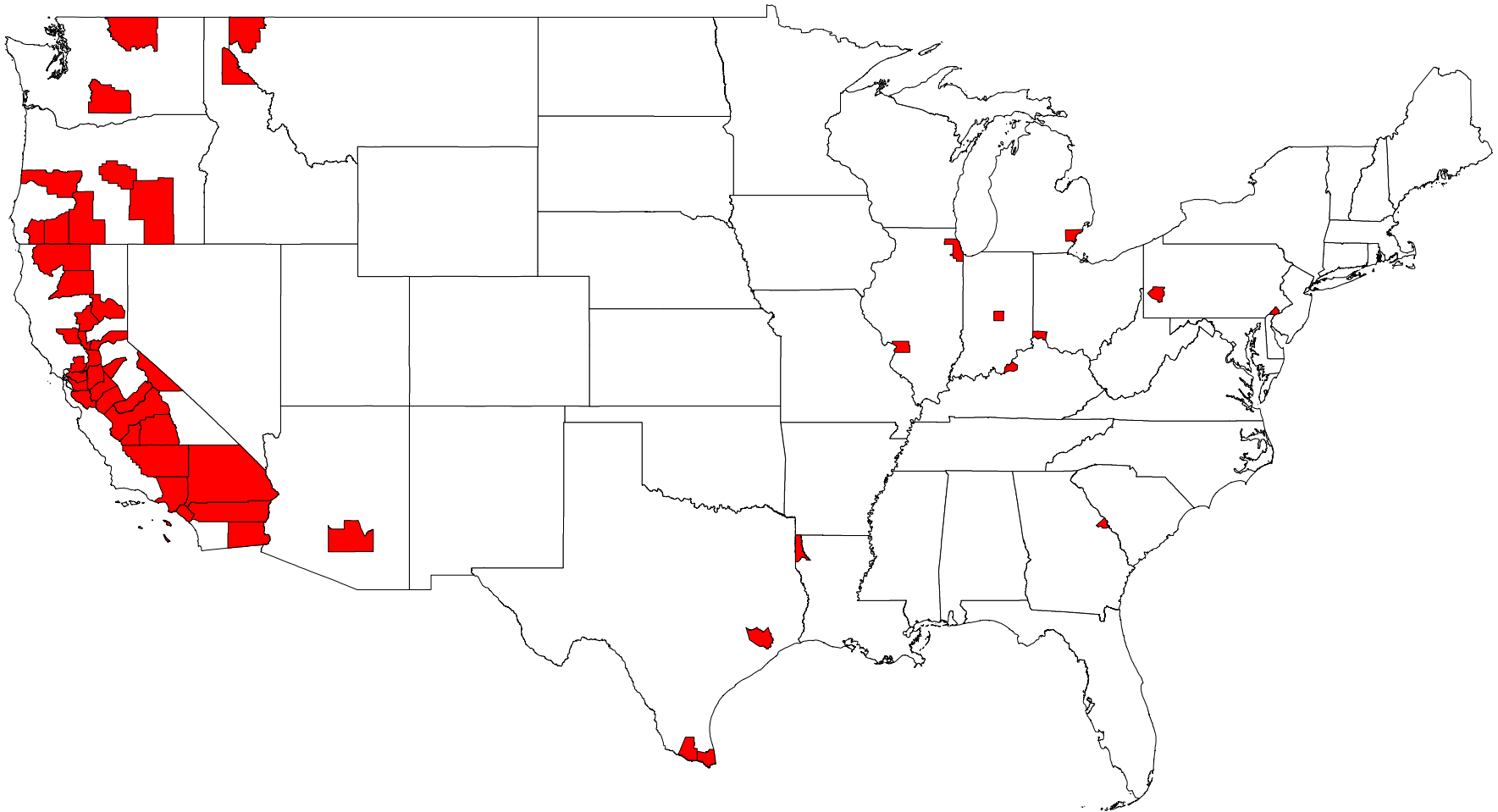
Design Values in Areas Previously Designated Nonattainment for the 2012 Annual PM2.5 NAAQS

