

Appendix 43

Summary of Public Comments and MassDEP Responses

The federal regional haze regulation at 40 CFR Section 51.102 requires MassDEP to provide public notice and the opportunity for written comments and a public hearing on its draft State Implementation Plan (SIP) revision.

On April 7, 2021, MassDEP issued a notice of public hearing and comments and the availability of the draft Regional Haze SIP revision for 2018-2028 on MassDEP's Public Notices and Hearings webpage and on its SIP webpage¹ and emailed the notice to parties that have registered for the MassDEP public notice email list. The email list contains over 3,000 recipients. Subscription to the list is publicly available via a form on MassDEP's website.² The notice announced two video conference call public hearings on May 11, 2021 at 1 p.m. and 5 p.m. and the opportunity to submit written comments until May 14, 2021.

Public Comments Received

Lauren Cosgrove representing the National Parks Conservation Association (NPCA) attended the first public hearing and provided oral testimony and a written transcript. No other persons provided oral testimony at the two public hearings. MassDEP received written comments from the U.S. Environmental Protection Agency (EPA) and combined comments from the NPCA and the Appalachian Mountain Club (AMC). The comments are summarized below along with MassDEP responses. Copies of the testimony and written comments are included as Appendices 40, 41 and 42.

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EPA Comments

1. Comment: Add Brigantine Wildlife Refuge in New Jersey to the list of Class 1 Areas and relabel RPG (2028)(dv) column in Table 2-1.

Response: MassDEP has made these changes in the final SIP.

2. Comment: MassDEP should make the use of 0.3% sulfur No.6 fuel by Canal 1 federally enforceable.

¹ MassDEP SIP webpage: <https://www.mass.gov/lists/massachusetts-state-implementation-plans-sips>

² MassDEP Regulations Updates and Related Notifications: <https://www.mass.gov/forms/subscribe-to-regulations-updates-related-notifications>

Response: The owner of Canal Unit 1 has agreed to submit an application to modify its Plan Approval to require use of 0.3% sulfur content oil. Once MassDEP approves the plan application, MassDEP will submit the Plan Approval to EPA for approval into the SIP.

3. Comment: What is the significance of the date of May 1, 2007 in the MANE-VU Ask 5.c?

Response: Ask 5.c. focuses on reducing nitrogen oxides (NO_x) from peaking combustion turbines that operate on high electric demand days (HEDD). Separately, the Ozone Transport Commission (OTC) analyzed and developed a model rule that included emissions limits for HEDD turbines. One of the criteria in OTC's model rule is that the turbine commenced operation prior to May 1, 2007.³ To be consistent with the OTC model rule, the Mid-Atlantic Northeast Visibility Union (MANE-VU) also chose this date to define a HEDD turbine subject to the MANE-VU Ask.

NPCA/AMC Comments

4. Comment: EPA's 2019 Regional Haze Guidance is deeply flawed and MassDEP should not wholly rely on it but should closely adhere to the Regional Haze Rule.

Response: MassDEP has adhered to EPA's Regional Haze Rule in developing this SIP.

5. Comment: The proposed SIP does not evaluate and analyze emission reduction measures necessary to make reasonable progress based on a four-factor analysis, instead relying on analyses by MANE-VU for targeting sources to conduct a four-factor analysis. By relying on the emission sources modeled by MANE-VU, MassDEP identified and selected only two point sources (Electrical Generating Units or EGUs) affecting Class I sites (Brayton Point unit 4 and Canal Station unit 1) out of which, Brayton Point, already ceased operations in 2017.

Response: MassDEP is a member of MANE-VU and has adopted the work of MANE-VU in its SIP. Relying on regional analyses is specifically allowed by EPA's Regional Haze Rule (RHR) [40 CFR 51.308(f)(2)(iii)] and therefore MassDEP's participation in and adoption of the MANE-VU work is consistent with the RHR.

MANE-VU conducted a broad analysis of sources contributing to haze and considered these in relation to the four factors in the RHR as described in Sections 5 and 6 of this SIP and in Appendix 6. Specifically, in the first planning period MANE-VU considered the *Assessment of Reasonable Progress for Regional Haze in MANE-VU Class I Areas* (Appendix T in the 2012 Massachusetts regional haze SIP – and its addendum for fuel oil, Appendix T1) which assessed the four factors for a group of sectors to help MANE-VU members determine which emission control measures may be needed to make reasonable progress in improving visibility.

