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April 25, 2022

Mr. Adam Ortiz
Regional Administrator, Region 3
U.S. Environmental Protection Agency
1650 Arch Street
Philadelphia, Pennsylvania 19103

Submitted to Docket ID No. EPA–R03–OAR–2021–0873

Re: Air Plan Disapproval; West Virginia; Interstate Transport Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards; Docket ID No. EPA–R03–OAR–2021–0873.

Dear Mr. Ortiz:

These comments are offered on behalf of the Midwest Ozone Group ("MOG") in response to the proposed rule of the U.S. Environmental Protection Agency ("EPA") in connection with the Air Plan Disapproval; West Virginia; Interstate Transport Requirements for the 2015 8-Hour Ozone National Ambient Air Quality Standards published on February 22, 2022 (87 Fed. Reg. 9516). The comment period deadline on this proposal April 25, 2022.

MOG is an affiliation of companies and associations[1] that draws upon its collective resources to seek solutions to the development of legally and technically sound air quality programs. MOG's primary efforts are to work with policy makers in evaluating air quality policies by encouraging the use of sound science. MOG has been actively engaged in a variety of issues and initiatives related to the development and implementation of air quality policy, including the development of transport rules (including the Revised CSAPR Update), NAAQS standards, nonattainment designations, petitions under Sections 126, 176A and 184(c) of the Clean Air Act ("CAA"), NAAQS implementation guidance, the development of Good Neighbor state implementation plans (SIPs) and related regional haze and climate change issues. MOG Members

[1] The members of and participants in the Midwest Ozone Group include: Alcoa, Ameren, American Electric Power, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Appalachian Region Independent Power Producers Association, Associated Electric Cooperative, Big Rivers Electric Corp., Buckeye Power, Inc., Citizens Energy Group, Cleveland Cliffs, Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, ExxonMobil, FirstEnergy Corp., Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Utility Group, LGE/ KU, Marathon Petroleum Company, National Lime Association, Nucor Corporation, Ohio Utility Group, Ohio Valley Electric Corporation, Olympus Power, and City Water, Light & Power (Springfield IL).

and Participants own and operate numerous stationary sources that are affected by air quality requirements including the ozone NAAQS. MOG seeks the development of technically and legally sound air pollution rules and actions that may impact on their facilities, their employees, their contractors, and the consumers of their products.

EPA notes that these disapprovals, if finalized, would not start a mandatory sanctions clock but rather would establish a 2-year deadline for EPA to promulgate a Federal Implementation Plan (FIP), unless EPA were to approve a subsequent SIP submittal that meets CAA requirements. EPA has now proposed a FIP to be finalized December 15, 2022, in complete disregard for the 2-year time period allowed by the Clean Air Act ("CAA") for responding to any such SIP disapprovals. See: 87 Fed. Reg 20036 (April 6, 2022).

As will be pointed out in detail in the attached comments, EPA's proposed Good Neighbor SIP disapprovals are both legally and technically flawed in that EPA seeks to advance the Good Neighbor SIP disapprovals based on incorrect air quality assumptions and calculations and in the absence of consideration of the flexibility guidance issued by EPA for application to 2015 ozone NAAQS Good Neighbor SIPs. In addition, these comments address the failure by EPA to give appropriate recognition to the merit of the SIPs involved. These comments also renew MOG's objection to the length of the comment period EPA has offered for this and the related SIP disapproval proposals for some 19 states all of which are occurring at the same time as EPA is advancing the related FIP discussed above.

These comments also highlight the agency's failure to align the responsibilities of upwind and downwind states as it selected the analytical year for evaluating the Good Neighbor Provisions of the CAA. EPA's response to the West Virginia plan failed to address the alignment issue and defaulted to the selection of 2023 as the appropriate analytic year. EPA did not assess the extent of delay of downwind states emissions reductions programs on nonattainment.

For the reasons set forth in these comments, the Midwest Ozone Group urges that EPA withdraw the subject proposed SIP disapprovals in favor of correcting the legal and technical errors that have been identified in its analysis and proposing an appropriate opportunity for states to address any deficiencies EPA may find in any Good Neighbor Plans implementing the 2015 ozone NAAQS.

Very truly yours,

Kathy G. Beckett

Kathy G. Beckett
Legal Counsel
Midwest Ozone Group

Cc: Michael Gordon
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MIDWEST OZONE GROUP COMMENTS ON

PROPOSED AIR PLAN DISAPPROVALS;

INTERSTATE AIR TRANSPORT OF AIR POLLUTION

FOR THE 2015 8-HOUR OZONE NAAQS.

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1. Introduction.

The Midwest Ozone Group ("MOG") takes this opportunity to offer comments[1] on the proposal by the U.S. Environmental Protection Agency ("EPA") to disapprove certain State Implementation Plan ("SIP") submittals related to the Interstate Transport of Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard ("NAAQS") that appeared in the Federal Register on February 22, 2022.

MOG is an affiliation of companies and associations[2] that draws upon its collective resources to seek solutions to the development of legally and technically sound air quality

[1] These comments were prepared with the technical assistance of Alpine Geophysics, LLC. Comments or questions about this document should be directed to David M. Flannery, Kathy G. Beckett or Edward L. (Skipp) Kropp, Legal Counsel, Midwest Ozone Group, Steptoe & Johnson PLLC, 707 Virginia Street East, Charleston, West Virginia 25301; 304-353-8000; dave.flannery@steptoe-johnson.com; kathy.beckett@steptoe-johnson.com; or skipp.kropp@steptoe-johnson.com, respectively.

[2] The members of and participants in the Midwest Ozone Group include: Alcoa, Ameren, American Electric Power, American Forest & Paper Association, American Iron and Steel Institute, American Wood Council, Appalachian Region Independent Power Producers Association, Associated Electric Cooperative, Big Rivers Electric Corp., Buckeye Power, Inc., Citizens Energy Group, Cleveland Cliffs, Council of Industrial Boiler Owners, Duke Energy Corp., East Kentucky Power Cooperative, ExxonMobil, FirstEnergy Corp., Indiana Energy Association, Indiana-Kentucky Electric Corporation, Indiana Utility Group, LGE/ KU, Marathon Petroleum Company, National Lime Association, Nucor Corporation, Ohio Utility Group, Ohio Valley Electric Corporation, Olympus Power, and City Water, Light & Power (Springfield IL).

programs. MOG's primary efforts are to work with policy makers in evaluating air quality policies by encouraging the use of sound science. MOG has been actively engaged in a variety of issues and initiatives related to the development and implementation of air quality policy, including the development of transport rules (including the Revised CSAPR Update), NAAQS standards, nonattainment designations, petitions under Sections 126, 176A and 184(c) of the Clean Air Act ("CAA"), NAAQS implementation guidance, the development of Good Neighbor State Implementation Plans ("SIPs") and related regional haze and climate change issues. MOG Members and Participants own and operate numerous stationary sources that are affected by air quality requirements including the ozone NAAQS. MOG seeks the development of technically and legally sound air pollution rules and actions that may impact on their facilities, their employees, their contractors, and the consumers of their products.

In the proposals being advanced[3], EPA notes that these disapprovals, if finalized, would

[3] See:

- Air Plan Disapproval; Maryland; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,463, February 22, 2022.
- Air Plan Disapproval; New York and New Jersey; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,484, February 22, 2022.
- Air Plan Disapproval; Kentucky; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,498, February 22, 2022.
- Air Plan Disapproval; West Virginia; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,516, February 22, 2022.
- Air Plan Disapproval; Missouri; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,533, February 22, 2022.
- Air Plan Disapproval; AL, MS, TN; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,545, February 22, 2022.
- Air Plan Disapproval; Arkansas, Louisiana, Oklahoma, and Texas; Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,798, February 22, 2022.
- Air Plan Disapproval; Illinois, Indiana, Michigan, Minnesota, Ohio, Wisconsin; Region 5 Interstate Transport Air Pollution for the 2015 8-Hour Ozone National Ambient Air Quality Standard. 87 Fed. Reg. 9,838, February 22, 2022.

not start a mandatory sanctions clock but rather would establish a 2-year deadline for EPA to promulgate a Federal Implementation Plan (FIP) unless EPA were to approve a subsequent SIP submittal that meets CAA requirements. However, EPA has now proposed a FIP to be finalized December 15, 2022, in complete disregard for the 2 year time period allowed by the CAA for responding to any such SIP disapprovals. See: 87 Fed. Reg. 20,036 (April 6, 2022).

As will be pointed out in these comments, EPA's proposed Good Neighbor SIP disapprovals are both legally and technically flawed in that EPA seeks to advance the Good Neighbor SIP disapprovals on the basis of flawed air quality modeling and in the absence of consideration of the flexibility guidance issued by EPA for application to 2015 ozone NAAQS Good Neighbor SIPs. These comments will also point out the agency's failure to have aligned the responsibilities of upwind and downwind states as it selected the analytical year for evaluating the Good Neighbor Provisions of the CAA. In addition, these comments will address the failure by EPA to have given appropriate recognition of the merit of the SIP involved. These comments also renew MOG's objection to the length of the comment period that EPA has offered for the eight proposals as not being adequate to allow time for thoughtful assessment of the proposed rule, particularly given the fact that these eight proposals were issued only six weeks prior to EPA's Federal Register publication that proposes a 181 page FIP that will impact significantly more than the 19 states affected by the proposed SIP disapprovals.

2. EPA's accelerated approach to denial of these plans is inconsistent with the CAA.

As evidenced by these several proposals for disapproval of Good Neighbor SIPs that accompanied this, EPA has begun an accelerated denial of the efforts of upwind states' and to implement a new transport rule and in doing so has taken an approach that is inconsistent with applicable law and appropriate science. This accelerated effort disenfranchises not only

meaningful technical analysis of the agency's proposals but also curtails meaningful participation by all stakeholders.

Section 110(c) of the CAA states that "The [EPA] Administrator shall promulgate a Federal implementation plan at any time within 2 years after the Administrator" if he: (1) finds that a state has failed to make a required submission or that the state plan submitted "does not satisfy" the minimum criteria in Section 110(k)(1)(A), or (2) "disapproves a State implementation plan submission in whole or in part," unless the State corrects the deficiency and the Administrator approves the correction before the Administrator promulgates the plan.

In the event of a justified disapproval, EPA then is required to promulgate a Federal Implementation Plan ("FIP") within two years unless the State corrects the deficiency before promulgation of the FIP. At issue in connection with the subject proposed SIP disapprovals are two initial considerations. First, EPA must offer adequate justification for the proposed disapprovals. As will be discussed extensively in these comments, EPA has not adequately demonstrated the basis for its actions. Second, EPA has not provided adequate public notice and comment as required by law. EPA is also obligated pursuant to Executive Orders 12898 (Feb. 11, 1994) and 14008 (Jan. 27, 2021), to ensure its actions support the principal of environmental justice, particularly in energy communities. Environmental justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. Again, these comments will illustrate EPA is improperly advancing implementation plan denials, while threatening with an imminent FIP proposal published in the Federal Register on April 6, 2022.

EPA does not offer explanation for not electing to work with the states to develop a state implementation plan call pursuant to 110(k)(5) which provides for up to 18 months for states to address flaws in the disapproved SIPs. These accelerated actions by the agency clearly indicate that transparency is not a priority. EPA should, instead, have provided updated guidance, updated modeling, instructions on addressing specific state deficiencies, and adequate time for state response.

Pursuant to the January 12, 2022, Consent Decree entered in *Downwinders at Risk et al. v. Regan*[4], EPA must by April 30, 2022, approve or disapprove the interstate ozone state implementation plans (SIPs) of 21 states: Alabama, Arkansas, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Jersey, New York, Ohio, Oklahoma, Tennessee, Texas, West Virginia and Wisconsin. Also, if EPA by February 28, 2022, proposes full or partial disapproval of a SIP from one of the 21 states, along with a proposed FIP to directly regulate interstate ozone emissions from that state, it must finalize its full or partial disapproval of the state's own plan by December 15, 2022. MOG also notes that the proposed *Downwinders* Consent Decree was provided for comment and that the concerns of the upwind states and the regulated community were ignored. See comments of Alabama, Missouri, Wyoming, and MOG in docket EPA-HQ-OGC-2021-0692.

The Clean Air Act does not mandate promulgation of a FIP in such an abbreviated time frame. The CAA allows FIP action any time within 2 years after the Administrator finds that a State has failed to make a required submission or finds that the plan or plan revision submitted by the State does not satisfy the minimum criteria or disapproves a State implementation plan submission in whole or in part. The CAA also specifically provides for the State to be allowed the

[4] U.S. District Court for the Northern District of California, Case No. 4:21-cv-3551.

opportunity to correct any deficiencies. We urge EPA to revise its proposals to allow States an appropriate opportunity to respond to EPS's findings of deficiency.

3. EPA improperly asserts that its three 2015 ozone NAAQS Good Neighbor SIP flexibility guidance memoranda should no longer be considered applicable to development of the SIPs that are the subject of its proposed disapprovals.

In 2018, EPA published three guidance documents describing the process by which states could incorporate various "flexibilities" into their Good Neighbor SIPs. All of the documents were issued by the USEPA, Director of Office of Air Quality Planning and Standards Peter Tsirigotis.

The March 27, 2018, Tsirigotis memo, styled "Information on Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards Under Clean Air Act Section 110(a)(2)(D)(i)(I)," was addressed to EPA Regional Air Directors in all EPA Regions. The memo states,

> [t]he purpose of this memorandum is to provide information to states and the Environmental Protection Agency Regional offices as they develop or review state implementation plans (SIPs) that address section 110(a)(2)(D)(i)(I) of Clean Air Act (CAA), also called the "good neighbor" provision, as it pertains to the 2015 ozone National Ambient Air Quality Standards (NAAQS). Specifically, this memorandum includes EPA's air quality modeling data for ozone for the year 2023, including newly available contribution modeling results, and a discussion of elements previously used to address interstate transport. In addition, the memorandum is accompanied by Attachment A, which provides a preliminary list of potential flexibilities in analytical approaches for developing a good neighbor SIP that may warrant further discussion between EPA and states.

The August 13, 2018, Tsirigotis guidance memo, styled "Analysis of Contribution Thresholds for Use in Clean Air Act Section 110(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. The memo states,

> "[t]he purpose of this memorandum is to provide analytical information regarding the degree to which certain air quality threshold amounts capture the collective amount of upwind contribution from upwind states to downwind receptors for the 2015 ozone National Ambient Air Quality Standards (NAAQS). It also interprets that information to make recommendations about what thresholds may be appropriate for use in state

> implementation plan (SIP) revisions addressing the good neighbor provision for that NAAQS . . . [t]his document does not substitute for provisions or regulations of the Clean Air Act (CAA), nor is it a regulation itself. Rather, it provides recommendations for states using the included analytical information in developing SIP submissions, and for the Environmental Protection Agency (EPA) Regional offices in acting on them. Thus, it does not impose binding, enforceable requirements on any party. State air agencies retain the discretion to develop good neighbor SIP revisions that differ from this guidance.