Designated Area	EPA Region	Designation Status	2018-2020 Annual Design Value ($\mu\text{g}/\text{m}^3$)	Met NAAQS?
Allegheny County, PA	3	Nonattainment	11.1	Yes
Cleveland, OH	5	Maintenance	9.3	Yes
Delaware County, PA	3	Maintenance	10.8	Yes
Imperial County, CA	9	Nonattainment	12.1	No
Lebanon County, PA	3	Maintenance		Incomplete
Los Angeles-South Coast Air Basin, CA	9	Nonattainment	14.2	No
Plumas County, CA	9	Nonattainment	15.9	No
San Joaquin Valley, CA	9	Nonattainment	17.6	No
West Silver Valley, ID	10	Nonattainment	10.9	Yes

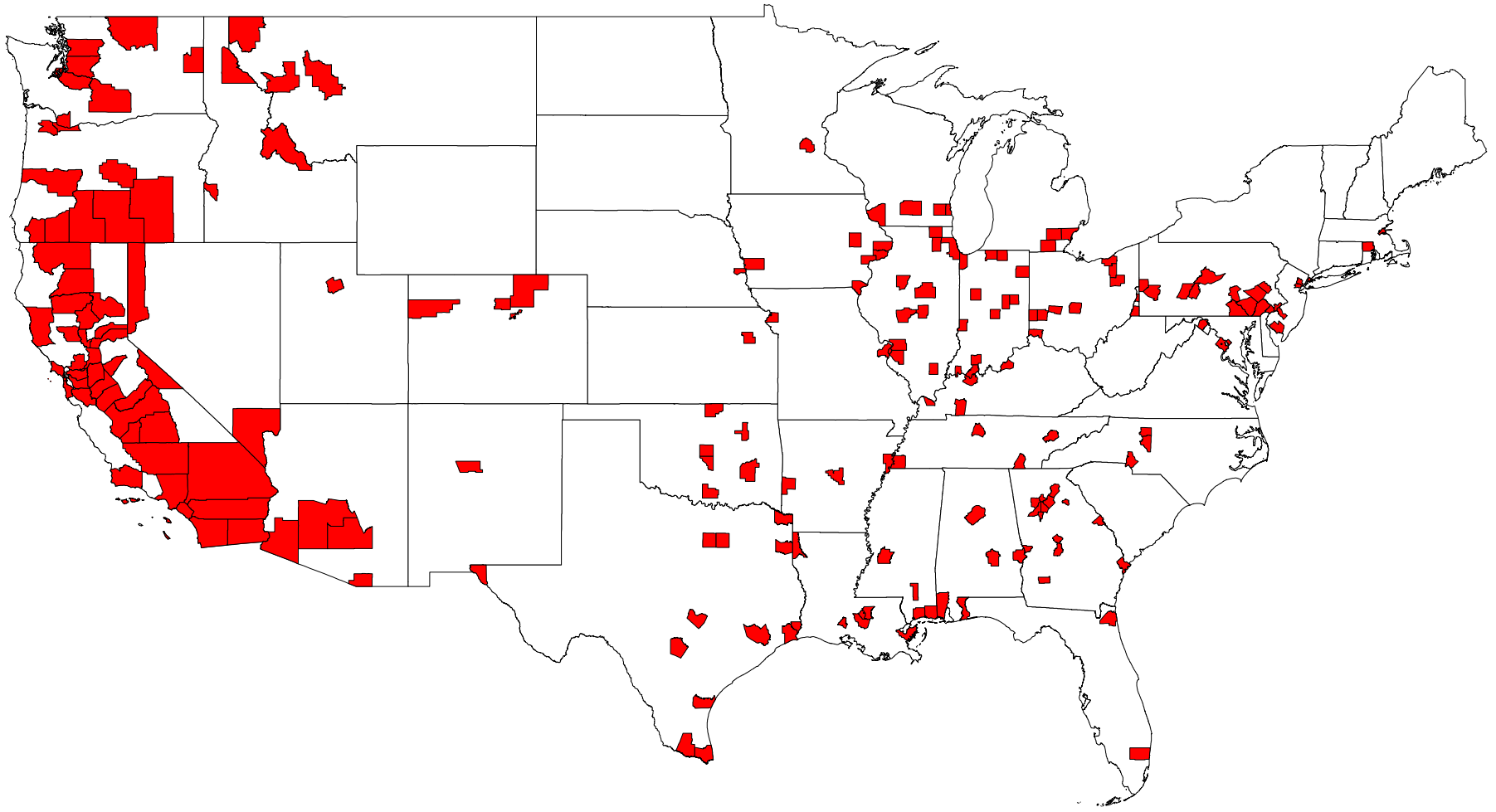
Violating Sites in Areas Not Previously Designated Nonattainment for the 2012 Annual PM2.5 NAAQS

