

MIDWEST OZONE GROUP

FUTURE OUTLOOK ON IMPLEMENTATION OF GOOD NEIGHBOR PROVISIONS OF CLEAN AIR ACT

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http://midwestozonegroup.com/files/MOG_Future_Outlook_on_Implementation_of_Good_Neighbor_Provisions_of_Clean_Air_Act_3.10.20.pdf

This document¹ is provided by the Midwest Ozone Group (MOG)² to offer an update on the various efforts that are being undertaken to develop approvable Good Neighbor SIPs by states in accordance with USEPA's 4 Step process for addressing Good Neighbor requirements of Section 110(a)(2)(d) of the federal Clean Air Act. For each step, the status of complying states is listed along with the illustrations of the capabilities of advanced analytics and modeling that states and USEPA can rely upon to make decisions in the future about air quality issues.

While much of MOG's efforts have focused on the eastern portion of the nation, many of these developments are applicable nation-wide.

Introduction.

- There are three mechanisms available to address Good Neighbor requirements under the federal Clean Air Act:
 1. Transport rules,

¹ Comments or questions about this document should be directed to David M. Flannery, Kathy G. Beckett, Edward L. Kropp, or Laura M. Goldfarb, 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; skipp.kropp@steptoe-johnson.com; and laura.goldfarb@steptoe-johnson.com, respectively. The Midwest Ozone Group believes that informed public policy development and decisions should be based on advanced technical and legal analysis. This document was prepared with the technical assistance of Alpine Geophysics, LLC.

² The members of and participants in the Midwest Ozone Group include: American Electric Power, American Forest & Paper Association, American Wood Council, Ameren, Alcoa, Appalachian Region Independent Power Producers Association (ARIPPA), ArcelorMittal, Associated Electric Cooperative, Big Rivers Electric Corp., Citizens Energy Group, Council of Industrial Boiler Owners (CIBO), Duke Energy, East Kentucky Power Cooperative, ExxonMobil, FirstEnergy, Indiana Energy Association, Indiana Utility Group, LGE / KU, Marathon Petroleum, National Lime Association, Ohio Utility Group, Olympus Power, and City Water, Light and Power (Springfield IL).

2. Good Neighbor Plans, and
3. 126 petitions.

- Transport rules (e.g. CSAPR Update and CSAPR Close-Out) have been promulgated by USEPA to address only 2008 the National Ambient Air Quality Standard (NAAQS) for ozone. Recent Court decisions remanded the CSAPR Update Rule to EPA and vacated the CSAPR Close-Out Rule. USEPA has not pursued the transport rule mechanism to address the 2015 ozone NAAQS.
- Good Neighbor SIPs are being advanced by most states as a means of addressing Good Neighbor requirements of the Clean Air Act. This document will focus largely on those efforts and the guidance that has been issued by EPA to address the development of those plans.
- Section 126 of the Clean Air Act also provides a mechanism for a downwind state to petition EPA to address Good Neighbor obligations of upwind states. It is understood, however, that approval of an upwind state's Good Neighbor SIP has the legal effect of resolving issues that could otherwise be raised in 126 petitions.
- EPA has established a Four Step process for address responsibilities under the Good Neighbor provisions of the Clean Air Act. These steps include:

Step 1 - Identify downwind receptors that are expected to have a problem attaining or maintaining the NAAQS.

Step 2 - Determine which states are linked to the air quality problem.

Step 3 - Determine whether those states have sources that are significant contributors to the problem such that emissions from those sources must be reduced.

Step 4 - Implement necessary emissions reductions on sources in states that are a significant contributor to a downwind receptor state.

Step 1 - Identify downwind receptors that are expected to have problems attaining or maintaining the NAAQS.

- EPA’s 12 km modeling data published on March 27, 2018 provides a database upon which EPA is prepared to approve Good Neighbor SIPs.³ That data identifies 11 potential nonattainment and 14 potential maintenance areas outside of California using its “No Water” data set.
- EPA March 27, 2018 memorandum authorizes alternative modeling platforms to identify problem monitors related to 2015 ozone NAAQS.⁴ This can improve the accuracy of the modeling results when smaller geographic areas that don’t include water are taken into account.
- Due in part to their geographic location, several 2015 ozone NAAQS Good Neighbor SIPs have been proposed for approval by EPA without reliance on any of the authorized flexibilities. These include:
 - Southeast states⁵
 - Alabama
 - Georgia
 - Florida
 - North Carolina
 - South Carolina
 - Tennessee
 - Massachusetts⁶
 - Nebraska⁷
 - Oregon⁸
 - Idaho⁹
- LADCO has offered alternative modeling data that is similar to EPA’s data except that it relies on outdated ERTAC data to estimate EGU emissions.¹⁰ It