³ OZONE TRANSPORT COMMISSION (OTC) Model Regulations for Nitrogen Oxides (NO_x) and Photo-reactive Volatile Organic Compounds (VOCs) Technical Support Document. (March 16, 2011 – Revised August 25, 2016)

For the second planning period, MANE-VU found that the top emitters were the same source categories initially selected during the first planning period. Since a four-factor analysis was already performed for these sources in the first planning phase, MANE-VU updated the existing four-factor analysis (as described in Section 6) and used it for the second planning period (see Appendix 6). This is consistent with EPA regional haze guidance, which allows states to use a four-factor analysis and other work from the first planning period.⁴ MANE-VU further refined the analysis in their reports which are part of this SIP (see Appendices 17 and 18).

MANE-VU selected a subset of sources for more detailed analysis as documented in Appendices 8 and 9 and the MANE-VU Ask (Appendix 15). Only a portion of those sources were located in Massachusetts. MassDEP's SIP revision describes how these sources are controlled (e.g., through RACT or permit limits for turbines and low sulfur fuel requirements), retired (Brayton Point 4), repowered (Solutia), or analyzed in greater detail for further controls (Canal 1 through a facility-specific four factor analysis) (see Section 6).

The retirement of Brayton Point and repowering of Solutia's boilers provide large permanent reductions in haze-forming emissions from Massachusetts. The RHR specifically requires states to consider retirements in developing its long-term strategy (LTS) [40 CFR 50.308(f)(2)(iv)(C)]. For states with Class I areas, reasonable progress goals (RPGs) must be based on reductions that can be achieved by the end of the implementation period; however, the RHR does not otherwise specify when an emissions reduction must be achieved. In other words, the RHR does not prohibit a state from achieving a reduction prior to the start of the implementation period. Therefore, a reduction prior to the implementation period due to an enforceable retirement or repowering is appropriate to include as part of the LTS.

6. Comment: Massachusetts does not explain how the 3.0 Mm^{-1} or greater visibility impact threshold was selected, does not justify use of this threshold, and does not explain why the same extinction threshold was applied to all Class I areas.

Response: MassDEP worked with and adopted analyses conducted by MANE-VU, including the screening threshold of 3.0 Mm^{-1} as described in the SIP, its appendices, and responses to Federal Land Manager (FLM) comments (see Section 7). MANE-VU applied the threshold to all Class I areas to achieve consistency across the Class I areas being assessed. As described in MANE-VU's modeling documentation, this approach is conservative.

EPA's RHR provides states with flexibility in selecting sources for detailed analysis and does not require the use of any specific thresholds. MANE-VU's approach is consistent with the flexibility the RHR gives states and regional planning organizations in performing their analyses,

⁴ Guidance on Regional Haze State Implementation Plans for the Second Implementation Period, EPA-457/B-19-003. EPA. (August 2019). p.39: "A state may consider in its analysis of control measures how it, other states, and EPA made reasonable progress decisions during the first implementation period and may consider final decisions already made in the second implementation period, if any."

and MassDEP's participation in and use of a regional analysis and adoption of regional determinations are appropriate under the RHR.

The RHR does not require state-specific justification for screening thresholds. Instead, the RHR specifically allows states to rely on regional analyses. The RHR rule at 51.308(f)(2)(iii) states "The State must document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects. The State may meet this requirement by relying on technical analyses developed by a regional planning process and approved by all State participants." MassDEP has documented the technical basis it and MANE-VU used for selecting the screening threshold in Appendix 20 of this SIP.

7. Comment: The 3 Mm^{-1} threshold is unreasonably high. The required long-term strategy in MassDEP's SIP must make reasonable progress toward the national goal of remedying any existing visibility impairment. Therefore, MassDEP cannot set a threshold so high as to exclude every State source from a four-factor reasonable progress analysis.