State Name	County Name	EPA Region	AQS Site ID	2018-2020 Annual Design Value ($\mu\text{g}/\text{m}^3$)	CBSA Name
Alaska	Fairbanks North Star	10	020900035	13.0	Fairbanks, AK
Arizona	Pinal	9	040213015	12.8	Phoenix-Mesa-Scottsdale, AZ
California	Butte	9	060070008	12.2	Chico, CA
California	Mono	9	060510001	20.7	
Montana	Lincoln	8	300530018	13.3	
Oregon	Jackson	10	410292129	13.9	Medford, OR
Oregon	Josephine	10	410330114	12.2	Grants Pass, OR
Oregon	Klamath	10	410350004	16.3	Klamath Falls, OR

Counties with annual 2018-2020 $\text{PM}_{2.5}$ DV $> 10 \mu\text{g}/\text{m}^3$



Counties with annual 2018-2020 $\text{PM}_{2.5}$ DV $> 8 \mu\text{g}/\text{m}^3$



MOVES3 EMISSIONS

MOVES3 Emission Changes

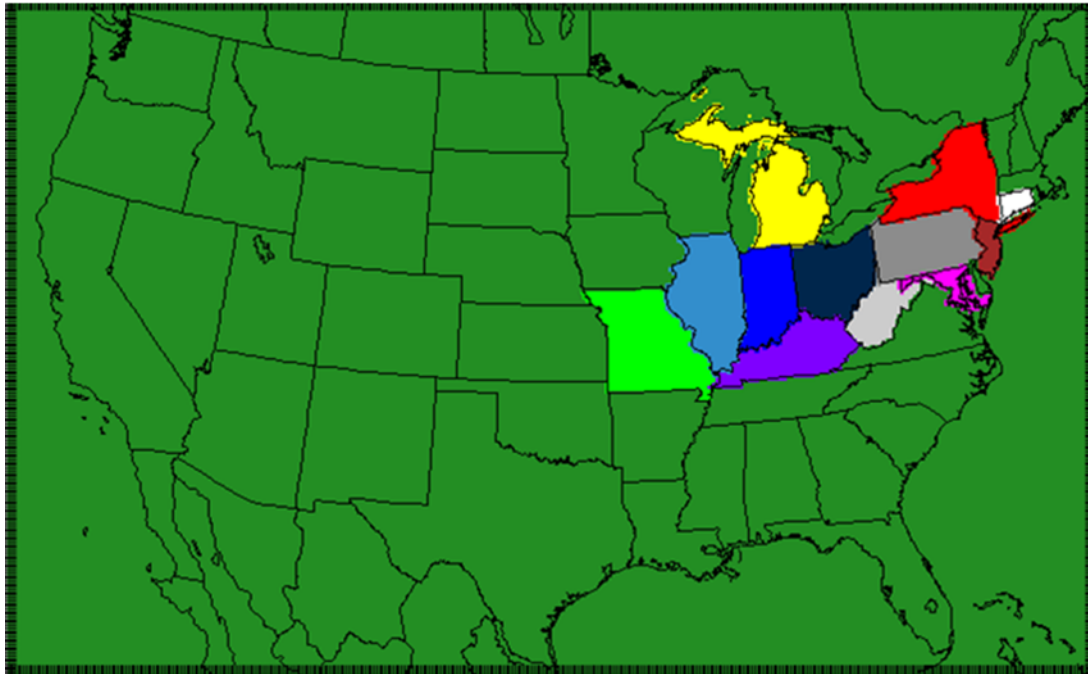
- In July 2021 EPA released MOVES3 emissions for onroad and nonroad mobile source categories (2016 base and 2023/2026 projections)
- Recent MOG/EPA modeling used MOVES 2014b

Preliminary MOVES 2014b/MOVES3 Observations

- MOVES3 presents different emissions in many states/ counties in 2023 compared to 2014b
 - Diesel truck emissions are consistently higher
 - Passenger gas vehicle emissions are consistently lower
- Distribution of emissions by vehicle type and fuel also significant in most areas
 - Passenger/gas -> Truck/diesel provides additional justification for HD truck NOx rules
- MOVES3 presents lower emission changes between 2016 and 2023 compared to modeled emission platform with MOVES2014b
 - In some areas this could be indicator of slightly higher future year DVs because of lower reductions

