

September 30, 2025

VIA EMAIL

Anne Vogel, Regional Administrator
U.S. Environmental Protection Agency, Region 5
77 West Jackson Boulevard
Chicago, IL 60604-3507

RE: Minnesota's State Progress Report for the Second Regional Haze Implementation Period
(2018-2028)

Dear Administrator Anne Vogel:

The state of Minnesota is home to two mandatory Class I Federal areas (Class I areas), the Boundary Waters Canoe Area Wilderness and Voyageurs National Park, both located along the state's border with Canada. To meet Minnesota's requirements under the Federal Regional Haze Rule (40 Code of Federal Regulations § 51.300-51.309), the Minnesota Pollution Control Agency (MPCA) is submitting its second implementation period Regional Haze Rule progress report (progress report).

Under the authority of section 169(a) of the Clean Air Act (CAA), the U.S. Environmental Protection Agency (EPA) on July 1, 1999, promulgated visibility goals for mandatory Class I areas in the Federal Regional Haze Rule. The goal of the Regional Haze Rule is to restore the Class I areas to natural visibility conditions by 2064. Section 169(a) of the CAA and the Regional Haze Rule required each state to adopt and submit a plan to EPA that addressed the state's contribution to visibility impairment at the mandatory Class I Federal areas. On December 20, 2022, Minnesota submitted its Regional Haze State Implementation Plan (SIP) for the second implementation period to EPA. The Regional Haze Rule further requires each state to submit a progress report on implementation of the Regional Haze SIP halfway through each ten-year implementation period.

The purpose of this progress report is to fulfill Minnesota's responsibility under the CAA Regional Haze Rule to assess whether the Regional Haze SIP is being implemented appropriately and whether reasonable visibility progress is being achieved consistent with the projected visibility improvement in the SIP. This progress report does not modify Minnesota's Regional Haze SIP strategy, but rather, assesses its progress in the second implementation period.

The enclosed report serves as a progress update for 2018-2028. The second period progress report demonstrates that Minnesota has already reached the emissions reductions projected to 2028 for SO₂, appears to be on-track for the 2028 NO_x emission reduction projection, and appears to be generating additional NH₃ at a rate that may reach the level projected to 2028 in the 2022 Regional Haze SIP. The report documents Minnesota's determination that its current Regional Haze SIP is adequate and requires no further substantive revisions to achieve 2028 visibility goals.

As specified in the Regional Haze Rule, the MPCA has consulted Federal Land Managers, and had a 30-day public comment period for this second implementation period progress report. The Federal Land Managers didn't have any adverse comments, and there were no comments received during the public comment period.

Anne Vogel
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The MPCA believes this submittal meets the requirements of the Regional Haze Rule and the guidance provided by EPA in its July 2024 document, "Overview of Elements for the Regional Haze Second Planning Period State Implementation Plan Progress Reports Due in 2025."

Sincerely,

Katrina Kessler

This document has been electronically signed.

Katrina Kessler, P. E.
Commissioner

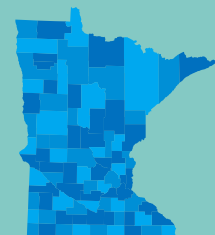
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Enclosure

May 2025

Minnesota's 2025 Progress Report for Regional Haze

Progress report for second implementation period (2018-2028)



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Cover Image - Sawbill Lake, Boundary Waters Canoe Area Wilderness

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This report is available in alternative formats upon request, and online at www.pca.state.mn.us.

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Executive summary

The Clean Air Act (CAA) § 169A and B requires the protection of visibility in 156 Class I Federal Areas in the United States (U.S.). In Minnesota, there are two impacted Class I Federal Areas: the Boundary Waters Canoe Area (Boundary Waters) and the Voyageurs National Park (Voyageurs). U.S. Environmental Protection Agency's (EPA) 1999 Regional Haze Rule, 40 Code of Federal Regulations (CFR) 51.308, requires states to develop and implement State Implementation Plans (SIP) to reduce visibility impairment resulting from "man-made air pollution," or regional haze.

Minnesota submitted its Regional Haze SIP for the first implementation period (2017-2018) on December 31, 2009, and updated it in May 2012. The EPA approved Minnesota's Regional Haze SIP as satisfying all applicable requirements, except for Best Available Retrofit Technology (BART) emission limits for taconite facilities, effective July 12, 2012. The EPA has been working on federal implementation plans (FIP) for the taconite facilities in NE Minnesota. These FIPs are expected to be finalized in the near future.

Minnesota submitted the Regional Haze SIP for the second implementation period (2018-2028) on December 20, 2022 (hereafter referred to as "2022 Regional Haze SIP"). The EPA proposed to approve the 2022 Regional Haze SIP on July 11, 2024, and solicited public comments from July 11, 2024, through September 11, 2024.

The Regional Haze Rule also requires states to provide periodic progress reports outlining the status of required Regional Haze SIP elements and progress towards meeting the reasonable progress goals for Class I areas. The second implementation period (2018-2028) regional haze progress report is due to EPA on January 31, 2025. The Minnesota Pollution Control Agency (MPCA) hereby submits this five-year progress report to evaluate implementation of the SIP requirements and the resulting emissions reductions and visibility improvements. This progress report covers emission reductions from 2019-2022. Minnesota has already reached the emissions reductions projected to 2028 for SO₂, appears to be on-track for the 2028 NO_x emission reduction projection, and appears to be generating additional NH₃ at a rate that may reach the level projected to 2028 in the 2022 Regional Haze SIP. The report documents Minnesota's determination that its current Regional Haze SIP is adequate and requires no further substantive revision to achieve 2028 visibility goals.

Status of control strategies

Electric generating unit retirements identified in Minnesota's 2022 Regional Haze SIP have either been implemented or are expected to be implemented by 2028. Requirements for taconite facilities have not been fully implemented yet, but EPA expects final rulemaking to update the Taconite Regional Haze FIP to be complete during the second implementation period. However, significant emission reductions may not take effect this implementation period.

Emissions reductions

While it is difficult to quantify or precisely allocate emission reductions for some of the 2022 Regional Haze SIP long-term strategies; quantifiable emission reductions include:

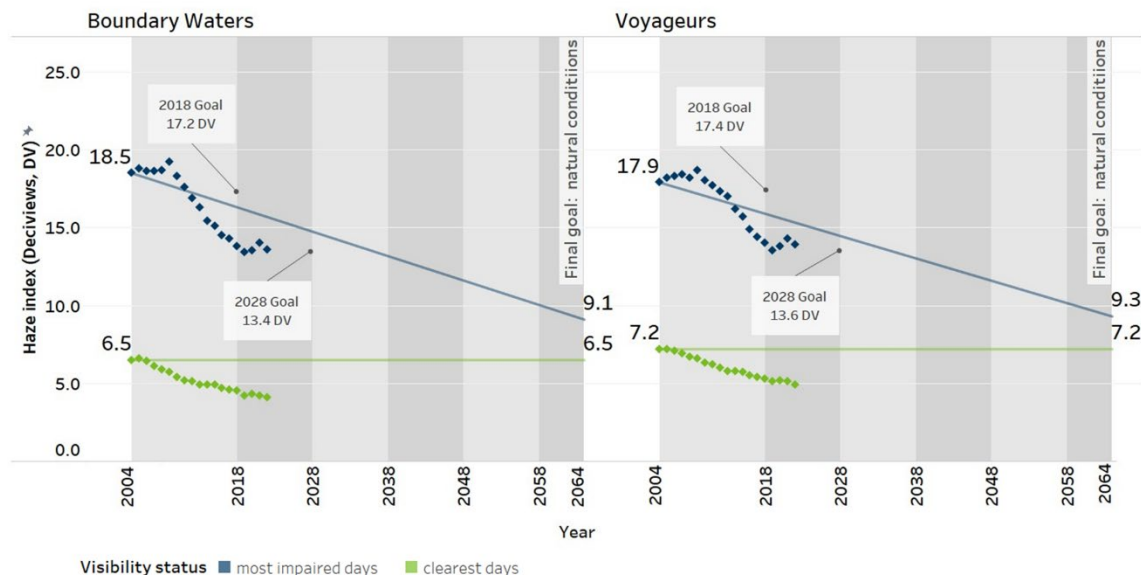
- Minnesota power plants reporting to EPA's Clean Air Markets Program have reduced sulfur dioxide (SO₂) emissions by 58% and nitrogen oxides (NO_x) emissions by 47%, from 2019 to 2023.
- SO₂ emissions from emission units with control measures identified in the 2022 Regional Haze SIP, excluding sources subject to the Taconite Regional Haze FIP, are about 1,400 tons lower in 2022 than they were in 2019. Emission reductions from anticipated electric generating unit retirements in the remaining years of the second implementation period will help meet projected emission levels used to set the 2028 reasonable progress goals. The impact of the

Taconite Regional Haze FIP on emissions will likely become apparent in the third implementation period comprehensive update.

- NO_x emissions from emission units with control measures identified in the 2022 Regional Haze SIP, excluding sources subject to the Taconite Regional Haze FIP, are about 1,100 tons lower in 2022 than they were in 2019. Emission reductions from anticipated electric generating unit retirements in the remaining years of the second implementation period will help meet projected emission levels used to set the 2028 reasonable progress goals. The impact of the Taconite Regional Haze FIP on emissions will likely become apparent in the third implementation period comprehensive update.

Visibility progress

Visibility continues to improve at Boundary Waters and Voyageurs. There continues to be no degradation on the clearest days at either Class I area. For the most impaired days, Boundary Waters improved from 18.5 deciviews (dv) in 2004 to 13.8 dv in 2018 and to 13.6 dv in 2022. Voyageurs improved from 17.9 dv in 2004 to 14.0 dv in 2018 and to 13.9 in 2022. These levels are below the glidepath for reaching natural visibility conditions by 2064. The main pollutants contributing to visibility impairment in Minnesota's Class I areas are sulfate and nitrate aerosols.



Emissions progress

Statewide emissions of SO₂ have continued to decrease during the second implementation period and are already lower than those reflected in the 2028 reasonable progress goal. Statewide emissions of NO_x have also decreased during the second implementation period, but more reductions are needed to reach those reflected in the 2028 reasonable progress goal.

Assessment of changes impeding visibility progress

Minnesota does not currently anticipate any significant changes in either in-state or out-of-state emissions that would impede visibility progress.

Review of visibility monitoring strategy

Minnesota continues to rely upon participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) program to meet its monitoring strategy requirements with no modifications to the strategy determined necessary at this time.

Determination of adequacy

Minnesota submits a declaration that revision of the existing implementation plan is not needed at this time, in accordance with 40 CFR 51.308(h)(1).

Procedural requirements

Section 40 CFR 51.308(g) and 40 CFR Sections 51.308(i)(2) and (3)

Each State identified in § 51.300(b) must periodically submit a report to the Administrator evaluating progress towards the reasonable progress goal for each mandatory Class I Federal area located within the State and in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State. The first progress reports must be in the form of implementation plan revisions that comply with the procedural requirements of § 51.102 and § 51.103. Subsequent progress reports are due by January 31, 2025, July 31, 2033, and every 10 years thereafter. Subsequent progress reports must be made available for public inspection and comment for at least 30 days prior to submission to EPA and all comments received from the public must be submitted to EPA along with the subsequent progress report, along with an explanation of any changes to the progress report made in response to these comments.

Federal Land Managers (FLM) consultation

This section describes the formal consultation held between MPCA and the FLMs.

FLM consultation period: November 20, 2024 – January 20, 2025

FLM consultation meeting: November 18, 2024 (virtual meeting)

On November 18, 2024, the MPCA met virtually with the Federal Land Managers from the National Park Service (U.S. NPS), U.S. Fish & Wildlife Service (U.S. FWS), and U.S. Forest Service (U.S. FS). On November 20, 2024, the sixty-day FLM consultation period began. The draft SIP document was provided to the FLMs on November 20, 2024. The MPCA requested that the FLMs provide comments by January 20, 2025, and offered to facilitate additional meetings and discussions regarding areas of interest in the draft Regional Haze Progress Report if requested. No additional meetings or discussions were requested.

The MPCA received one FLM comment prior to the close of the consultation. The U.S. FS provided their comment in an email dated January 16, 2025. The FS asked about current taconite NO_x emissions, reasonable progress goal modeling NO_x emission assumptions, and NO_x emissions based on the Revision to Taconite Federal Implementation Plan (FIP). The MPCA provided answers to current taconite NO_x emissions and reasonable progress goal modeling NO_x emission assumptions. The MPCA responded that information concerning emissions based on the FIPs should be forthcoming upon the finalizing of the FIPs. The MPCA did not receive a comment letter from the U.S. FWS nor the NPS prior to the close of consultation.

The MPCA did not make any changes to the following sections of the Regional Haze SIP submittal based on this consultation with FLMs. The email correspondence between the MPCA and the FLMs is included in Appendix B.

Public Notice

Public notice period: 5/19/2025 – 6/18/2025

On May 19, 2025, the public notice was placed in the *Minnesota State Register* (Volume 49, Number 47, page 1265). No public comments were received. There were no requests for a public meeting. A public meeting was not held.

Progress report elements

A. Status of Control Strategies in the Regional Haze SIP

40 CFR § 51.308(g)(1) requires a description of the status of emission reduction measures:

A description of the status of implementation of all measures included in the implementation plan for achieving reasonable progress goals for mandatory Class I Federal areas both within and outside the State.

In accordance with EPA's July 2024 Guidance, the relevant time-period to address regarding 40 CFR § 51.308(g)(1) is 2019 through 2023.¹

In the first implementation period, the focus of the Regional Haze Rule was on establishing Best Available Retrofit Technology (BART) for certain older sources and reasonable progress towards national visibility goals. A full discussion of these strategies is available in Minnesota's 2014 5-year update.² However, in the second implementation period there are no BART requirements; therefore, the focus is on making reasonable progress.

As previously discussed in Section 2.5.6 of Minnesota's Comprehensive State Implementation Plan Update for the Second Regional Haze Implementation Period (2018-2028) [referenced hereafter as "2022 Regional Haze SIP"], MPCA identified electric generating unit retirements and the Taconite Regional Haze Federal Implementation Plan (FIP) as emission reduction measures necessary to make reasonable progress.³

The history and status of implementation of the Taconite Regional Haze FIP is described in Section 1.3 of Minnesota's 2022 Regional Haze SIP. Since then, EPA published proposed settlement agreements on April 22, 2024, with Cleveland Cliffs regarding four taconite facilities and with United States Steel regarding one taconite facility. The settlement agreements describe NO_x and SO₂ emission factor limits for various emission units and set compliance dates depending on when EPA updates the Taconite Regional Haze FIP through rulemaking actions. EPA expects the final rulemaking to update the Taconite Regional Haze FIP for the four Cleveland Cliffs facilities will be complete by December 2025 and expects final rulemaking for the United States Steel facility to be complete by May 2026. Many of the compliance deadlines for the emission factor limits are dependent on the date of final rulemaking to update the FIP; therefore, precise timing is unclear at this time.

Table 1 below provides a status update for control measures identified as necessary to make reasonable progress in the 2022 Regional Haze SIP.

¹ See EPA, July 2024 EPA Guidance, at 10.

² See MPCA, Five-Year Regional Haze Progress Report State Implementation Plan (Dec. 30, 2014), <https://www.pca.state.mn.us/sites/default/files/aq-sip2-17.pdf>.

³ See MPCA, Minnesota's Comprehensive State Implementation Plan Update for the Second Regional Haze Implementation Period (2018-2028) (Dec. 30, 2022), <https://www.pca.state.mn.us/sites/default/files/aq-sip2-19.pdf>.

Table 1. Status of control measures necessary for reasonable progress from 2022 Regional Haze SIP.

Facility name	Emission unit	Action	Reflected in RPG	Status
Minnesota Power - Boswell Energy Center	Unit 1	Retired 2018	Yes	Complete.
	Unit 2	Retired 2018	Yes	Complete.
Minnesota Power - Taconite Harbor Energy	Boiler 1	Retirement 2023	Yes	Complete.
	Boiler 2	Retirement 2023	Yes	Complete.
Virginia Department of Public Utilities	Boiler 7	Retirement 2025	Yes	Upcoming.
	Boiler 9	Retirement 2021	Yes	Complete.
Xcel Energy - Allen S. King	Boiler 1	Retirement 2028	Yes	Upcoming.
Xcel Energy - Sherburne	Unit 1	Retirement 2026	Yes	Upcoming.
	Unit 2	Retirement 2023	Yes	Complete. Retired December 31, 2023.
Hibbing Public Utilities Commission	Boiler 1	67 tpy NO _x limit Jan. 1, 2023	Yes	Complete.
	Boiler 2	67 tpy NO _x limit Jan. 1, 2023	Yes	Complete.
	Boiler 3	80 tpy NO _x limit Jan. 1, 2023	Yes	Complete.
Northshore Mining - Silver Bay	Power Boiler 1	Idled to 2031	Yes	Idle until 2031. Anticipate settlement before 2031.
	Power Boiler 2	Idled to 2031	Yes	Idle until 2031. Anticipate settlement before 2031.
	Furnace 11	Taconite RH FIP	No	In Progress. EPA expects FIP updates described in 2024 settlement agreement to be final by December 2025. ^{4,5}
	Furnace 12	Taconite RH FIP	No	
Cleveland Cliffs Minorca Mine Inc.	Indurating Machine	Taconite RH FIP	No	In Progress. EPA expects FIP updates described in 2024 settlement agreement to be final by December 2025. ^{4,5}
Hibbing Taconite Company	Indurating Furnace Line 1	Taconite RH FIP	No	In Progress. EPA expects FIP updates described in 2024 settlement agreement to be final by December 2025. ^{4,5}
	Indurating Furnace Line 2	Taconite RH FIP	No	
	Indurating Furnace Line 3	Taconite RH FIP	No	
United Taconite LLC - Fairlane Plant	Line 1 Pellet Induration	Taconite RH FIP	Yes	In Progress. EPA expects FIP updates described in

⁴ See EPA, 2024 Settlement Agreement for Cleveland Cliffs Inc., <https://www.regulations.gov/docket/EPA-HQ-OGC-2024-0179/document>

⁵ October 30, 2024, email from Kathleen D'Agostino (EPA).

Facility name	Emission unit	Action	Reflected in RPG	Status
	Line 2 Pellet Induration	Taconite RH FIP	Yes	2024 settlement agreement to be final by December 2025. ^{4,5}
US Steel Corporation - Keetac	Grate Kiln	Taconite RH FIP	Yes	In Progress. EPA expects FIP updates described in 2024 settlement agreement to be final by May 2026. ^{5,6}
US Steel Corporation - Minntac	Line 3 Rotary Kiln	Taconite RH FIP	Yes	Emission factor limit in effect no later than September 30, 2019, per Taconite Regional Haze FIP, see 40 CFR 52.1235(b)(1)(iii).
	Line 4 Rotary Kiln	Taconite RH FIP	Yes	
	Line 5 Rotary Kiln	Taconite RH FIP	Yes	
	Line 6 Rotary Kiln	Taconite RH FIP	Yes	
	Line 7 Rotary Kiln	Taconite RH FIP	Yes	

Taconite RH FIP = Taconite Regional Haze Federal Implementation Plan

Southern Minnesota Beet Sugar Cooperative

Control measures on Southern Minnesota Beet Sugar Cooperative (SMBSC) were not relied upon in the Minnesota Regional Haze SIP for either the first implementation period or the second implementation period to establish or make reasonable progress toward the 2018 and 2028 goals, respectively. However, this facility was one of several selected for assessment in both implementation periods.

Minnesota's 2022 Regional Haze SIP states, "the MPCA maintained that NO_x controls on Southern Minnesota Beet Sugar Cooperative [Boiler 1] are cost-effective and necessary to continue making reasonable progress, but MPCA has not reached an agreed path forward with the facility to install the NO_x controls. If an agreed path forward is reached, MPCA will supplement this Regional Haze SIP with the relevant information. If an agreed path forward is not reached, MPCA will consider reevaluating this facility and emission unit as part of the 2025 progress report or the 2028 comprehensive update".

B. Emissions reductions from Regional Haze SIP Strategies

40 CFR § 51.308(g)(2) requires a summary of the emissions reductions from regional haze SIP strategies:

A summary of the emissions reductions achieved throughout the State through implementation of the measures described in [40 CFR § 51.308(g)(1)].

In accordance with EPA's July 2024 Guidance, the relevant time period to address for the elements of 40 CFR § 51.308(g)(2) is 2019 through 2023.⁷ Final emissions data for 2023 are not yet available⁸, so this section will primarily focus on emissions from 2019 through 2022.

⁶ See EPA, 2024 Proposed Settlement Agreement for United States Steel Corp., <https://www.regulations.gov/docket/EPA-HQ-OGC-2024-0180/document>

⁷ See EPA, July 2024 EPA Guidance, at 12.

⁸ The MPCA annually updates permitted facility emissions data on its website at https://public.tableau.com/app/profile/mpca.data.services/viz/Pointsourceairemissionsdata_v10_5-11130/Byfacility

Of the control measures for the 11 electric generating units described in Section A and Table 1, three were due for implementation between 2019 and 2022. These measures are:

- Retirements of electric generating units in the utilities sector at
 - Minnesota Power—Boswell Energy Center, and
 - Virginia Department of Public Utilities
- Idling of electric generating units in the mining sector at Northshore Mining – Silver Bay

Emission reductions have occurred at other facilities that were not due for control measure implementation between 2019 and 2022 according to the 2022 Regional Haze SIP.

- While Minnesota Power – Taconite Harbor Energy Center was not scheduled to retire boilers 1 and 2 until March 2023, SO₂ and NO_x emissions were last reported from that facility in 2016.
- While emission units at Xcel Energy – Sherburne County Generating Plant and Xcel Energy – Allen S King Generating Plant are not scheduled to retire until after 2022, SO₂ and NO_x emissions have steadily decreased at both facilities over the last several years.
- While emission units at Hibbing Public Utilities Commission have control measures scheduled for implementation by January 1, 2023, SO₂ and NO_x emissions have steadily decreased at the facility over the last several years.

Table 2 shows SO₂ emissions for facility units with control measures necessary for making reasonable progress in the 2022 Regional Haze SIP from 2019 through 2022. In total, SO₂ emissions in 2022 were 4,415 tons, which is 411 tons more than the 2028 projected emissions from these sources used to develop the 2028 reasonable progress goals. Electric generating units (EGU) scheduled to retire between 2023 and 2028 emitted 1,591 tons of SO₂ in 2022. Accounting for upcoming EGU retirements, emissions appear to be on track to meet the projected 2028 levels at the end of the current implementation period. SO₂ emissions in the Taconite Regional Haze FIP and settlement agreements are only addressed for Cleveland Cliffs Minorca Mine, Northshore Mining Company – Silver Bay, and Hibbing Taconite Company but due to timing, appreciable emission reductions from these sources are more likely to appear after 2028 in the third regional haze implementation period.

Table 2. SO₂ Actual annual emissions from control strategies necessary for reasonable progress from 2022 Regional Haze SIP.