Response: MassDEP and the MANE-VU states chose the extinction threshold of 3 Mm^{-1} after considering progress being made in the Class I areas (see Section 2) and expected emissions reductions due to existing programs, the conclusions of the four-factor analysis from the first implementation period as updated for the second implementation period, and the level of reductions represented by a range of thresholds examined. MANE-VU considered 1, 2, 3 and 10 Mm^{-1} thresholds and the number of sources that would need to be examined. The 3 Mm^{-1} threshold would encompass approximately the top 7 to 26 units affecting each Class 1 area and approximately 40% of the haze forming emissions from all large stationary sources. The lower thresholds of 1 and 2 Mm^{-1} would roughly triple and double the number of units that would have to be analyzed, respectively, with diminishing potential visibility benefit per unit analyzed.

The 3 Mm^{-1} threshold did not eliminate every source from analysis. It identified Brayton Point unit 4 (which has retired) and Canal Station unit 1 (for which MassDEP required a four-factor analysis). Furthermore, the 3 Mm^{-1} threshold was only one component of the four-factor analysis MassDEP and MANE-VU performed. The four-factor analysis and MANE-VU Ask also identified 25 turbine EGUs to be addressed in the SIP revision, which MassDEP evaluated. See Section 6 for an explanation of how MassDEP met the MANE-VU Ask for these 25 turbines.

8. Comment: For the sources MANE-VU selected using the 3 Mm^{-1} threshold, the SIP must make clear how each source's visibility impacts were determined, including documentation of the modeling that explains the pollutants and emission units modeled and the timeframe against which visibility impacts were compared (e.g., 20% worst days). The technical approach used to

select the extinction threshold for defining sources to target for controls needs to be identified and be subject to public comment.

Response: MassDEP has documented the modeling of source impacts in Section 3.3 of Appendix 8: 2016 MANE-VU Source Contribution Modeling Report - CALPUFF Modeling of Large Electrical Generating Units and Industrial Sources. This report explains that the 2016 CALPUFF analysis was based on the 20% "worst days" metric. It further explains that the results are very conservative because they use 95th percentile emissions of NO_x and SO₂ on the same day so all meteorological conditions are considered with peak emissions. The pollutants and units modeled also are contained in this document. MassDEP included this document in the draft SIP that was subject to public comment.

9. Comment: Massachusetts reliance on the MANE-VU modeling work for the selection of point sources means that it only evaluated sources from a preselected group of specific sectors: coal and oil-fired EGUs, point and area Industrial, Commercial, and Institutional (ICI) boilers, cement and lime kilns, low sulfur heating oil, and residential wood combustion and open burning. Municipal Waste Combustors (MWCs), among other sources, currently emit the highest amounts of sulfur dioxide and nitrogen oxides pollution in Massachusetts. Despite high level of controllable pollution from these sources and the many opportunities for cost-effective controls, Massachusetts failed to select any MWCs for an evaluation of emission reducing measures during this planning period. MassDEP's proposed regional haze SIP lacks significant protections for Class 1 areas like Acadia National Park because it did not place additional controls on MWCs. Using 2017 emissions data and Q/d values, it is clear MassDEP needs to conduct a four-factor analysis for four municipal waste combustion sources to inform its reasonable progress determination, namely SEMASS Partnership, Covanta Haverill Inc., Wheelabrator Millbury Inc., and Wheelabrator North Andover Inc. The National Park Service (NPS) has informed Massachusetts that at least two states are requiring tighter limits for waste combustors:

- The Montgomery County Resource Recovery Facility, in Maryland is achieving a 30-day rolling average NO_x emissions rate of 105 ppmv, that was promulgated in the State's regulation;
- Emission limits in Virginia's SIP for the Covanta Arlington/Alexandria and Covanta Fairfax facilities, means after 2021 modifications the sources will achieve daily average NO_x rates of 110 ppmvd @7% O₂ and annual average NO_x rates of 90 ppmvd @ 7% O₂.

Given the high levels of NO_x emissions from the facilities in Massachusetts, their potential to impact Class I areas, and the known emission reduction control measures feasible, we urge Massachusetts to do a four-factor analysis for these facilities to determine emission reduction requirements and include practically enforceable provisions in the SIP.

Response: MassDEP acknowledges that MWCs are now among the largest sources of NO_x and SO₂ remaining in Massachusetts. This is in part because other stationary sources have been adequately controlled, repowered, or retired, resulting in large reductions in haze forming emissions as described in this SIP revision. These emissions reductions have ensured reasonable further progress in Class 1 areas affected by emissions from Massachusetts in this planning period, including for Acadia National Park.