2023 SOURCE APPORTIONMENT

Modeling Domain, Source Regions, and Source Categories



Connecticut
Illinois
Indiana
Kentucky
Maryland
Michigan
Missouri
New Jersey
New York
Ohio
Pennsylvania
West Virginia
Other Regions

Abbreviation	Description
NAT	Biogenics/Fires/Sea Salt
MVO	On-Road Mobile
NRA	Non-Road Mobile/Stationary Area
EGP	Peaking EGU Point
EGO	Other EGU Points
NEG	Non-EGU Point
EOT	Other Emissions

Preliminary Results

- Alpine still reviewing results to determine variance in use of updated model and inputs
- Preliminary results provided here for select monitors
- Analyses to continue and be finalized in following weeks

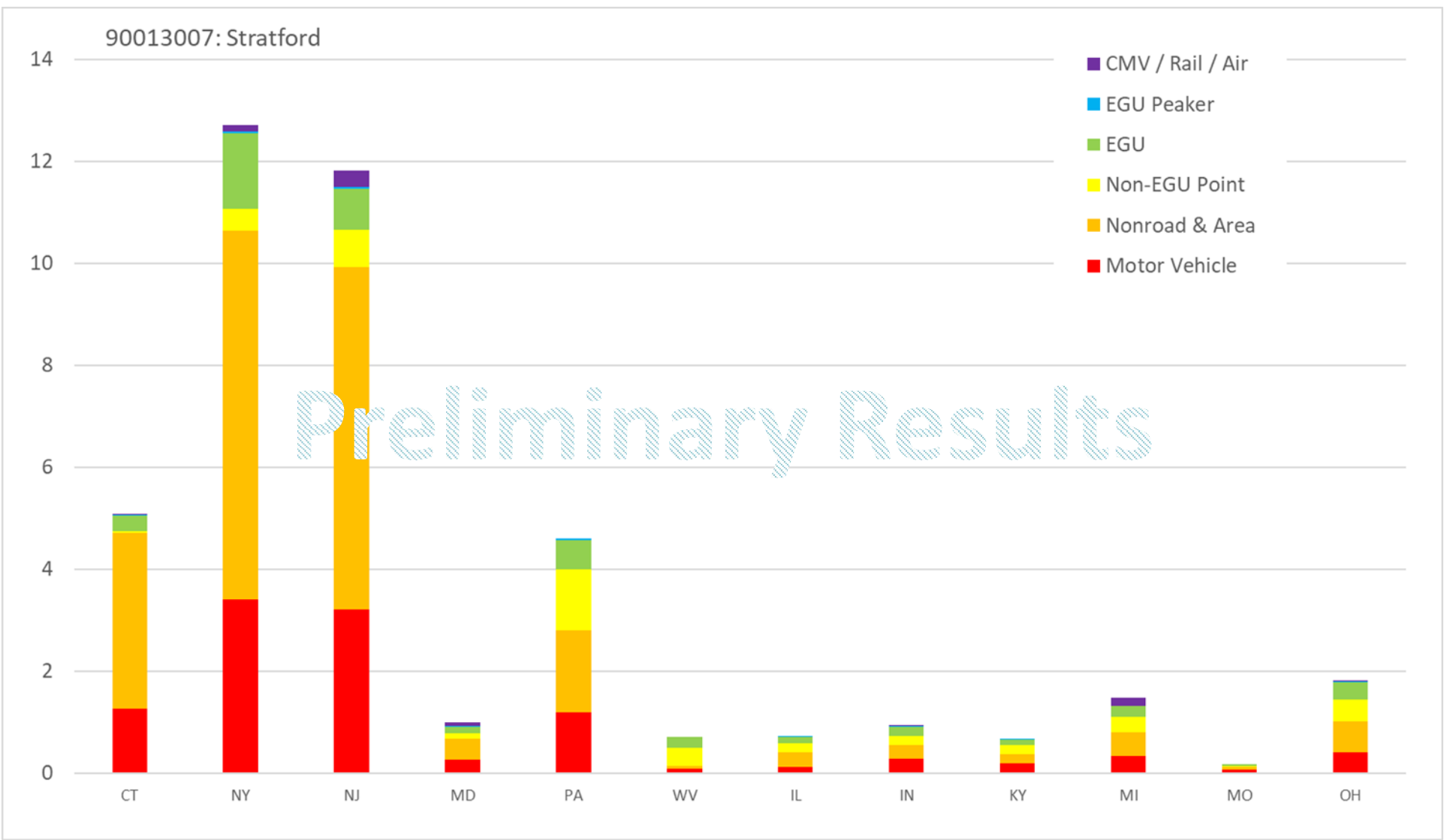
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14
12
10
8
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2
0