The October 19, 2018, Tsirigotis guidance memo is titled "Considerations for Identifying Maintenance Receptors for Use in Clean Air Act Section 11 0(a)(2)(D)(i)(I) Interstate Transport State Implementation Plan Submissions for the 2015 Ozone National Ambient Air Quality Standards," also was addressed to EPA Regional Air Directors in all EPA Regions. As in the first two memoranda, the memo stated,

> [t]he purpose of this memorandum is to present information that states may consider as they evaluate the status of monitoring sites that the Environmental Protection Agency (EPA) identified as potential maintenance receptors with respect to the 2015 ozone national Ambient Air Quality Standards (NAAQS) based on EPA' s 2023 modeling. States may use this information when developing state implementation plans (SIPs) for the 2015 ozone AAQS addressing the good neighbor provision in Clean Air Act (CAA) section 11 0(a)(2)(D)(i)(I). In brief this document discusses (1) using alternative technical methods for projecting whether future air quality warrants identifying monitors as maintenance receptors and (2) considering current monitoring data when identifying monitoring sites that although projected to be in attainment as described below, should be identified as maintenance receptors because of the risk that they could exceed the NAAQS due to year-to-year (i.e., inter-annual) variability in meteorological conditions.(emphasis added).

In the ensuing two years and six months since the last guidance document was published, EPA has known that states might be incorporating the 2018 guidance into Good Neighbor SIP submittals and has made no public statement saying that it would not honor its guidance. Moreover, all of the subject 19 Good Neighbor SIPs have been pending before the agency between two and one-half and almost four years with only one proposed action by EPA – the proposed approval of Iowa's Good Neighbor SIP that incorporated the 2018 guidance in a March 2, 2020, proposal at 85 Fed. Reg. 12,232. Now, nearly three years after the first Tsirigotis memo was published and two and a half years after the last was published, EPA is attempting to assert that these documents

are archival in nature and trying to walk back the proposed Iowa approval (See 87 Fed. Reg. 9,477, February 22, 2022).

As EPA states in the proposed disapproval notices for Illinois, Indiana, Michigan, Minnesota, Ohio, and Wisconsin (87 Fed. Reg. 9,838 at 9,841)):

> In the March, August, and October 2018 memoranda, the EPA recognized that states may be able to establish alternative approaches to addressing their interstate transport obligations for the 2015 8-hour ozone NAAQS that vary from a nationally uniform framework. The EPA emphasized in these memoranda, however, that such alternative approaches must be technically justified and appropriate in light of the facts and circumstances of each particular state's submittal. In general, the EPA continues to believe that deviation from a nationally consistent approach to ozone transport must be substantially justified and have a well-documented technical basis that is consistent with relevant case law. Where states submitted SIPs that rely on any such potential "flexibilities" as may have been identified or suggested in the past, the EPA will evaluate whether the state adequately justified the technical and legal basis for doing so.
>
> EPA notes that certain concepts included in an attachment to the March 2018 memorandum require unique consideration, and these ideas do not constitute agency guidance with respect to transport obligations for the 2015 ozone NAAQS. Attachment A to the March 2018 memorandum identified a "Preliminary List of Potential Flexibilities" that could potentially inform SIP development. However, EPA made clear in that Attachment that the list of ideas were not suggestions endorsed by the Agency but rather "comments provided in various forums" on which the EPA sought "feedback from interested stakeholders." Further, Attachment A stated, "EPA is not at this time making any determination that the ideas discussed below are consistent with the requirements of the CAA, nor are we specifically recommending that states use these approaches." Attachment A to the March 2018 memorandum, therefore, does not constitute agency guidance, but was intended to generate further discussion around potential approaches to addressing ozone transport among interested stakeholders. To the extent states sought to develop or rely on these ideas in support of their SIP submittals, EPA will thoroughly review the technical and legal justifications for doing so.

This disavowal of EPA's guidance this late SIP development process is an arbitrary abuse of authority. The Administrative Procedures Act allows federal agencies such as EPA to issue guidance without following rulemaking procedures. 5 U.S.C. § 553. Although agency guidance is not binding on regulated parties, such parties are permitted to rely on agency guidance as the

agency's public statement of how it intends to construe the statutes and rules it governs. *Perez v. Mortg. Bankers Ass'n*, 575 U.S. 92, 96–97 (2015). Indeed, Tsirigotis expressly notes in his 2018 memos that states could rely on the information provided in the memos, including the "alternative technical methods" authorized by the memos, when developing their SIPs in compliance with CAA Good Neighbor Provisions.

Once an agency issues guidance to regulated parties, the agency cannot "simply disregard" the substance of its guidance and rely on "post hoc justifications" when deciding whether regulated parties have acted in accordance with such guidance. *Hoosier Env't Council v. Nat. Prairie Indiana Farmland Holdings, LLC*, No. 4:19-CV-71 DRL-JEM, 2021 WL 4477152, at **13, 16 (N.D. Ind. Sept. 29, 2021). Doing so constitutes an arbitrary and capricious action by the agency. Id. at *17. By waiting for years and until after states complied with EPA's 2018 guidance to backtrack on the guidance, add a new requirement, not in the guidance, that alternative methods used by states in their SIPs must be "substantially justified and have a well-documented technical basis," and disapprove SIPs on that basis, EPA is engaging in arbitrary and capricious actions. EPA should alter its position and encourage states to take advantage of these flexibilities, as appropriate, and to incorporate these guidance flexibilities into their Good Neighbor SIPs.

4. EPA's intention to revise its emission inventory and to conduct new air quality modeling without allowing an appropriate opportunity for stakeholder review and comment is inappropriate

EPA notes in the proposed disapprovals that, after the modeling it conducted in support of earlier transport rules, e.g., CAIR, CSAPR, CSAPR Update, CSAPR Closeout, and Revised CSAPR Update, the agency revised the emission inventory used in the modeling to assess the efficacy of prior transport rules. EPA conducted new modeling using the revised inventory. The agency describes the process as follows:

> Following the Revised CSAPR Update final rule, the EPA made further updates to the 2016 emissions platform to include mobile emissions from the EPA's Motor Vehicle Emission Simulator MOVES3 model 17 and updated emissions projections for electric generating units (EGUs) that reflect the emissions reductions from the Revised CSAPR Update, recent information on plant closures, and other sector trends. The construct of the updated emissions platform, 2016v2, is described in the emissions modeling technical support document (TSD) for this proposed rule. (emphasis added).[5]

In December 2021, MOG and other stakeholders submitted detailed comments on the 2016v2 emission inventory platform in an effort to correct errors that existed in that platform. EPA's efforts to revise this emission inventory platform at this time raises the question about whether EPA intends to update the modeling that has been used as the basis for the SIP disapprovals and the proposed FIP - but only in support of the final rule.

While MOG urges EPA to rely on modeling that accurately reflects current on-the-books regulatory requirements and up-to-date emission inventories, we strenuously object to the possibility that EPA would conduct any such additional modeling to support a final rule and not provide the opportunity for that data to be reviewed, analyzed and commented on in advance of any final decision on the subject SIP disapproval (or for that matter the related proposed FIP). These concerns were also expressed earlier, in July 2021, by several MJOs (Westar, LADCO, SESARM, MARAMA, and CENSARA).[6]

5. EPA's modeling and emission inventories must include the control programs and related permitted emission limits on ozone precursors that significantly impact air quality design values in 2023 and beyond.

Downwind states and regulated entities are on an ever-changing path to manage the complex implementation of emissions reductions programs to address local and regional impacts on ambient air quality. EPA's modeling of applicable emission control programs to assess attainment

[5] See: IN, IL, MN, OH, and WI proposal at 87 Fed. Reg. 9,838 at 9,840.
[6] See the attachment "EPA Decisions Final" to Wyoming's comments on proposed Downwinders. https://www.regulations.gov/comment/EPA-HQ-OGC-2021-0692-0012

strategies supports the iterative nature of these programs. 87 Fed. Reg. 9,484, 9,494 (February 22, 2022). Private sector and government investments in emission reduction strategies are considerable. As EPA engages in proposed denials of the 2015 Ozone NAAQS Good Neighbor State Implementation Plans, the agency has the burden and obligation to assess both upwind and downwind emissions reductions programs. The modeling relied upon for these proposals; however, EPA fails to provide a wholistic assessment of these emission control requirements.

The following examples are illustrative of the types of emission control programs that EPA must include in the emission inventory that is being modeled to support the proposal disapprovals:

- The Illinois Environmental Protection Agency, as reflected on its website, is currently promulgating several new and older Cook County (ozone nonattainment) pending permit applications (Title V and Federally Enforceable State Operating Permits) to address gas-fired generators, to include emergency generators that had previously not been permitted or recently had been replaced. In certain instances, enforcement actions were initiated to bring the emergency and demand response generators within the regulatory program. EPA does not explain its assessment methodology for these types of emissions reductions relative to Good Neighbor SIP review and assessment.
  In addition, it appears that EPA did not take into account "The Illinois Energy Law, AKA, Climate and Equitable Jobs Act (CEJA)" as an applicable control program. This new law became effective in September 2021 and significantly limits the emissions of NOx from all existing gas fired EGUs in Illinois. Each unit >25 MW cannot exceed its 3-year (2018-2020) baseline actual emissions on a 12-month rolling basis beginning Oct. 1, 2021. Significantly, the law also requires all coal fired plants to retire no later than 2030.

- The New York State Department of Environmental Conservation ("NYDEC") has developed recent controls for simple cycle and regenerative combustion turbines ("SCCT") or "peaking units" noted by the agency as being inefficient and approaching 50 years of age. Yet, while the agency has estimated controls will result in a 4.8 ppb significant air quality improvement to nonattainment monitors within the New York Metropolitan Nonattainment Area (NYMA), implementation is delayed until 2025 and beyond. NYDEC also recently has imposed NOx controls on distributed generation units, which as with peaking units, has been structured to delay implementation of controls beyond the applicable attainment date as part of the attainment plan proposed for approval by EPA. 87 Fed. Reg. 4,530 (Jan. 28, 2022).
- The Wisconsin Department of Natural Resources, Air Management Program has initiated a number of permitting actions in response to designation of Kenosha County as serious nonattainment. Many of those actions have been implemented as recently as the last 24 months imposing new NOx and VOC emission reductions. It is also noteworthy that some regulated facilities are seeking relief from additional non-attainment reductions in advance of EPA approval of a partial redesignation of Kenosha County as attainment for the 2008 ozone standard. EPA does not explain its methodology for assessing these types of downwind emissions reduction strategies relative to review of Good Neighbor SIP.

EPA's attention also is directed to examples of state and federal air program elements that warrant review by EPA for impact on the efficacy of attainment strategies. The Wisconsin Department of Natural Resources regulations include Chapter NR 436 titled, "Emission Prohibition, Exceptions, Delayed Compliance Orders and Variances." NR 436.03(2)(c) provides,

> Emissions in excess of the emission limitation set in chs. NR 400 to 499 may be allowed in the following circumstances:

> (c) The use of emergency or reserve equipment needed for meeting high peak loads, testing of the equipment or other uses approved by the department. Such equipment must be specified in writing as emergency or reserve equipment by the department. Upon startup of this equipment notification must be given to the department which may or may not give approval for continued equipment use.

The Wisconsin regulation is just one example of an exemption that could impact attainment strategies. It is likely there are several other similar provisions in other state programs that warrant careful assessment by EPA.

Consideration of these upwind and downwind state control programs are critical not only to assure the correct modeling results in the future analytical year, but also to allow an assessment of the alignment of the emission reduction burdens of the upwind and downwind states, as will be discussed in the next comment.

6. EPA's selection of 2023 as the analytical year for its assessments of the state plans fails to align the obligation of upwind states with downwind states inasmuch as certain nonattainment areas have delayed implementation of nonattainment controls until 2025 and beyond.

EPA's statutory duty is to harmonize the Good Neighbor Provision of CAA §110(a)(2)(D)(i) with nonattainment and maintenance requirements of CAA §172 so that compliance burdens are aligned among upwind and downwind states. MOG is not critical of the downwind state plans to the extent those plans are designed and demonstrated to achieve attainment within the attainment deadlines. MOG is, however, critical of EPA for disapproving upwind state Good Neighbor Plans without consideration of the timing of the implementation of nonattainment controls by downwind states - effectively shifting the burden of additional controls to the upwind states.

The *Wisconsin* remand concluded that EPA exceeded its statutory authority under the Good Neighbor Provision "by issuing a Rule that does not call for upwind States to eliminate their substantial contributions to downwind nonattainment in concert with the attainment deadlines."

Wisconsin, 938 F.3d at 318. The *Wisconsin* remand directed EPA to address the downwind state "deadline" in such a manner as to "harmonize" the deadlines of upwind and downwind states and to apply "parallel timeframes." *Id.* at 312, 314. The D.C. Circuit repeatedly has explained the CAA directive to "harmonize" and manage the relationship described as parallel between the Good Neighbor obligations for upwind states and statutory attainment deadlines for downwind areas. That relationship is one of "par," using the Court's term, meaning to be judged on a common level with the other.[7] With this proposed disapproval, EPA ignores the obvious relationship between the downwind states' obligation to implement controls to attain the standard relative to the obligation of an upwind state to not significantly contribute to the nonattainment at issue.

This Court in *North Carolina v. EPA*, 531 F.3d 896 (D.C. Cir. 2008), found that EPA did not explain why it did not coordinate the Good Neighbor Provision with the Clean Air Interstate Rule to provide a sufficient level of protection to downwind states.

Despite CAA §110(a)(2)(D)(i)'s requirement that upwind contributions to downwind nonattainment be "consistent with the provisions of [Title I]," EPA did not make any effort to *harmonize* CAIR's Phase Two deadline for upwind contributors to eliminate their significant contribution with the attainment deadlines for downwind areas. . . . As a result, downwind nonattainment areas must attain NAAQS for ozone and PM2.5 without the elimination of upwind states' significant contribution to downwind nonattainment, forcing downwind areas to make greater reductions than CAA §110(a)(2)(D)(i)(I) requires. *Id.* (emphasis added). The D.C. Circuit described its *North Carolina* ruling in the *Wisconsin* remand as follows:

> We explained that EPA needed to "*harmonize*" the "Phase Two deadline for upwind contributors to eliminate their significant contribution with the attainment deadlines for

[7] *Definition of Par*, MERRIAM-WEBSTER, https://www.meriam-webster.com/dictionary/par (last visited Mar. 24, 2022).

> downwind areas." . . . Otherwise, downwind areas would need to attain the NAAQS "without the elimination of upwind states' significant contribution."

Wisconsin, 938 F.3d at 314 (emphasis added). The *Wisconsin* remand explained, "In sum, under our decision in *North Carolina,* the Good Neighbor Provision calls for elimination of upwind States' significant contributions on *par* with the relevant downwind attainment deadlines." *Id.* at 315 (emphasis added). The *Wisconsin* opinion explains further:

> The Good Neighbor Provision, as *North Carolina* emphasized, requires upwind States to eliminate their significant contributions to downwind pollution "consistent with the provisions of this subchapter," i.e., Title I of the Clean Air Act. 42 U.S.C. §7410(a)(2). One of the "provisions of this subchapter" is §7511(a)(1), which in turn requires downwind areas in moderate non-attainment to attain the NAAQS by July 20, 2018.

Id. at 315-16. The *Wisconsin* remand summarizes that "it is the statutorily designed relationship between the Good Neighbor Provision's obligations for upwind states and the statutory attainment deadlines for downwind areas that generally calls for parallel timeframes." *Id.* at 316.