MassDEP has taken significant action to ensure reductions in NO_x and SO₂ emissions from MWCs. In 2018 MassDEP promulgated an enforceable regulation requiring lower NO_x limits for MWCs through amendment of its Reasonably Available Control Technology (RACT) regulations [310 CMR 7.08(2)] and EPA has approved those regulations into the Massachusetts SIP. In February 2020, pursuant to the mandates in those amended RACT regulations, MassDEP issued updated Emission Control Plans (ECPs) to the MWCs with the lower NO_x emission limits. These ECPs currently are under appeal and are not yet final. Once the ECPs are final, the NO_x emissions limits for the MWCs will be reduced from 205 ppm to a range from 146 to 150 ppm (or lower) on a 24-hour basis.

MassDEP will continue to evaluate opportunities to further reduce NO_x emissions from MWCs and will provide an update on these efforts in the Regional Haze Progress Report due in 2025. MassDEP actively participated in an Ozone Transport Commission (OTC) workgroup that evaluated the technical and economic feasibility of lower NO_x emission limits for MWCs across the region. As a result of this work, at its Spring Annual Public Meeting on June 15, 2021, OTC adopted “Resolution of the Ozone Transport Commission on Developing a Recommendation for Emissions Reductions from Municipal Waste Combustors,” in which the members of OTC commit to working together in using the OTC workgroup’s technical analyses to develop regional and national recommendations on more stringent NO_x emissions reductions for MWCs. MassDEP will continue its participation in this effort. In addition, this issue will be addressed in MassDEP’s 2030 Solid Waste Master Plan, which will be issued later this year.

Finally, EPA’s RHR does not require that all individual sources be evaluated in detail in each regional haze implementation period. See Sections 5 and 6 as well as the response to the similar comments regarding MWCs from the FLMs in Section 7. Also see Appendices 8, 9, and 11 for details of how all sources were considered.

10. Comment: The proposed SIP revision does not meet the legal requirements of the CAA and RHR because it does not address emissions from the sources that emit visibility impairing pollution contributing to regional haze affecting Class I areas. No emission reducing measures are included in the proposed SIP revision for the second planning period.

Response: MassDEP has documented substantial emission reductions and emission reduction measures in this SIP revision (see Section 6). These include retirement of all four Brayton Point Station units; repowering of the boilers at Solutia from coal to natural gas; adoption of NO_x

RACT for combustion turbines; adoption of NO_x RACT for municipal waste combustors, and implementation of low sulfur fuel requirements. These emissions reductions meet the requests from the MANE-VU states with Class I areas affected by emissions from Massachusetts as required by the RHR.

Note that the RHR provide states with flexibility in determining the level of controls needed to make reasonable progress in improving visibility in each planning period, does not set a specific number of stationary sources that must be considered, nor a percentage of emissions that must be represented by those sources, nor a visibility impact that must be mitigated. The RHR requires consultation with states with impacted Class 1 areas to determine measures needed to make reasonable progress, and Massachusetts has consulted with the Class I states through the MANE-VU process and has met the requests of those states.

To confirm future emission reductions and visibility improvement the RHR provides for a mid-period progress report on emissions reductions and requires that states adjust their SIPs if the anticipated progress is not being made. MassDEP will conduct this mid-period assessment and determine if the reductions projected in this SIP revision are realized and whether additional reductions are necessary.

11. Comment: MassDEP should allow an additional comment period on its responses to these comments.

Response: MassDEP's responses to comments refer to documents that already were part of the SIP revision posted for public comment; therefore, MassDEP does not believe an additional comment period on the same materials is warranted.

12. Comment: MassDEP must make the commitment by Canal Station to burn 0.3% sulfur content fuel oil practically enforceable in the SIP for this planning period.

Response: The owner of Canal Unit 1 has agreed to submit an application to modify its Plan Approval to require use of 0.3% sulfur content in its oil. Once MassDEP approves the plan application, MassDEP will submit the Plan Approval to EPA for approval into the SIP.

13. Comment: MassDEP should have conducted a four-factor analysis of Stony Brook Energy Center based on its reported emission of 564 tons of NO_x in 2017.