3 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

4 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

5 http://www.midwestozonegroup.com/files/MOG_Comments_on_Proposed_SE_States_SIP_Approval.pdf

6 <https://www.federalregister.gov/documents/2020/01/31/2020-01113/air-plan-approval-massachusetts-transport-state-implementation-plan-for-the-2015-ozone-standard>

7 <https://www.federalregister.gov/documents/2019/05/09/2019-09492/air-plan-approval-nebraska-infrastructure-sip-requirements-for-the-2015-ozone-national-ambient-air>

8 <https://www.federalregister.gov/documents/2019/05/17/2019-10186/air-plan-approval-or-2015-ozone-naaqs-interstate-transport-requirements>

9 <https://www.federalregister.gov/documents/2020/01/23/2020-00888/air-plan-approval-id-2015-ozone-naaqs-interstate-transport-requirements>

10 https://www.ladco.org/wp-content/uploads/Documents/Reports/TSDs/O3/LADCO_2015O3iSIP_TSD_13Aug2018.pdf

also includes data for geographic water areas that have no emission sources.

- LADCO “Water” data was relied upon by at least the following states in the development of their Good Neighbor SIP’s”

Indiana¹¹

Illinois¹²

Ohio¹³

- The Midwest Ozone Group has offered a more refined 4 km version of the EPA’s modeling data that shows no nonattainment areas in the Northeast related to the 2015 ozone NAAQS.¹⁴

- The MOG 4 km modeling has been relied upon by the following states in support of their Good Neighbor SIPs:

West Virginia¹⁵

Indiana¹⁶

Illinois¹⁷

Ohio¹⁸

- EPA previously relied on 4 km modeling to approve the Wyoming Good Neighbor SIP related to the 2008 ozone NAAQS.¹⁹
- On October 19, 2018, EPA offered an additional flexibility related to determining what constitutes a maintenance monitor.²⁰
- The Midwest Ozone Group has offered a technical support document that

11 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

12 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

13 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

14 http://www.midwestozonegroup.com/files/Final_TSD_-_Ozone_4kei_Modeling_Supporting_GN_SIP_Obligations.pdf

15 http://www.midwestozonegroup.com/files/WV_2015_O3_Transport_SIP_Final_with_response_to_comments.pdf

16 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

17 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

18 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

19 <https://www.regulations.gov/document?D=EPA-R08-OAR-2018-0723-0001>

20 http://www.midwestozonegroup.com/files/EPA_maintenance_flexibility_Oct_19_2018.pdf

demonstrates that when EPA maintenance guidance is applied, there are no remaining maintenance monitors in the East.²¹ The need for maintenance flexibility guidance has been cited by the following states:

Illinois²²

Ohio²³

Missouri²⁴

- While no specific guidance has yet been issued by EPA on addressing international emissions in the development of Good Neighbor SIPs, EPA’s March 27, 2018 memorandum recognizes the failure of a downwind state not to recognize the influence of international emissions in its nonattainment of NAAQS as a legitimate factor to be addressed by upwind states in the development of Good Neighbor SIPs.²⁵
- EPA’s March 2018 memorandum²⁶ points out a Good Neighbor SIP flexibility available to upwind states in those cases where downwind states have not taken advantage of relief from regulatory requirements that is available under the Clean Air Act such as is the case with 319B exceptional events and 179B international transport. EPA has, however, not yet issued guidance specifying how upwind states should incorporate the failure of a downwind state to seek such relief into the development of a Good Neighbor SIP plan of an upwind state.
- EPA’s March 2018 memorandum²⁷ also points out a Good Neighbor SIP flexibility available to upwind states that involves assessing “current and projected local emissions reductions” in downwind states.
- A presentation by EPA’s Norm Possiel notes that remaining air quality issues in the Northeast are related to local sources.²⁸ That can be addressed through current and future local actions.

21 http://www.midwestozonegroup.com/files/Maintenance_Monitor_Flexibility_Dec_2018_.pdf

22 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

23 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

24 http://midwestozonegroup.com/files/Missouri_Good_Neighbor_SIP_6.10.19.pdf

25 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

26 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

27 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

28 http://www.midwestozonegroup.com/files/2018-05-14_EPA_OAQPS_-_Analysis_of_O3_Trends_in_the_East_in_Relation_to_Interstate_Transport.pdf

- States which have noted that any remaining problem monitors in the Northeast appear to be related to local sources²⁹ include:

Indiana³⁰

Illinois³¹

Ohio³²

- EPA’s Cleaner Trucks Initiative offers promise for significantly reducing mobile source emissions and improving ozone air quality in areas with problem monitors.³³
- It is becoming increasingly apparent that the ERTAC EGU emission inventory used by several states to develop modeling in support of their Good Neighbor SIP submittals significantly overstates emission for that source category in several states. States relying on this emission inventory include at least:

Indiana³⁴

Illinois³⁵

Ohio³⁶

Step 2 – Determine which upwind states are linked to these identified downwind air quality problems and thus warrant further analysis to determine whether their emissions violate the Good Neighbor provision.