EPA, however, takes the following actions. It interprets the court's holding in *Maryland v. EPA*, 958 F. 3d 1185 (D.C. Cir. 2020) as requiring the states and the Agency, under the good neighbor provision, to assess downwind air quality as expeditiously as practicable and no later than the next applicable attainment date, which is now the Moderate area attainment date under CAA §181 for ozone nonattainment. The Moderate area attainment date for the 2015 8-hour ozone NAAQS is August 3, 2024. The EPA provides that it believes that 2023 is now the appropriate year for analysis of interstate transport obligations for the 2015 8-hour ozone NAAQS because the 2023 ozone season is the last relevant ozone season during which achieved emissions reductions in linked upwind states could assist downwind states with meeting the August 3, 2024, Moderate area attainment date for the 2015 8-hour ozone NAAQS." 87 Fed. Reg. 9,487-8. EPA is inappropriately shifting the burden to the transport states.

For New York's disapproved transport plan, EPA offers the following criticism, "under the *Wisconsin* decision, states and the EPA may not delay implementation of measures necessary to address good neighbor requirements beyond the next applicable attainment date without a showing of impossibility or necessity. See 938 F.3d at 320. In those cases where the measures identified by the State had implementation timeframes beyond the next relevant attainment dates the submission did not offer a demonstration of impossibility of earlier implementation of those control measures. Similarly, the State's submittal is insufficient to the extent the implementation timeframes for identified control measures were left unidentified, unexplained, or too uncertain to permit the EPA to form a judgment as to whether the timing requirements for good neighbor obligations have been met. 87 Fed. Reg. 9,494. This narrative illustrates the disconnect between standards to which downwind plans are held versus the standards to which upwind plans are held. Both plans must be aligned with the same timeframes.

Within the Clean Air Act, Subchapter 1, Part D titled "Plan Requirements for Nonattainment Areas" is found Subpart 1 titled "Nonattainment Areas in General." Subpart 1 includes Section 177 addressing new motor vehicle emissions standards in state plans for nonattainment areas. It is apparent that the CAA contemplated the option of developing nonattainment plans per Section 172 to address certain new motor vehicles or new motor vehicle emissions. For those approved downwind nonattainment plans that include motor vehicle emissions reduction strategies for achieving attainment, delay in implementation beyond the attainment date is unacceptable under CAA §179. Delay in implementation of committed controls by a downwind state shifts the emissions reduction burdens onto upwind states if EPA fails to engage in alignment of the dates upon which each of the states must satisfy nonattainment strategy performance.

This issue of imbalance was specifically addressed by D.C. Circuit in the *Wisconsin* remand as an appropriate basis for extending the compliance deadline for upwind states. In that case the Court stated that: "if a modified attainment deadline applies to downwind States, EPA may be able, if justified, to make a corresponding extension for an upwind State's good neighbor obligations." *Wisconsin,* 938 F.3d at 317.

Nowhere in its discussion of the regulatory framework underlying these proposals does EPA recognize the alignment obligation as articulated in the *Wisconsin* remand.

7. In the absence of any guidance from EPA related to the assessment of Step 3 control measures, EPA should defer to state plans which evaluate such control measures.

While EPA's proposed disapprovals criticize states for failing to conduct an appropriate Step 3 analysis, EPA makes it clear that it has not established guidelines for how states should conduct that analysis. EPA's treatment of this issues is illustrated by the following statement made by EPA in addressing the Tennessee SIP:

> While the EPA has not directed states that they must conduct a Step 3 analysis in precisely the manner the EPA has done in its prior regional transport rulemakings, state implementation plans addressing the obligations in CAA section 110(a)(2)(D)(i)(I) must prohibit "any source or other type of emissions activity within the State" from emitting air pollutants which will contribute significantly to downwind air quality problems. Thus, states must complete something similar to the EPA's analysis (or an alternative approach to defining "significance" that comports with the statute's objectives) to determine whether and to what degree emissions from a state should be "prohibited" to eliminate emissions that will "contribute significantly to nonattainment in or interfere with maintenance of" the NAAQS in any other state. Tennessee did not conduct such an analysis in its SIP submission.[8]

[8] https://www.govinfo.gov/content/pkg/FR-2022-02-22/pdf/2022-02948.pdf

It is apparent that most states did little or no Step 3 analysis because, with many incorporating the 2018 flexibilities that EPA advised could be used in 2015 NAAQS Good Neighbor SIPs, they concluded in either Step 1 or 2 that no controls were required. The proposed Good Neighbor SIP disapprovals should therefore not impose a FIP without first allowing the states, working with their respective MJOs for a regional approach, an opportunity to conduct a Step 3 analysis better tailored to their state and/or region.

Rather than a wholesale disapproval of 19 state Good Neighbor SIPs, EPA should propose an 18-month period for states to proceed with Steps 3 and 4, especially since the EGU-only approach is insufficient and the other source contributions provide even more opportunity for the development of state- and region-specific control strategies that would likely be more cost effective and avoid the over-control that occurs with a generic FIP approach.

8. EPA's modeling fails to recognize the inadequacy of EPA's approach to addressing downwind nonattainment with the 2015 ozone NAAQS.

Review of historic emission changes and observed design values at linked downwind nonattainment monitors in Connecticut and Wisconsin indicates that controls associated with recently applied regulation and strategies to reduce NOx emissions from upwind EGU sources has nominal impact on ozone formation. As seen in the Figure 1 below, the relative design values at key receptors in 2020 is about the same (ratio near 1.0) compared to 2011. In contrast, EGU NOx emissions (yellow bar) from upwind CSAPR states have been reduced by over 65 percent in this same period and onroad NOx emissions (blue bar) from these states have been reduced by over 60 percent. All other anthropogenic categories (red bar) show a NOx emission reduction of only 27 percent over this period.

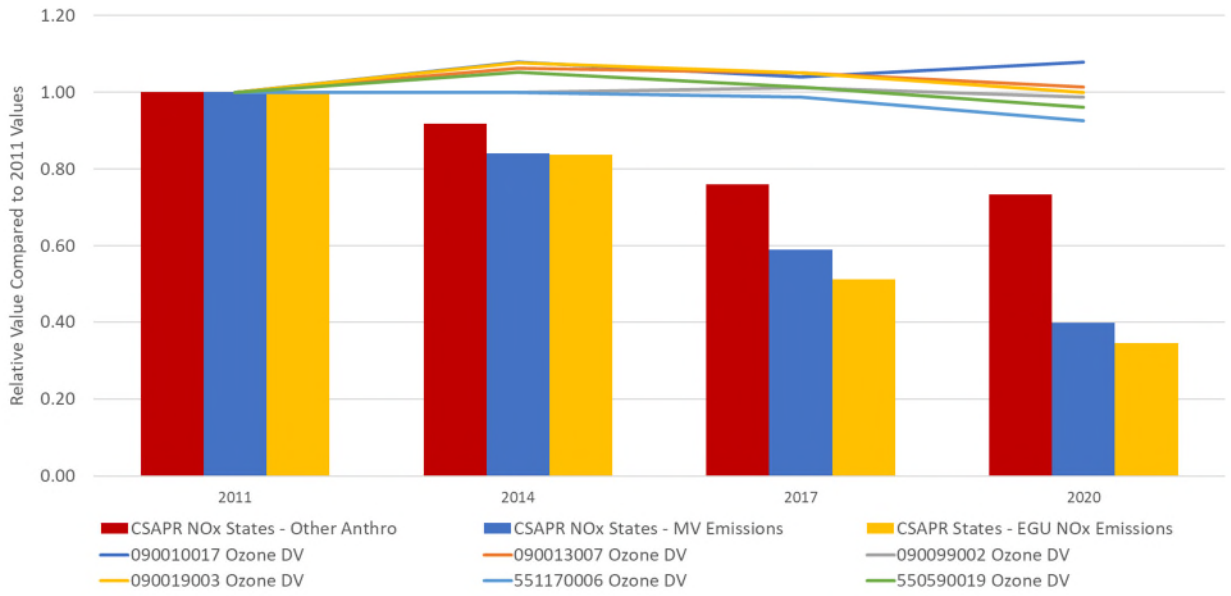


Figure 1. Relative ozone season NOx emission reduction from CSAPR identified upwind states and ozone design values at downwind receptors in Wisconsin and Connecticut between 2011 and 2020.

These data demonstrate that recent control strategies, directed toward regional EGU NOx emissions are not having the intended impact on downwind ozone concentrations. In support of this observation, recent ozone source apportionment modeling of state-source sector contribution by Alpine Geophysics shows small ozone contribution from NOx emissions from EGUs. Given the relatively small contribution of EGU NOx and even smaller contribution of non-EGU NOx to ozone concentrations at relevant monitors predicted by USEPA's modeling platform, additional control of emissions from either sector will have little, if any, impact on ozone concentrations at these downwind receptors.

Several downwind nonattainment monitors in urban areas around Lake Michigan have recently been shown to be largely unresponsive to ozone reduction strategies consisting of regional interstate NOx control and that high ozone days in the region were predominantly VOC-limited in nature. This was demonstrated in multiple ozone episodes extensively evaluated in the Lake Michigan Air Directors Consortium (LADCO) Lake Michigan Ozone Study (LMOS) 2017

study[9] where ozone precursor measurements indicated relative increases in VOC concentrations with increases in ozone and where biogenic VOC increases outpaced those of anthropogenic VOC.

In contrast to the peer reviewed research resulting from the 2017 LMOS data collection effort, EPA recently documented its support for additional NOx controls in stating that its "review of the portion of the ozone contribution attributable to anthropogenic NOX emissions versus VOC emissions from each linked upwind state leads the Agency to conclude that the vast majority of the downwind air quality areas addressed by the proposed rule under are primarily NOX-limited, rather than VOC-limited."[10] However, the current situation is that the modeling as conducted does not accurately characterize ozone levels on high ozone days, underpredicting by 10 + ppb, which is a huge error. Other studies indicate that, in order to better match actual conditions, the model needs less NOx and higher windspeeds at lower levels. The model is therefore telling us that *less* NOx means *more* ozone. That also means that, proportionally, the attribution of ozone to out of state NOx predicts a higher impact than is actually occurring. .

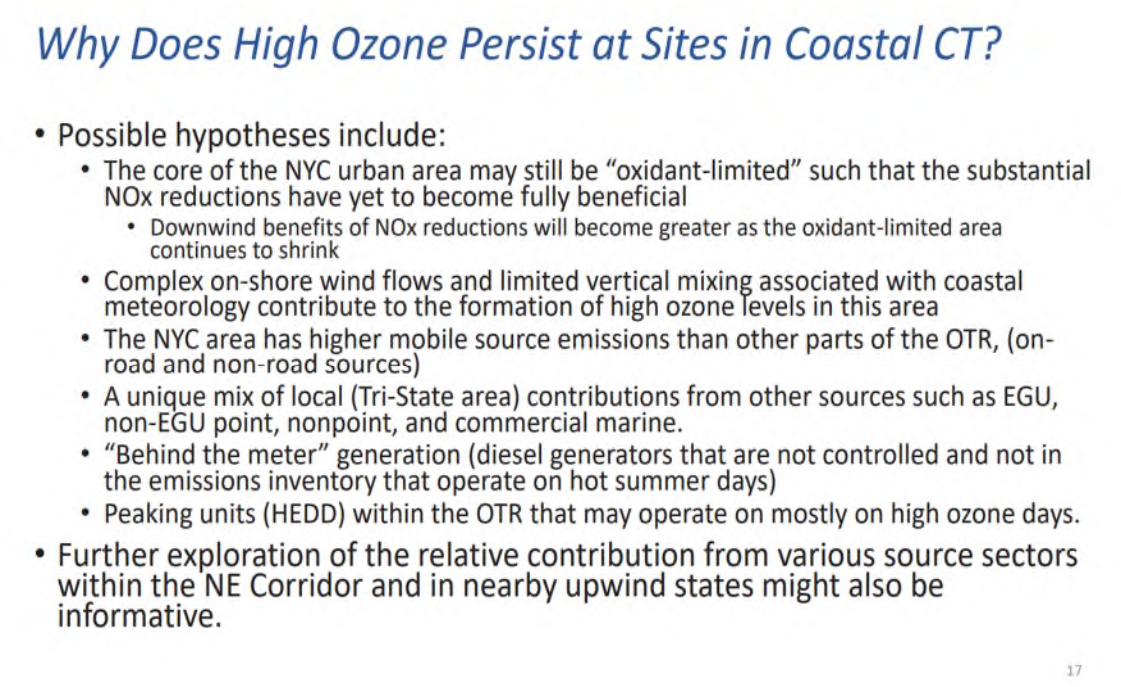
The modeled VOC and NOx emission tracers in EPA's Anthropogenic Precursor Culpability Assessment (APCA) modeling can give a general indication of the VOC/NOx sensitivity, but EPA assigning definitive numerical values to that sensitivity provides inaccurate projections, especially using APCA that is known to have a bias toward attributing ozone to NOx emitting anthropogenic sources under VOC sensitive conditions. As documented in the CAMx v 7.10 User's Guide[11], "when ozone formation is due to biogenic VOC and anthropogenic NOx under VOC-limited conditions (a situation where OSAT would attribute ozone production to

[9] https://www.ladco.org/wp-content/uploads/Research/LMOS2017/LMOS_LADCO_report_revision_apr2019_final.pdf
[10] 87 Fed. Reg. 20,076
[11] https://camx-wp.azurewebsites.net/Files/CAMxUsersGuide_v7.10.pdf, page 177.

biogenic VOC), APCA attributes ozone production to the anthropogenic NOx present. Using APCA instead of OSAT results in more ozone formation attributed to anthropogenic NOx sources and less ozone formation attributed to biogenic VOC sources." Here, it is believed that as applied in this case (with biogenic emissions as an uncontrollable source group), EPA has overestimated the efficacy of NOx controls on these receptors as modeled results have a bias toward attributing more ozone formed to NOx emissions than VOC emissions.

9. Mobile sources are the primary cause of remaining air quality problems

Available source apportionment data clearly shows that the most significant contributor of ozone in the East is mobile sources. Even EPA recognized that mobile and other local sources are the likely cause of high ozone in Connecticut. In a May 14, 2018, presentation titled "Analysis of Ozone Trends in the East in Relation to Interstate Transport," Norm Possiel of the EPA Office of Air Quality Planning and Standards showed the following slide regarding high ozone in costal Connecticut:



More recently, in a November 9, 2021, presentation to the Ozone Transport Commission (OTC), Dr. Jeff Underhill, Chair of the OTC Modeling Committee, showed hourly source apportionment results that demonstrate that onroad and nonroad emissions dominate ozone formation in the modeled simulation at the Connecticut monitor example provided.

Alpine Geophysics, on behalf of MOG, prepared a summary of source apportionment data in March of 2022 that documents recent ozone source apportionment modeling and associated results of the EPA 2016v2 modeling platform and associated 2023fj projections. For each monitor in the modeling domain, Alpine produced a standard set of products representing the relative contribution of region and category emissions to projected 2023 ozone concentrations.

An example of the relative contribution of EGU and non-EGU point source emissions to the downwind receptor (90099002) at New Haven, Connecticut is presented in Figure 2. Note the small contribution of both EGU and non-EGU point source emissions (6 percent) toward the total contribution of emissions forming ozone in the 2023 modeled simulation.