Facility name	Emission unit	Action	2019	2020	2021	2022	2028 SIP
Minnesota Power – Boswell Energy Center	Unit 1	Retired 2018	-	-	-	-	-
	Unit 2	Retired 2018	-	-	-	-	-
Minnesota Power – Taconite Harbor Energy	Boiler 1	Retirement 2023	-	-	-	-	-
	Boiler 2	Retirement 2023	-	-	-	-	-
Virginia Department of Public Utilities	Boiler 7	Retirement 2025	93	74	64	76	-
	Boiler 9	Retirement 2021	60	-	-	-	-
Xcel Energy – Allen S. King	Boiler 1	Retirement 2028	1,031	491	797	739	-
Xcel Energy – Sherburne	Unit 1	Retirement 2026	532	479	417	417	-
	Unit 2	Retirement 2023	472	390	629	359	-
	Boiler No. 1A	67 tpy NO _x limit Jan. 1, 2023	3	3	3	2	348

Facility name	Emission unit	Action	2019	2020	2021	2022	2028 SIP
Hibbing Public Utilities Commission	Boiler No. 2A	67 tpy NO _x limit Jan. 1, 2023	-	-	-	-	348
	Boiler No. 3A	80 tpy NO _x limit Jan. 1, 2023	36	36	12	1	348
Northshore Mining – Silver Bay	Power Boiler 1	Idled to 2031	457	-	-	-	-
	Power Boiler 2	Idled to 2031	241	-	-	-	-
	Furnace 11	Taconite RH FIP	72	53	62	23	74
	Furnace 12	Taconite RH FIP	69	51	70	20	75
Cleveland Cliffs Minorca Mine Inc.	Indurating Machine	Taconite RH FIP	188	169	153	131	97
Hibbing Taconite Company	Indurating Furnace Line 1	Taconite RH FIP	230	157	208	168	215
	Indurating Furnace Line 2	Taconite RH FIP	261	198	229	206	230
	Indurating Furnace Line 3	Taconite RH FIP	236	179	208	145	294
United Taconite LLC – Fairlane Plant	Line 1 Pellet Induration	Taconite RH FIP	110	88	60	26	61
	Line 2 Pellet Induration	Taconite RH FIP	239	354	396	67	217
US Steel Corporation – Keetac	Grate Kiln	Taconite RH FIP	675	248	750	704	537
US Steel Corporation – Minntac	Line 3 Rotary Kiln	Taconite RH FIP	194	267	322	323	308
	Line 4 Rotary Kiln	Taconite RH FIP	141	211	240	261	227
	Line 5 Rotary Kiln	Taconite RH FIP	155	174	231	198	272
	Line 6 Rotary Kiln	Taconite RH FIP	155	97	294	208	109
	Line 7 Rotary Kiln	Taconite RH FIP	158	155	371	340	244
Total			5,808	3,872	5,517	4,415	4,004

Table 3 shows NO_x emissions for facility units with control measures necessary for making reasonable progress in the 2022 Regional Haze SIP from 2019 through 2022. In total, NO_x emissions in 2022 were 24,922 tons, which is 7,523 tons more than 2028 projected emissions from these sources used in the modeling to develop the 2028 reasonable progress goals. Electric generating units (EGU) scheduled to retire between 2023 and 2028 emitted 5,234 tons of NO_x in 2022. After accounting for upcoming EGU retirements, 2,289 tons of NO_x emission reductions would still be needed to reach the projected 2028 levels by the end of the current implementation period. Looking at Table 3, the sources with 2022 emissions being higher than the 2028 column are the taconite facilities that will be subject to the FIPs. NO_x emissions from the taconite sources are addressed in the Taconite Regional Haze FIP but due to timing, appreciable emission reductions from those sources are more likely to appear after 2028 in the third regional haze implementation period.

Table 3. NO_x Actual annual emissions from control strategies necessary for reasonable progress from 2022 Regional Haze SIP.

Facility name	Emission unit	Action	2019	2020	2021	2022	RH SIP 2028
Minnesota Power - Boswell Energy Center	Unit 1	Retirement 2018	-	-	-	-	-
	Unit 2	Retirement 2018	-	-	-	-	-
Minnesota Power - Taconite Harbor Energy	Boiler 1	Retirement 2023	-	-	-	-	-
	Boiler 2	Retirement 2023	-	-	-	-	-
Virginia Department of Public Utilities	Boiler 7	Retirement 2025	71	52	45	52	-
	Boiler 9	Retirement 2021	47	-	-	-	-
Xcel Energy - Allen S. King	Boiler 1	Retirement 2028	913	420	702	636	-
Xcel Energy – Sherburne	Unit 1	Retirement 2026	2,475	2,078	1,907	2,475	-
	Unit 2	Retirement 2023	2,211	1,803	2,515	2,071	-
Hibbing Public Utilities Commission	Boiler No. 1A	67 tpy NO _x limit Jan. 1, 2023	43	24	53	44	165
	Boiler No. 2A	67 tpy NO _x limit Jan. 1, 2023	-	-	-	18	165
	Boiler No. 3A	80 tpy NO _x limit Jan. 1, 2023	82	82	55	52	165
Northshore Mining - Silver Bay	Power Boiler 1	Idled to 2031	277	-	-	-	-
	Power Boiler 2	Idled to 2031	404	-	-	-	-
	Furnace 11	Taconite RH FIP	253	223	288	101	267
	Furnace 12	Taconite RH FIP	279	229	290	83	320
Cleveland Cliffs Minorca Mine Inc.	Indurating Machine	Taconite RH FIP	2,464	1,151	1,209	1,406	3,243
Hibbing Taconite Company	Indurating Furnace Line 1	Taconite RH FIP	646	437	655	732	1,200
	Indurating Furnace Line 2	Taconite RH FIP	901	426	614	927	1,767
	Indurating Furnace Line 3	Taconite RH FIP	1,260	711	666	614	1,358
United Taconite LLC - Fairlane Plant	Line 1 Pellet Induration	Taconite RH FIP	1,384	1,198	1,150	1,018	1,330
	Line 2 Pellet Induration	Taconite RH FIP	3,397	3,147	3,198	3,136	1,885
US Steel Corporation - Keetac	Grate Kiln	Taconite RH FIP	3,306	1,388	4,458	4,624	1,373
US Steel Corporation - Minntac	Line 3 Rotary Kiln	Taconite RH FIP	719	1,013	1,437	1,437	724
	Line 4 Rotary Kiln	Taconite RH FIP	1,193	1,374	1,546	1,722	1,294
	Line 5 Rotary Kiln	Taconite RH FIP	1,421	1,418	1,434	1,532	788

Facility name	Emission unit	Action	2019	2020	2021	2022	RH SIP 2028
	Line 6 Rotary Kiln	Taconite RH FIP	1,161	1,182	1,272	961	675
	Line 7 Rotary Kiln	Taconite RH FIP	1,088	859	1,402	1,280	680
Total			25,995	19,214	24,896	24,922	17,399

EGU emissions reported to Clean Air Markets Program

In accordance with the 2024 EPA Guidance, if EGU emissions strategies are a part of the measures described under 40 CFR 51.308(g)(1), the progress reports should identify sources reporting to the EPA's Clean Air and Power Division (CAPD). The report should also discuss emissions trends for the state using the latest information available from the Clean Air Markets Program Data (CAMPD) website:

<https://campd.epa.gov/>.

Electric generating utilities greater than 25 megawatts that burn fossil fuels report NO_x and SO₂ emissions directly to the CAMPD system operated by EPA. Utilities have reported full year emissions through 2023. Of the electric generating unit facilities in Table 2 and Table 3, Minnesota Power – Boswell, Xcel Energy – Sherburne County Generating Plant and Xcel Energy – Allen S King Generating Plant currently all report to EPA's Clean Air and Power Division (CAPD)⁹. SO₂ and NO_x emissions from these three facilities, as well as state-wide are trending downward. Table 4 and

⁹ Clean Air Markets Program Data: <https://campd.epa.gov/>

Table 5 show the facility annual emissions for the last eight years.

Table 4. SO₂ emissions from facilities with control measures reporting to EPA Clean Air and Power Division.

SO ₂	Tons emissions reported							
Facility	2016	2017	2018	2019	2020	2021	2022	2023
Minnesota Power – Boswell Energy Center	3,640	3,140	3,190	577	491	551	605	579
Xcel Energy – Allen S King Generating Plant	1,520	1,580	1,480	1,030	490	797	739	558
Xcel Energy – Sherburne County Generating Plant	8,500	6,160	8,110	5,480	3,990	4,110	3,860	2,640
Minnesota state-wide total	16,500	13,500	16,600	9,080	5,800	6,160	5,350	3,840

Table 5. NO_x emissions from facilities with control measures reporting to EPA Clean Air and Power Division.

NO _x	Tons emissions reported							
Facility	2016	2017	2018	2019	2020	2021	2022	2023
Minnesota Power – Boswell Energy Center	4,310	4,080	4,130	2,350	2,040	2,430	2,480	2,340
Xcel Energy – Allen S King Generating Plant	1,390	1,470	1,370	913	420	702	636	493
Xcel Energy – Sherburne County Generating Plant	8,470	8,650	8,840	7,630	6,030	6,670	7,250	4,860
Minnesota state-wide total	17,600	17,400	17,700	13,400	9,980	12,100	11,800	9,310

C. Visibility progress

Section 51.308(g)(3) requires:

For each mandatory Class I Federal area within the State, the State must assess the following visibility conditions and changes, with values for most impaired, least impaired and/or clearest days as applicable expressed in terms of 5–year averages of these annual values. The period for calculating current visibility conditions is the most recent 5–year period preceding the required date of the progress report for which data are available as of a date 6 months preceding the required date of the progress report.

For progress reports due on and after January 31, 2025:

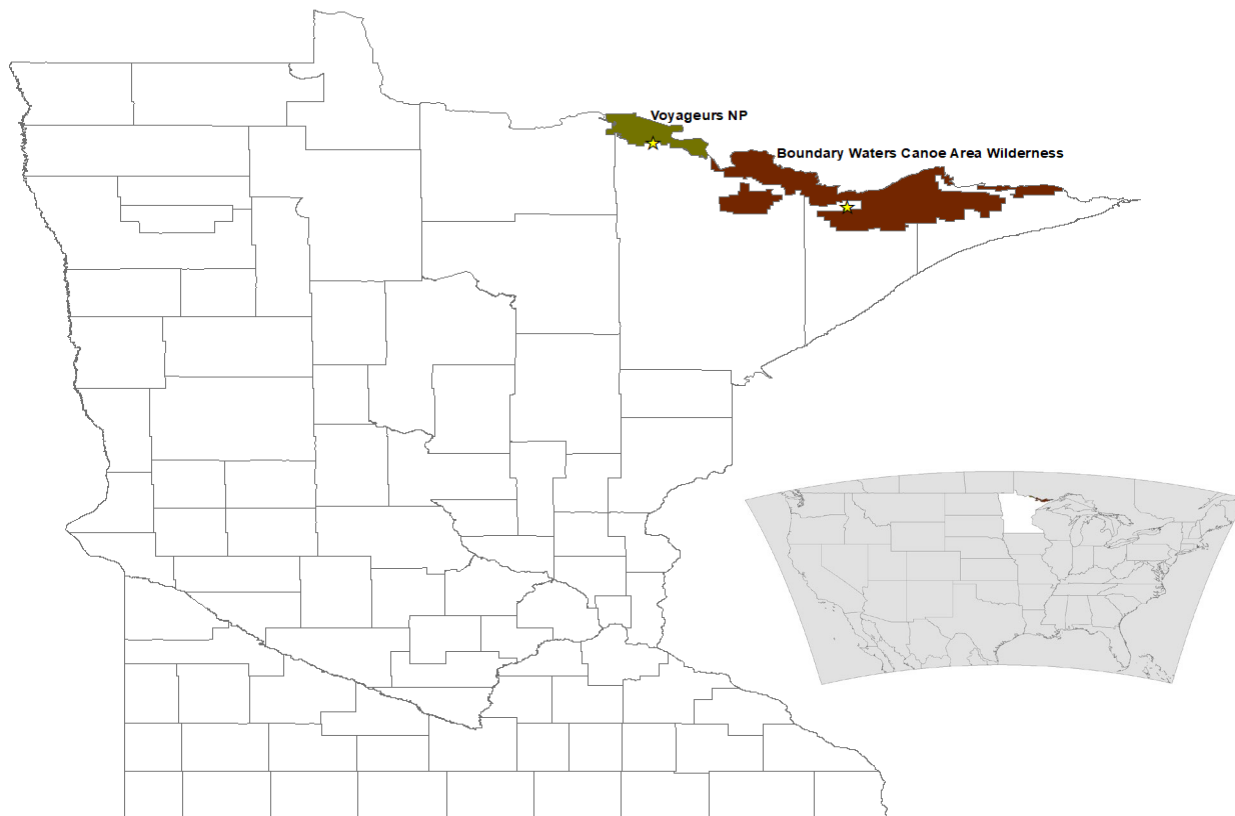
- i. The current visibility conditions for the most impaired and clearest days [51.308(g)(3)(i)(B)]*
- ii. The difference between current visibility conditions for the most impaired and clearest days and baseline visibility conditions [51.308(g)(3)(ii)(B)]*
- iii. The change in visibility impairment for the most impaired and clearest days over the period since the period addressed in the most recent plan required under paragraph (f) of this section [51.308(g)(3)(iii)(B)]*

i. Background information

The Regional Haze Rule requires states to “establish goals that provide for reasonable progress toward achieving natural visibility conditions” for each mandatory Class I area within a State¹⁰; improving visibility on the most impaired days and not degrading visibility on the least impaired or clearest days. Minnesota is home to two protected Class I areas, Boundary Waters and Voyageurs, located along the state’s border with Canada, as shown in Figure 1. Yellow star shaped icons identify the location of ambient air monitoring stations in the Interagency Monitoring of Protected Visual Environments (IMPROVE) network for each Class I area.

¹⁰ 40 CFR 51.308(d)(1)

Figure 1. Minnesota Class I areas, Boundary Waters and Voyageurs



The core of the visibility assessment is the baseline and natural visibility conditions based on observed data collected at IMPROVE monitors, made available through the Federal Land Manager Environmental Database (FED).¹¹ The baseline conditions are developed from five years of monitoring data, and represent the starting point from which reasonable progress is measured.

The Regional Haze Rule prescribes the initial baseline period as the years 2000-2004¹². The rule defines baseline visibility conditions as the average of the 20% of days with the most impaired visibility and the average of the 20% of days with the least impaired visibility (or “clearest days”). The baseline conditions are calculated from the monitoring data for each year of the baseline, then averaged over the 5-year baseline period. This process is repeated each year, dropping one year of data from the beginning of the 5-year period and adding one year of new data to the end of the 5-year period. The final result of the visibility calculation is assigned to the last year of the 5-year period, e.g. 2000-2004 is assigned to 2004.

The ultimate goal is to reach natural visibility conditions by the end of 2064. Reasonable progress goals are established as interim goals representing progress toward that end. The year 2018 is the initial year for developing a reasonable progress goal. The year 2028 is the second year for developing a reasonable progress goal. The year 2016 is the base year for developing the 2028 reasonable progress goal.

Models are used to establish the reasonable progress goal by simulating the future visibility conditions that will result from future emissions estimates. Emissions from a “base”, or known, year (i.e. 2016) representing the current baseline period and from a year in the future (i.e. 2028) are each modeled. The

¹¹ Federal Land Manager Environmental Database. <http://views.cira.colostate.edu/fed/QueryWizard/>

¹² 40 CFR 51.308(d)(2)

model results are used to estimate the air concentration change from base year to future year inventories. These air concentration changes are in the form of ratios of the future year air concentrations to the base year concentrations predicted near a monitor location and averaged over the same 20% most impaired and 20% clearest days in the base year, which were also used to establish baseline visibility conditions. These ratios, called Relative Response Factors (RRF), are applied to baseline monitoring conditions for the future visibility condition estimate, or reasonable progress goal.

The Regional Haze Rule requires states to measure interim progress toward reaching the reasonable progress goal using monitor data¹³. The rule requires visibility to be expressed in deciviews. A deciview is a unit of measurement of haze, or the haze index.

ii. Visibility conditions

Publicly available quality assured data is available through 2022 at the time of this report¹⁴. Current visibility conditions at both Boundary Waters and Voyageurs have improved compared to baseline conditions. Details on the calculations are available in Appendix A: MPCA's Regional Haze Technical Support Document¹⁵ of Minnesota's State Implementation Plan for Regional Haze – Comprehensive update for the second implementation period (2018 – 2028).

The current most impaired visibility at Boundary Waters as of 2022 is 13.6 deciviews; a 4.9 deciview improvement from the 2004 baseline visibility conditions and a 0.2 deciview decline from 2019 which is the latest period addressed in Minnesota's 2022 Regional Haze SIP. No degradation of visibility on the clearest days as occurred at Boundary Waters. The current clearest day visibility at Boundary Waters as of 2022 is 4.1 deciviews, a 2.4 deciview improvement from the 2004 baseline visibility conditions and a 0.1 deciview improvement from 2019 which is the latest period addressed in Minnesota's 2022 Regional Haze SIP.

The current most impaired visibility at Voyageurs as of 2022 is 13.9 deciviews; a 4.0 deciview improvement from the 2004 baseline visibility conditions and a 0.4 deciview decline from 2019 which is the latest period addressed in Minnesota's 2022 Regional Haze SIP. No degradation of visibility on the clearest days has occurred at Voyageurs. The current clearest day visibility at Voyageurs as of 2022 is 4.9 deciviews, a 2.3 deciview improvement from the 2004 baseline visibility conditions and a 0.2 deciview improvement from 2019 which is the latest period addressed in Minnesota's 2022 Regional Haze SIP.

The most impaired visibility as of 2022 at Boundary Waters is 0.2 deciview above, and at Voyageurs is 0.3 deciview above, the 2028 reasonable progress goals of 13.4 deciviews and 13.6 deciviews respectively. The five-year period ending in 2020 and the following year 2021 show upticks in visibility impairment at both Boundary Waters and Voyageurs. The subsequent and currently available 5-year period of data ending the year 2022 shows a return to visibility improvement at both Class I areas.

Figure 2 and Figure 3 and show the change in visibility conditions for the most impaired and clearest visibility days since 2004 at Boundary Waters and Voyageurs. The five-year rolling average deciview

¹³ 40 CFR 51.308(g)(3)

¹⁴ The MPCA annually updates visibility data on its website at https://public.tableau.com/app/profile/mpca.data.services/viz/RegionalHaze_visibility_metrics_public/Visibilityprogress

¹⁵ Appendix A: MPCA's Regional Haze Technical Support Document, <https://www.pca.state.mn.us/sites/default/files/aq-sip2-19a.pdf>

values for each year is placed in relation to a straight line connecting the initial baseline deciview value to the 2064 natural conditions endpoint goal for each Class I area. This line does not represent interim-year goals, but helps the reader measure the current visibility progress toward the 2064 natural conditions endpoint goal. Table 6 and Table 7 contain the underlying data shown in the figures.

Figure 2. Measured progress toward meeting the 2028 Reasonable Progress Goal at Boundary Waters for the most impaired and clearest visibility days (5-year rolling average).

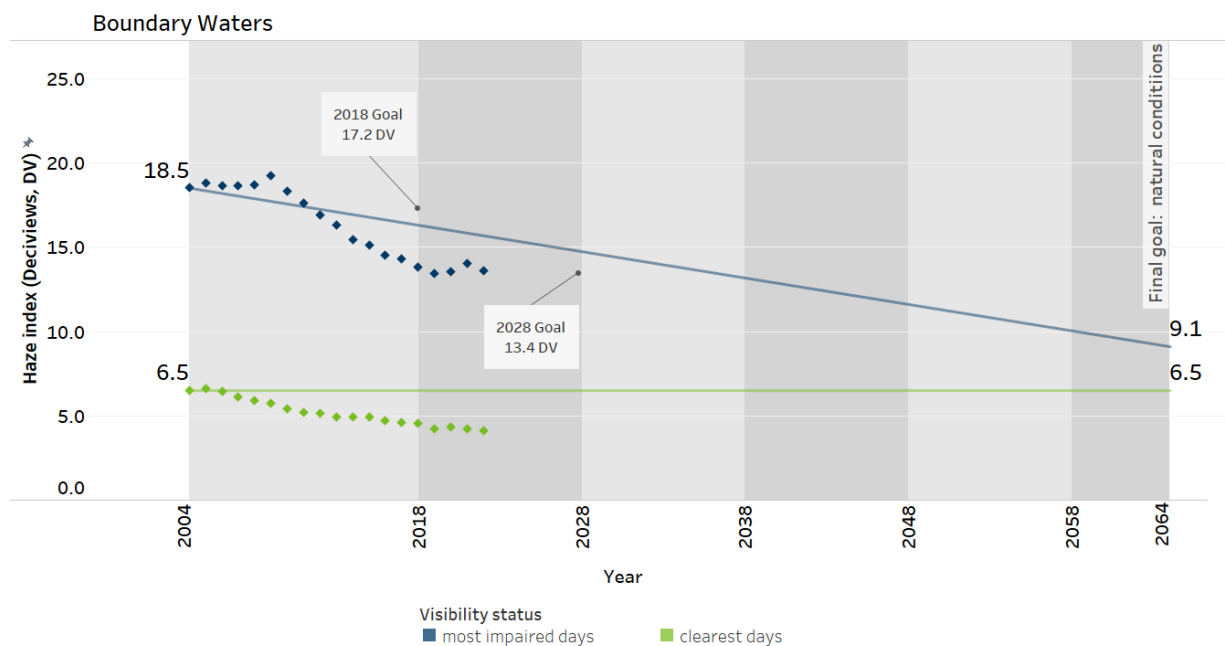


Table 6. Underlying data in deciviews for Figure 2. Measured progress toward meeting the 2028 Reasonable Progress Goal at Boundary Waters for the most impaired and clearest visibility days.

Site	Year	Most impaired visibility		Clearest visibility	
		Annual	5-year rolling average	Annual	5-year rolling average
B O U N D A R Y W A T E R S	2000	18.6		6.0	
	2001	19.4		6.9	
	2002	18.8		7.1	
	2003	18.5		6.8	
	2004	17.1	18.5	5.8	6.5
	2005	20.3	18.8	6.5	6.6
	2006	18.5	18.6	5.8	6.4
	2007	18.7	18.6	5.8	6.1
	2008	19.1	18.7	5.6	5.9
	2009	19.5	19.2	4.9	5.7
	2010	15.5	18.3	4.8	5.4
	2011	15.2	17.6	4.9	5.2
	2012	15.4	16.9	5.4	5.1
	2013	15.8	16.3	4.5	4.9
	2014	15.2	15.4	5.0	4.9
	2015	13.8	15.1	4.5	4.9
	2016	12.0	14.5	4.2	4.7
	2017	14.5	14.3	5.0	4.6
	2018	13.7	13.8	4.0	4.5
	2019	13.1	13.4	3.5	4.2
	2020	14.2	13.5	5.0	4.3
	2021	14.3	14.0	3.7	4.2
	2022	12.7	13.6	4.2	4.1

Figure 3. Measured progress toward meeting the 2028 Reasonable Progress Goal at Voyageurs for the most impaired and clearest visibility days (5-year rolling average).