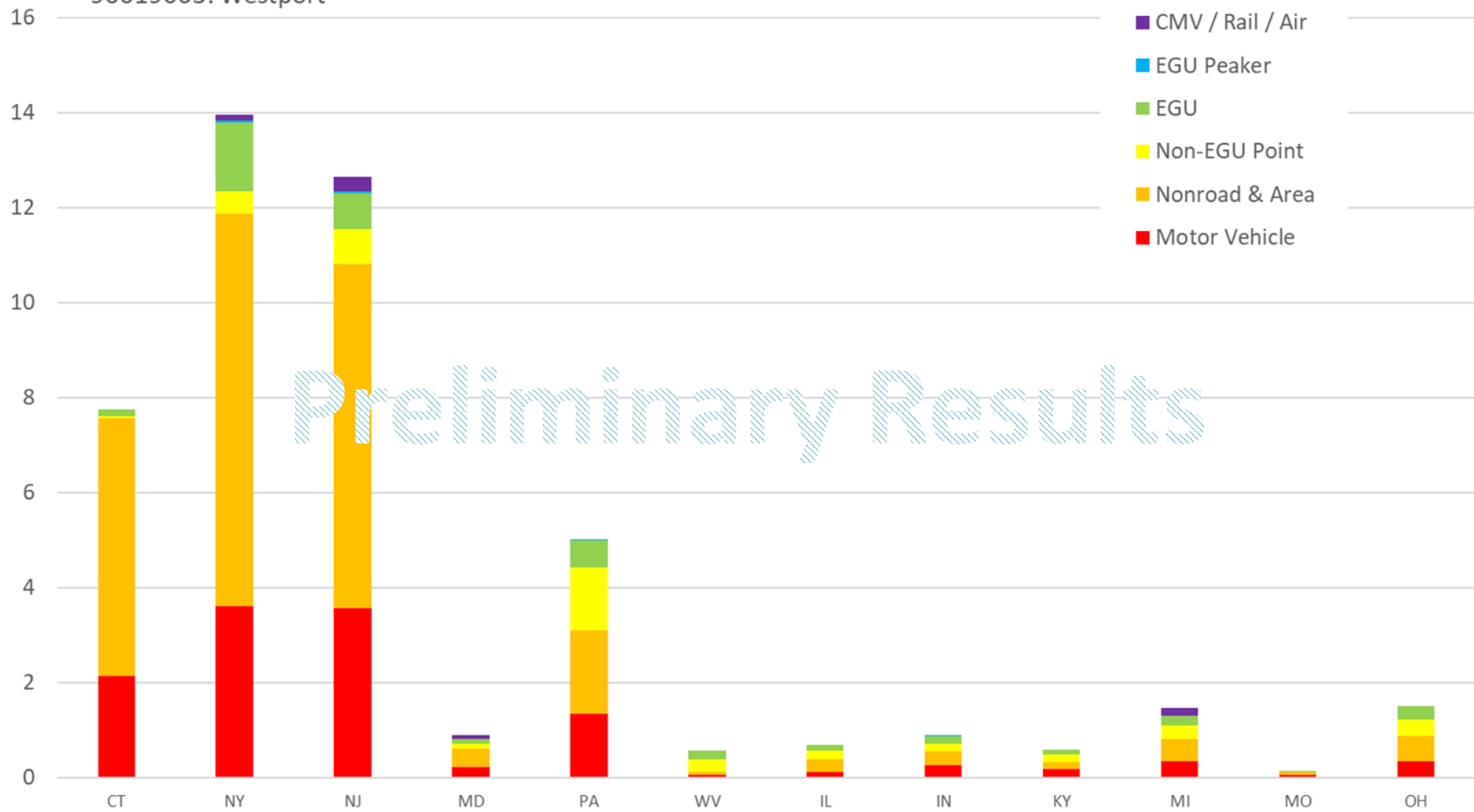
- CMV / Rail / Air
- EGU Peaker
- EGU
- Non-EGU Point
- Nonroad & Area
- Motor Vehicle