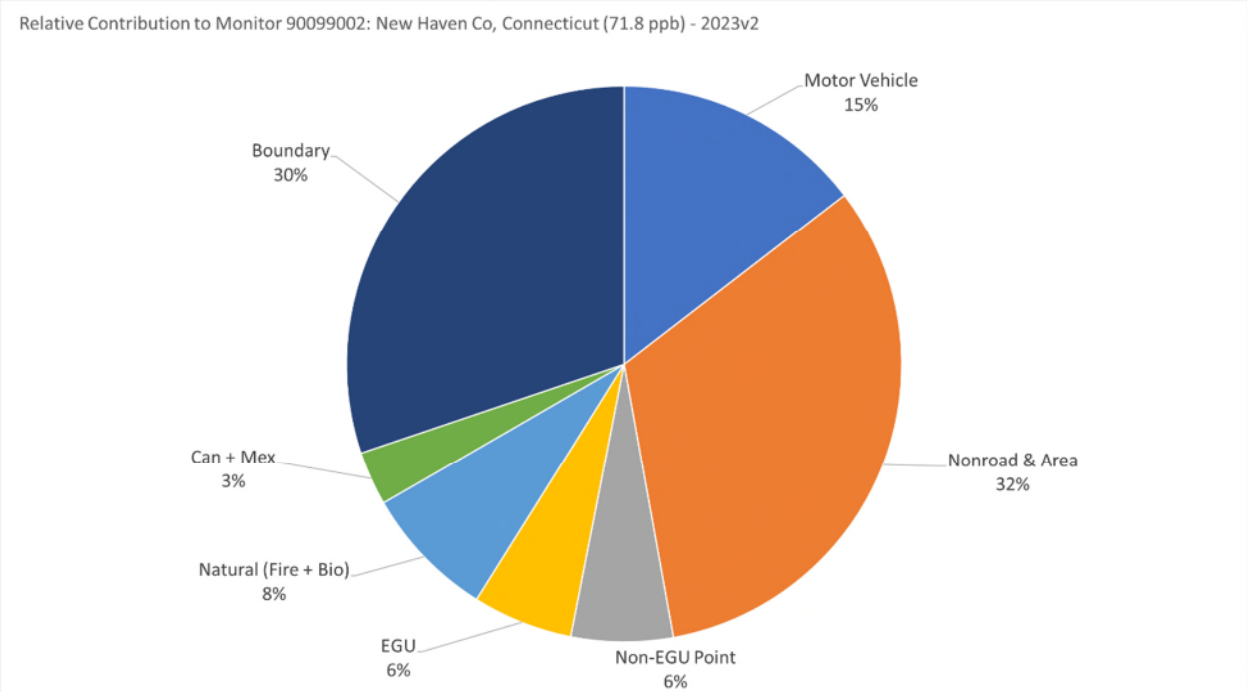


Figure 2. Relative contribution of emissions (by percent) from major source sectors to modeled ozone concentrations in 2023 at the New Haven, Connecticut monitor 90099002.

A similar level of emissions from EGU and non-EGU NOx contribution is seen in Figure 3 at the Kenosha, Wisconsin nonattainment monitor (550590019), where almost 43% of NOx contributions is from mobile and area source sectors.

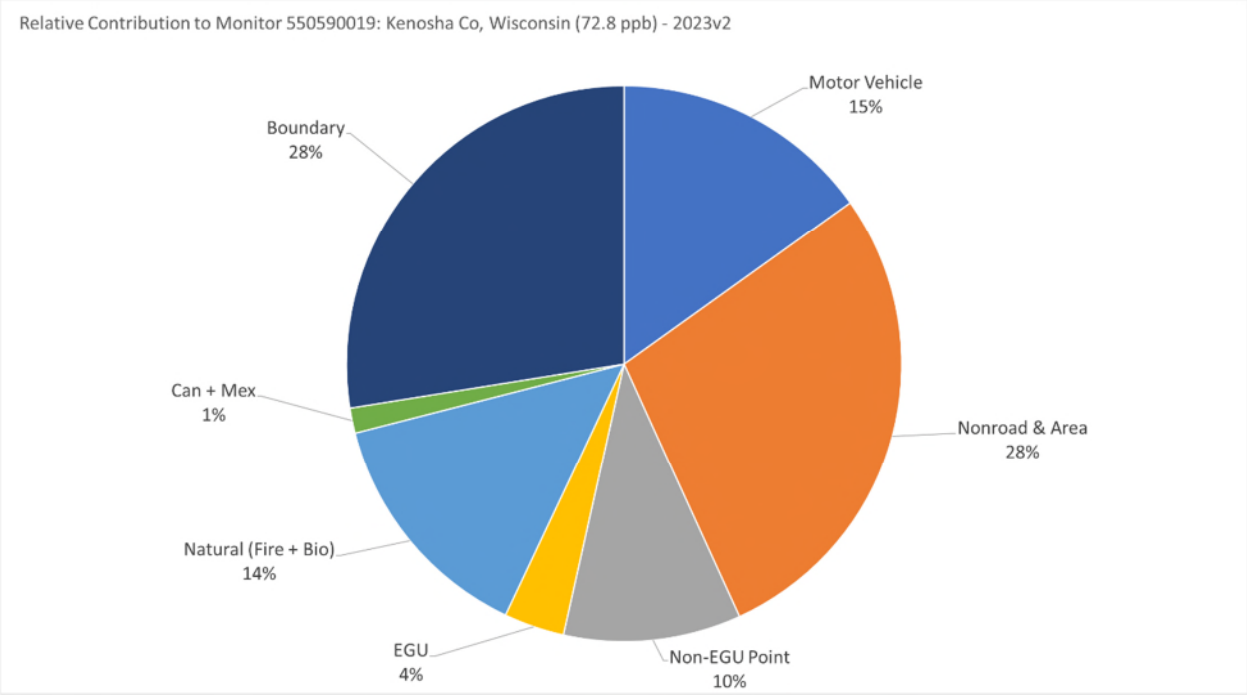


Figure 3. Relative contribution of emissions (by percent) from major source sectors to modeled ozone concentrations in 2023 at the Kenosha, Wisconsin monitor 550590019.

Based on these findings, it is questionable whether additional upwind regional ozone season NOx reductions from EGUs or non-EGU point sources would have the intended impact at downwind receptors compared to other, higher contributing, and local, source sectors.

As can easily be seen in the data, the contribution of nearby sources, and especially mobile sources, dwarfs the contribution of upwind state point sources. The data for all monitors in the Northeast are similar. Mobile sources are the dominant source of ozone in the Northeast now and are projected to continue to dominate in 2023.

The EPA Strategic Plan at page 43 states that "EPA will collect and evaluate mobile source emission data to help guide future program priorities related to reducing criteria pollutant and greenhouse gas emissions from light-duty cars and trucks, heavy-duty trucks and buses, nonroad engines and equipment, and from the fuels that power these engines. The Agency will develop the next round of multi-pollutant emission standards for light-duty and highway heavy-duty vehicles, which will improve air quality and reduce pollution near roads and other areas of high truck activity, such as warehouses and ports. EPA will also continue to work to ensure that Clean Air Act requirements are met for new transportation projects with heavy-duty diesel traffic, such that they do not worsen air quality near communities with environmental justice concerns. The Agency will address air quality concerns in these communities through implementing regulations, developing improved air quality models and mitigation measures, and collaborating with a broad range FY 2022-2026 EPA Strategic Plan – Objective 4.1 44 of stakeholders — including state air quality agencies and communities with environmental justice concerns — to develop targeted, sector-based, and place-based strategies for diesel fleets (including school buses, ports, and other goods movement facilities). EPA will support and oversee projects for the replacement of existing school buses with low- or zero-emission school buses funded under the Bipartisan Infrastructure Law, which will be implemented in alignment with Justice."[12]

MOG notes that EPA plans to deal with mobile sources in the future and has initiated regulatory work in this regard as noted in the EPA Strategic Plan. Specifically, EPA has finalized

[12] As noted in the November 23, 2021, Midwest Ozone Group Comments on Environmental Justice Considerations for 2015 Ozone Transport Rulemakings, Docket No. EPA-HQ-OAR-2021-0668, EPA's historical approach to implementation of the Clean Air Act has been inconsistent with the goals of environmental justice because "mobile sources are the most significant contributors to the only remaining nonattainment monitors in the East, not emissions from power plants and industrial facilities."

"Late Model Year Light-Duty Vehicle Greenhouse Gas Emission Standards." 86 Fed. Reg. 74,434 (December 30, 2021). EPAS has also proposed "Control of Air Pollution From New Motor Vehicles: Heavy-Duty Engine and Vehicle Standards," 87 Fed. Reg. 17,414 (March 28, 2022).

EPA revised the GHG emission standards for passenger cars and light trucks under the authority provided by section 202(a) of the CAA. This section is found within the Chapter 85 of the U.S. Code titled, "Air Pollution Prevention and Control" and is incorporated into the chapter reference found within the state implementation plan obligations found under Section 110(a)(2),

> Each implementation plan submitted by a State under **this chapter** shall be adopted by the State after reasonable notice and public hearing. Each such plan shall – (A) include enforceable emission limitations and other control measures, means, or techniques (including economic incentives such as fees, marketable permits, and auctions of emissions rights), as well as schedules and timetables for compliance, as may be necessary or appropriate to meet the applicable requirements of **this chapter**; (Emphasis added).

In summary, nonattainment plans are required to meet the applicable requirements of the Clean Air Act also described as Chapter 85 of Title 42 of the U. S. Code. Approvable NAAQS implementation plans are required to incorporate relevant sections of the Clean Air Act, to include the programs promulgated under Subchapter II – Emission Standards for Moving Sources such as the GHG emissions standards for light-duty vehicles for 2023 and later model years. The air quality impacts from this rule will have tailpipe emissions are measurable and warrant incorporation into the overall calculation of emissions reductions from CAA programs that will improve ozone air quality. 86 Fed. Reg. 74,490.

The proposed Heavy-Duty Engine and Vehicle Standards rule is anticipated to "reduce air pollution from highway heavy-duty vehicles and engines, including ozone, particulate matter, and greenhouse gases." 87 Fed. Reg. 17.414. EPA expects the standards in the proposed Options 1 and 2 to result in meaningful reductions in emissions of NOx, VOC, CO and PM2.5. " 87 Fed. Reg. 17,581. Also, EPA predicts, "The proposal would reduce 8-hour ozone design values

significantly in 2045." Id. at 17,582. These observations support the known impact of mobile sources on ozone ambient air quality.

As stated earlier in these comments, aligning the obligations to control significant sources of ozone precursors with the upwind and downwind ozone attainment obligations is the only path that leads to successful state implementation plan development as guided by the Clean Air Act. EPA's failure to recognize the impact of the timing of mobile source controls on implementation of the Good Neighbor provisions and the disapprovals being proposed is arbitrary and capricious and exceeds EPA's authority under the CAA.

10. The problem monitors in Connecticut, Wisconsin, and Illinois are not properly characterized by EPA's modeling since they are located at the interface between land and water.

EPA's ozone attainment modeling guidance states that:

> "[t]he most important factor to consider when establishing grid cell size is model response to emissions controls. Analysis of ambient data, sensitivity modeling, and past modeling results can be used to evaluate the expected response to emissions controls at various horizontal resolutions for both ozone and $PM_{2.5}$ and regional haze. If model response is expected to be different (and presumably more accurate) at higher resolution, then higher resolution modeling should be considered. If model response is expected to be similar at both high and low(er) resolution, then high resolution modeling may not be necessary. *The use of grid resolution finer than 12 km would generally be more appropriate for areas with a combination of complex meteorology, strong gradients in emissions sources, and/or land-water interfaces in or near the nonattainment area(s)*" (emphasis added)

EPA's modeling in support of the proposed disapprovals simulated a national domain using a 12km grid resolution domain wide. While this makes running a national, regional simulation easier from a technical perspective, it neglects the important issue of the complex meteorology and/or land-water interfaces in or near the nonattainment or maintenance monitors of interest. Indeed, EPA's choice of a 12 km grid is an arbitrary choice in contravention of its own guidance

when modeling Illinois, Wisconsin, and Connecticut monitors because these monitors are at land-water interfaces.

Photochemical modeling along coastlines is complex for two reasons. First, the temperature gradients along land/water interfaces can lead to localized on-shore/off-shore flows; and secondly, the photochemical model formulation spreads the emissions in a grid cell throughout the full grid volume of the cell.

Figures 4 and 5 present two unique areas in the eastern U.S. that is challenged by these complex meteorologic issues at land-water interfaces. For each monitor associated with this proposed rule and located in Connecticut along the Long Island Sound (Figure 4) and in Wisconsin and Illinois along the shore of Lake Michigan (Figure 5), EPA's published model performance evaluation (MPE) metrics for ozone have been reviewed on a day specific basis.

Figure 4. Long Island Sound shoreline monitors located on land/water interface.

Figure 5. Lake Michigan shoreline monitors located on land/water interface.

Studies indicate that air quality forecast models typically predict large summertime ozone abundances over water relative to land and that meteorology around Lake Michigan and the Long Island Sound is distinctly unique; both shortcomings warrant individualized attention and a finer grid resolution to best explore actual conditions.

The 3x3 neighborhood of grid cells used in determining the design values of the relative response factor (RRF) at land-water interface monitors extends into the noted water bodies. Under current guidance, the top ten modeled days within this 3x3 matrix are used in determining this RRF for each monitor with any cell identified as 50 percent or more water, except for cells including monitors, which are omitted from the calculations.

When the individual days selected for RRF calculation are reviewed at many of these monitors, it is seen that the performance of the model to replicate observed concentrations are outside of comparable acceptable ranges. Table 1 below provides a list of top 10 days at the Kenosha monitor in Wisconsin and comparisons of daily modeled maximum daily average 8-hour ozone concentrations (highlighted in green) and observations on the same date in 2016. These are the dates selected in EPA's modeling to represent highest modeled days used in estimating future year design values.

As can be seen in these Tables, several days selected for RRF calculation have modeled ozone concentrations that fall outside of normally acceptable normalized bias (NBias) boundaries (±15%), either because of over (positive bias) or under (negative bias) predictions compared to observed concentrations on those days. In fact, at the Kenosha monitor example below, four of the ten selected days fall outside of the ±15% bias metric (highlighted in orange in the Table below).

Monitor	550590019	Kenosha County, Wisconsin	Chiwaukee Prairie Stateline

Top 10 RRF - Base Dates (Modeled) - No Water - 3x3

Order	Date	Obs	Base DV	Future DV	RRF	NBias (%)
1	20160804	90.25	82.86	78.65	0.9492	-8.19
2	20160727	71.71	77.14	69.79	0.9048	7.57
3	20160615	80.50	73.45	69.34	0.9440	-8.76
4	20160707	58.00	72.30	68.05	0.9413	24.65
5	20160625	77.38	71.67	66.24	0.9243	-7.38
6	20160810	63.00	69.13	63.98	0.9256	9.72
7	20160720	80.75	68.53	66.27	0.9670	-15.13
8	20160619	83.13	67.97	62.10	0.9136	-18.23
9	20160723	56.75	66.95	62.41	0.9322	17.97
10	20160722	67.63	66.19	61.94	0.9357	-2.13
	Average		**71.62**	**66.88**	**0.9338**	

Table 1. List of top 10 days at the Kenosha monitor (550590019) in Wisconsin used in RRF calculations.