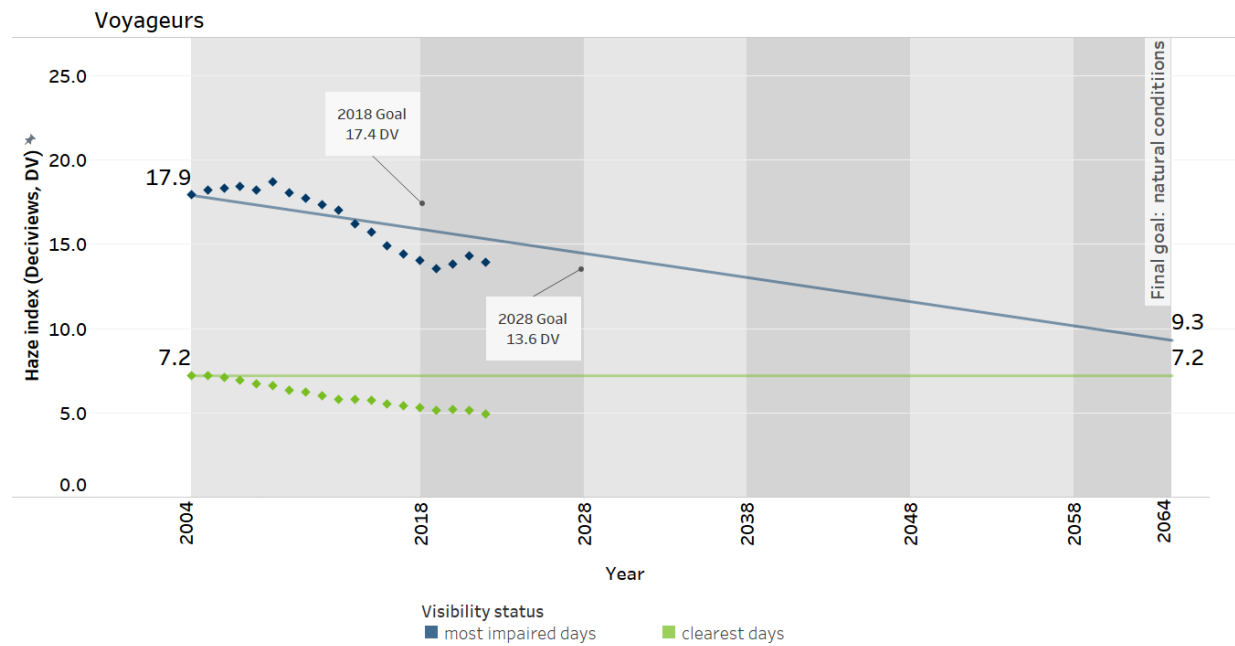


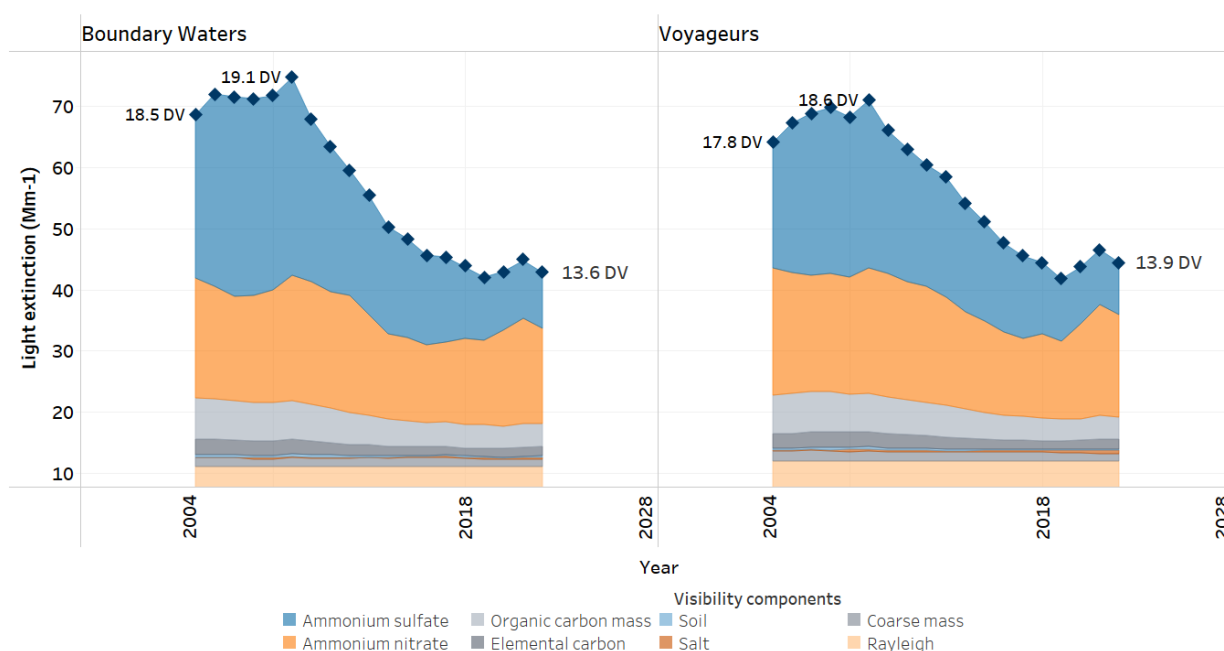
Table 7. Underlying data in deciviews for Figure 3. Measured progress toward meeting the 2028 Reasonable Progress Goal at Voyageurs for the most impaired and clearest visibility days.

Site	Year	Most impaired visibility		Clearest visibility	
		annual	5-year rolling average	annual	5-year rolling average
V O Y A G E U R S	2000	18.0		7.1	
	2001	17.7		7.1	
	2002	17.8		7.5	
	2003	18.8		7.7	
	2004	17.2	17.9	6.4	7.2
	2005	19.6	18.2	7.0	7.2
	2006	18.2	18.3	6.6	7.1
	2007	18.1	18.4	6.9	6.9
	2008	17.9	18.2	6.6	6.7
	2009	19.4	18.7	5.7	6.6
	2010	16.4	18.0	5.9	6.3
	2011	16.4	17.7	5.7	6.2
	2012	16.2	17.3	6.2	6.0
	2013	16.3	17.0	5.2	5.8
	2014	15.8	16.2	5.8	5.8
	2015	13.5	15.7	5.4	5.7
	2016	12.6	14.9	4.9	5.5
	2017	14.1	14.4	5.8	5.4
	2018	14.2	14.0	4.9	5.3
	2019	13.2	13.5	4.3	5.1
	2020	14.9	13.8	5.9	5.2
	2021	15.0	14.3	4.7	5.1
	2022	12.1	13.9	4.9	4.9

iii. Visibility components

A break-down of the visibility measure into its individual components—ammonium nitrate, ammonium sulfate, organic carbon, elemental carbon, fine soil, salt, and coarse mass particles—provides context for the visibility conditions at Boundary Waters and Voyageurs. Figure 4 shows the monitored visibility impairment, as light extinction in units of inverse megameters (Mm^{-1}), from the identified visibility components through 2022 for the most impaired visibility conditions at Boundary Waters and Voyageurs. The 5-year rolling average value of total light extinction is converted to the haze index in deciviews and superimposed at the top of each year.

Figure 4. Visibility components for most impaired visibility conditions at Boundary Waters and Voyageurs.



Minnesota's Class I areas continue to show marked improvement in visibility since the initial baseline period. The measured improvements in visibility impairment on the most impaired days can be attributed to reductions in sulfate, and to a lesser extent nitrate. These improvements are likely a result of enforceable measures for SO_2 and NO_x emissions at power plants, industrial facilities, and motor vehicles.

Data for specific years is presented in Table 8, further illustrating the relative dominance nitrates and sulfates have in causing visibility impairment at Boundary Waters and Voyageurs. For example, at Boundary Waters sulfates and nitrates account for roughly 68% of the total visibility impairment in the initial baseline year (2004), 57% in the latest period addressed in the December 2022 State Implementation Plan (2019) and 58% in the most recent available data year (2022).

Table 8. Visibility components at Boundary Waters and Voyageurs at initial baseline (2004), initial projection year (2018) and most recent available data year (2022).

Class I area	Year	Total (dv)	Light extinction by component (best expressed in Mm^{-1})							
			Total	NH_4SO_4	NH_4NO_3	OCM	EC	Soil	Salt	Coarse Mass
Boundary Waters	2004	18.5	68.6	26.7	19.6	6.8	2.5	0.4	0.1	1.5
	2019	13.4	42.0	10.3	13.8	3.8	1.4	0.2	0.2	1.3
	2022	13.6	42.8	9.1	15.6	3.8	1.5	0.2	0.3	1.3
Voyageurs	2004	17.9	64.1	20.4	20.8	6.4	2.4	0.3	0.1	1.6
	2019	13.5	41.8	10.2	12.7	3.6	1.4	0.2	0.4	1.3
	2022	13.9	44.4	8.5	16.7	3.7	1.6	0.2	0.5	1.2

D. Emissions progress

Section 51.308(g)(4) requires:

An analysis tracking the change over the period since the period addressed in the most recent plan required under paragraph (f) of this section in emissions of pollutants contributing to visibility impairment from all sources and activities within the State. Emissions changes should be identified by type of source or activity. With respect to all sources and activities, the analysis must extend at least through the most recent year for which the state has submitted emission inventory information to the Administrator in compliance with the triennial reporting requirements of subpart A of this part as of a date 6 months preceding the required date of the progress report. With respect to sources that report directly to a centralized emissions data system operated by the Administrator, the analysis must extend through the most recent year for which the Administrator has provided a State-level summary of such reported data or an internet-based tool by which the State may obtain such a summary as of a date 6 months preceding the required date of the progress report.

As described in the Visibility Progress section, the reasonable progress goal is determined using base year and future year emissions inventories. In the second implementation period, emissions from the “base,” or known, year that represent the baseline period were developed for 2016. Emissions were projected using growth and control analyses to estimate emissions in 2028. The Regional Haze Rule requires states to measure interim progress toward reaching the projected emissions estimate.

As evident in the Visibility Progress section, the precursors to formation of ammonium sulfate and ammonium nitrate are the most significant contributors to visibility impairment. Human-generated emissions of SO₂, NO_x and ammonia contribute to the formation of ammonium sulfate and ammonium nitrate, with NO_x from industry and vehicles having been primary source types impacting Minnesota’s Class I areas in the second implementation period. In the first implementation period, SO₂ from electric generating utilities was the primary source type impacting visibility at Minnesota’s Class I areas.

Emissions from large facilities that emit pollutants through stacks, or point sources, are estimated every year. The most recent point source emissions are available for the year 2022. Emissions from on-road and off-road (aka nonroad) vehicle sources and other sources not emitted through stacks, or non-point sources, are calculated on a three-year cycle. The most recent complete vehicle and non-point emissions are available for the year 2020.

Although vehicle and nonpoint emissions are calculated every three years¹⁶, trend data in this section shows linearly interpolated values in the off-years 2016 (interpolated between 2014-2017), 2018 and 2019 (interpolated between 2017 and 2020). Vehicle and nonpoint emissions are not provided for 2021 or 2022 because 2023 emissions are not available for the interpolation. Emissions of each pollutant contributing to visibility are discussed separately in the following sub-sections.

¹⁶ The MPCA updates every three years all source type emissions on its website at <https://public.tableau.com/app/profile/mpca.data.services/viz/Statewideairemissionsdata/Emissions>

i. Sulfur dioxide

SO₂ emissions in Minnesota have been steadily decreasing. Table 9 shows that point sources emit the majority of SO₂ in Minnesota. Between 2016 and 2022, annual point source SO₂ emissions have decreased 43% to 15,800 tons. Between 2016 and 2020, vehicle and nonpoint SO₂ emissions have decreased an estimated 49% to 2,000 tons. Minnesota actual annual SO₂ emissions are significantly lower than the projected 2028 SO₂ emissions identified in the 2022 Regional Haze SIP to develop the 2028 reasonable progress goal. In the 2022 Regional Haze SIP SO₂ emissions were projected to decrease 23% to 22,000 tons for point sources and decrease by 2% to 5,200 tons for vehicle and nonpoint sources by 2028.

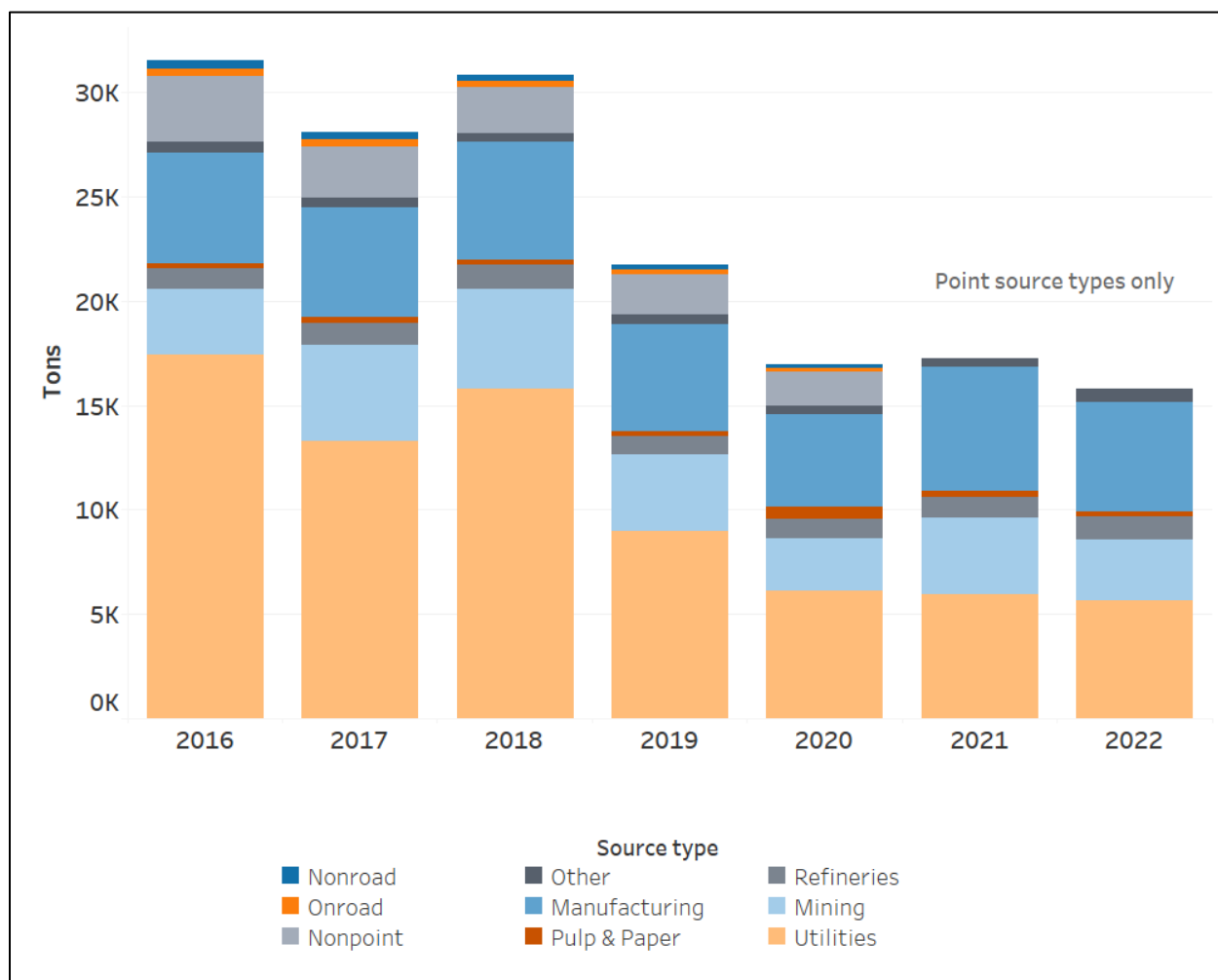
Table 9. SO₂ annual emissions (tons) in Minnesota emissions inventory and the 2022 Regional Haze SIP.

SO ₂			2022 SIP	
Year	Annual point source	Annual total*	Annual point source	Annual total
2016	27,600	31,500	28,400	33,700
2017	24,900	28,100		
2018	28,100	30,800		
2019	19,400	21,700		
2020	15,000	17,000		
2021	17,200			
2022	15,800			
≈				
2028			22,000	27,200

* Greyed out annual total emissions include interpolated data for vehicle and nonpoint emissions

Coal-burning electric generating utilities are no longer the main source of SO₂ emissions, with other types of industry sources taking a larger share of the point source emissions. Of the industry source types, the manufacturing, mining and refinery sources together in 2022 account for most of the SO₂ emissions at 9,250 tons compared to utilities at 5,650 tons. Figure 5 shows the SO₂ emissions trend in Minnesota from 2016 to 2022. A table with the data used to create Figure 5 is located in Appendix A.

Figure 5. SO₂ annual human-generated emissions by source type in Minnesota 2016 to 2022.



Note: 2021 and 2022 emissions do not include Nonroad, Onroad, or Nonpoint sources

Electric generating utilities greater than 25 megawatts that burn fossil fuels report SO₂ emissions directly to an emissions data system operated by EPA. The Clean Air Markets Program Data (CAMPD) system contains Minnesota data for 2023 in addition to the years between 2016 and 2022. Table 10 contains state-wide total CAMPD SO₂ emissions between 2016 and 2023. SO₂ emissions in 2023 are lower than in 2022 by 1,510 tons.

Table 10. SO₂ annual Clean Air Markets Program emissions in Minnesota 2016 to 2023.

SO ₂								
Year	2016	2017	2018	2019	2020	2021	2022	2023
Tons	16,500	13,500	16,600	9,080	5,800	6,160	5,350	3,840

ii. Nitrogen oxides

NO_x emissions in Minnesota have been decreasing, but less so than SO₂ emissions. Table 11 shows that vehicle and nonpoint sources emit the majority NO_x in Minnesota. Between 2016 and 2022, annual point source NO_x emissions have decreased 8% to 52,300 tons. Between 2016 and 2020, vehicle and nonpoint NO_x emissions have decreased an estimated 33% to 110,800 tons. However, the COVID-19

pandemic in 2020 may skew emissions downward that year due to lack of routine activity as opposed to emission reduction measures.

Vehicle and nonpoint source NO_x emissions will likely rebound from 2020 in the 2023 vehicle and nonpoint inventory, but perhaps will be lower than 2017. Point source NO_x emissions changes before and after 2020 illustrate the effect of the pandemic. Point source NO_x emissions dipped down 19% to 44,200 tons between 2019 and 2020. Point source NO_x emissions rebounded by 18% to 52,300 tons between 2020 and 2022.

As expected, the most current Minnesota actual annual NO_x emissions are higher than the projected 2028 NO_x emissions identified in the 2022 Regional Haze SIP to develop the 2028 reasonable progress goal. In the 2022 Regional Haze SIP, NO_x emissions were projected from 2016 to decrease 24% to 48,200 tons for point sources and decrease by 43% to 89,800 tons for vehicle and nonpoint sources by 2028.

Table 11. NO_x annual emissions (tons) in Minnesota emissions inventory and the 2022 Regional Haze SIP.

NO _x			2022 SIP	
Year	Annual point source	Annual total*	Annual point source	Annual total
2016	56,700	223,000	63,300	221,000
2017	63,400	217,000		
2018	63,200	202,000		
2019	54,600	180,000		
2020	44,200	155,000		
2021	52,400			
2022	52,300			
≈				
2028			48,200	138,000

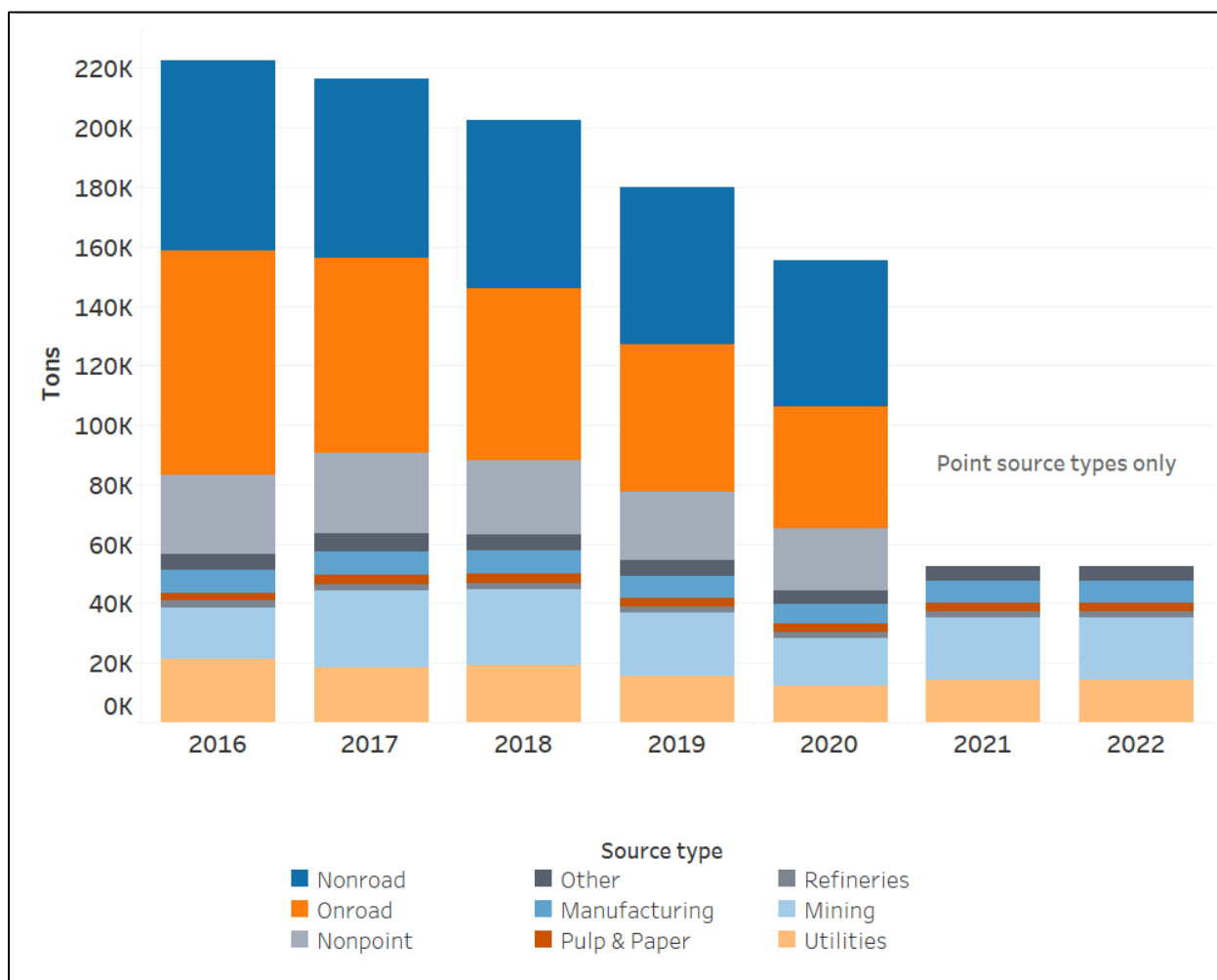
* Greyed out annual total emissions include interpolated data for vehicle and nonpoint emissions

Vehicles that operate off-road, aka nonroad sources, are replacing vehicles that operate on roadways as the main source of NO_x emissions. In 2020, nonroad sources account for most of the NO_x emissions at 49,300 tons compared to on road sources at 41,100 and nonpoint sources at 20,800 tons.