- On August 30, 2018, EPA offered an additional flexibility related to significant contribution which allows a state to base its Good Neighbor SIP on either a 1

29 http://www.midwestozonegroup.com/files/2018-05-14_EPA_OAQPS_-_Analysis_of_O3_Trends_in_the_East_in_Relation_to_Interstate_Transport.pdf

30 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

31 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf (See page 4 of Response to Comments)

32 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

33 <https://www.federalregister.gov/documents/2020/01/21/2020-00542/control-of-air-pollution-from-new-motor-vehicles-heavy-duty-engine-standards>

34 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

35 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

36 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

ppb or 2 ppb contribution level.³⁷

- Allowing significant contribution to be defined at either 1 ppb or 2 ppb is enough to provide the basis for the Good Neighbor SIP that have been submitted by the following states:

Indiana³⁸

Illinois³⁹

Kentucky⁴⁰

Missouri⁴¹

Ohio⁴²

Step 3 – Identify air quality, cost, and emission reduction factors to be evaluated in a multifactor test to identify emissions that significantly contribute to nonattainment or interfere with maintenance of the NAAQS downwind, if any.

- EPA has issued draft guidance addressing international emissions under 179B of the Clean Air Act⁴³ and in the development of portions of the regional haze program⁴⁴, but has not yet done so for Good neighbor SIP development. Nevertheless, EPA’s March 2018 memorandum⁴⁵ specifically recognizes that in the development of Good Neighbor SIP’s states may wish to consider “whether air quality, cost, or emission reduction factors should be weighed differently in areas where international contributions are relatively high.”
- International transport has also been offered as a flexibility in EPA in the development of Good Neighbor SIPs.⁴⁶ The following states have recognized

37 http://www.midwestozonegroup.com/files/contrib_thresholds_transport_sip_subm_2015_ozone_memo_08_31_18.pdf

38 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

39 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

40 http://www.midwestozonegroup.com/files/2019-01-11_2015_O3_ISIP_Final_Submittal.pdf

41 http://midwestozonegroup.com/files/Missouri_Good_Neighbor_SIP_6.10.19.pdf

42 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

43 <https://www.epa.gov/ground-level-ozone-pollution/international-transport-air-pollution>

44 https://www3.epa.gov/ttn/scram/reports/Updated_2028_Regional_Haze_Modeling-TSD-2019.pdf

45 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

46 http://www.midwestozonegroup.com/files/transport_memo_03_27_18_1.pdf

international emissions in their Good Neighbor SIP:

Illinois⁴⁷
Missouri⁴⁸
West Virginia⁴⁹

- For problem monitors that have not been addressed at Steps 1 or 2, the following states have based their Good Neighbor SIP on the lack of any additional cost-effective controls on sources in their state. These states include:

Indiana⁵⁰
Illinois⁵¹
Kentucky⁵²
Missouri⁵³
Ohio⁵⁴
West Virginia⁵⁵

Step 4 – Adopt permanent and enforceable measures needed to achieve emissions reductions (translating the control levels identified in Step 3 into enforceable emissions limits.

- No state has yet reached the point of adopting Step 4 measures with respect to the 2015 ozone NAAQS.

47 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

48 http://midwestozonegroup.com/files/Missouri_Good_Neighbor_SIP_6.10.19.pdf

49 http://www.midwestozonegroup.com/files/WV_2015_O3_Transport_SIP_Final_with_response_to_comments.pdf

50 http://www.midwestozonegroup.com/files/Indiana_Final_GNS.pdf

51 http://www.midwestozonegroup.com/files/Illinois_SIP_for_2015_Ozone_NAAQS.pdf

52 http://www.midwestozonegroup.com/files/2019-01-11_2015_O3_ISIP_Final_Submittal.pdf

53 http://midwestozonegroup.com/files/Missouri_Good_Neighbor_SIP_6.10.19.pdf

54 http://www.midwestozonegroup.com/files/Ohio_2015_O3_Infrastructure_SIP.pdf

55 http://www.midwestozonegroup.com/files/WV_2015_O3_Transport_SIP_Final_with_response_to_comments.pdf