The LMOS 2017 study[13] also shows that for Lake Michigan coastal monitors the air quality model even at a 4 km resolution does not simulate the proper timing and structure of the land/lake breeze or the inland penetration of elevated ozone concentrations. A review of this LMOS study[14] states "To reproduce the timing and magnitude of the ozone time series at coastal monitors, ozone production over the lake must be correctly simulated; furthermore, details of the lake breeze must be accurate——timing, horizontal extent, and vertical structure." Based on recommendations from

[13] https://www.ladco.org/wp-content/uploads/Research/LMOS2017/LMOS_LADCO_report_revision_apr2019_final.pdf

[14] Stanier, C. O., & et al. (2021, November). Overview of the Lake Michigan Ozone Study 2017. BAMS, 19.

the LMOS 2017 study research team, a horizontal resolution of at most 1.3 km is required to reasonably resolve the complex meteorology of the air/water interface for the great lakes and coastal ocean areas. The LMOS 2017 Study researchers believe that a 1.3 km grid spacing will assist in the resolution of the large ozone concentration gradients that often occur along the shoreline as well as the inland penetration of the lake breeze circulation.

Similar results are seen at the example Fairfield, Connecticut nonattainment monitor (Table 2) where again four of the ten days are outside of the ±15% normalized bias range; including the top modeled day at the receptor (modeled value of 91.64 ppb and an observed value of 67.13 ppb).

Monitor 090013007 **Fairfield County, Connecticut** **Stratford**

Top 10 RRF – Base Dates (Modeled) – No Water – 3x3

Order	Date	Obs	Base DV	Future DV	RRF	Nbias (%)
1	20160725	67.13	91.64	82.52	0.9005	36.52
2	20160526	76.25	87.17	82.02	0.9409	14.32
3	20160706	75.25	84.54	76.36	0.9032	12.35
4	20160718	83.13	83.80	76.74	0.9158	0.80
5	20160528	70.00	81.65	73.98	0.9060	16.64
6	20160813	69.88	80.82	68.29	0.8450	15.66
7	20160722	96.75	80.46	72.51	0.9012	-16.83
8	20160717	79.00	79.83	70.04	0.8774	1.06
9	20160831	75.13	78.44	74.83	0.9540	4.41
10	20160824	76.50	77.48	70.96	0.9159	1.28
	Average		**82.58**	**74.83**	**0.9060**	

Table 2. List of top 10 days at the Fairfield monitor (90013007) in Connecticut used in RRF calculations.

As these examples show, days where modeled ozone was predicted at concentrations differing up to ± 24 ppb are being used to estimate future year ozone concentrations and to make determinations of nonattainment, maintenance, and significant contribution from upwind sources.

Furthermore, to adequately capture the inland penetration of the lake breeze, the LMOS report also cites the need for accurate Lake Michigan water temperatures and correct model physics options. EPA's use of the Pleim-Xiu Land Service Model (LSM) [15] does not adequately capture the lake breeze inland penetration. A review of wind vector observations (from the Meteorological Assimilation Data Ingest System (MADIS) network[16]) compared to modeled wind vectors on RRF and significantly contributing days at nonattainment monitors highlights the differences in wind direction and speed during many hours of these predicted high ozone episodes.

On many days with relatively simple meteorology, EPA-developed wind fields using the Weather Research and Forecasting (WRF) Model agree with the MADIS observed winds. However, the modeled winds have strong disagreement with the observed meteorology on June 15, July 7, July 27 and August 4, 2016, the four days when the CAMx model predicted the highest ozone concentrations and are thus used in estimating RRFs and future year ozone design values. The following presents an example on August 4, 2016, the day with the highest model estimated MDA8 ozone concentrations at the Kenosha, Wisconsin monitor.

In Figures 6 through 8 below, the black wind vectors are the wind fields used in the CAMx model. For clarity only every third grid cell is presented. The red vectors are the hourly observed wind vectors from the MADIS archive. The hourly results from 1200 CDT through 1600 CDT are presented in these Figures. The observations clearly show a broad persistent land to lake flow

[15] EPA-HQ-OAR-2021-0668-0099
[16] https://madis.ncep.noaa.gov/

long the Wisconsin shoreline while the model shows a persistent lake to land flow in this same region during this same period. For this timeframe, when the model is estimating the highest ozone for the ozone season at this receptor, the model has the winds flowing from the lake to the shore while the observations are winds flowing from the shore to the lake.

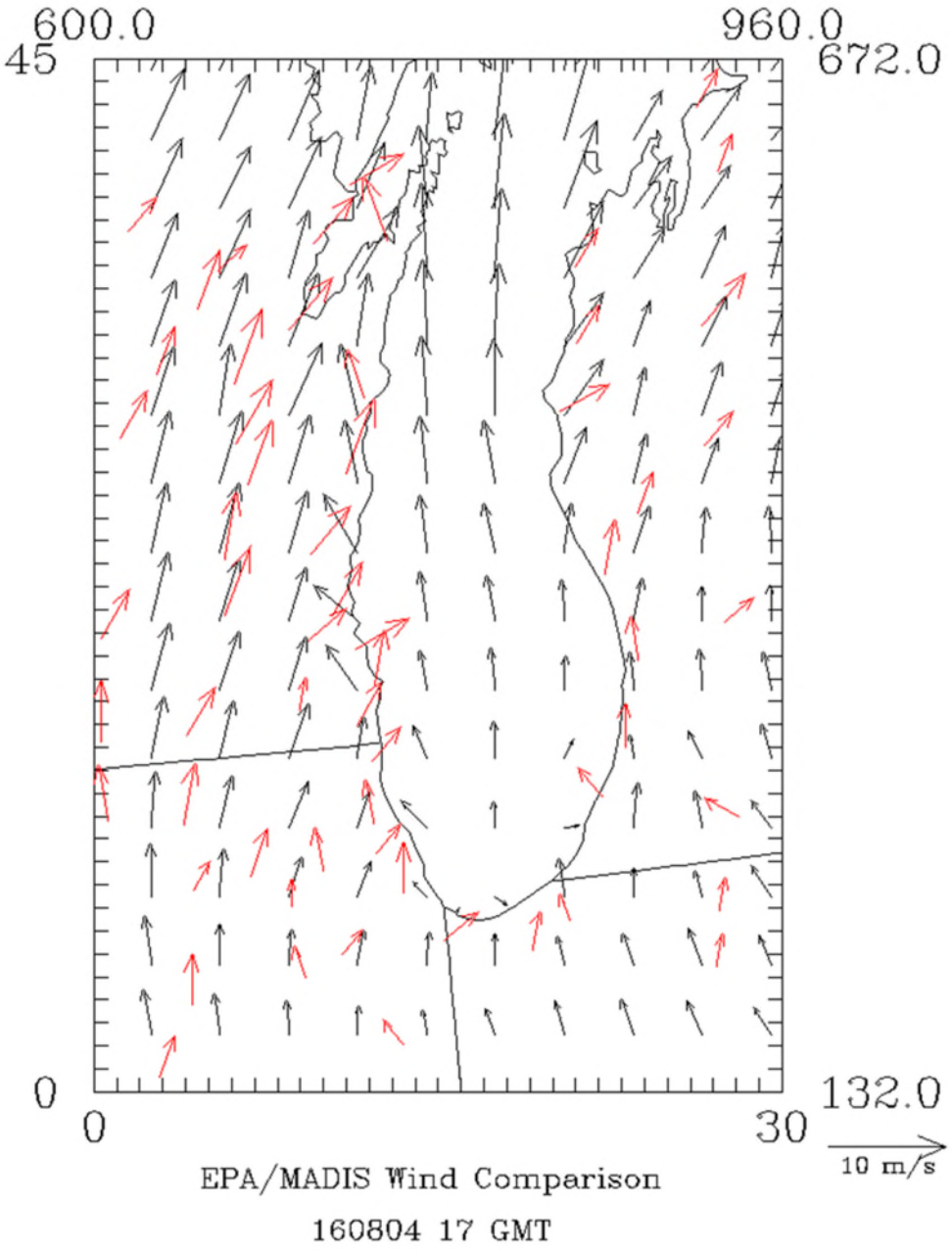


Figure 6. Model estimated (black) and observed (red) winds in the Lake Michigan area at 1200 CDT on August 4, 2016.

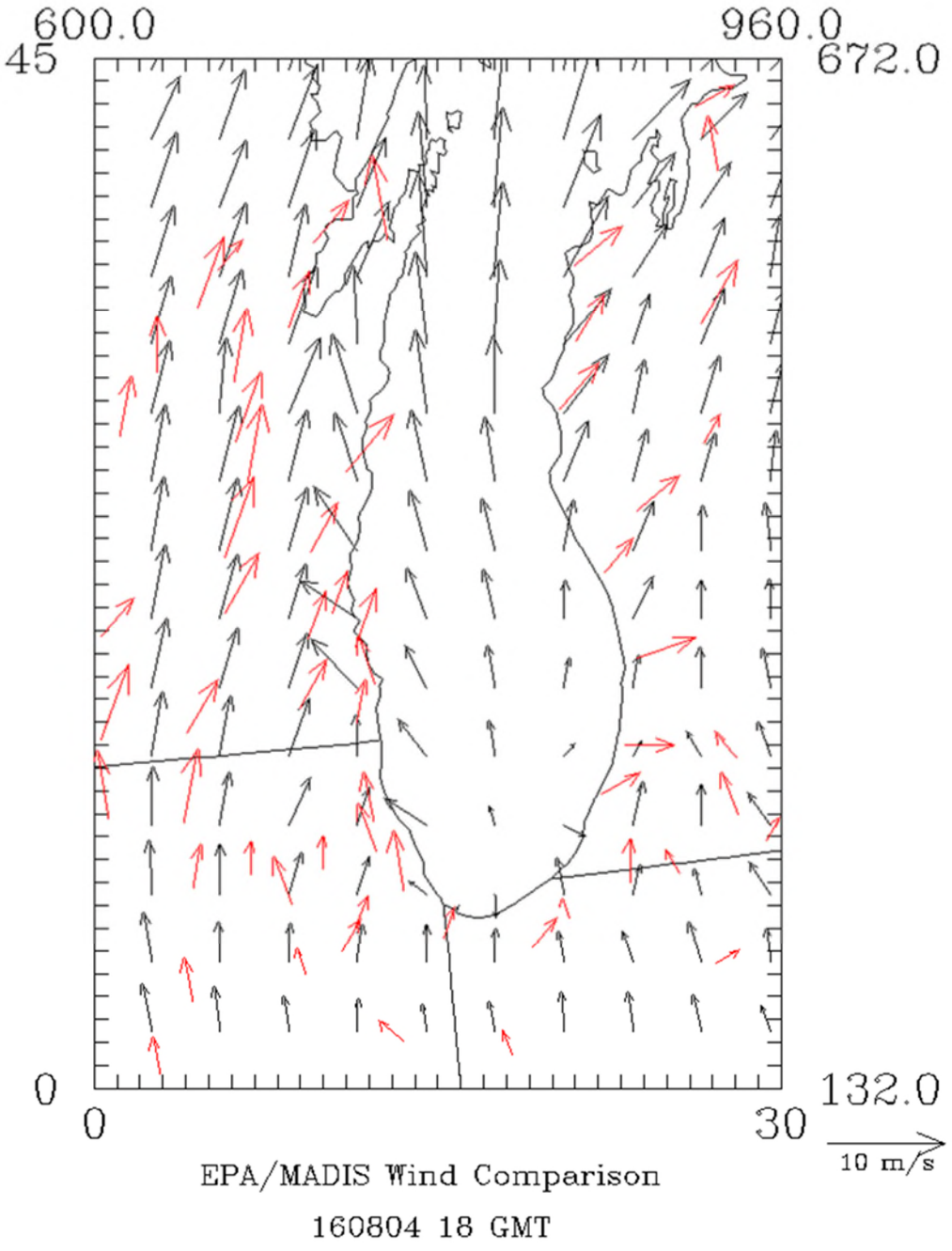


Figure 7. Model estimated (black) and observed (red) winds in the Lake Michigan area at 1300 CDT on August 4, 2016.

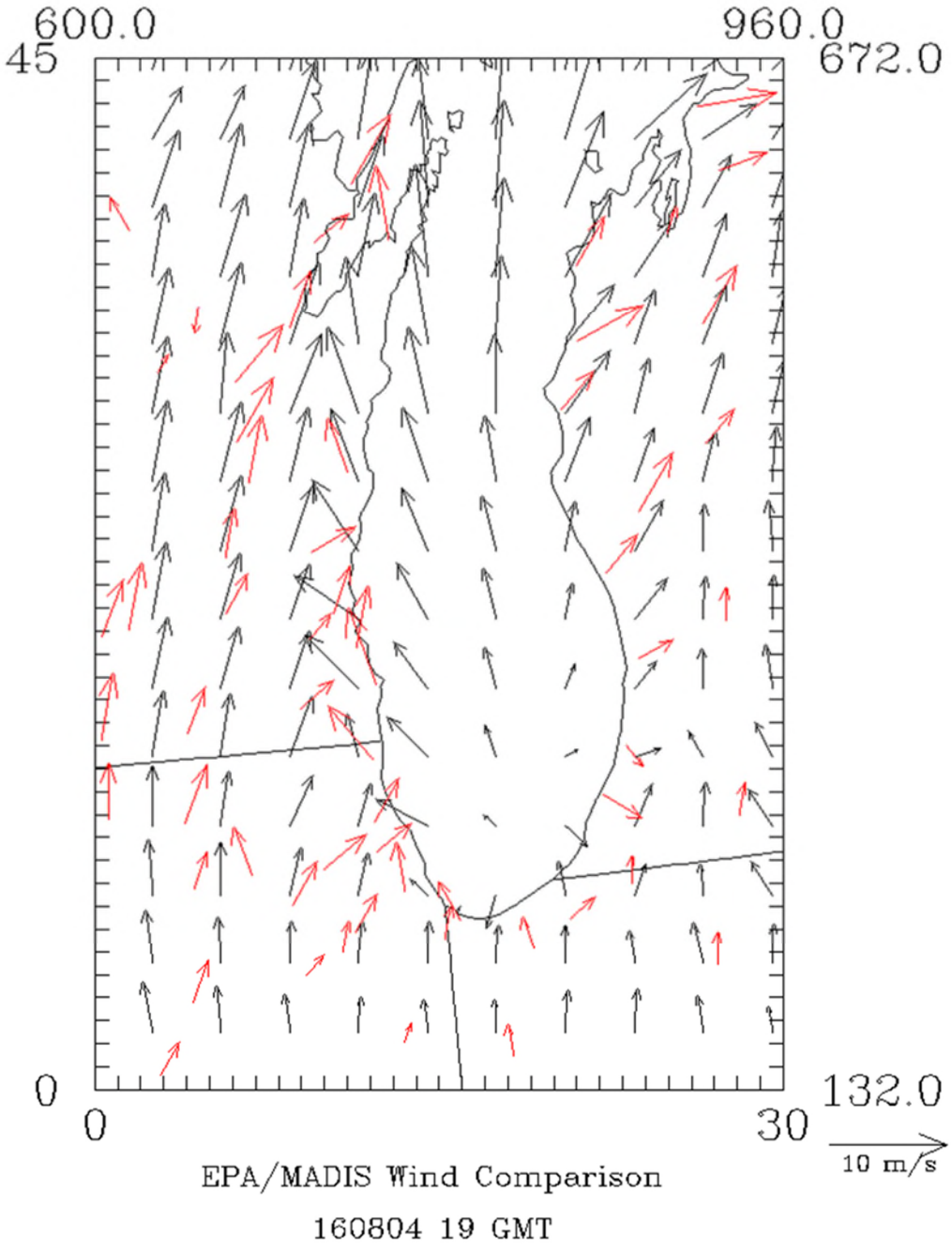


Figure 8. Model estimated (black) and observed (red) winds in the Lake Michigan area at 1400 CDT on August 4, 2016.