Of the point source NO_x emissions, between 2016 and 2022 electric generating utilities NO_x emissions reduced 32% to 14,400 tons. Mining NO_x emissions between 2016 and 2022 suggest emissions increased 18% to 20,700 tons, but 2016 was an atypical year for mining operations. Year 2017 was a more typical year for mining operations. Between 2017 and 2022 mining facilities NO_x emissions reduced by 19%.

Figure 6 shows the NO_x emissions trend in Minnesota from 2016 to 2022. A table with the data used to create Figure 6 is located in Appendix A.

Figure 6. NO_x annual human-generated emissions by source type in Minnesota 2016 to 2022.



Note: 2021 and 2022 emissions do not include Nonroad, Onroad, or Nonpoint sources

Electric generating utilities greater than 25 megawatts that burn fossil fuels report NO_x emissions directly to an emissions data system operated by EPA. The Clean Air Markets Program Data (CAMPD) system contains Minnesota data for 2023 in addition to the years between 2016 and 2022. Table 12 contains state-wide total CAMPD NO_x emissions between 2016 and 2023. NO_x emissions in 2023 are lower than in 2022 by 2,490 tons.

Table 12. NO_x annual Clean Air Markets Program emissions in Minnesota 2016 to 2023.

NO _x								
Year	2016	2017	2018	2019	2020	2021	2022	2023
Tons	17,600	17,400	17,700	13,400	9,980	12,100	11,800	9,310

iii. Ammonia

To form ammonium sulfate and ammonium nitrate in the atmosphere, there must be readily available ammonia (NH₃) with which to react. Table 13 shows that vehicle and nonpoint sources emit the majority of NH₃ in Minnesota. Between 2016 and 2022, annual point source NH₃ emissions have decreased 10% to 1,080 tons. Between 2016 and 2020, vehicle and nonpoint NH₃ emissions have increased an estimated 15% to 199,000 tons.

In the 2022 Regional Haze SIP, NH₃ emissions were projected from 2016 to increase 19% to 1,370 ton by 2028 for point sources and increase 6% from 201,000 tons in 2016 to 213,000 for vehicle and nonpoint sources by 2028. Interpolated 2016 NH₃ emissions from vehicle and nonpoint emissions are significantly lower than those used in the 2022 SIP for developing the reasonable progress goals. The dissimilar values are likely due to a difference of emission estimation methodology exacerbated by the fact vehicle and nonpoint emissions are calculated every three years. Not enough comparable data is available to draw definitive conclusions, but it appears NH₃ emissions may at least increase to the levels reflected in the reasonable progress goals.

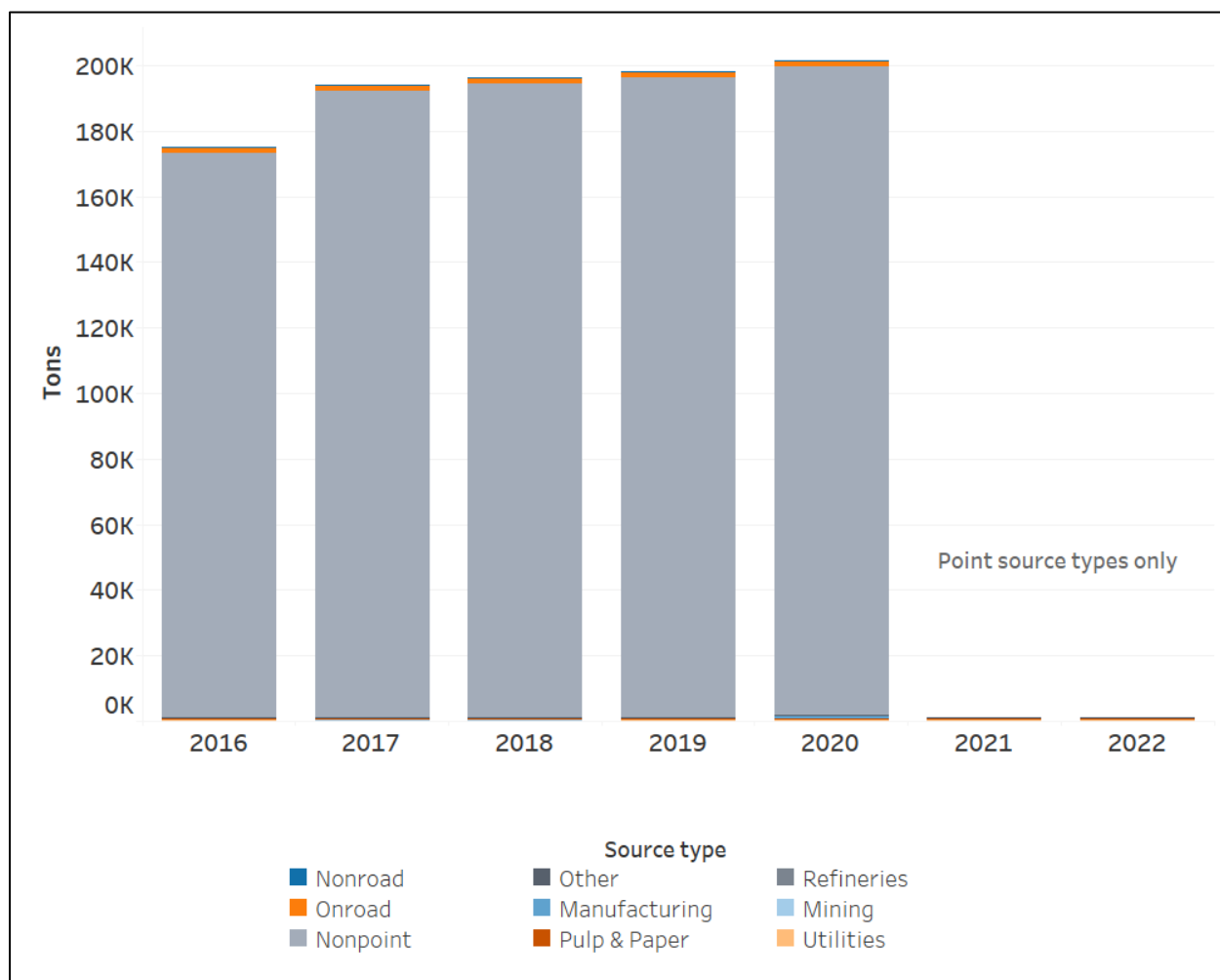
Table 13. Ammonia annual emissions (tons) in Minnesota emissions inventory and the 2022 Regional Haze SIP.

NH ₃			2022 SIP	
Year	Annual point source	Annual total*	Annual point source	Annual total
2016	1,200	175,000	1,150	202,000
2017	1,190	194,000		
2018	1,280	196,000		
2019	1,260	198,000		
2020	1,820	201,000		
2021	1,090			
2022	1,080			
≈				
2028			1,370	214,000

* Greyed out annual total emissions include interpolated data for vehicle and nonpoint emissions

Figure 7 shows the proportion of NH₃ emissions by source type. Nonpoint sources are by far the most significant emitter of NH₃, specifically agriculture livestock manure management that includes feedlots and application of manure as fertilizer. In 2020, agriculture livestock manure management accounts for 128,000 tons and fertilizer application accounts for 64,700 tons of the total NH₃ emissions. A table with the data used to create Figure 7 is located in Appendix A.

Figure 7. Ammonia annual human-generated emissions by source type in Minnesota 2016 to 2022.



Note: 2021 and 2022 emissions do not include Nonroad, Onroad, or Nonpoint sources

iv. Volatile organic compounds

Volatile organic compounds (VOC) emissions have a role in organic carbon formation. The level of VOC naturally present in the air often overwhelm those that are human-generated. On days that organic carbon is highest, wildfires are typically the cause. The visibility metrics in the visibility progress section of this report changed from the first to the second implementation period by dampening the effect of wildfires on the metrics. The effective removal of wildfires makes nearly insignificant the role of VOC emissions in the visibility metric.

Table 14 shows that vehicle and nonpoint emissions sources emit the majority human-generated VOC in Minnesota. Between 2016 and 2022, annual point source VOC emissions have decreased 6% to 17,800 tons. Between 2016 and 2020, vehicle and nonpoint VOC emissions have decreased an estimated 13% to 198,000 tons. The most current Minnesota actual annual VOC emissions are somewhat lower than the projected emissions in the 2022 Regional Haze SIP to develop the 2028 reasonable progress goal. In the 2022 Regional Haze SIP VOC emissions were projected to remain unchanged for point sources and decrease by 20% to 180,000 tons for vehicle and nonpoint sources by 2028.

Table 14. VOC annual emissions (tons) in Minnesota emissions inventory and the 2022 Regional Haze SIP.

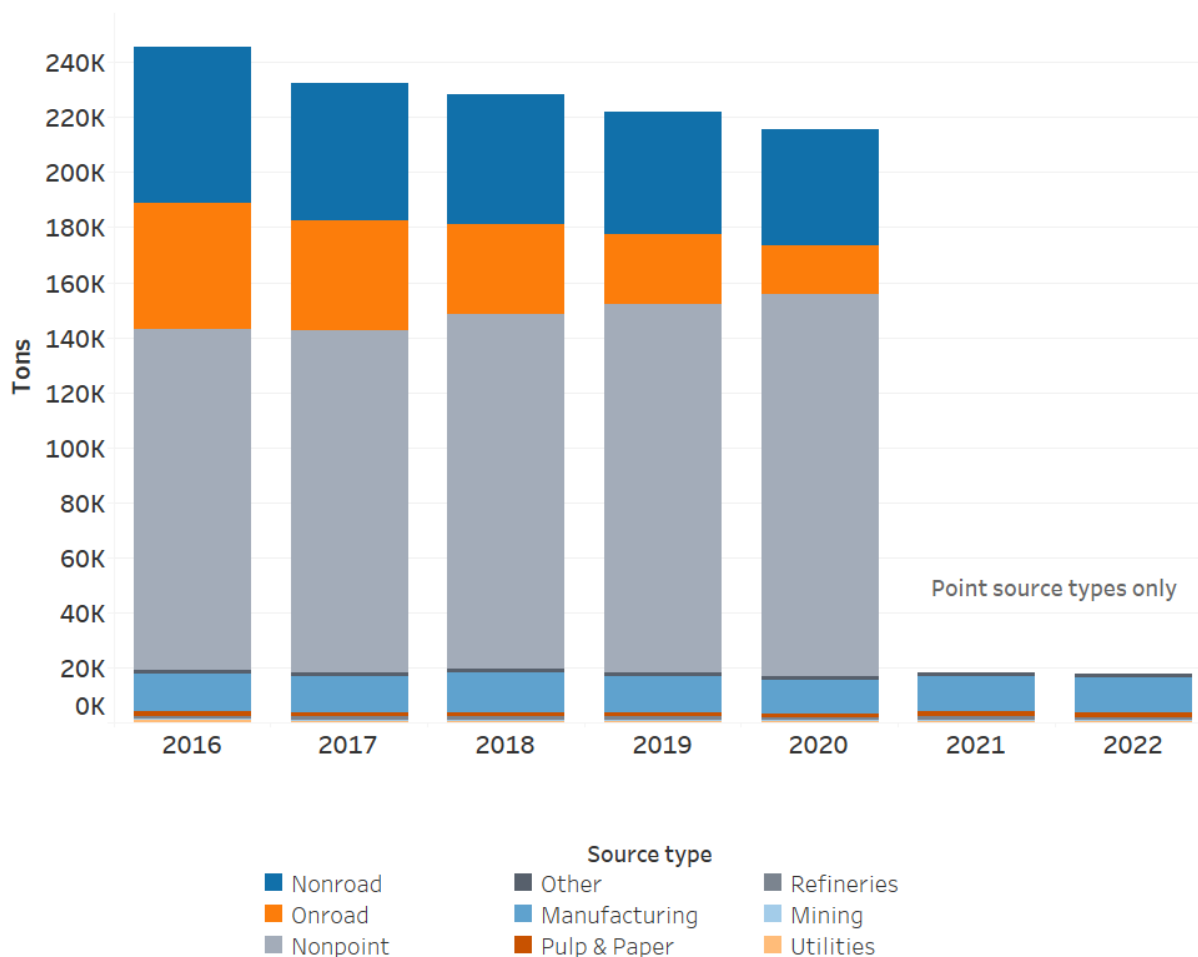
VOC			2022 SIP	
Year	Annual point source	Annual total*	Annual point source	Annual total
2016	18,900	246,000	18,900	243,000
2017	18,400	232,000		
2018	19,600	228,000		
2019	18,100	222,000		
2020	16,600	215,000		
2021	18,200			
2022	17,800			
≈				
2028			18,900	199,000

* Greyed out annual total emissions include interpolated data for vehicle and nonpoint emissions

Figure 8 shows the proportion of VOC emissions by source type. In 2020, nonpoint sources are the most significant emitter of VOC in Minnesota. A table with the data used to create Figure 8 is located in Appendix A.

The top five VOC emitters include four nonpoint source types, residential wood combustion (33,700 tons), consumer and commercial solvent use (25,800 tons), asphalt paving (20,300 tons), miscellaneous non-industrial source not elsewhere classified (12,100 tons), and one nonroad source type, recreational equipment (22,400 tons).

Figure 8. VOC annual human-generated emissions by source type in Minnesota 2016 to 2022.



v. Direct fine particulate

Direct Particulate Matter < 2.5 microns ($PM_{2.5}$) emissions have very minimal impact on visibility in Boundary Waters and Voyageurs. Visibility levels for directly emitted $PM_{2.5}$ are so small they barely appear in the component breakdown in Figure 4 of the Visibility Progress section of this report. The 2016 modeling platform developed for the 2022 Regional Haze SIP contains significantly less total direct $PM_{2.5}$ emissions than the annual emissions inventory. The modeling platform adjusts these emissions to account only for the transportable fraction. Otherwise, direct $PM_{2.5}$ emissions are unreasonably high when comparing modeled with measured values within the Midwestern United States¹⁷.

Table 15 shows the direct $PM_{2.5}$ emissions from the annual emissions inventory and the 2022 Regional Haze SIP. Emissions are aggregated into all point sources and the total all point sources plus vehicle and nonpoint sources. In the 2022 Regional Haze SIP, direct $PM_{2.5}$ emissions are projected from 2016 to decrease 3% to 11,500 tons for point sources and decrease 7% to 85,100 tons for vehicle and nonpoint sources by 2028.

¹⁷ Reference MPCA RH SIP technical support document (appendix a)

Table 15. PM_{2.5} annual emissions (tons) in Minnesota emissions inventory and the 2022 Regional Haze SIP.

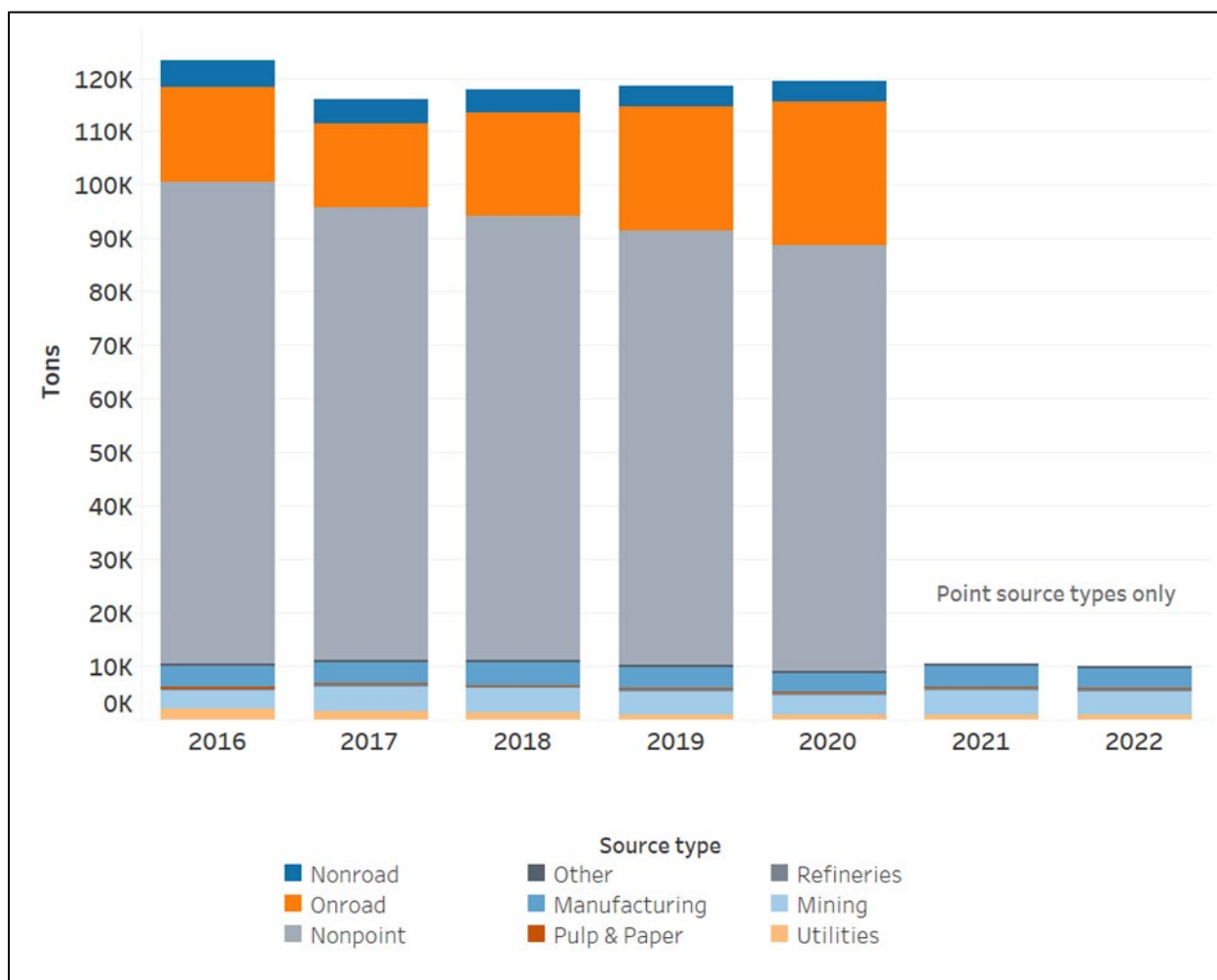
PM _{2.5}			2022 SIP	
Year	Annual point source	Annual total*	Annual point source	Annual total
2016	10,500	123,000	11,800	103,000
2017	11,200	116,000		
2018	11,200	118,000		
2019	10,300	119,000		
2020	9,160	119,000		
2021	10,400			
2022	10,100			
≈				
2028			11,500	96,600

* Greyed out annual total emissions include interpolated data for vehicle and nonpoint emissions

Figure 9 shows the proportion of direct PM_{2.5} emissions by source type. In 2020, nonpoint sources are the main emitter of direct PM_{2.5} emissions in Minnesota. A table with the data used to create Figure 9 is located in Appendix A.

The top five direct PM_{2.5} emitters include three nonpoint source types, residential wood combustion (35,500 tons), agricultural dust (31,900 tons) and industrial fuel combustion (3,370 tons), and two nonroad source types, unpaved roads (21,400 tons) and paved roads (4,050 tons). Agricultural dust, unpaved roads and paved roads are subject to the transport fraction adjustment.

Figure 9. PM_{2.5} annual human-generated emissions by source type in Minnesota 2016 to 2022.



Note: 2021 and 2022 emissions do not include Nonroad, Onroad, or Nonpoint sources

vi. Emissions progress summary

In conclusion, Minnesota reductions of SO₂ emissions continue to exceed those used to develop reasonable progress goals for the implementation period. Minnesota sources appear to be generating additional NH₃ at a rate that may reach the level projected for 2028. Reductions in NH₃ are preferable as more available ammonia can result in additional formation of ammonium sulfate and ammonium nitrate, the main causes of visibility impairment in Boundary Waters and Voyageurs. The effective removal of organic carbon due to wildfires makes nearly insignificant the role of VOC emissions in the visibility metric. The transportable fraction of directly emitted PM_{2.5} also has very little impact on visibility impairment in Boundary Waters and Voyageurs.

E. Assessment of changes impeding visibility progress

Section 51.308(g)(5) requires:

An assessment of any significant changes in anthropogenic emissions within or outside the State that have occurred since the period addressed in the most recent plan required under paragraph (f) of this section including whether or not these changes in anthropogenic emissions were anticipated in that most recent plan and whether they have limited or impeded progress in reducing pollutant emissions and improving visibility.

The 2022 Regional Haze SIP identified through modeling regions—states and Canada—that contributed 3.5% or more to impaired visibility projected to 2028 at Boundary Waters and Voyageurs. The states, in addition to Minnesota, are Iowa, Missouri, Nebraska, North Dakota and Wisconsin. Minnesota, the host state to Boundary Waters and Voyageurs, is the greatest contributor to visibility impairment. As neighboring states decrease emissions, the contribution of the host state can become proportionally larger. Because visibility impairment in Boundary Waters and Voyageurs is mainly attributable to ammonium sulfate and ammonium nitrate, this section will focus on the three emitted precursor pollutants SO₂, NO_x and NH₃.

As mentioned in Section D. Emissions progress, Minnesota has already reached the emissions reductions projected to 2028 for SO₂, appears to be on-track for the 2028 NO_x emission reduction projection, and appears to be generating additional NH₃ at a rate that may reach the level projected to 2028 in the 2022 Regional Haze SIP. Table 16 shows emissions estimated in the 2022 Regional Haze SIP for each state contributing 3.5% or more to impaired visibility—in order of most to least contributing—to Boundary Waters and Voyageurs and the expected emissions change reflected in the reasonable progress goal.

Table 16. Annual human-generated emissions in tons in 2016 and projected to 2028 as modeled for Minnesota and other States contributing to visibility impairment at Boundary Waters and Voyageurs.