Preliminary Results

CT NY NJ MD PA WV IL IN KY MI MO OH



90019003: Westport



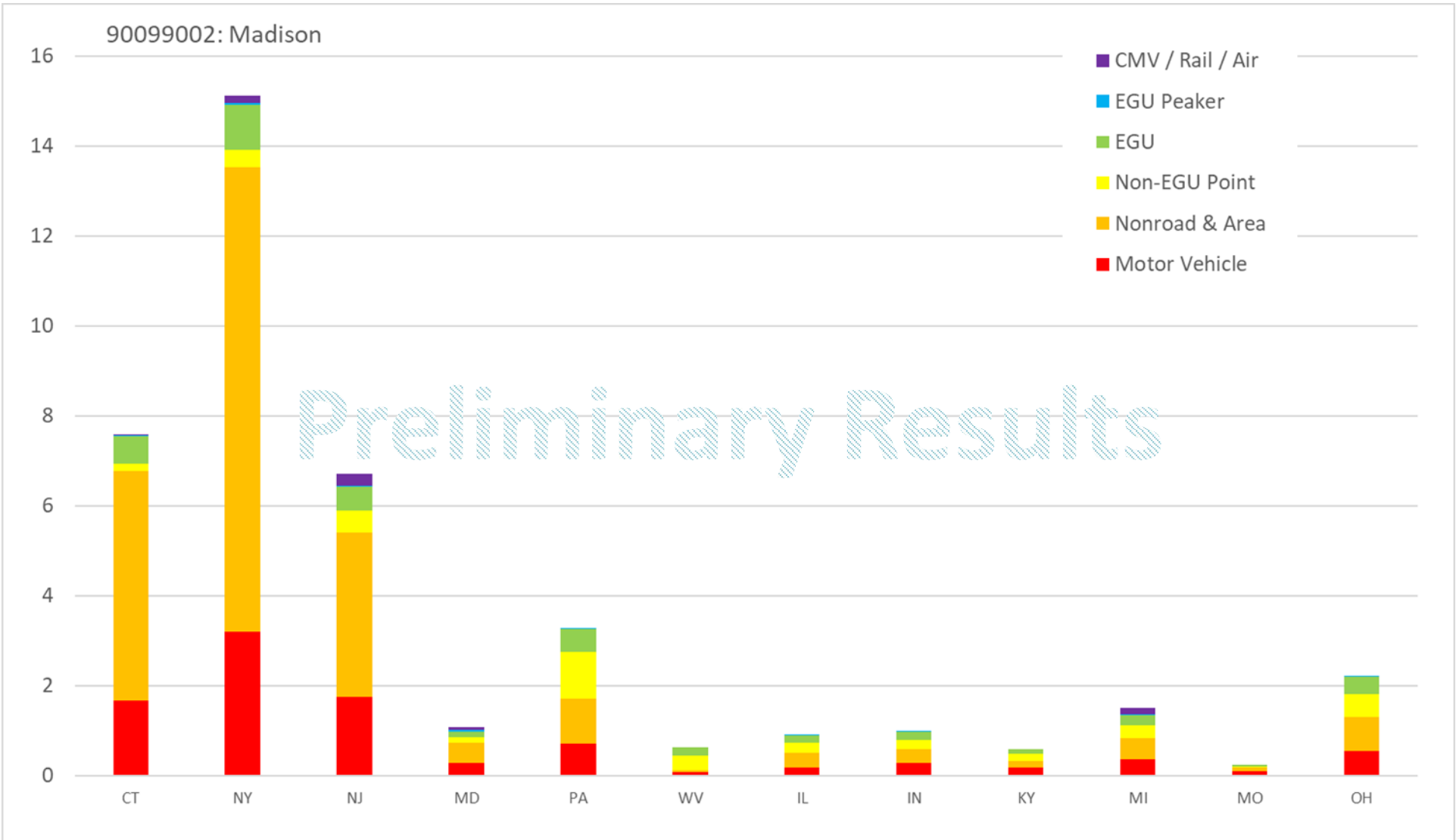
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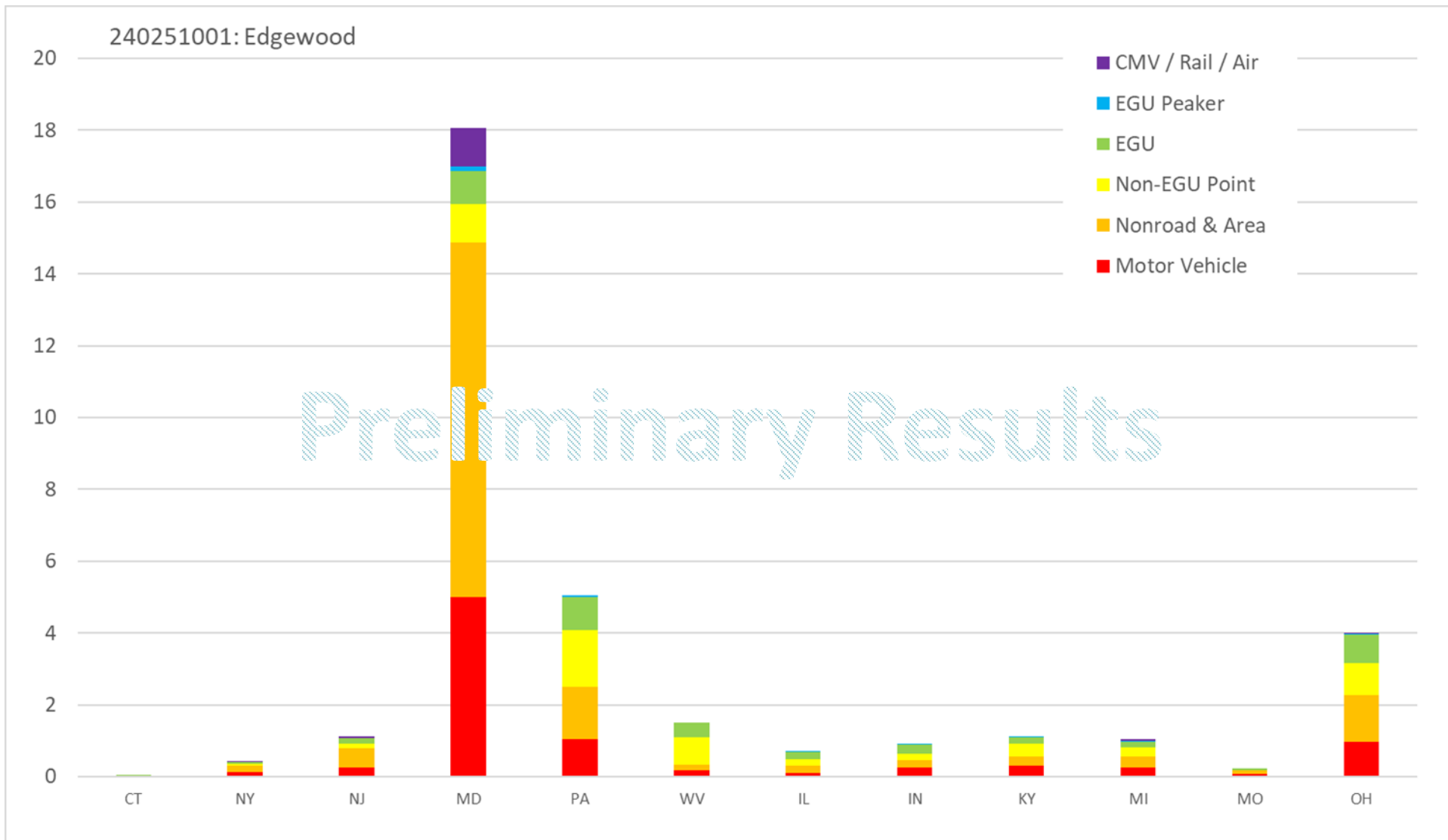
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- CMV / Rail / Air
- EGU Peaker
- EGU
- Non-EGU Point
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- Motor Vehicle

Preliminary Results

CT NY NJ MD PA WV IL IN KY MI MO OH





Contact Information

Steptoe & Johnson, PLLC

David M. Flannery
(304) 353-8171

Dave.Flannery@Steptoe-Johnson.com

Kathy Beckett
(304) 353-8172

Kathy.Beckett@Steptoe-Johnson.com

Skipp Kropp
(317) 946-9882

skipp.kropp@steptoe-johnson.com

Alpine Geophysics, LLC

Gregory M. Stella
gms@alpinegeophysics.com
(828) 675-9045