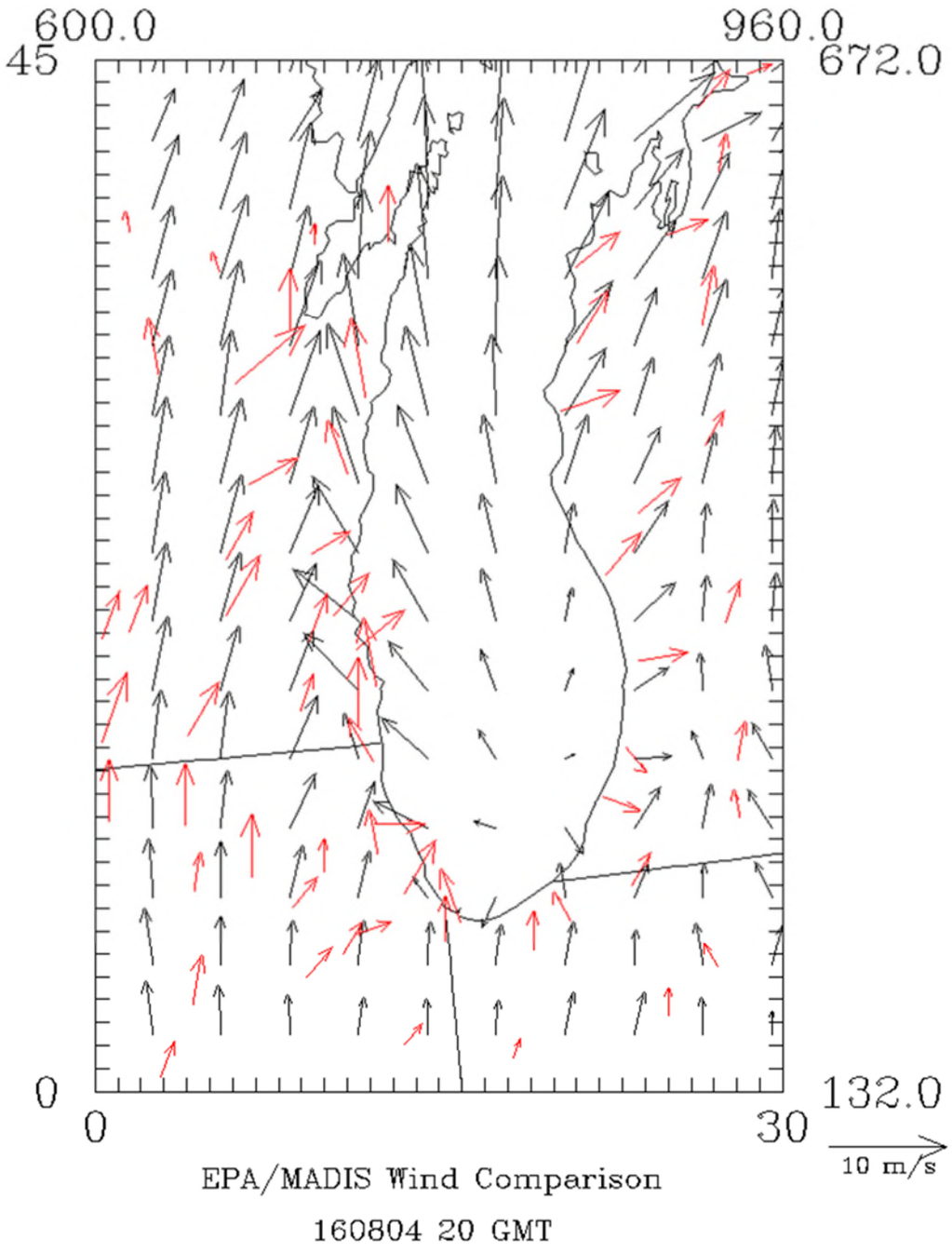


Figure 9. Model estimated (black) and observed (red) winds in the Lake Michigan area at 1500 CDT on August 4, 2016.

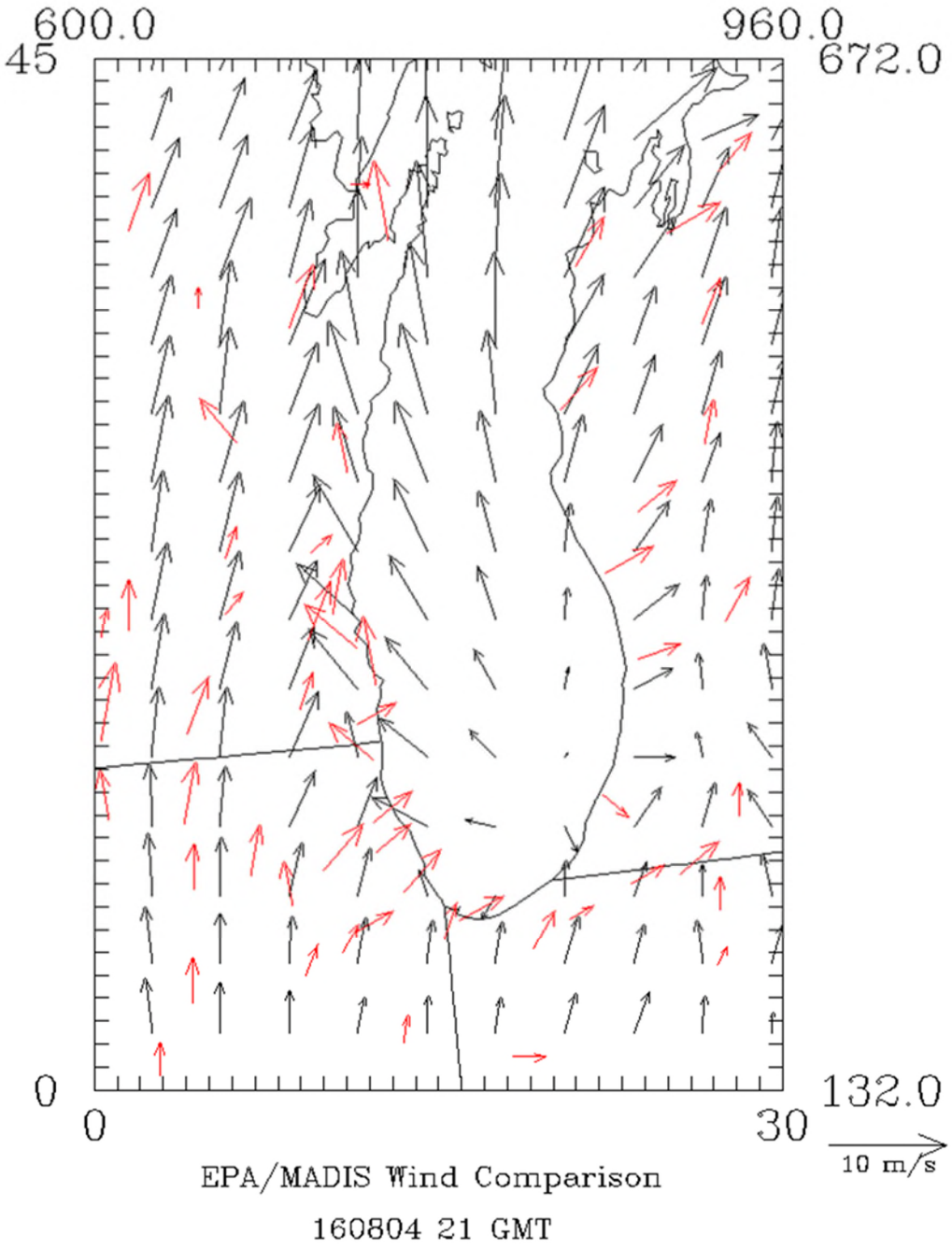


Figure 10. Model estimated (black) and observed (red) winds in the Lake Michigan area at 1600 CDT on August 4, 2016.

In addition to grid size resolution and complex meteorology issues, modeling performed by EPA[17] and the LMOS 2017 study both showed a negative bias in predicted ozone concentrations

[17] EPA-HQ-OAR-2021-0668-0099

in the Lake Michigan region. LMOS 2017 study researchers have experimented with increasing anthropogenic VOC emissions and decreasing anthropogenic NOx emissions. These emission changes improved air quality model performance reducing the negative bias. VOC speciation and spatio-temporal release patterns should also be reviewed. This evaluation by the LMOS 2017 research scientists indicates there are significant errors in the quantity and speciation of the VOC/NOx emissions used in the EPA's air quality modeling platform to characterize state contribution to ozone in Step 2 of EPA's analyses linking these states to critical nonattainment monitors.

For these reasons, EPA must consider finer grid resolution modeling over the Lake Michigan domain to adequately capture ozone formation and significant contribution at receptors located on complex land-water interfaces because model evaluation shows that the model fails to adequately characterize ozone production at these monitors. Absent a wholesale revision of EPA's modeling protocol, MOG believes that EPA's use of modeling with poor performance at critical monitors amounts to an arbitrary and capricious decision when used to establish linkages under Step 2.

11. The days selected by EPA for modeling and analysis are not appropriate.

EPA's analysis erroneously relies on air quality monitoring data that is known to have been influenced by exceptional events. Failure to have accounted for the impact of these exceptional events overstates the ozone design values for the problem monitors involved and the contribution of upwind states and results in over-control that is prohibited under the Clean Air Act.

CAA §319 (42 U.S. Code § 7619) requires that EPA promulgate regulations that remove the impact of air quality data that is affected by what is known as "exceptional events." The following statutory requirements are established in Section 319 (b) (2)(B):

> Not later than 1 year after the date on which the Administrator publishes proposed regulations under subparagraph (A)…the Administrator shall promulgate final regulations governing the review and handling o[f] air quality monitoring data influenced by an exceptional event that are consistent with paragraph (3).…
>
> (3)(A) …In promulgating regulations under this section, the Administrator shall follow—
> …
> (v)the principle that air quality data should be carefully screened to ensure that events not likely to recur are represented accurately in all monitoring data and analyses.

EPA has published three guidance documents describing the process by which the impacts of exceptional events are to be managed. In 2018, a memorandum by then-Director of Office of Air Quality Planning and Standards Peter Tsirigotis on the development of Good Neighbor SIPs provided a discussion of exceptional events and the importance of downwind states seeking available regulatory relief before turning to upwind states. Consideration of exceptional events allows certain monitoring data impacted by exceptional events to be removed from inclusion in the determination of design values related to determining compliance with the NAAQS.

In April of 2019, the Director of the Air Quality Assessment Division, Richard Wayland, and then-Director of the Air Quality Policy Division, Anna Marie Wood, published a memorandum titled "Additional Methods, Determinations, and Analyses to Modify Air Quality Data Beyond Exceptional Events." Their memo notes that the "2016 Exceptional Events Rule specified that it applies to the treatment of monitoring data showing exceedances or violations of any NAAQS for the purpose of [a number of] types of regulatory determinations by the Administrator," including "other actions on a case-by-case basis as determined by the Administrator," and also noted that "EPA included 'other actions on a case-by-case basis'… to provide a degree of flexibility for addressing other possible regulatory determinations," adding that "the case-by-case provision is not intended to serve as a data-exclusion mechanism for determinations by the Administrator not influenced by exceedances or violations of the NAAQS,

nor for non-regulatory purposes."

The Wayland, Wood memo then provided guidance to EPA Regions and state agencies regarding three types of determinations and analyses under which the exclusion, selection, or adjustment of air quality monitoring data may be appropriate. Significantly, one of the types of determinations and analyses is certain modeling analyses using EPA's Guideline on Air Quality Models (see 40 CFR Part 51, Appendix W) …estimating base and future year design values for ozone and PM2.5 SIP attainment demonstrations." (emphasis supplied)

On August 8, 2019, Acting Director of the Air Quality Policy Division Scott Mathias and Director of the Air Quality Assessment Division Richard Wayland published a memorandum titled "Exceptional Events Guidance: Prescribed Fire on Wildland that May Influence Ozone and Particulate Matter Concentrations," in which they provided guidance to all EPA Regions regarding the manner in which ozone monitoring data that is measured on days impacted by both prescribed fires and wildfires, should be analyzed, recognizing that such data may be affected by fire events and therefore improperly bias ozone design values.

A number of states including Nevada, New Jersey, Massachusetts, Rhode Island, Maryland, Colorado, Pennsylvania, Louisiana, and Connecticut have already made requests to have air masses impacted by the numerous wildfires that occurred in 2016 and 2017 be declared Exceptional Events – thus allowing monitored data influenced by those events to be excluded from the calculation of the design value for the affected monitor. The exceptional events demonstrations of all of these states have been approved in whole or in part by EPA using the guidance applicable at the time the demonstrations were submitted.

The Connecticut demonstration related to the May 2016 event showed that Canadian wildfire caused the event and noted that ". . . the exceedances of May 25-26th cannot be attributed

to EGUs operating on high electric demand days as is more typically the case later in the ozone season." EPA concurred in that demonstration on July 31, 2017. For the three Connecticut monitors upon which the Revised CSAPR Update was based (Stratford/Fairfield, 90013007; Westport/ Fairfield, 90019003; and Madison/New Haven, 90099002), accounting for the 2016 exception event resulted in a significant change in the ozone DV for each monitor. This is illustrated in Figure 10 for Stratford, Figure 11 for Westport and Figure 12 for Madison below in which the red bars reflect monitor values that occurred during the exceptional events that occurred in May and July of 2016:

AQS_SITE_ID 90013007 Fairfield, Connecticut

Date	Daily MDA8 (ppm)
7/22/2016	0.096
5/25/2016	0.089
7/15/2016	0.084
7/18/2016	0.083
8/11/2016	0.082
7/21/2016	0.081
8/12/2016	0.079
7/17/2016	0.079
8/24/2016	0.076
5/26/2016	0.076

Value	Ozone MDA8 (ppb)
2016 4th (fire)	83
2016 4th (no fire)	79
2014-16 DV (fire)	81
2014-16 DV (no fire)	79

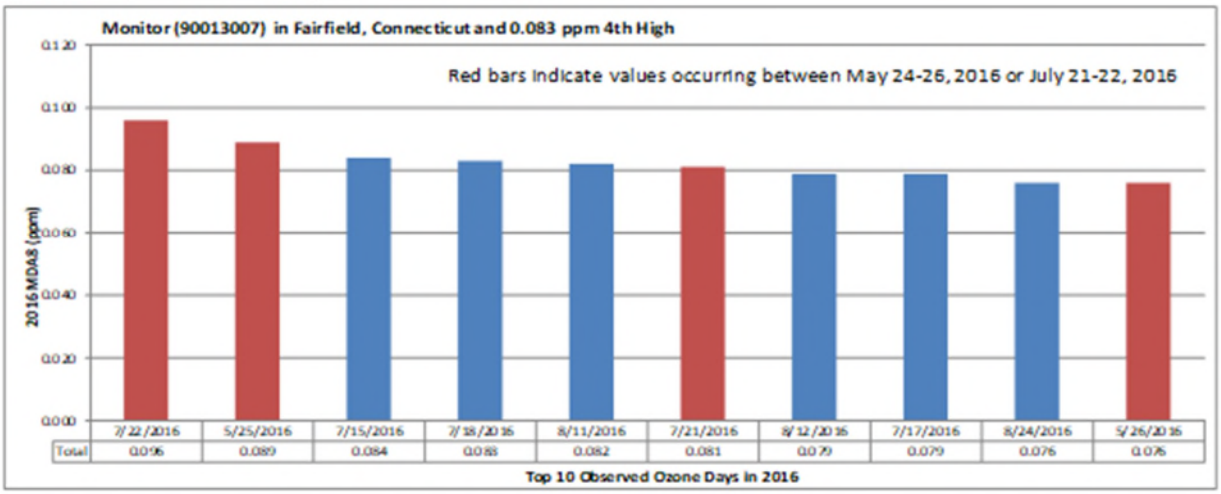


Figure11. 2016 Exceptional Event for Stratford.