State	2016			2028			Difference (2028 - 2016)		
	SO ₂	NO _x	NH ₃	SO ₂	NO _x	NH ₃	SO ₂	NO _x	NH ₃
Minnesota	33,700	221,000	202,000	27,200	138,000	214,000	(6,500)	(83,000)	12,000
North Dakota	56,000	125,000	84,800	49,600	101,000	85,100	(6,400)	(24,000)	300
Iowa	40,500	153,000	302,000	36,100	96,900	335,000	(4,400)	(56,100)	33,000
Nebraska	54,100	134,000	150,000	59,200	88,400	154,000	5,100	(45,600)	4,000
Wisconsin	36,100	175,000	62,300	26,600	105,000	64,600	(9,500)	(70,000)	2,300
Missouri	115,000	267,000	110,000	110,000	149,000	119,000	(5,000)	(118,000)	9,000

i. Other states' emissions progress

To assess whether any significant emissions changes have occurred within the states identified through modeling as contributing to visibility impairment in Boundary Waters and Voyageurs, the MPCA relies on

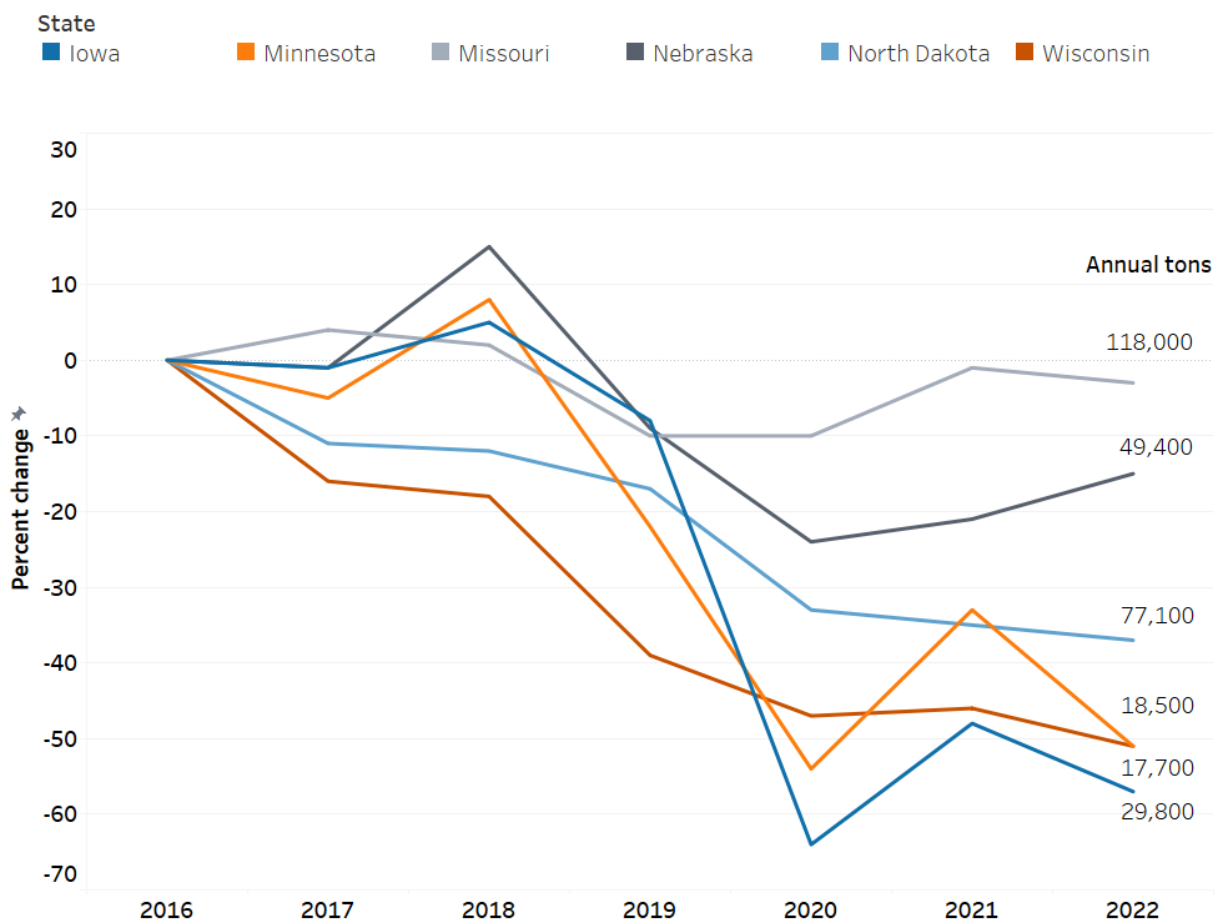
EPA Air Pollutant Emissions Trends data¹⁸. The data was prepared to provide national and state emission trends by source sector for criteria pollutants including SO₂, NO_x and NH₃. Minnesota presents this data in a semi-quantitative sense because the emissions will not necessarily exactly match Minnesota's statewide emissions data nor Minnesota's 2016 model platform data. Figure 10 through Figure 12 contain EPA estimated emission trends for each state shown as a percentage change from the 2016 level. The EPA estimated tons of emissions for each contributing state accompany the percentage change estimate for 2022.

ii. Sulfur dioxide

Figure 10 shows SO₂ emissions estimates are decreasing from 2016 for all contributing states except perhaps Missouri. As of 2022, Missouri SO₂ emissions remain flat at 118,000 tons compared to 2016. Because Missouri contributes least to visibility impairment at Boundary Waters and Voyageurs, this lack of change in SO₂ emissions estimates likely will not limit or impede reasonable progress by 2028. The EPA trends 2022 SO₂ emissions estimate for Missouri is 7%, or 8,000 tons, higher than the 2028 SIP projected SO₂ emissions for Missouri of 110,000 tons. The EPA trends 2022 SO₂ estimates for all contributing states except Missouri and North Dakota will surpass 2028 modeled projections for SO₂ emissions. While the 2022 SO₂ emissions estimate for North Dakota decreases 37% from 2016 it remains 36%, or 27,500 tons, higher than the 2028 SIP projected SO₂ emissions. North Dakota is the second most significant contributor to visibility impairment after Minnesota, so it may be prudent to keep an eye on North Dakota SO₂ emissions. Iowa, Minnesota, Wisconsin and Nebraska EPA trends 2022 SO₂ emissions are lower by between 6,300 to 9,800 tons than the 2028 SIP projected SO₂ emissions and will help make reasonable progress.

¹⁸ USEPA Air Pollutant Emissions Trends data, <https://www.epa.gov/air-emissions-inventories/air-pollutant-emissions-trends-data>

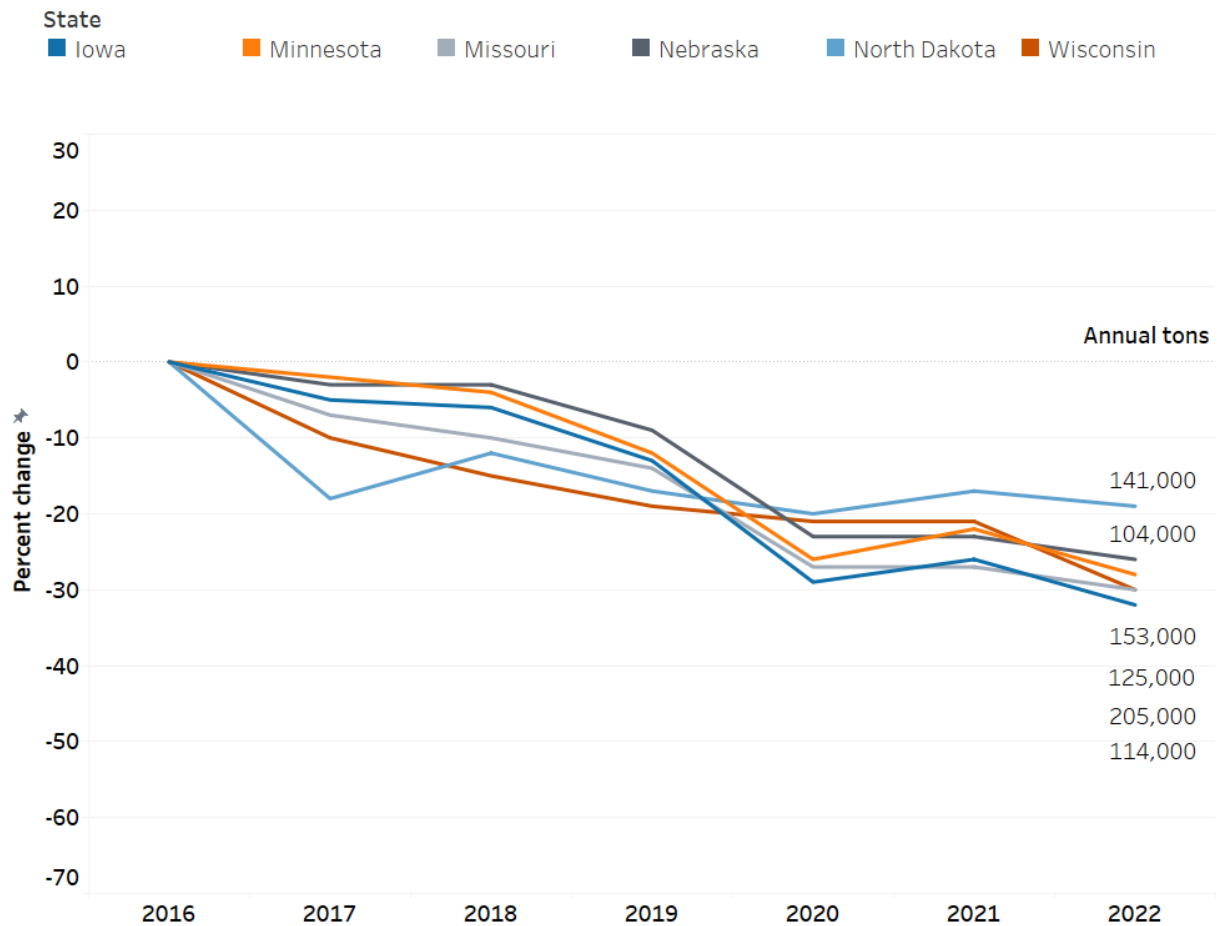
Figure 10. SO₂ emissions trends for Minnesota and other States contributing to visibility impairment at Boundary Waters and Voyageurs.



iii. Nitrogen oxides

Figure 11 shows NO_x emissions estimates are decreasing from 2016 for all contributing states. North Dakota shows the least percentage change in NO_x emissions estimates. The EPA trends 2022 NO_x emissions estimate for North Dakota decreases 19% from 2016 and remains 28%, or 40,000 tons, higher than the 2028 SIP projected NO_x emissions. The 2022 NO_x emissions estimate for the other states decrease between 26% to 32% from 2016. The EPA trends 2022 NO_x emissions for Missouri are 27%, or 56,000 tons, higher than the 2028 SIP projected NO_x emissions. Iowa, Minnesota, Wisconsin and Nebraska EPA trends 2022 NO_x emissions are between 10% to 16% —or 15,000 to 20,000 tons—higher than the 2028 SIP projected NO_x emissions reflected in the reasonable progress goals. With visibility progress dependent on reductions of ammonium nitrate production, meeting at least the 2028 SIP projected NO_x emissions from all contributing states are essential to making reasonable progress.

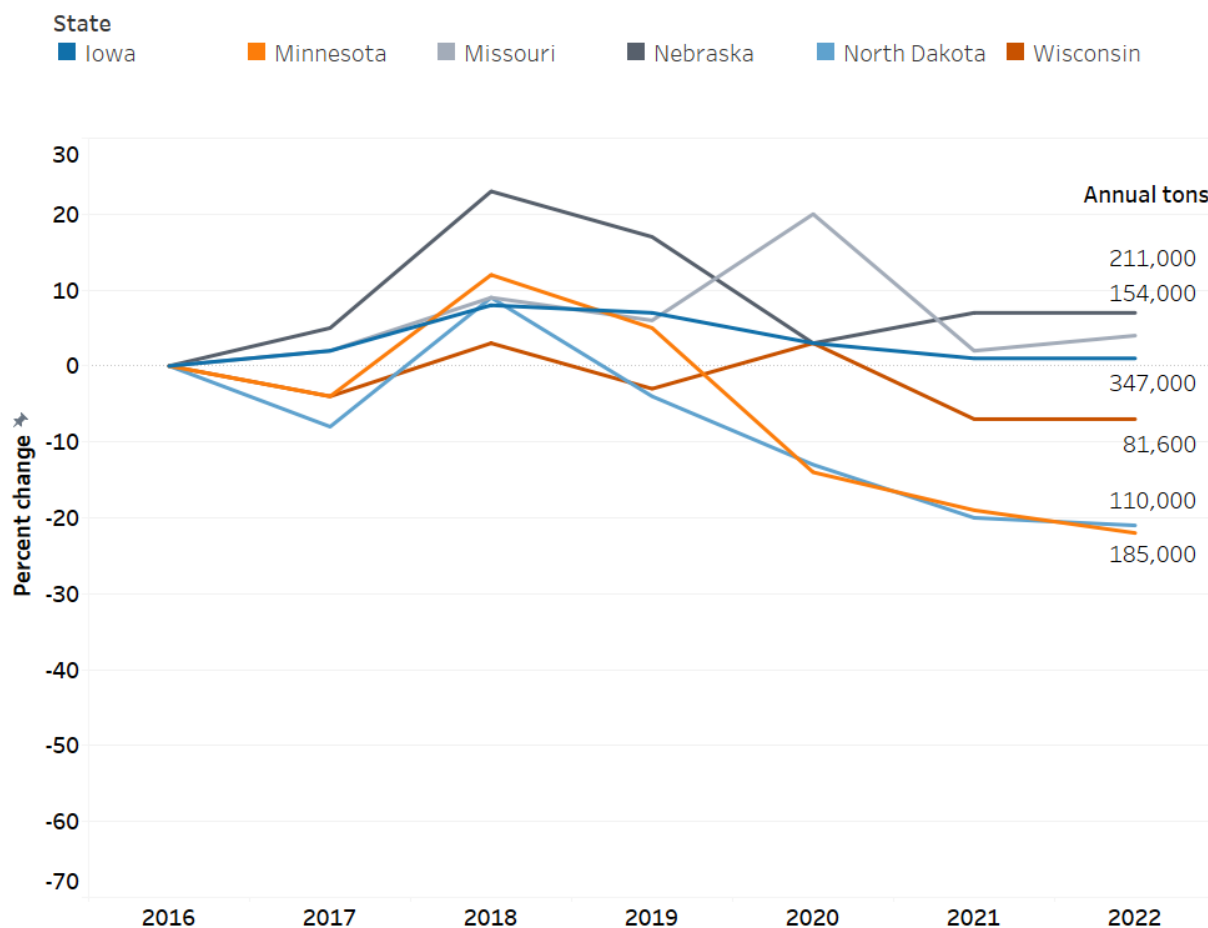
Figure 11. NO_x emissions trends for Minnesota and other States contributing to visibility impairment at Boundary Waters and Voyageurs.



iv. Ammonia

Figure 12 shows NH₃ emissions estimates are relatively flat from EPA trends 2016 estimates with a slight increase for Iowa, Missouri and Nebraska and a slight decrease from Wisconsin. While Iowa only has a 1% increase from 2016 NH₃ emissions estimates, its EPA trends 2022 NH₃ emissions estimates are 3% or 12,000 tons higher than the 2028 SIP projected NH₃ emissions. Missouri and Nebraska EPA trends 2022 NH₃ emissions estimates are higher by 23% or 35,000 tons and 27% or 57,000 tons, respectively, than the 2028 SIP projected NH₃ emissions. The EPA trends 2022 NH₃ emissions estimates for North Dakota decrease 21% from 2016 and are 23%, or 24,900 tons, higher than the 2028 SIP projected NH₃ emissions. The EPA trends 2022 NH₃ emissions estimates for Minnesota decrease 22% from 2016. Minnesota is the only state with EPA trends 2022 NH₃ emissions estimates lower—by 16% or 29,000 tons—than the 2028 SIP projected NH₃ emissions reflected in the reasonable progress goals.

Figure 12. NH₃ emissions trends for Minnesota and other States contributing to visibility impairment at Boundary Waters and Voyageurs.



v. Canada

The 2022 Regional Haze SIP identified, through modeling, that Canada contributes 3.5% or more to impaired visibility projected to 2028 at Boundary Waters and Voyageurs. The extent of the modeling domain does not encompass all of Canada, but only portions of seven provinces bordering the United States. Table 17 contains the SO₂, NO_x and NH₃ modeled emissions in Canada for 2016 and 2028 used to develop the reasonable progress goal. Modeled emissions were aggregated for portions of Manitoba, directly North of Minnesota, and provinces Westward and of Ontario, directly North of Minnesota, and provinces Eastward. A contribution assessment in Appendix A of the 2022 Regional Haze SIP attributes 7% to 10% of visibility impairment at Boundary Waters and Voyageurs to the portion of Canada within the modeling domain.

The remainder of Canada outside the modeling domain is encompassed within the modeled boundary conditions. The boundary conditions enter one-way into the modeling domain. The boundary condition contribution of 40% to impaired visibility at Boundary Waters and Voyageurs could be all Canada, but the domain doesn't have a large enough spatial extent to the North to capture recirculation due to shifting winds of emissions from sources within the model domain to rely on that interpretation of the contribution assessment.

Table 17. Annual human-generated emissions in tons for the modeled portion of Canada in 2016 and projected to 2028.

Canada	2016			2028			Difference (2028 - 2016)		
	SO ₂	NO _x	NH ₃	SO ₂	NO _x	NH ₃	SO ₂	NO _x	NH ₃
Manitoba and Westward	132,000	305,000	192,000	103,000	175,000	263,000	(29,000)	(130,000)	71,000
Ontario and Eastward	394,000	465,000	169,000	283,000	329,000	236,000	(111,000)	(136,000)	67,000

Table 18 contains the annual SO₂, NO_x and NH₃ emissions in tons for entire provinces of Canada in 2022 as obtained from Environment Canada¹⁹. Because the spatial extent of Canada calculated emissions differs from that used for developing the reasonable progress goals, the emissions data has little use in determining whether Canada emissions progress might impede visibility progress at Boundary Waters and Voyageurs.

Table 18. Annual emissions in tons for entire provinces of Canada in 2022.

Canada provinces	2022		
	SO ₂	NO _x	NH ₃
Total Manitoba and Westward:	399,000	935,000	348,000
Manitoba	2,430	32,200	63,400
Saskatchewan	135,000	120,000	110,000
Alberta	188,000	573,000	152,000
British Columbia	73,600	210,000	22,500
Total Ontario and Eastward:	251,000	361,000	175,000
Ontario	131,000	203,000	101,000
Quebec	105,000	135,000	69,900
New Brunswick	15,400	22,900	3,860

F. Assessment of current strategy

40 CFR § 51.308(g)(6) requires a discussion of the assessment of the current strategy:

An assessment of whether the current implementation plan elements and strategies are sufficient to enable the State, or other States with mandatory Federal Class I areas affected by emissions from the State, to meet all reasonable progress goals.

Considering the emissions and visibility trends described earlier, Class I areas impacted by emissions from Minnesota are on track to meet 2028 reasonable progress goals.

¹⁹ Canada national pollutant release inventory. <https://www.canada.ca/en/environment-climate-change/services/national-pollutant-release-inventory/tools-resources-data.html>

i. Control strategies and emissions reductions

As described in the Status of Control Strategies section, controls relied upon in Minnesota's Regional Haze SIP have either been or are expected to be implemented.

SO₂ emissions in Minnesota have been steadily decreasing. In Minnesota, point sources emit the majority of SO₂. Between 2016 and 2022, annual point source SO₂ emissions have decreased 43% to 15,800 tons. Between 2016 and 2020, vehicle and nonpoint SO₂ emissions have decreased an estimated 49% to 2,000 tons. Minnesota actual annual SO₂ emissions are significantly lower than the projected emissions in the 2022 Regional Haze SIP to develop the 2028 reasonable progress goal. Continued implementation of Long-Term Strategy controls are expected to provide further reductions.

NO_x emissions in Minnesota have been decreasing. Vehicle and nonpoint sources emit the majority NO_x in Minnesota. Between 2016 and 2022, annual point source NO_x emissions have decreased 8% to 52,300 tons. Between 2016 and 2020, vehicle and nonpoint NO_x emissions have decreased an estimated 33% to 110,800 tons. However, the COVID-19 pandemic in 2020 may skew emissions downward that year due to lack of routine activity as opposed to emission reduction measures.

Vehicle and nonpoint source NO_x emissions will likely rebound from 2020 in the 2023 vehicle and nonpoint inventory, but perhaps will be lower than 2017. Point source NO_x emissions changes before and after 2020 illustrate the effect of the pandemic. Point source NO_x emissions dipped down 19% to 44,200 tons between 2019 and 2020. Point source NO_x emissions rebounded by 18% to 52,300 tons between 2020 and 2022.

Reasonable progress is being made to achieve the 2028 NO_x emission goal. Continued implementation of Long-Term Strategy controls are expected to provide further reductions.

Although Minnesota impacts visibility at Isle Royale National Park in Michigan, the focus of this document is on Boundary Waters and Voyageurs, as Minnesota has the greatest visibility impacts on these two Class I areas. However, emissions progress supporting reasonable progress goals in Minnesota's Class I areas can be expected to support the achievement of the reasonable progress goal for Isle Royale. It is reasonable to conclude that current SIP controls and emissions reduction progress are sufficient to support reasonable progress goals at all Class I areas impacted by emissions from Minnesota.

ii. Visibility progress

Current visibility conditions at both Boundary Waters and Voyageurs have improved compared to baseline conditions. No degradation of visibility has occurred on the clearest days. Minnesota expects to meet and maintain the 2028 reasonable progress goals.

The 2028 reasonable progress goal for the most impaired days at Boundary Waters is 13.4 deciviews. The 2022 annual value is 12.7 deciviews and the five-year rolling average is 13.6 deciviews. Visibility progress at Boundary Waters is currently on track to meet the 2028 reasonable progress goal based on the data shown in Figure 2 and Table 6.

The 2028 reasonable progress goal for the most impaired days at Voyageurs is 13.6 deciviews. The 2022 annual value is 12.1 deciviews and the five-year rolling average is 13.9 deciviews. Visibility progress at Voyageurs is currently on track to meet the 2028 reasonable progress goal, based on the data shown in Figure 3 and Table 7.

In the second implementation period, Minnesota assessed modeled contributions to visibility at eight additional Class I areas located outside the state. Minnesota has the greatest visibility impact on the

Class I areas within the State—Boundary Waters and Voyageurs—with lesser visibility impact on the two Michigan Class I areas, Isle Royale and Seney. Visibility impacts in the other states are unremarkable.

Minnesota concludes that its current Regional Haze SIP strategies are sufficient to achieve reasonable progress goals for Class I areas within Minnesota and those impacted by Minnesota.

G. Long-term strategy containing a Smoke Management Program

40 CFR § 51.308(g)(8) requires a description of the long-term strategy containing a smoke management program:

For a state with a long-term strategy that includes a smoke management program for prescribed fires on wildland that conducts a periodic program assessment, a summary of the most recent periodic assessment of the smoke management program including conclusions if any that were reached in the assessment as to whether the program is meeting its goals regarding improving ecosystem health and reducing the damaging effects of catastrophic wildfires.

40 CFR § 51.308(f)(2)(iv)(D) requires Minnesota to consider basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs. Prescribed fire and managed wildfire have been used in Minnesota for many years to improve and maintain natural resources. Hence, a Minnesota Smoke Management Plan was created and implemented.