Response: The 2017 emissions reported by Stony Brook Energy Center in its Source Registration report were an error. The facility emitted 95 tons of NO_x in 2017. The facility has submitted a corrected report for 2017 and other years with similar incorrect reporting. Due to the lower tons of NO_x, this facility would not meet the criteria for requiring a four-factor analysis.

14. Comment: The SIP revision did not contain a list of facilities subject to Ask 1 – rather Appendix 23 was the operating permit for Canal Generating Station.

Response: The appendices were posted in a zip file (Appendices to the MA Regional Haze SIP Revision for 2018-2028 - DRAFT for hearing.zip) that contained the spreadsheet file (23 - Massachusetts Facilities Subject to Ask 1 EUGs 25MW with Controls.xlsx) as indicated in the SIP revision.

15. Comment: The permits referenced in Appendix 23 in response to MANE-VU Ask 1 are not incorporated into the SIP and therefore the SIP does not meet the requirement to contain enforceable emission limits.

Response: The permits were issued under MassDEP rules that are in the Massachusetts SIP and the permits are enforceable by MassDEP. MassDEP will examine compliance with these permit limits in the progress report.

16. Comment: The response to MANE-VU Ask 6 regarding energy efficiency summarizes but does not propose including any of the efforts in the SIP. Thus, none of what is summarized are in the form of emission limitations that are permanent and enforceable for purposes of the SIP.

Response: The MANE-VU Ask 6 only required that the “State should consider and report” on energy efficiency and clean energy efforts, and therefore the SIP revision meets Ask 6 (see Section 6). MassDEP will evaluate emission reductions from these efforts in the progress report due in 2025.

17. Comment: This proposed SIP revision does nothing to remediate Massachusetts’ environmental justice issues. Massachusetts should analyze the environmental justice impacts of its regional haze SIP revision for the second planning period. This is because most of the same sectors and sources implicated under the regional haze program are of concern to disproportionately impacted communities in Massachusetts. This is based in part on the RHR requirement to evaluate the “non-air quality environmental impacts of compliance” and on the recent Massachusetts climate law (An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy, Senate Bill 9, Section 10, Section 5(v) (2021)) and the Environmental Justice Policy of the Massachusetts Executive Office of Energy and Environmental Affairs (EEA).

Response: MassDEP’s SIP revision includes measures that reduce air pollutant emissions and will not create any burdens on environmental justice populations. EPA’s RHR does not include specific requirements regarding environmental justice; however, MassDEP considers environmental justice in all of its programs as described in the Executive Office of Energy and Environmental Affairs’ 2017 Environmental Justice Policy. This Policy directs agencies to engage in enhanced public participation for certain projects and to conduct enhanced analysis and review of impacts and mitigation for certain projects. While the proposed Regional Haze SIP revision did not trigger the project criteria in the Policy, MassDEP did translate the Notice of Public Hearing and Comment into several alternative languages and sent the notice to a broad array of stakeholders that included environmental justice advocacy organizations. In addition,

Massachusetts has and is continuing to take significant actions to reduce air pollution that affects environmental justice communities, including adopting California low and zero emissions standards for cars and trucks; providing grants for electric buses and rebates for purchase of electric cars and trucks, providing grants for electric vehicle charging stations and for diesel truck emissions controls and electrification; and implementing a net-zero climate goal that prioritizes reducing air pollution from fossil fuel combustion in over-burdened and environmental justice communities. Building upon the landmark 2008 Global Warming Solutions Act, on March 26, 2021 Governor Baker signed *An Act Creating a Next Generation Roadmap for Massachusetts Climate Policy*, which sets specific interim targets for reducing greenhouse gas emissions and further prioritizes equity and environmental justice. The Act amended the Massachusetts Environmental Policy Act to require an environmental impact report for projects that impact air quality located within 5 miles of an environmental justice population that assesses whether there is an existing unfair or inequitable environmental burden and related public health consequences, and how the proposed project might result in a disproportionate adverse effect on the EJ population. In addition, it directs MassDEP to evaluate and seek public comment on incorporating cumulative impact analyses into certain permits, and to propose regulations within 18 months requiring cumulative impact analysis in certain air permits.