AQS_SITE_ID 90019003

Fairfield, Connecticut

Date	Daily MDA8 (ppm)
7/22/2016	0.097
5/26/2016	0.090
5/25/2016	0.087
7/21/2016	0.087
8/11/2016	0.087
5/28/2016	0.081
7/18/2016	0.080
8/24/2016	0.079
8/31/2016	0.076
7/17/2016	0.076

Value	Ozone MDA8 (ppb)
2016 4th (fire)	87
2016 4th (no fire)	79
2014-16 DV (fire)	85
2014-16 DV (no fire)	82

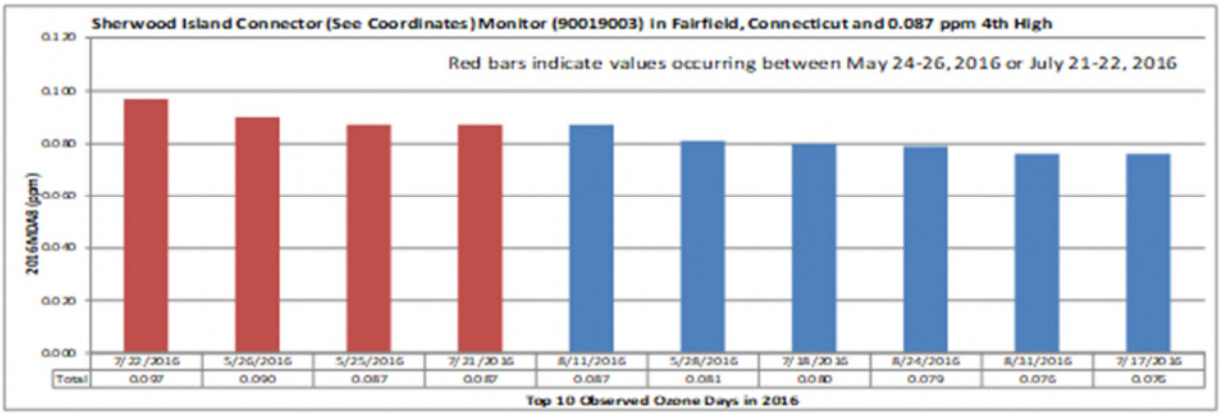


Figure 12. 2016 Exceptional Event for Westport

AQS_SITE_ID 90099002 New Haven, Connecticut

Date	Daily MDA8 (ppm)
5/25/2016	0.089
5/26/2016	0.086
7/18/2016	0.082
9/14/2016	0.080
6/7/2016	0.078
7/22/2016	0.078
8/13/2016	0.077
8/12/2016	0.075
7/21/2016	0.074
6/21/2016	0.071

Value	Ozone MDA8 (ppb)
2016 4th (fire)	80
2016 4th (no fire)	77
2014-16 DV (fire)	76
2014-16 DV (no fire)	75

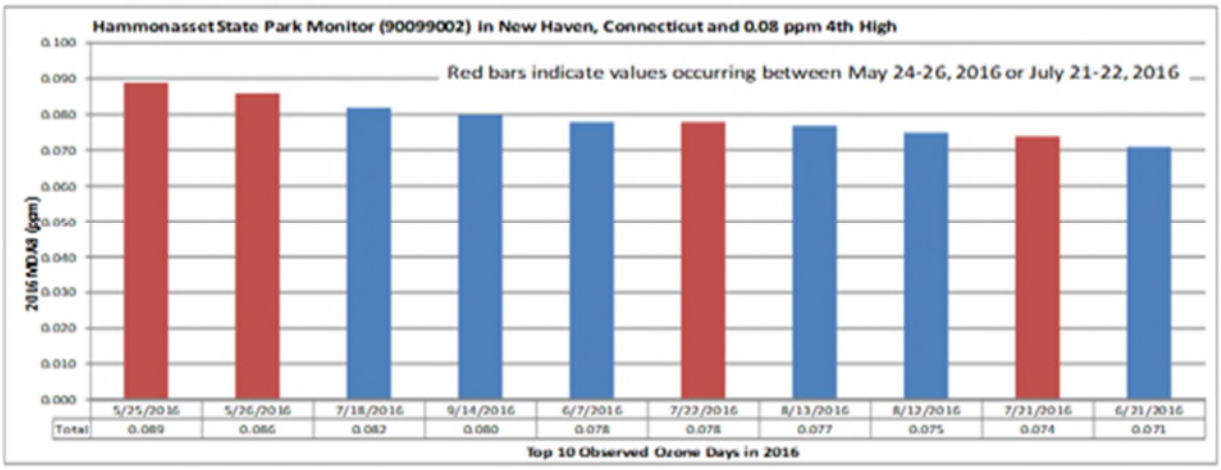


Figure 13. 2016 Exceptional Event for Madison.

It is also noted that in the Connecticut exceptional events demonstration for the May 2016 episode there were nine total monitors which were shown to have been impacted by the wildfire event. Of those nine, only four were shown to have immediate regulatory significance - Abington, Westport, Cornwall, and East Harford. Each of these monitors, with exceptional event exclusion, were determined to demonstrate attainment with the 1997 (Westport) or 2015 (Abington) ozone NAAQS or potentially prevent impediment of attainment with the 2008 ozone NAAQS (Cornwall and East Hartford). Two monitors not included in CT DEEP's demonstration request or in EPA's concurrence are the Stratford and Madison monitors, currently listed as nonattainment in EPA's modeling.

In the CT DEEP demonstration, the Stratford monitor would have had a 2016 4th high ozone value reduced by 1 ppb (83 ppb to 82 ppb) and the Madison monitor would have had a 2016

4th high ozone value drop 2 ppb (from 80 ppb to 78 ppb) because of the wildfire's impact. At the time, this change in resulting 2014-2016 design value was 1 ppb at Stratford and negligible at the Madison monitor due to truncation of the 3-year average, however, now that these 2016 4th high values are also being used in the proposed rule's projection of EPA's 2016 platform to 2023, these adjustments now have regulatory significance.

CT DEEP has itself recognized the potential future impact of the additional monitors to be considered and in the 2016 wildfire demonstration report to EPA stated:

> "Based on the severity of the difference in critical value, and the expectation that those sites with the largest differences will be controlling in any assessment of attainment status, DEEP has decided to focus this demonstration on the four sites with the greatest difference in critical value. <u>If future assessments of attainment status based on inclusion of sites with lower critical differences prove to be controlling, then DEEP will revisit this analysis</u>." (emphasis added)

The potential change in 2016-impacted 4th high concentrations at these two monitors have the possibility to generate alternate average and maximum future year design values that would impact nonattainment or maintenance status in the 2023 modeled results and could reduce the significant contribution calculation of one or more upwind states linked to those monitors if dates selected for the top 10 base year (RRF) or future year (significant contribution) days were excluded with an exceptional events concurrence. It is imperative that EPA consider these regulatory significant events, recalculate the projected design value excluding these event day concentrations, and determine the attainment status and significant contribution metrics resulting from the new values under step 1 and step 2 of the 4-step interstate transport framework.

In addition, there have been multiple fire and other exceptional events episodes in the 2014-2018 period. Multiple fire and other exceptional events between 2018 and the present clearly fall within the ambit of the guidance memoranda published by EPA that have resulted in a significant impact on the design values of identified nonattainment and maintenance monitors. EPA is now

obligated to undertake an examination of the exceptional events that occurred and impacted the monitoring data and therefore the modeling analysis before concluding that any of the monitors relied upon to support this proposal are considered either nonattainment or maintenance, and, more importantly, before concluding that a multistate transport rule should be based on such monitors. Failure to undertake this necessary additional analysis creates a fatal flaw in the final rule and individual state SIP denials based on that rule.

At multiple monitors, the days that EPA has selected for relative response factor (RRF) and used in future year design value and significant contribution calculations have back trajectories that do not largely support influence from upwind states. In fact, many trajectories indicate a localized flow and associated impact from local sources. Additionally, two of the days used in the calculation have been identified in Connecticut's exceptional events demonstration for the episode related to the Fort McMurry wildfires in May 2016.

As noted earlier, the Connecticut demonstration related to the May 2016 event showed that Canadian wildfire caused the event and noted that ". . . the exceedances of May 25-26th cannot be attributed to EGUs operating on high electric demand days as is more typically the case later in the ozone season." EPA concurred in that demonstration on July 31, 2017.

EPA selects the top ten days from the base year (2016) modeling platform to calculate the RRF used in the projection year design value calculation and to determine significant contribution from upwind states to downwind receptors. Table 3 presents the top ten modeled days selected for three Connecticut monitors from EPA's recent Revised CSAPR Update modeling.

Top Day	Stratford (90013007)	Westport (90019003)	Madison (90099002)
1	7/25/2016	7/25/2016	7/25/2016
2	5/26/2016*	7/6/2016	7/18/2016
3	7/6/2016	5/26/2016*	5/26/2016*
4	7/18/2016	7/18/2016	7/22/2016
5	7/22/2016	7/28/2106	7/6/2016
6	8/31/2016	7/21/2016	5/25/2106*
7	5/28/2016*	7/17/2016	9/14/2016
8	7/17/2016	8/24/2106	7/17/2016
9	8/24/2016	7/22/2016	6/7/2017
10	7/21/2016	8/31/2016	8/31/2016

**dates referenced by Connecticut DEEP as impacted by wildfire smoke in exceptional events demonstration*

Table 3. Top ten base year modeled days used in EPA RRF and significant calculation determinations for three Connecticut monitors.

Figures 14, 15 and 16 below present the 48-hour back trajectories from the Stratford, Westport, and Madison monitors, respectively. These figures arranged in order from highest base year modeled day (top left) to tenth highest (lower right) show the flow of the air packets influencing the modeled ozone concentrations on the dates listed in Table 3.

Except for May 26 (a wildfire smoke exceptional event influenced day) and July 16, none of the trajectories at any of the three monitors reaches farther west in the U.S. than western Pennsylvania. In many cases, a localized recirculation is noted in the region or initiating over the Atlantic Ocean. An additional transport pattern is noted to arrive via upstate New York and

southeastern Canada and others reach south along the mid-Atlantic coast. According to these patterns, significant flow initiating over many upwind states is not present indicating negligible influence from sources within those states.

In addition, a trajectory analysis for the top 10 modeled days used in EPA's significant contribution calculations show that few of the trajectories at the three Connecticut monitors passed over many upwind states, questioning whether units located within the region truly were significant contributors to the monitors on the days selected for nonattainment and maintenance determination and used to inform the calculation for significant contribution.

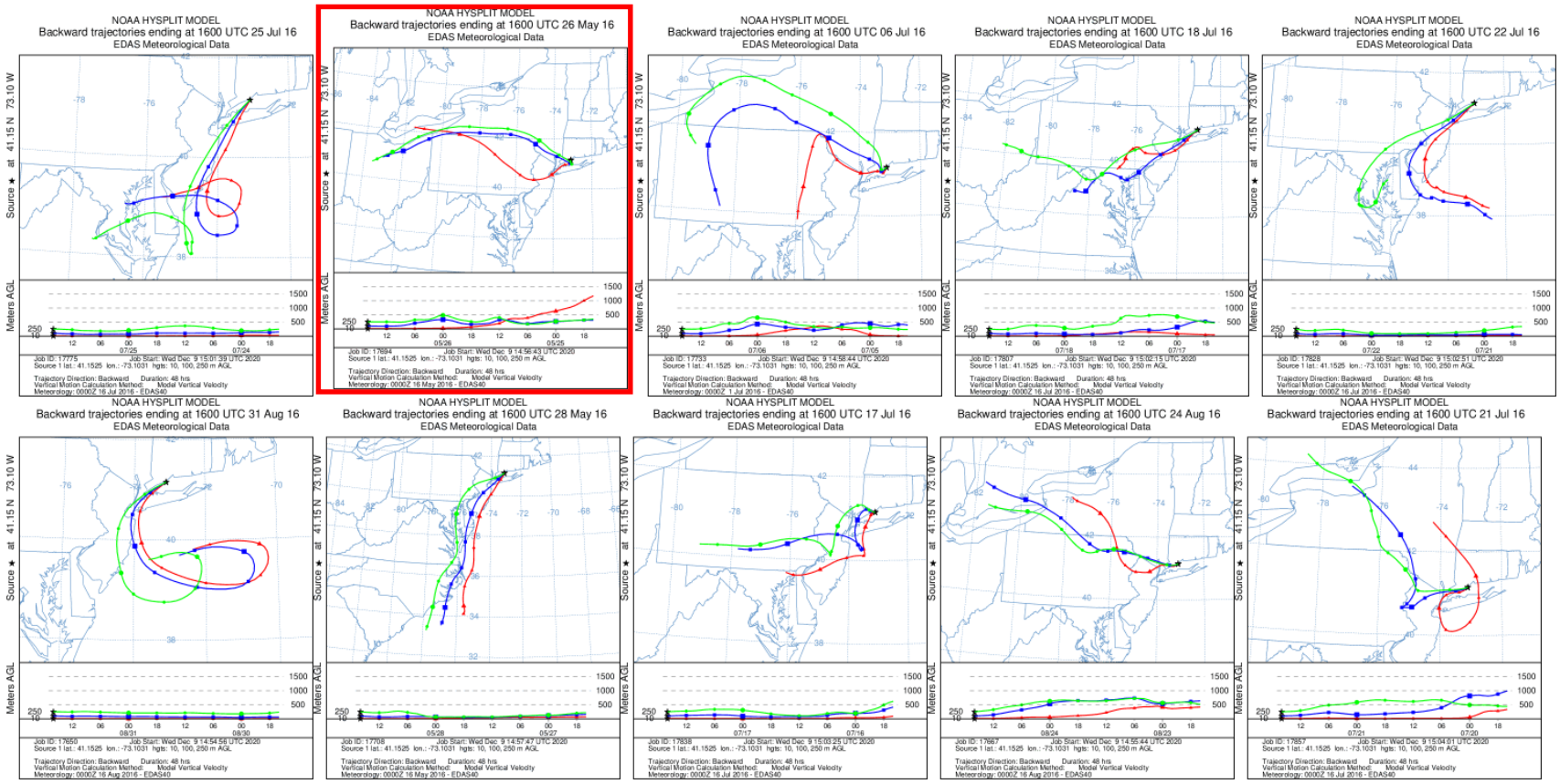


Figure 14. 48-hour back trajectories from Stratford (090013007) monitor on top 10 days used in RRF and significant contribution calculations in order of highest base year modeled value (top left to bottom right). Red outlined trajectories indicate exceptional events days.