The Minnesota Smoke Management Plan is based on Section VI, Smoke Management Programs, of the EPA's *Interim Air Quality Policy on Wildland and Prescribed Fires (April 23, 1998)*. The planning process for Minnesota's document began early in 1999 with the formation of a subcommittee of the Minnesota Incident Command System (MNICS) Prescribed Fire Working Team. Participants included representatives from the Minnesota Pollution Control Agency (MPCA), National Weather Service (NWS), Minnesota Department of Natural Resources (MNDNR), U.S. National Park Service (U.S. NPS), U.S. Fish & Wildlife Service (U.S. FWS), U.S. Forest Service (U.S. FS), Minnesota Department of Military Affairs (MNDMA), and the Bureau of Indian Affairs (BIA). A Memorandum of Agreement for the Minnesota Smoke Management Plan was signed and accepted in 2007 and again with formal revisions in 2014, 2016, and the latest revision in April 2021.

Agricultural burning requires an open burning permit from the MNDNR. In general, agricultural burning in Minnesota is limited to grass and stubble burning, particularly of bluegrass and timothy grass. This light fuel type produces short-term smoke events without a lot of combustion of biomass and smoldering. In addition, most agricultural burning occurs in the northwest area of the state, away from the Class I areas. Agricultural burning is not covered by Minnesota's Smoke Management Plan, and EPA's *Interim Air Quality Policy on Wildland and Prescribed Fires* specifies that it does not apply to agricultural burning.

As discussed previously in Section 2.3.1 of the second implementation SIP, data from the IMPROVE monitoring sites at the Boundary Waters and Voyageurs Class I areas indicates that elemental and organic carbon, pollutants typically formed from fire, are not large contributors to visibility impairment in these areas. As result, Minnesota is not addressing prescribed fire use beyond the revision to the Minnesota Smoke Management Plan in April 2021.

H. Determination of adequacy

40 CFR § 51.308(h) provides that the state must make a determination of the adequacy of the existing implementation plan in the progress report:

Determination of the adequacy of existing implementation plan. At the same time the State is required to submit any progress report to EPA in accordance with [paragraph \(g\)](#) of this section, the State must also take one of the following actions based upon the information presented in the progress report:

(1) If the State determines that the existing implementation plan requires no further substantive revision at this time in order to achieve established goals for visibility improvement and emissions reductions, the State must provide to the Administrator a declaration that revision of the existing implementation plan is not needed at this time.

(2) If the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another State(s) which participated in a regional planning process, the State must provide notification to the Administrator and to the other State(s) which participated in the regional planning process with the States. The State must also collaborate with the other State(s) through the regional planning process for the purpose of developing additional strategies to address the plan's deficiencies.

(3) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources in another country, the State shall provide notification, along with available information, to the Administrator.

(4) Where the State determines that the implementation plan is or may be inadequate to ensure reasonable progress due to emissions from sources within the State, the State shall revise its implementation plan to address the plan's deficiencies within one year.

Based on the analyses presented in previous sections, the MPCA has determined that its existing 2022 Regional Haze SIP is adequate to meet the requirements of the Regional Haze Rule and to ensure achievement of the established reasonable progress goals for Minnesota's Class I areas (Boundary Waters and Voyageurs). The plan requires no further substantive revision to achieve established goals for visibility improvement and emissions reductions. Minnesota will continue to implement the measures of its existing SIP and begin preparation for the next scheduled Regional Haze SIP revision due in 2028.

Minnesota submits a declaration that revision of the existing implementation plan is not needed, at this time, in accordance with 40 CFR 51.308(h)(1).

References

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(<https://www.epa.gov/sites/default/files/2016-07/documents/introvis.pdf>)

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MPCA 2006b. McCourtney, M., RESULTS of Best Available Retrofit Technology (BART) Modeling to Determine Sources Subject-to-BART in the State of Minnesota, March 2006

EPA YYYY. BART guidance citation

Appendix A

Emissions tracking information

Tables below present data shown in Figure 8 to Figure 9 in the main progress report

Table 19. Disaggregated SO₂ emissions data in annual tons - Minnesota.

SO ₂									
Year	Utilities	Mining	Refineries	Pulp & Paper	Mfg	Other point sources	Nonpoint	Onroad	Nonroad
2016	17,400	3,180	995	203	5,300	554	3,110	391	390
2017	13,300	4,590	1,040	325	5,240	426	2,460	358	362
2018	15,800	4,750	1,180	246	5,640	421	2,190	294	294
2019	8,960	3,660	901	210	5,150	478	1,910	230	226
2020	6,130	2,480	971	567	4,440	404	1,630	166	158
2021	5,930	3,690	1,000	299	5,920	409			
2022	5,650	2,910	1,090	233	5,250	637			
2022-2016	(11,750)	(270)	95	30	(50)	83	(1,480)*	(225)*	(232)*

* Emissions difference 2020 – 2016

Table 20. Disaggregated NO_x emissions data in annual tons - Minnesota.

NO _x									
Year	Utilities	Mining	Refineries	Pulp & Paper	Mfg	Other point sources	Nonpoint	Onroad	Nonroad
2016	21,200	17,500	2,260	2,660	7,540	5,510	26,700	75,100	64,100
2017	18,600	25,500	2,380	3,270	7,470	6,200	27,300	65,600	60,200
2018	19,300	25,300	2,140	3,190	7,700	5,600	25,100	57,500	56,600
2019	15,600	21,400	2,110	2,710	7,280	5,560	23,000	49,300	52,900
2020	12,400	16,000	2,110	2,670	6,560	4,450	20,800	41,100	49,300
2021	14,400	20,900	2,090	2,820	7,150	5,050			
2022	14,400	20,700	2,150	2,800	7,590	4,650			
2022-2016	(6,800)	3,200	(110)	140	50	(860)	(5,900)*	(34,000)*	(14,800)*

* Emissions difference 2020 – 2016

Table 21. Disaggregated NH₃ emissions data in annual tons - Minnesota.

NH ₃									
Year	Utilities	Mining	Refineries	Pulp & Paper	Mfg	Other point sources	Nonpoint	Onroad	Nonroad
2016	651	27	40	147	258	72	172,000	2,010	84
2017	493	31	35	108	452	74	191,000	1,950	84
2018	496	47	32	135	491	80	193,000	1,820	85
2019	656	26	36	75	395	74	195,000	1,690	85
2020	574	17	49	73	1,050	58	198,000	1,560	85
2021	603	24	45	76	273	70			
2022	573	22	44	75	286	82			
2022-2016	(78)	(5)	4	(72)	28	10	26,000*	(450)*	1 *

* Emissions difference 2020 – 2016

Table 22. Disaggregated VOC emissions data in annual tons - Minnesota.

VOC									
Year	Utilities	Mining	Refineries	Pulp & Paper	Mfg	Other point sources	Nonpoint	Onroad	Nonroad
2016	920	340	1,180	1,450	13,700	1,370	124,000	46,000	56,600
2017	581	370	1,250	1,650	13,100	1,430	124,000	39,900	50,000
2018	620	389	1,290	1,550	14,400	1,340	129,000	32,500	47,300
2019	520	402	1,230	1,300	13,400	1,340	134,000	25,100	44,700
2020	434	269	1,240	1,250	12,200	1,250	139,000	17,800	42,000
2021	507	299	1,290	1,840	12,900	1,380			
2022	474	274	1,280	1,410	12,900	1,400			
2022-2016	(446)	(66)	100	(40)	(800)	30	15,000*	(28,200)*	(14,600)*

* Emissions difference 2020 – 2016

Table 23. Disaggregated PM_{2.5} emissions data in annual tons - Minnesota.

PM _{2.5}									
Year	Utilities	Mining	Refineries	Pulp & Paper	Mfg	Other point sources	Nonpoint	Onroad	Nonroad
2016	2,110	3,260	420	291	3,960	472	90,000	17,900	4,870
2017	1,700	4,370	469	201	3,900	538	84,600	15,600	4,600
2018	1,380	4,470	418	203	4,140	576	82,900	19,400	4,320
2019	1,020	4,270	416	204	3,860	500	81,200	23,100	4,040
2020	824	3,640	463	257	3,490	483	79,600	26,900	3,770
2021	842	4,590	470	262	3,750	457			
2022	983	4,170	485	258	3,710	467			
2022-2016	(1,127)	910	65	(33)	(250)	(5)	(10,400)*	9,000*	(1,100)*

* Emissions difference 2020 – 2016

Appendix B

FLM Consultation correspondence

Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Dickerson, Lauren (She/Her/Hers) (MPCA)
Sent: Monday, October 28, 2024 11:16 AM
To: Peters, Melanie; Tim_Allen@FWS.GOV; Wickman, Trent - FS, MN; David_Pohlman@nps.gov; Don_Shepherd@nps.gov
Cc: deAlwis, Deepa (She/Her/Hers) (MPCA); Braaten, Bruce (MPCA); McCartney, Margaret (MPCA); Smith, Michael D (MPCA); Smith, Amanda (She/Her/Hers) (MPCA)
Subject: FLM Consultation on Minnesota's Regional Haze 5-year Progress Report

Hello Federal Land Managers,

We anticipate formal consultation with you on the Regional Haze 5-year Progress Report will begin in November, and we would like to ask for your availability for an initial virtual meeting (30 minutes) in the timeframe of November 12th through November 22nd.

Dates and times that work for the majority of MPCA staff are reflected in the doodle poll at the link below. Please add your votes for appointments in the doodle poll this week and we will follow-up this Friday with an appointment or send a new doodle poll if needed.

<https://doodle.com/meeting/participate/id/b2O0Nw1d>

There are timeslots on November 12, 18, 20, and 22 in the doodle poll.

Thank you,

Lauren Dickerson | Air Policy Planner | Air Policy Unit
(she/her/hers)
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 N Lafayette Rd | St Paul, MN | 55155
O: 651-757-2184
<mailto:lauren.dickerson@state.mn.us> | www.pca.state.mn.us



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Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Peters, Melanie <Melanie_Peters@nps.gov>
Sent: Monday, October 28, 2024 4:55 PM
To: Dickerson, Lauren (She/Her/Hers) (MPCA); Allen, Tim; Wickman, Trent - FS, MN; Pohlman, David C.; Shepherd, Don
Cc: deAlwis, Deepa (She/Her/Hers) (MPCA); Braaten, Bruce (MPCA); McCartney, Margaret (MPCA); Smith, Michael D (MPCA); Smith, Amanda (She/Her/Hers) (MPCA)
Subject: Re: [EXTERNAL] FLM Consultation on Minnesota's Regional Haze 5-year Progress Report

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Hello Lauren,

Thank you for the update. The NPS appreciates this opportunity to participate in FLM consultation on Minnesota's Regional Haze 5-year Progress Report. We will be happy to attend a progress report presentation, and I answered the linked doodle poll to help find a time. However, due to competing workload priorities the NPS does not plan to provide consultation feedback on this progress report. We do not speak for the other FLM agencies which may still need the required 60-day review period to consult. Thank you for understanding. We look forward to continued work with Minnesota for clean air and clear views in the future.

Best,
Melanie

--

Melanie V. Peters
NPS, Air Resources Division

Office: 303-969-2315
Cell: 720-644-7632



From: Dickerson, Lauren (She/Her/Hers) (MPCA) <Lauren.Dickerson@state.mn.us>
Sent: Monday, October 28, 2024 10:16 AM
To: Peters, Melanie <Melanie_Peters@nps.gov>; Allen, Tim <tim_allen@fws.gov>; Wickman, Trent - FS, MN <trent.wickman@usda.gov>; Pohlman, David C. <David_Pohlman@nps.gov>; Shepherd, Don <Don_Shepherd@nps.gov>
Cc: deAlwis, Deepa (She/Her/Hers) (MPCA) <deepa.dealwis@state.mn.us>; Braaten, Bruce (MPCA) <bruce.braaten@state.mn.us>; McCartney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Smith, Michael D (MPCA) <michael.smith@state.mn.us>; Smith, Amanda (She/Her/Hers) (MPCA) <amanda.smith@state.mn.us>
Subject: [EXTERNAL] FLM Consultation on Minnesota's Regional Haze 5-year Progress Report

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Hello Federal Land Managers,

We anticipate formal consultation with you on the Regional Haze 5-year Progress Report will begin in November, and we would like to ask for your availability for an initial virtual meeting (30 minutes) in the timeframe of November 12th through November 22nd.

Dates and times that work for the majority of MPCA staff are reflected in the doodle poll at the link below. Please add your votes for appointments in the doodle poll this week and we will follow-up this Friday with an appointment or send a new doodle poll if needed.

<https://doodle.com/meeting/participate/id/b2O0Nw1d>

There are timeslots on November 12, 18, 20, and 22 in the doodle poll.

Thank you,

Lauren Dickerson | Air Policy Planner | Air Policy Unit
(she/her/hers)

Minnesota Pollution Control Agency (MPCA)

Environmental Analysis and Outcomes Division

520 N Lafayette Rd | St Paul, MN | 55155

O: 651-757-2184

<mailto:lauren.dickerson@state.mn.us> | www.pca.state.mn.us



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Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Wickman, Trent - FS, MN <trent.wickman@usda.gov>
Sent: Monday, November 18, 2024 1:40 PM
To: Braaten, Bruce (MPCA); deAlwis, Deepa (She/Her/Hers) (MPCA); McCourtney, Margaret (MPCA); Dickerson, Lauren (She/Her/Hers) (MPCA)
Cc: Don Shepherd (Don_Shepherd@nps.gov); David Pohlman (David_Pohlman@nps.gov); Peters, Melanie
Subject: follow up to our call today

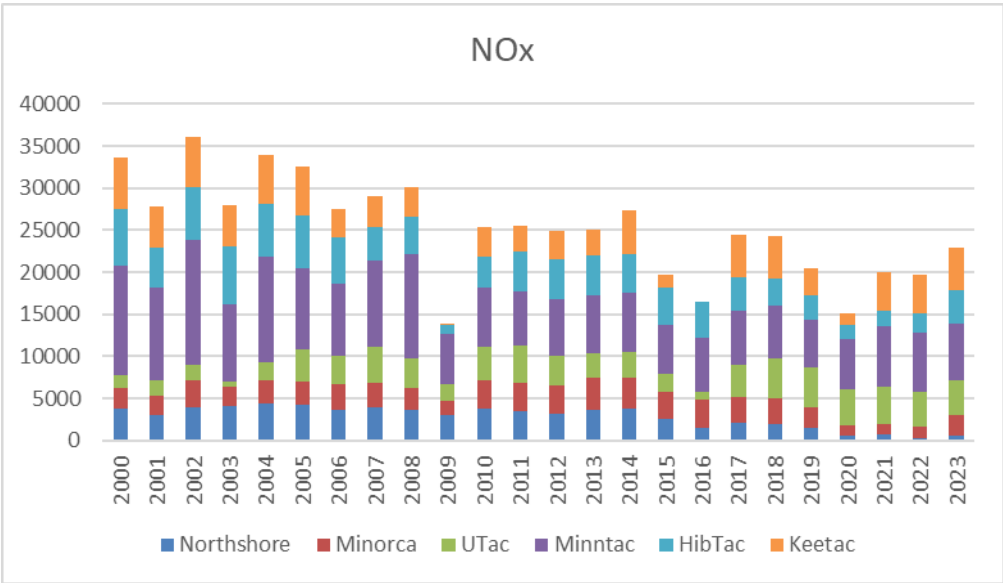
Follow Up Flag: Follow up
Flag Status: Flagged

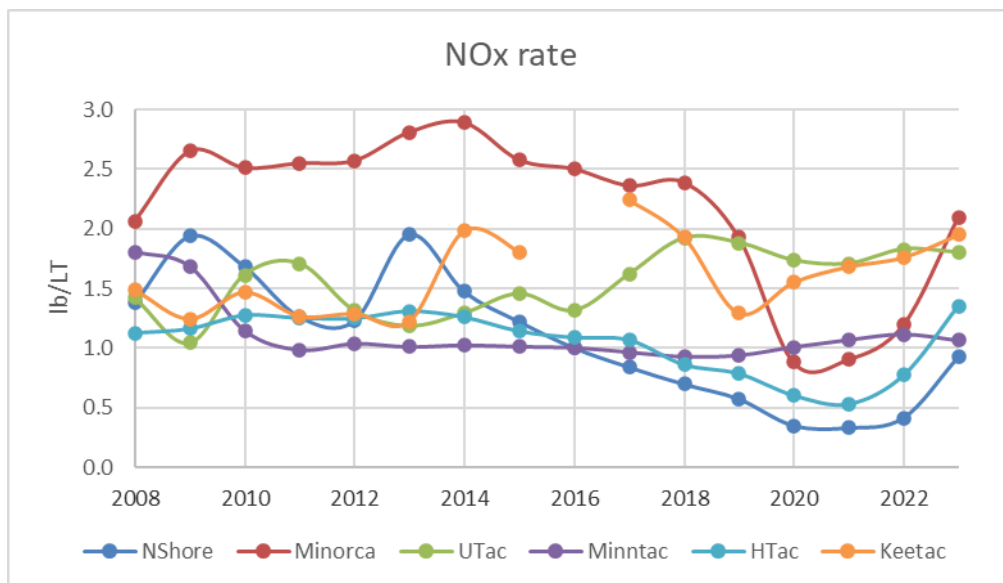
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Folks

Thanks for the call today

Here is something I referred to during the call. As I said I assume we would see some effect of the LNBs on NOx emissions but I’m not sure where it is





Trent

Trent Wickman, PE
Tribal Relations Specialist - MN, WI, MI

Forest Service
Eastern Regional Office

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Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Dickerson, Lauren (She/Her/Hers) (MPCA)
Sent: Wednesday, November 20, 2024 8:26 AM
To: Pohlman, David C.; Peters, Melanie; Wickman, Trent - FS, MN
Cc: Smith, Amanda (She/Her/Hers) (MPCA); deAlwis, Deepa (She/Her/Hers) (MPCA); Smith, Michael D (MPCA); Braaten, Bruce (MPCA); McCourtney, Margaret (MPCA)
Subject: Regional Haze Progress Report FLM Consultation
Attachments: FLM RH Progress Report Introduction.pdf; Regional Haze 2025 Progress Report_2024-11-06.docx; RH Progress Report_Checklist_2024-11-18.docx

Hello David, Melanie, and Trent,

Thank you for your time and discussion on Monday. Please find attached the slides from our meeting, the draft 2025 Regional Haze Progress Report, and a draft of the checklist from EPA's 2024 progress report guidance. Please let us know if you would like to set up another meeting during the sixty-day consultation period, running from November 20, 2024 to January 20, 2025.

Kind Regards,

Lauren Dickerson | Air Policy Planner | Air Policy Unit
(she/her/hers)
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 N Lafayette Rd | St Paul, MN | 55155
O: 651-757-2184
<mailto:lauren.dickerson@state.mn.us> | www.pca.state.mn.us



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2025 Regional Haze Progress Report Briefing

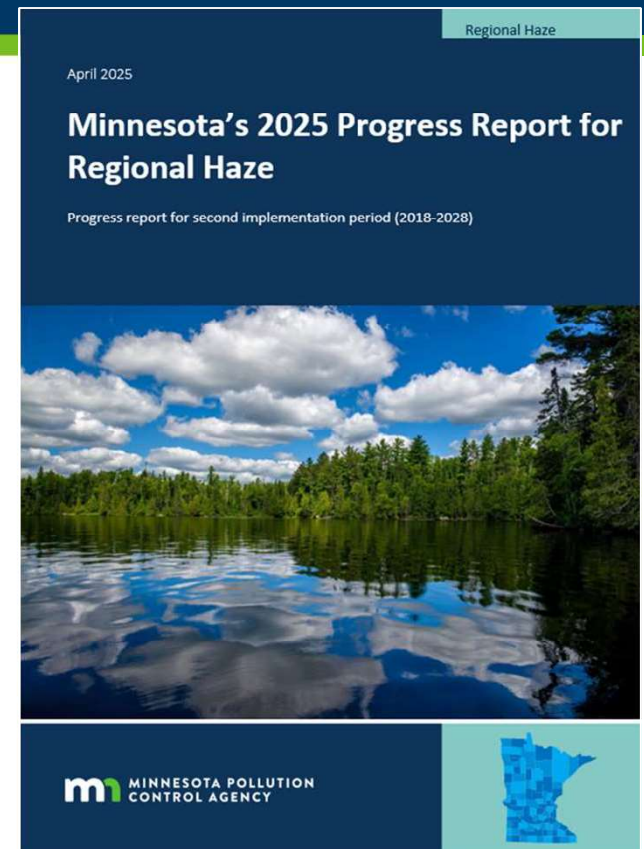
Margaret McCourtney, Lauren Dickerson, Bruce Braaten | Air Data Analysis & Air Policy Unit

November 18, 2024

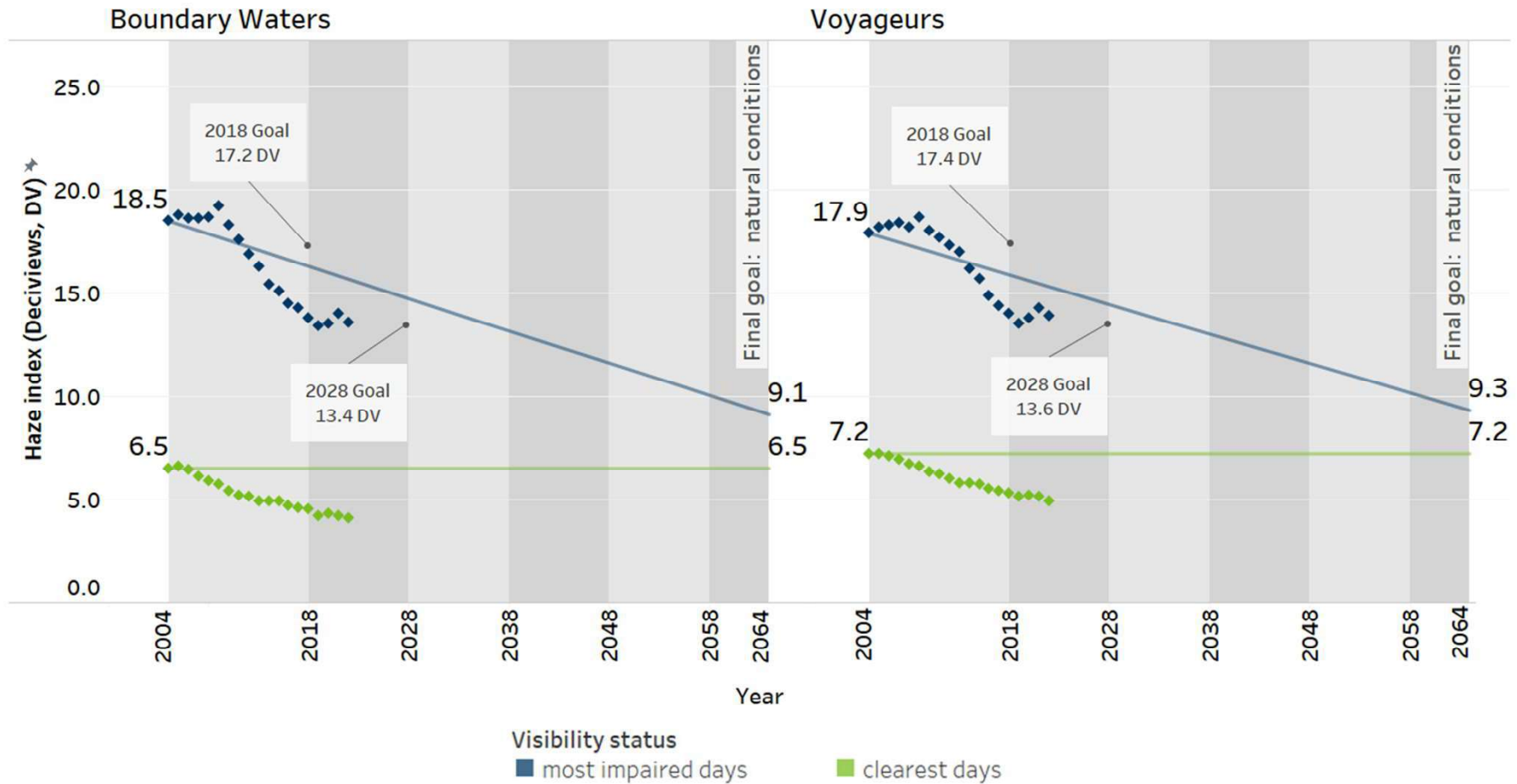
Report Contents

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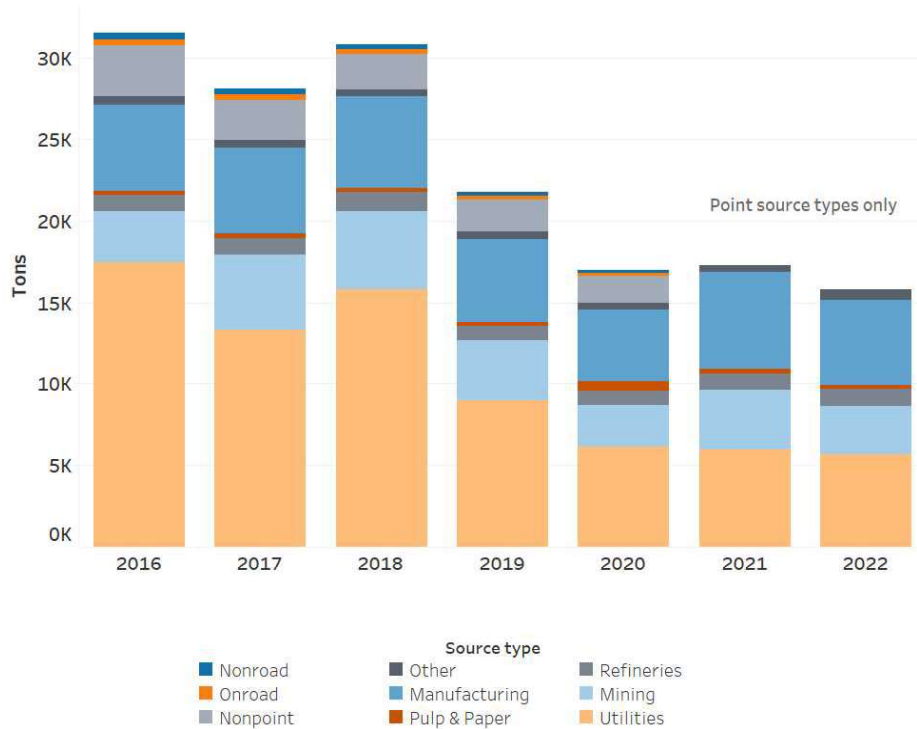


Visibility Progress

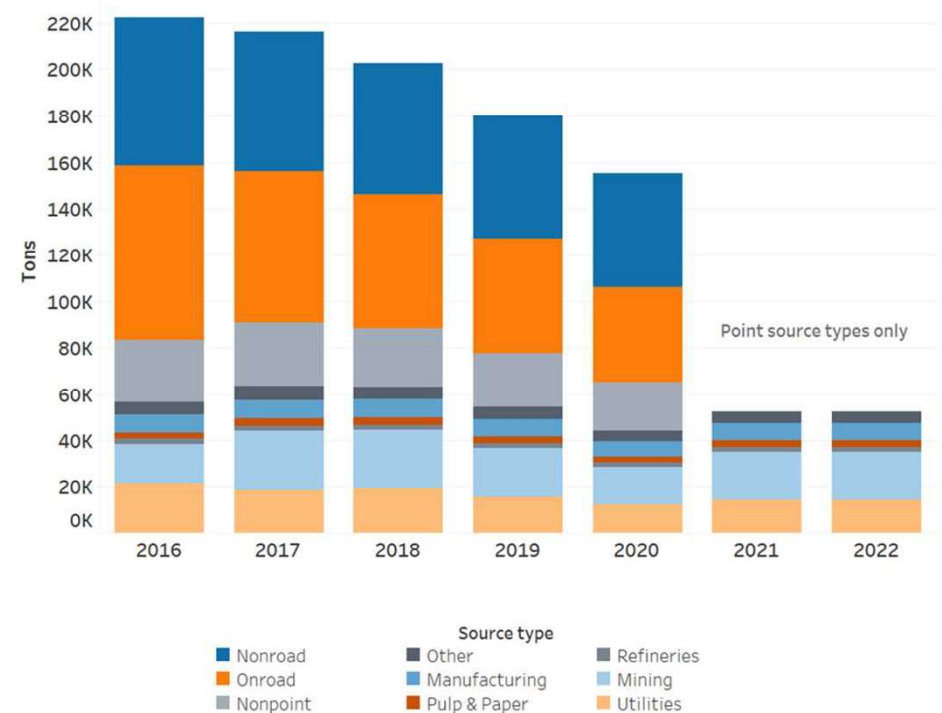


Emissions Progress

SO₂ annual human-generated emissions by source type in Minnesota 2016 to 2022



NO_x annual human-generated emissions by source type in Minnesota 2016 to 2022



Report Section Highlights

- Sec. A Status of Control Strategies

- Hibbing Public Utilities Commission NO_x limits
- Emission Unit Retirements
- Taconite FIP

- Sec. B Emission Reductions from Control Measures

- Close to meeting 2028 SO₂ projected emissions
- Will get close to 2028 NO_x projected emissions with planned emission retirements

- Sec. C Visibility Progress

- Continued improvement at both Boundary Waters and Voyageurs

- Sec D. State-wide Emissions Progress

- SO₂ emissions continue to decrease already lower than reflected in 2028 reasonable progress goal
- Total SO₂ emissions are 46% lower in 2020 than 2016
- NO_x have decreased, but further reductions are needed to reach those reflected in 2028 reasonable progress goal
- Total NO_x emissions are 30% lower in 2020 than 2016

Process and Estimated Timeline



Thank you

Y/N	Regulation Citation (40 CFR)	Regulation Summary (not verbatim)	Location in Progress Report	Comments
	51.308(i)	Consultation with FLMs: Did the state provide documentation of and address all comments made by the FLMs from the consultation period, which must take place no less than 60 days prior to the public hearing or public comment opportunity? <i>(all states)</i>	See “Procedural Requirements” section starting on page 2	
	51.308(g)	Public Inspection and Comment: Was the draft report made available for public inspection and comment for at least 30 days prior to submission to the EPA? Does the report contain all comments received from the public? If the public comments received resulted in changes made to the progress report, does the report contain an explanation as to why changes were made? <i>(all states)</i>	See “Procedural Requirements” section starting on page 2	
	51.308(g)(1)	Status of Control Measures in the RH SIP: Does the report contain a list of all measures the state relied upon in the Second Planning Period? <i>(all states)</i>	See Section A.	
	51.308(g)(2)	Emissions Reductions from RH SIP Strategies: Does the report include estimated emissions reductions from the measures provided under (g)(1)? <i>(all states)</i>	See Section B.	
	51.308(g)(3)	Visibility Progress: Does the report contain a summary of monitored visibility data as required by the RHR? <i>(only states with CIAs)</i>	See Section C.	
	51.308(g)(4)	Emissions Progress: Does the report provide an analysis of emissions trends as applicable to the current period? <i>(all states)</i>	See Section D.	
	51.308(g)(5)	Assessment of Changes Impeding Visibility Progress: Does the report contain an assessment of and statement if anthropogenic emissions have impeded visibility progress? <i>(all states)</i>	See Section E.	
	51.308(g)(6)	Assessment of Current Strategy: Does the report assess whether current implementation plan strategies are sufficient to meet the RPGs described in the SIP? <i>(all states)</i>	See Section F.	
	51.308(g)(8)	Long-Term Strategy Containing a Smoke Management Program: Does the report address the smoke management program’s impact on the LTS? <i>(states with a LTS containing a permanent and federally enforceable smoke management program that also contains a periodic assessment element of the SMP)</i>	See Section G., although not applicable in Minnesota	
	51.308(h)	Determination of Adequacy: Does the report determine the adequacy of the current implementation of measures incorporated into the SIP? <i>((h)(1) and (h)(4) = all states, (h)(2) and (h)(3) = available to states with CIAs)</i>	See Section H. Plan is adequate in accordance with (h)(1).	

Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Braaten, Bruce (MPCA)
Sent: Monday, January 13, 2025 9:55 AM
To: David Pohlman (David_Pohlman@nps.gov); Peters, Melanie; Wickman, Trent - FS, MN
Cc: Braaten, Bruce (MPCA); deAlwis, Deepa (She/Her/Hers) (MPCA); Dickerson, Lauren (She/Her/Hers) (MPCA)
Subject: FW: Regional Haze Progress Report FLM Consultation
Attachments: FLM RH Progress Report Introduction.pdf; Regional Haze 2025 Progress Report_2024-11-06.docx; RH Progress Report_Checklist_2024-11-18.docx

Hello David, Melanie, and Trent

The sixty-day consultation period for the 2025 Regional Haze Progress Report ends on January 20, 2025. Please let us know if you have any questions or would like to discuss.

Thank you.

Bruce Braaten
Minnesota Pollution Control Agency (MPCA)
7381 Airport View Drive SW
Rochester, MN 55902
507-206-2607
bruce.braaten@state.mn.us



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From: Dickerson, Lauren (She/Her/Hers) (MPCA)
Sent: Wednesday, November 20, 2024 8:26 AM
To: Pohlman, David C. <David_Pohlman@nps.gov>; Peters, Melanie <Melanie_Peters@nps.gov>; Wickman, Trent - FS, MN <trent.wickman@usda.gov>
Cc: Smith, Amanda (She/Her/Hers) (MPCA) <amanda.smith@state.mn.us>; deAlwis, Deepa (She/Her/Hers) (MPCA) <deepa.dealwis@state.mn.us>; Smith, Michael D (MPCA) <michael.smith@state.mn.us>; Braaten, Bruce (MPCA) <bruce.braaten@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>
Subject: Regional Haze Progress Report FLM Consultation

Hello David, Melanie, and Trent,

Thank you for your time and discussion on Monday. Please find attached the slides from our meeting, the draft 2025 Regional Haze Progress Report, and a draft of the checklist from EPA's 2024 progress report

guidance. Please let us know if you would like to set up another meeting during the sixty-day consultation period, running from November 20, 2024 to January 20, 2025.

Kind Regards,

Lauren Dickerson | Air Policy Planner | Air Policy Unit
(she/her/hers)
Minnesota Pollution Control Agency (MPCA)
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Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Braaten, Bruce (MPCA)
Sent: Tuesday, February 11, 2025 4:07 PM
To: Wickman, Trent - FS, MN
Cc: deAlwis, Deepa (She/Her/Hers) (MPCA); Smith, Amanda (She/Her/Hers) (MPCA); Bouchareb, Hassan (He/Him/His) (MPCA); Braaten, Bruce (MPCA); Dickerson, Lauren (She/Her/Hers) (MPCA)
Subject: RE: FIP CEMs data

Trent

In your January 16, 2025 e-mail concerning the sixty-day FLM consultation for the round 2 Regional Haze Progress Report, you offered the following comment:

1. What are the current NO_x emissions from each taconite plant?
2. How does the answer to 1) compare to the emissions assumed in the RPG modeling in the round 2 plan and
3. How does the answer to 1) compare to the limits in the FIP?

Table 1 has been prepared in response to the first two parts of your comment.

Table 1. NO_x 2019-2023 Actual Annual Emissions and 2028 Reasonable Progress Goals

Facility name	Facility ID	Emission unit	Action	2019 (tons)	2020 (tons)	2021 (tons)	2022 (tons)	2023 (tons)	RH SIP 2028 (tons)
Northshore Mining - Silver Bay	07500003	Power Boiler 1	Idled to 2031	277	-	-	-	-	-
		Power Boiler 2	Idled to 2031	404	-	-	-	-	-
		Furnace 11 11 (EU100/EU104)	Taconite RH FIP	253	223	288	101	227	267
		Furnace 12 (EU110/114)	Taconite RH FIP	279	229	290	83	222	320
Cleveland Cliffs Minorca Mine Inc.	13700062	Indurating Machine (EU026)	Taconite RH FIP	2,464	1,151	1,209	1,406	2,465	3,243
Hibbing Taconite Company	13700061	Indurating Furnace Line (EU020)	Taconite RH FIP	646	437	655	732	1,472	1,200
		Indurating Furnace Line (EU021)	Taconite RH FIP	901	426	614	927	1,406	1,767
		Indurating Furnace Line (EU022)	Taconite RH FIP	1,260	711	666	614	1,134	1,358
United Taconite	13700113	Line 1 Pellet Induration (EU040)	Taconite RH FIP	1,384	1,198	1,150	1,018	1,061	1,330

LLC - Fairlane Plant		Line 2 Pellet Induration (EU042)	Taconite RH FIP	3,397	3,147	3,198	3,136	3,032	1,885
US Steel Corporation - Keetac	13700063	Grate Kiln (EU030)	Taconite RH FIP	3,306	1,388	4,458	4,624	5,120	1,373
US Steel Corporation - Minntac	13700005	Line 3 Rotary Kiln (EU225)	Taconite RH FIP	719	1,013	1,437	1,437	1,322	724
		Line 4 Rotary Kiln (EU261)	Taconite RH FIP	1,193	1,374	1,546	1,722	1,377	1,294
		Line 5 Rotary Kiln (EU282)	Taconite RH FIP	1,421	1,418	1,434	1,532	1,652	788
		Line 6 Rotary Kiln (EU315)	Taconite RH FIP	1,161	1,182	1,272	961	1,160	675
		Line 7 Rotary Kiln (EU334)	Taconite RH FIP	1,088	859	1,402	1,280	1,274	680

The following is in response to part 3 of your comment. Based on the Dec. 4, 2024 proposed Revision to Taconite Federal Implementation Plan (FIP), it is our understanding that CEMs monitoring will be required when the emission limits become effective. The proposed FIP language for 40 CFR part 52.1235(c) provides, in part:

(c) Testing and monitoring.

(1) The owner or operator of the respective facility shall install, certify, calibrate, maintain and operate continuous emissions monitoring systems (CEMS) for NO_x on United States Steel Corporation, Keetac unit EU030; Hibbing Taconite Company units EU020, EU021, and EU022; United States Steel Corporation, Minntac units EU225, EU261, EU282, EU315, and EU334; United Taconite units EU040 and EU042; Minorca Mine unit EU026; and Northshore Mining Company-Silver Bay units Furnace 11 (EU100/EU104) and Furnace 12 (EU110/EU114). Compliance with the emission limits for NO_x shall be determined using data from the CEMS.

The proposed FIP revision provides that the Cliff's emission limits are to be effective Jan. 3, 2025. The resulting CEMs monitoring data will be reported quarterly to EPA. We asked that the U.S. Forest Service obtain the data that you want from EPA since they will be receiving this information. When this information, a comparison, based on lb/MMBtu, can be made to the FIP limits.

Bruce Braaten

From: Wickman, Trent - FS, MN <trent.wickman@usda.gov>

Sent: Thursday, January 16, 2025 7:40 PM

To: Braaten, Bruce (MPCA) <bruce.braaten@state.mn.us>

Cc: deAlwis, Deepa (She/Her/Hers) (MPCA) <deepa.dealwis@state.mn.us>; Smith, Amanda (She/Her/Hers) (MPCA) <amanda.smith@state.mn.us>; Dietrich, Dan (MPCA) <dan.dietrich@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Bouchareb, Hassan (He/Him/His) (MPCA) <hassan.bouchareb@state.mn.us>

Subject: Re: FIP CEMs data

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Hey Bruce

In regards to the NOx CEM data, as I'm sure you know, emission data can never be confidential.

In a separate email you mentioned that the end of our comment period on the 5-year review is coming up. In response to that deadline, the following comment is offered.

1. What are the current nox emissions from each taconite plant?
2. How does the answer to 1) compare to the emissions assumed in the RPG modeling in the round 2 plan and
3. How does the answer to 1) compare to the limits in the FIP?

Thanks

Trent

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From: Braaten, Bruce (MPCA) <bruce.braaten@state.mn.us>
Sent: Thursday, January 16, 2025 3:43 PM
To: Wickman, Trent - FS, MN <trent.wickman@usda.gov>
Cc: deAlwis, Deepa (She/Her/Hers) (MPCA) <deepa.dealwis@state.mn.us>; Smith, Amanda (She/Her/Hers) (MPCA) <amanda.smith@state.mn.us>; Dietrich, Dan (MPCA) <dan.dietrich@state.mn.us>; Braaten, Bruce (MPCA) <bruce.braaten@state.mn.us>
Subject: FIP CEMs data

Trent

When we previously met, you asked about the taconite mining CEMs data that was used in the FIPs. With the FIP negotiations, the mines sent the data to EPA with confidentiality requests.

Stay warm this weekend.

Bruce Braaten
Minnesota Pollution Control Agency (MPCA)
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Our mission is to protect and improve the environment and human health.

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Appendix C

Tribal Notification and Public Notice

Public notice period: 5/19/2025 – 6/18/2025

Tribal contacts were notified in December 2024 that MPCA had completed the 60-day Federal Land Manager consultation period and shared the draft progress report in advance of the 30-day public comment period. No comments were received from Tribal contacts.

On May 19, 2025, the public notice was placed in the *Minnesota State Register* (Volume 49, Number 47, page 1265). No public comments were received. There were no requests for a public meeting. A public meeting was not held.

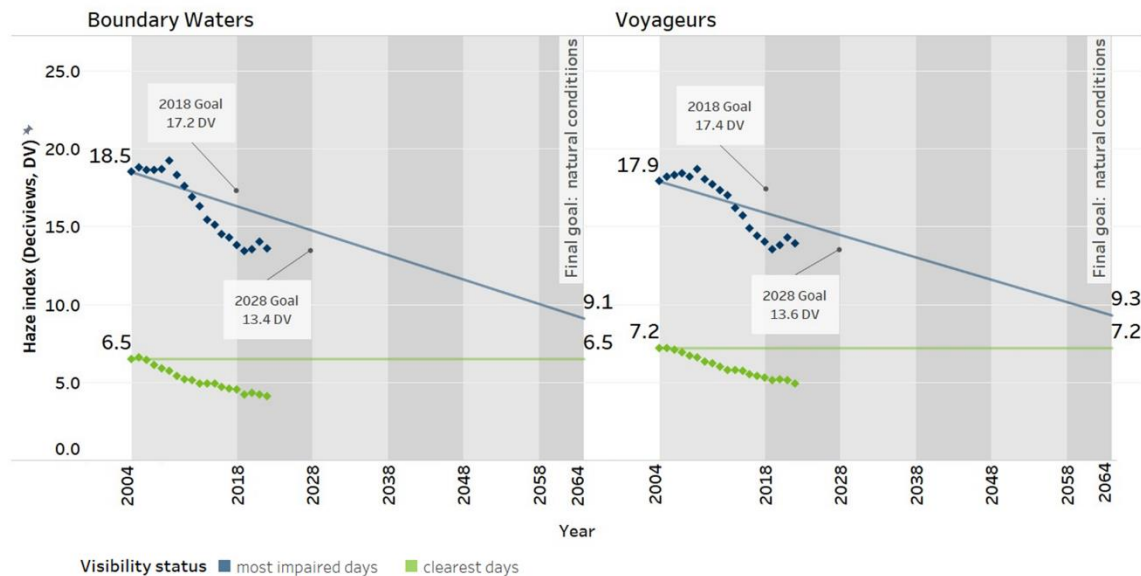
December 30, 2024

RE: MPCA's 2025 Regional Haze State Implementation Plan Progress Report

Bois Forte Band of Chippewa,
Fond du Lac Band of Lake Superior Chippewa,
Grand Portage Band of Ojibwe,
Leech Lake Band of Ojibwe,
Mille Lacs Band of Ojibwe,
Red Lake Band of Chippewa,
White Earth Band of Ojibwe,
Lower Sioux Indian Community,
Prairie Island Indian Community,
Shakopee Mdewakanton Sioux Community,
Upper Sioux Community,
Minnesota Chippewa Tribe

The Clean Air Act § 169A and B requires the protection of visibility in Class I Federal Areas. In Minnesota, the impacted Class I Federal Areas are the Boundary Waters Canoe Area, and Voyageurs National Park. The United States Environmental Protection Agency's 1999 regional haze rule, 40 Code of Federal Regulations 51.308, requires states to develop and implement State Implementation Plans (SIPs) to reduce visibility impairment resulting from "man-made air pollution" or regional haze. The rule requires the states, with consultation with Federal Land Managers (FLMs): the National Park Service, U.S. Fish and Wildlife Service, and the U.S. Forest Service, and other interested parties, to develop and implement the State Implementation Plans.

The first State SIPs for regional haze were due in December 2007. Comprehensive periodic revisions to these initial SIPs were and are currently due in 2021, 2028, and every 10 years thereafter. The regional haze rule also requires states to provide progress reports halfway through each SIP implementation period. Key highlights in the draft report are that emission reductions continue to make adequate progress. These progress for Minnesota Class 1 areas illustrated on the graphs below. The main pollutants contributing to visibility impairment in Minnesota's Class I areas are sulfate and nitrate aerosols.



The Regional Haze rule requires that the MPCA provide a 60-day consultation period with the Federal Land Managers prior to proceeding to the 30-day public comment period. The MPCA began the 60-day FLM consultation period on November 18, 2024. The full draft progress report submitted for FLM review is attached. The MPCA anticipates the 30-day public comment period will commence mid- to late January 2025. If changes occur to the draft report before commencing the public comment period, the MPCA will send highlights of any key revisions to the Tribal Nations. The MPCA welcomes any comments from the time you received this draft progress report until the end of the public comment period. The full 2022 Regional Haze SIP can be found at: <https://www.pca.state.mn.us/air-water-land-climate/regional-haze-state-implementation-plan>

Please let me know if you wish to discuss or would like additional information.