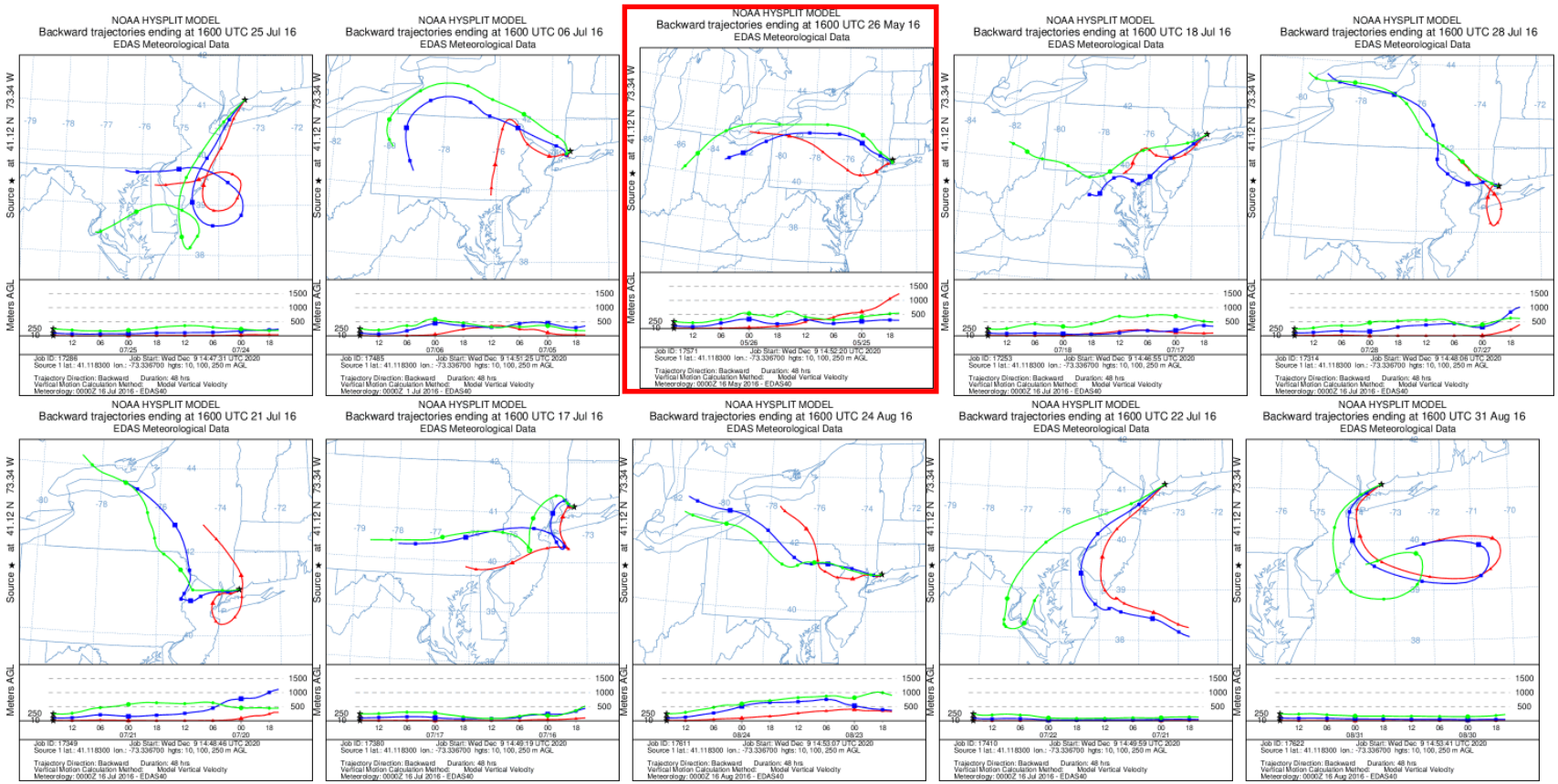


Figure 15. 48-hour back trajectories from Westport (090019003) monitor on top 10 days used in RRF and significant contribution calculations in order of highest base year modeled value (top left to bottom right). Red outlined trajectories indicate exceptional events days.

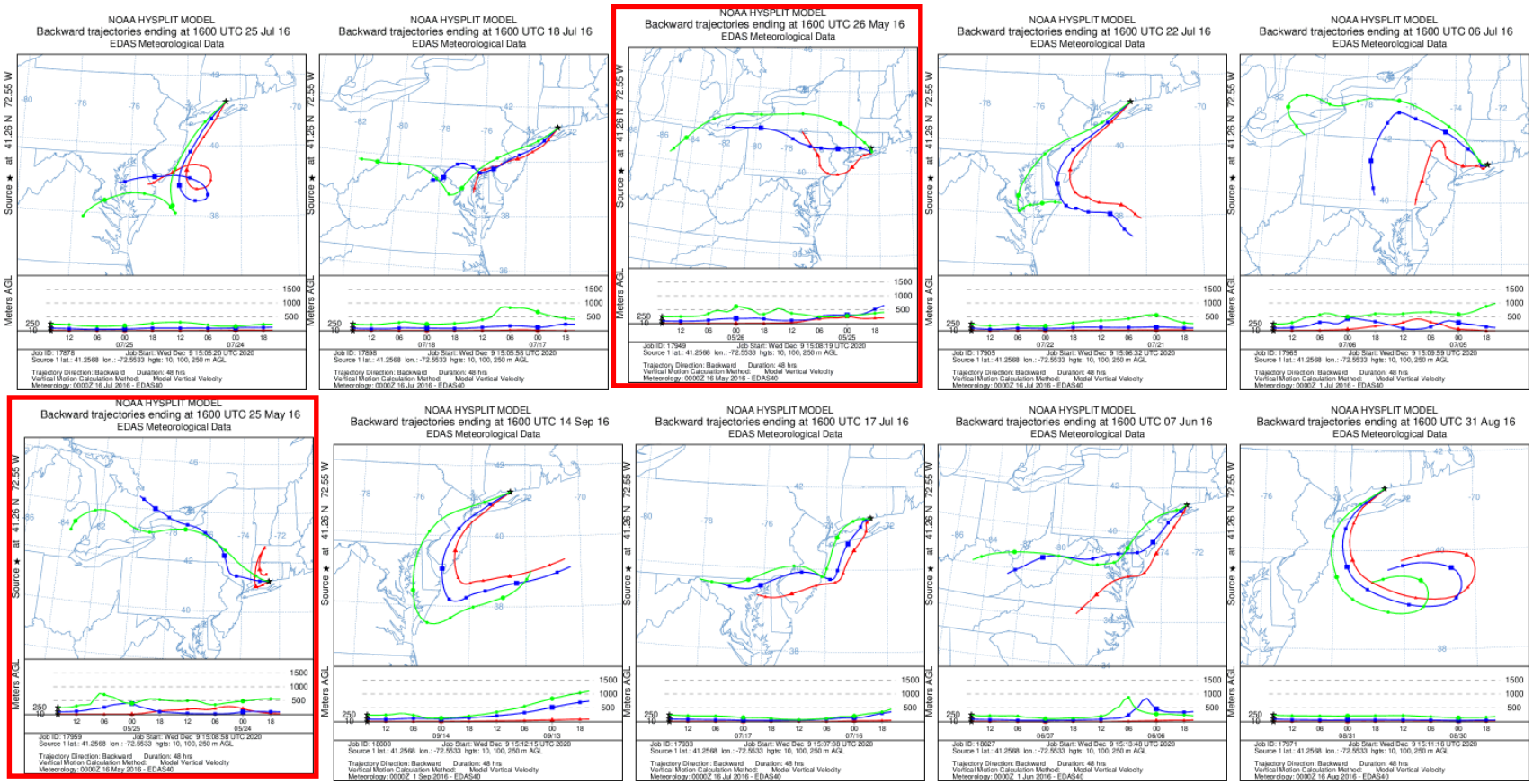


Figure 16. 48-hour back trajectories from Madison (090099002) monitor on top 10 days used in RRF and significant contribution calculations in order of highest base year modeled value (top left to bottom right). Red outlined trajectories indicate exceptional events days.

These results call into question EPA's proposed wholesale disapproval of 19 upwind state Good Neighbor SIPs because they are inconsistent with EPA's significant contribution analyses at Step 2 .

MOG also finds it to be significant that the enforcement action brought by the State of New Jersey against USEPA involved the operation of certain boilers and emergency generators at USEPA's facility in Edison, New Jersey on days which were forecasted to be unhealthy air days. Edison, New Jersey is, of course, located within the New York-New Jersey-Connecticut Nonattainment Area. Specifically included among the days of this noncompliance were May 26, 2016, and July 6, 2016.

In addition to being forecasted "unhealthy air quality days" as described in the settlement agreement between New Jersey and USEPA and as documented in the Tables and Figures above, May 26, 2016, and July 6, 2016, are among the top ten days that are associated with critical nonattainment and maintenance air quality monitors located in the New York-New Jersey-Connecticut Nonattainment Area.

Set out below is data taken from the data files of EPA's Final Revised CSAPR Update Rule ("Rule")[18] that were used by EPA to determine at Step 1 whether there were downwind nonattainment or maintenance monitors to be addressed in the Rule and at Step 2 whether there were upwind states that significantly contributed to the nonattainment or maintenance status of the monitors identified at Step 1. In each case you will notice that the May 26, 2016, and July 6, 2016, noncompliance dates were high among the top 10 dates that were the basis for EPA's Revised CSAPR Update.

[18] EPA-HQ-OAR-2020-072-0064_attachment_2.

				Step 1 - RRF/DVf Calculation 3x3 "No Water" Base Year			Step 2 - Significant Contribution Future Year Modeled (APCA)	
Name	**Monitor**	**Rank**		**Date**	**Ozone (ppb)**		**Date**	**Ozone (ppb)**
Stratford	090013007	1		20160725	94.43		20230725	82.70
		2		20160526	87.23		20230526	80.61
		3		20160706	87.19		20230718	77.42
		4		20160718	85.46		20230706	75.49
		5		20160722	81.02		20230722	72.68
		6		20160831	80.24		20230831	72.50
		7		20160528	79.96		20230528	72.00
		8		20160717	79.66		20230717	68.07
		9		20160824	77.89		20230824	66.71
		10		20160721	77.34		20230923	65.10

Table 4. Top 10 modeled dates and ozone concentrations at Stratford, CT monitor (090013007) as used in Revised CSAPR Update rule for nonattainment designation (Step 1) and significant contribution (Step 2) calculations

				Step 1 - RRF/DVf Calculation 3x3 "No Water" Base Year			Step 2 - Significant Contribution Future Year Modeled (APCA)	
Name	**Monitor**	**Rank**		**Date**	**Ozone (ppb)**		**Date**	**Ozone (ppb)**
Westport	090019003	1		20160725	94.43		20230725	84.43
		2		20160706	93.83		20230526	82.75
		3		20160526	87.23		20230706	78.73
		4		20160718	83.82		20230718	77.82
		5		20160728	83.07		20230831	76.84
		6		20160721	80.99		20230528	73.58
		7		20160717	80.97		20230722	72.27
		8		20160824	80.70		20230824	71.08
		9		20160722	80.68		20230717	69.39
		10		20160831	80.24		20230525	67.51

Table 5. Top 10 modeled dates and ozone concentrations at Westport, CT monitor (090019003) as used in Revised CSAPR Update rule for nonattainment designation (Step 1) and significant contribution (Step 2) calculations.

			Step 1 - RRF/DVf Calculation 3x3 "No Water" Base Year			Step 2 - Significant Contribution Future Year Modeled (APCA)	
Name	**Monitor**	**Rank**	**Date**	**Ozone (ppb)**		**Date**	**Ozone (ppb)**
Madison	090099002	1	20160725	88.56		20230718	76.54
		2	20160718	85.89		20230914	75.61
		3	20160526	84.17		20230526	75.13
		4	20160722	82.75		20230722	71.28
		5	20160706	79.44		20230525	69.91
		6	20160525	77.21		20230706	68.46
		7	20160914	76.98		20230717	67.91
		8	20160717	76.54		20230607	67.33
		9	20160607	75.82		20230831	67.11
		10	20160831	75.51		20230824	64.76

Table 6. Top 10 modeled dates and ozone concentrations at Madison, CT monitor (090099002) as used in Revised CSAPR Update rule for nonattainment designation (Step 1) and significant contribution (Step 2) calculations.

The fact that EPA's noncompliance in 2016 occurred on the same days as these three monitors in the same nonattainment area recorded top 10 ozone concentrations cannot be ignored. MOG urges that EPA's modeling be revised to assess the air quality impact of the emissions related to EPA's noncompliance on May 16, 2016, and July 6, 2016, and to assess the implications of that assessment on this proposal.

12. The 60-day comment period is too short to allow review and analysis of the proposed denials for multiple states.

EPA eight proposed Good Neighbor SIP disapprovals would result in disapproval of Good Neighbor SIPs submitted by 19 states regarding interstate transport for the 2015 8-hour ozone national ambient air quality standard. Significantly, EPA established a comment period of only 63 days that applies to all eight proposals for all 19 states. The sheer number of EPA proposed actions regarding these Good Neighbor SIPs alone is evidence that the comment period allowed by EPA is grossly insufficient. Compounding the challenge for stakeholders of the inadequate comment

period on these eight proposed disapprovals, EPA also proposed a 181 page transport rule on April 6, 2022, during the pendency of the comment period on these eight proposed disapprovals. The comment period on the transport rule is also 60 days, ending June 6, 2022.

MOG has been an active participant in transport rule development since the 1997 NOx SIP Call and continues to be keenly interested in the development of air pollution regulations that are based on sound science. MOG has undertaken independent modeling and verification of EPA modeling in the past and offered comments on how to improve the accuracy and completeness of those efforts in prior comments on various transport rules.

As a result of its continued interest in the transport issue, MOG has developed technical capabilities that allow it to analyze and verify the science behind both Good Neighbor SIPs proposed by states and EPA actions to approve or disapprove them. MOG is acutely aware that preparation of proper technical analyses of Good Neighbor SIPs involves the use of complicated dispersion models that take substantial execution time. MOG's significant experience in these matters also makes clear that simultaneous analysis of eight proposed rulemakings in addition to analyzing a 181 page transport rule that involves the same ozone NAAQS as the Good Neighbor SIPs dramatically complicates the analysis process.

The totality of these now nine pending rulemakings necessitates a period substantially longer than the allowed 63 days to allow stakeholders, including MOG, to analyze the proposed rules in parallel and prepare comprehensive comments that will better inform the rulemaking process, and EPA has utterly failed to allow sufficient time for that to happen.

13. Conclusion

For the reasons set forth in these comments, the Midwest Ozone Group urges that EPA withdraw the subject proposed SIP disapprovals in favor of correcting the legal and technical errors that have been identified in its analysis and proposing an appropriate opportunity for states to address any deficiencies EPA may find in any Good Neighbor Plans implementing the 2015 ozone NAAQS.