Deepa S. A. de Alwis M.S. | (she/her/hers)

Air Policy Unit Supervisor

Minnesota Pollution Control Agency | 520 Lafayette Road N | St. Paul, MN 55155

651-757-2572

www.pca.state.mn.us

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DSD/BB:kt

Attachments

Dickerson, Lauren (She/Her/Hers) (MPCA)

From: deAlwis, Deepa (She/Her/Hers) (MPCA)
Sent: Tuesday, December 31, 2024 9:33 AM
To: cholm; fvillebrun@boisforte-nsn.gov; PaigeHuhta@fdlband.org; Deschampe, Robert; agathaa@grandportage.com; Aprilm@grandportage.com; tobys@grandportage.com; Trustlands.admin@grandportage.com; Carma Huseby; Brandy Toft; Craig Tangren; charlie.lippert; amy.moore; deb.dirlam; gabriel.miller; Stacy.Boone@shakopeedakota.org
Cc: Kesner, Shannon (MPCA); Braaten, Bruce (MPCA); Dickerson, Lauren (She/Her/Hers) (MPCA)
Subject: Regional Haze State Implementation Plan progress report
Attachments: 2025 RH SIP progress rpt ltr to Tribal Nations.docx; Report draft Regional Haze 2025 Progress Report_2024-11-06.pdf

Hello Tribal Nation leaders,

The MPCA is working on submitting its Regional Haze State Implementation Plan progress report and wanted to provide an advanced draft copy prior to official public comment period. Please see the attached letter and the draft progress report.

Thank you and please let me know if you have any questions or would like to meet with our team.

Deepa de Alwis

Deepa S. A. de Alwis M.S. | (she/her/hers)

Air Policy Unit Supervisor

Minnesota Pollution Control Agency | 520 Lafayette Road N | St. Paul, MN 55155

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Dickerson, Lauren (She/Her/Hers) (MPCA)

From: Braaten, Bruce (MPCA)
Sent: Thursday, May 15, 2025 11:38 AM
To: deAlwis, Deepa (She/Her/Hers) (MPCA); cholm; Frank Villebrun JR; paigehuhta; Deschampe, Robert; agathaa; Aprilm@grandportage.com; Toby Stephens; Vallen Cook; Carma Huseby; Brandy Toft; Craig Tangren; charlie.lippert; amy.moore; Deb Dirlam; Gabriel Miller; Stacy.Boone@shakopeedakota.org
Cc: Kesner, Shannon (MPCA); Dickerson, Lauren (She/Her/Hers) (MPCA); Braaten, Bruce (MPCA); deAlwis, Deepa (She/Her/Hers) (MPCA)
Subject: RE: Regional Haze State Implementation Plan progress report
Attachments: Regional Haze 2025 Progress Report (aq-sip2-20) 5-13-25.pdf; 2025 RH SIP progress rpt PN to Tribal Nations 5-15-25.docx; Public Notice MPCA Regional Haze Document_final.pdf

Hello Tribal Nation leaders,

On May 19, 2025, the MPCA is commencing its Regional Haze State Implementation Plan progress report 30-day public comment period. Please see the attached letter, public comment document, and the draft progress report.

Thank you and please let me know if you have any questions.

Bruce Braaten

Bruce Braaten

Air Policy Unit

Minnesota Pollution Control Agency | 7381 Airport View Drive SW | Rochester, MN 55902

507-206-2607

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MINNESOTA STATE REGISTER

MONDAY, MAY 19, 2025

VOLUME 49, NUMBER 47

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Minnesota State Register

Judicial Notice Shall Be Taken of Material Published in the Minnesota State Register

The Minnesota State Register is the official publication of the State of Minnesota's Executive Branch of government, published weekly to fulfill the legislative mandate set forth in Minnesota Statutes, Chapter 14, and Minnesota Rules, Chapter 1400. It contains:

- Proposed Rules
- Adopted Rules
- Exempt Rules
- Expedited Rules
- Withdrawn Rules
- Executive Orders of the Governor
- Appointments
- Proclamations
- Vetoed Rules
- Commissioners' Orders
- Revenue Notices
- Official Notices
- State Grants and Loans
- Contracts for Professional, Technical and Consulting Services
- Non-State Public Bids, Contracts and Grants

Printing Schedule and Submission Deadlines

Vol. 49 Issue Number	Publish Date	Deadline for: all Short Rules, Executive and Commissioner's Orders, Revenue and Official Notices, State Grants, Professional-Technical- Consulting Contracts, Non-State Bids and Public Contracts	Deadline for LONG, Complicated Rules (contact the editor to negotiate a deadline)
#48	Tuesday 27 May	Noon Tuesday 20 May	Noon Thursday 15 May
#49	Monday 2 June	Noon Tuesday 27 May	Noon Thursday 22 May
#50	Monday 9 June	Noon Tuesday 3 June	Noon Thursday 29 May
#51	Monday 16 June	Noon Tuesday 10 June	Noon Thursday 5 June

PUBLISHING NOTICES: We need to receive your submission ELECTRONICALLY in Microsoft WORD format. Submit ONE COPY of your notice via e-mail to: sean.plemmons@state.mn.us. State agency submissions must include a "State Register Printing Order" form, and, with contracts, a "Contract Certification" form. Non-State Agencies should submit ELECTRONICALLY in Microsoft WORD, with a letter on your letterhead stationery requesting publication and date to be published. Costs are \$13.50 per tenth of a page (columns are seven inches wide). One typewritten, double-spaced page = 6/10s of a page in the State Register, or \$81. About 1.5 pages typed, double-spaced, on 8-1/2"x11" paper = one typeset page in the State Register. Contact editor with questions (651) 201-3204, or e-mail: sean.plemmons@state.mn.us.

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SEE THE Minnesota State Register free at website: <https://mn.gov/admin/government/data-info/register.jsp>

- Minnesota State Register: Online subscription – \$180, includes links, index, special section "CONTRACTS & GRANTS," with Sidebar Table of Contents, Early View after 4:00 pm Friday (instead of waiting for early Monday), and it's sent to you via E-mail.
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- "Affidavit of Publication" includes a notarized "Affidavit" and a copy of the issue: \$15.00.

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(651) 296-0504

State Capitol, Room 231, St. Paul, MN 55155
<https://www.senate.mn/>

Minnesota State Court System

Court Information Office (651) 296-6043
MN Judicial Center, Rm. 135,
25 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<http://www.mncourts.gov>

House Public Information Services
(651) 296-2146

State Office Building, Room 175
100 Rev. Dr. Martin Luther King Jr Blvd., St. Paul, MN 55155
<https://www.house.leg.state.mn.us/hinfo/hinfo.asp>

Federal Register

Office of the Federal Register (202) 512-1530; or (888) 293-6498
U.S. Government Printing Office – Fax: (202) 512-1262
<https://www.federalregister.gov/>

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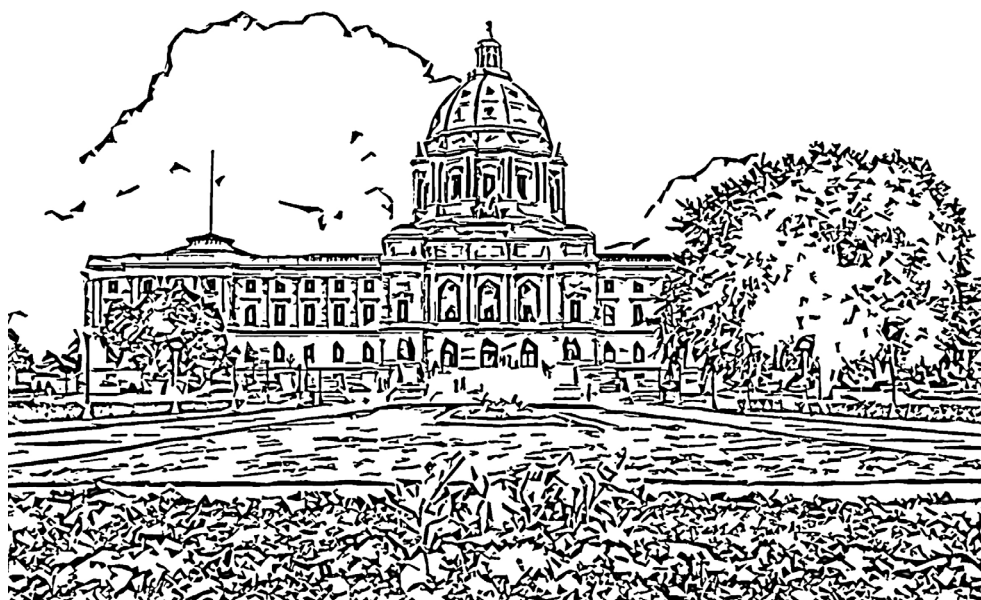
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Front Cover Artwork: *Two swans soar over three pelicans floating on the Saint Louis River near Chambers Grove in Duluth, Minn.
Photo by Sean Plemmons*



Minnesota Rules: Amendments and Additions

NOTICE: How to Follow State Agency Rulemaking in the State Register

The State Register is the official source, and only complete listing, for all state agency rulemaking in its various stages. State agencies are required to publish notice of their rulemaking action in the State Register. Published every Monday, the State Register makes it easy to follow and participate in the important rulemaking process. Approximately 80 state agencies have the authority to issue rules. Each agency is assigned specific Minnesota Rule chapter numbers. Every odd-numbered year the Minnesota Rules are published. Supplements are published to update this set of rules. Generally speaking, proposed and adopted exempt rules do not appear in this set because of their short-term nature, but are published in the State Register.

An agency must first solicit Comments on Planned Rules or Comments on Planned Rule Amendments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency (Minnesota Statutes §§ 14.101). It does this by publishing a notice in the State Register at least 60 days before publication of a notice to adopt or a notice of hearing, or within 60 days of the effective date of any new statutory grant of required rulemaking.

When rules are first drafted, state agencies publish them as Proposed Rules, along with a notice of hearing, or a notice of intent to adopt rules without a hearing in the case of noncontroversial rules. This notice asks for comment on the rules as proposed. Proposed emergency rules, and withdrawn proposed rules, are also published in the State Register. After proposed rules have gone through the comment period, and have been rewritten into their final form, they again appear in the State Register as Adopted Rules. These final adopted rules are not printed in their entirety, but only the changes made since their publication as Proposed Rules. To see the full rule, as adopted and in effect, a person simply needs two issues of the State Register, the issue the rule appeared in as proposed, and later as adopted.

The State Register features partial and cumulative listings of rules in this section on the following schedule: issues #1-26 inclusive (issue #26 cumulative for issues #1-26); issues #27-52 inclusive (issue #52, cumulative for issues #27-52 or #53 in some years). A subject matter index is updated weekly and is available upon request from the editor. For copies or subscriptions to the State Register, contact the editor at 651-201-3204 or email at sean.plemmons@state.mn.us

Volume 49 - Minnesota Rules

(Rules Appearing in Vol. 49 Issues #1-27 are
in Vol. 49, #27 - Monday 30 December 2024)

Volume 49, #47

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Adopted Rules

A rule becomes effective after the requirements of *Minnesota Statutes* §§ 14.05-14.28 have been met and five working days after the rule is published in the *State Register*, unless a later date is required by statutes or specified in the rule. If an adopted rule is identical to its proposed form as previously published, a notice of adoption and a citation to its previous *State Register* publication will be printed. If an adopted rule differs from its proposed form, language which has been deleted will be printed with strikeouts and new language will be underlined. The rule's previous *State Register* publication will be cited.

KEY: Proposed Rules - Underlining indicates additions to existing rule language. ~~Strikeouts~~ indicate deletions from existing rule language. If a proposed rule is totally new, it is designated "all new material."

Adopted Rules - Underlining indicates additions to proposed rule language. Strikeout indicates deletions from proposed rule language.

Department of Health

Adopted Permanent Rules Relating to Borings and Wells

The rules proposed and published at State Register, Volume 49, Number 20, pages 477-496, November 12, 2024 (49 SR 477), are adopted with the following modifications:

4725.1834 SUBMERGED CLOSED LOOP HEAT EXCHANGER SYSTEM PERMIT.

Subp. 2. Permit application.

B. A SCLHE system permit application must include:

(10) an inventory of known groundwater contamination sites and plumes within one-half mile of the proposed SCLHE system wells. The inventory must include:

(b) a scaled map, including:

- ii. a line showing the one-half mile boundary from the proposed SCLHE wells; and
- iii. identified sites and plumes within the one-half mile boundary; and

Executive Orders

The governor has the authority to issue written statements or orders, called Executive Orders, as well as Emergency Executive Orders. The governor's authority is specified in the Constitution of the State of Minnesota, Article V, and in *Minnesota Statutes* § 4.035. Emergency Executive Orders, for protection from an imminent threat to health and safety, become effective immediately, are filed with the secretary of state, and published in the *State Register* as soon as possible after they are issued. Other Executive Orders become effective 15 days after publication in the *State Register* and filing with the secretary of state. Unless otherwise specified, an executive order expires 90 days after the date the governor who issued the order vacates office.

Office of the Governor

Emergency Executive Order 25-04: Providing Assistance to the Minnesota Interagency Fire Center

I, Tim Walz, Governor of the State of Minnesota, by the authority vested in me by the Constitution and applicable statutes, issue the following executive order:

On May 11, 2025, the Camp House wildfire started in Saint Louis County in northern Minnesota. As of today, that wildfire has grown to 750 acres and is zero percent contained. The Camp House fire has led to evacuations and has destroyed property in the impacted areas of Minnesota.

This spring, unusually dry and windy weather conditions have resulted in elevated fire danger conditions throughout Minnesota. A majority of Minnesota counties have active Red Flag Warnings, and elevated fire danger conditions exist for the remaining counties. We expect these conditions to continue for the next several days.

First responders, including multiple fire departments, law enforcement, the Minnesota Department of Natural Resources, and the Minnesota Interagency Fire Center do not have adequate resources to meet the demands caused by the wildfire or the threat to life and property that it poses. The Minnesota Interagency Fire Center has requested fire suppression assets from the Minnesota National Guard.

For these reasons, I order as follows

1. The Adjutant General is authorized to order to state active duty the personnel, equipment, facilities, and resources needed to provide assistance throughout Minnesota.
2. The Adjutant General is authorized to procure the goods and services needed to accomplish the mission.
3. The costs of this assistance shall be paid from the general fund as allowed by Minnesota Statutes 2024, section 192.52.

This Executive Order is effective immediately under Minnesota Statutes 2024, section 4.035, subd. 2, and remains in effect until the emergency conditions caused by the wildfire threats subside or until it is rescinded by proper authority, whichever occurs first.

A determination that any provision of this Executive Order is invalid will not affect the enforceability of any other provision of this Executive Order. Rather, the invalid provision will be modified to the extent necessary so that it is enforceable.

Signed on May 12, 2025.

Tim Walz, GOVERNOR

Filed According to Law:

Steve Simon, SECRETARY OF STATE

Official Notices

Pursuant to *Minnesota Statutes* §§ 14.101, an agency must first solicit comments from the public on the subject matter of a possible rulemaking proposal under active consideration within the agency by publishing a notice in the *State Register* at least 60 days before publication of a notice to adopt or a notice of hearing, and within 60 days of the effective date of any new statutory grant of required rulemaking.

The *State Register* also publishes other official notices of state agencies and non-state agencies, including notices of meetings and matters of public interest.

Department of Employment and Economic Development (DEED) Notice of Public Hearing by the Minnesota Department of Employment and Economic Development with Respect to a Proposed Project and the Provision of Funds from the Minnesota Job Creation Fund Program under Minnesota Statutes 116J.8748

NOTICE IS HEREBY GIVEN that the Minnesota Department of Employment and Economic Development (“DEED”) will conduct a public hearing on Wednesday, June 4, 2025 at 1:00 p.m., or as soon thereafter as reasonably possible at 180 East Fifth Street, Suite 1200, St. Paul, Minnesota 55101 on one (1) proposal to provide funding through the Minnesota Job Creation Fund Program (“JCF”) pursuant to authority granted under *Minnesota Statutes* 116J.8748 and *Minnesota Rules* Chapter 4301. This hearing is conducted in accordance with *Minnesota Statutes* 116J.994, Subd. 5.

Description of Project and Proposed JCF Funding:

West Fraser US EWP LLC (NAICS 321219) is looking to expand in Solway, Beltrami County, Minnesota. West Fraser US EWP LLC is a wood products company with more than 50 facilities across North America and Europe. Focused on sustainable forestry, the company produces a range of materials including lumber, engineered wood, pulp, newsprint, and renewable energy. Its products are widely used in construction, renovation, manufacturing, and packaging. The total project cost is \$137,000,000, with \$19,554,000 eligible for a capital investment rebate for renovations to an existing building, which would be rebated up to 7.5%. Costs ineligible for rebate include machinery and equipment. The company expects to retain 132 jobs at the project site in Solway at an average cash wage of \$37.11 per hour. The project may be eligible for a job retained award of up to \$250,000 and a capital investment rebate of up to \$1,000,000, depending on final project specifications. No additional local assistance is being proposed.

All interested persons may appear and be heard at the time and place set forth above. Persons interested in participating via teleconference should contact Sala Yussuf, Economic Development Specialist at (651) 259-7518 or salahadin.yussuf@state.mn.us prior to the date of the hearing for instructions on how to participate in the call.

Interested persons may mail written comments to Sala Yussuf at Great Northern Building, 180 East Fifth Street, Suite 1200, St. Paul, MN 55101, or e-mail salahadin.yussuf@state.mn.us prior to the date of the hearing set forth above. All persons who appear at the meeting or participate via teleconference will be given an opportunity to express their views with respect to the proposal to award funds from the Minnesota Job Creation Fund.

Department of Human Services

Health Care Administration

Notice of Prepaid Medical Assistance Project Plus Demonstration Waiver Public Forum

The Minnesota Department of Human Services (DHS) invites the public to comment on the progress of the current Prepaid Medical Assistance Project Plus (PMAP+) demonstration waiver at a public forum on June 24, 2025.

The Centers for Medicare & Medicaid Services (CMS) initially approved Minnesota’s section 1115 demonstration waiver titled “Prepaid Medical Assistance Project Plus (PMAP+)” in July 1995. On Nov. 15, 2023, CMS approved Minnesota’s request to extend the waiver from Jan. 1, 2024 through Dec. 31, 2028. The five-year demonstration provides

Official Notices

federal authority to:

- Cover children under Medical Assistance who are 12 to 23 months old with income eligibility above 275% and at or below 283% of the federal poverty level (FPL).
- Waive the federal requirement to redetermine the basis of Medical Assistance eligibility for caretaker adults with incomes at or below 133% of the FPL who live with children age 18 who are not full-time secondary school students.
- Provide Medical Assistance benefits to pregnant people during the period of presumptive eligibility.
- Provide continuous eligibility under Medical Assistance for children up to age six, and 12 months of continuous eligibility for children ages 19 and 20.

For additional information about the PMAP+ demonstration waiver, see:

- ***PMAP+ waiver approval, expenditure and waiver authorities, and special terms and conditions (PDF)*** for information about CMS' approval of the PMAP+ demonstration waiver;
- ***Annual Report for Demonstration Year 28 (PDF)*** for the most recent CMS approved annual report; and
- ***Federal health care waivers with public hearings and comments / Minnesota Department of Human Services (mn.gov)*** webpage.

Under the terms of the PMAP+ demonstration waiver, DHS must hold an annual forum to provide the public with an opportunity to comment on the progress of the waiver over the last year. All interested members of the public are invited to attend and provide comments. Comments will be recorded and shared publicly as part of the state's federal reporting requirements.

You may attend the forum via video conference or in-person. The next public forum will be held:

DATE: Tuesday, June 24, 2025

TIME: 9:00 – 10:00 a.m.

Video Conference Option

Use this ***Webex link*** to attend virtually (at the date and time above).

In-Person Option

If you would like to attend in-person, please send an email to ***Section1115WaiverComments@state.mn.us*** so we can assure sufficient room capacity.

LOCATION: Minnesota Department of Human Services
Elmer L. Anderson Human Services Building, Room 2222
540 Cedar Street
St. Paul, MN 55101

Limited parking is available in the ramp adjacent to the building. Refer to the DHS ***Directions and parking*** webpage for more information, including additional parking options.

Minnesota Pollution Control Agency (MPCA)

Environmental Analysis and Outcomes Division

Notice of Minnesota's 2025 Progress Report for Regional Haze: Progress Report for Second Implementation Period (2018-2028)

NOTICE IS HEREBY GIVEN that the Commissioner of the Minnesota Pollution Control Agency (MPCA) has determined that a second planning period Regional Haze progress report must be submitted to meet Minnesota's requirements under the Federal Regional Haze Rule (40 Code of Federal Regulations § 51.300-51.309). The progress report provides an update on the implementation of measures within the latest State Implementation Plan (SIP) revision. The draft second period progress report is now available for public comment.

Background. Under the authority of section 169(a) of the Clean Air Act (CAA), the United States Environmental Protection Agency (EPA) on July 1, 1999, promulgated visibility goals for mandatory Class I Federal areas in the Federal Regional Haze Rule. Section 169(a) of the CAA and the Regional Haze Rule required each state to adopt and submit a plan to EPA that addressed the state's contribution to visibility impairment at the mandatory Class I Federal areas. Subsequently, Minnesota submitted its second planning period Regional Haze SIP revision to EPA on December 20, 2022. The Regional Haze Rule further requires each state submit a progress report on implementation of the Regional Haze SIP halfway through each ten-year implementation period.

Purpose of the Progress Report. The purpose of this progress report is to fulfill Minnesota's responsibility under the CAA Regional Haze Rule to assess whether the Regional Haze SIP is being implemented appropriately and whether reasonable visibility progress is being achieved consistent with the projected visibility improvement in the SIP. This progress report does not modify Minnesota's Regional Haze SIP strategy, but rather, assesses its progress in the second implementation period.

The MPCA will consider changing the contents of the proposed progress report based on comments received during the comment period. Following the end of the comment period, the Commissioner will submit the progress report to the EPA.

Minnesota has already reached the emissions reductions projected to 2028 for SO₂, appears to be on-track for the 2028 NO_x emission reduction projection, and appears to be generating additional NH₃ at a rate that may reach the level projected to 2028 in the 2022 Regional Haze SIP.

MPCA contact person. The MPCA contact person is Lauren Dickerson. Written comments, requests, and petitions should be mailed to: Lauren Dickerson, Minnesota Pollution Control Agency, Environmental Analysis and Outcome Division, 520 Lafayette Road North, Saint Paul, Minnesota 55155-4194; telephone: 651-757-2184 or email: lauren.dickerson@state.mn.us. Online comments can be submitted at <https://mpca.commentinput.com/comment/search>.

Availability of SIP. A copy of the proposed progress report SIP revision is available on the MPCA's website at <http://www.pca.state.mn.us/index.php/public-notices/list.html>. A copy is also available upon request by contacting Lauren Dickerson at 651-757-2184 or lauren.dickerson@state.mn.us, or can be mailed to any interested person upon the MPCA's receipt of a written request. The proposed progress report is also available for inspection by appointment at the MPCA, 520 Lafayette Road North, Saint Paul, Minnesota 55155-4194, between the hours of 8:00 a.m. and 4:30 p.m., Monday through Friday. To examine this report, please contact Lauren Dickerson.

Public comment period and potential public meeting. Your comments must be in writing and received by Lauren Dickerson by 4:30 p.m. on Wednesday, June 18, 2025. Written comments may be submitted to her at the address or email address listed above or through the online comment link.

As this progress report SIP revision does not include any substantive changes to the Minnesota's SIP, a public information webinar will only be held if one is requested by 4:30 p.m. on Wednesday, June 18, 2025. If such a webinar is requested, it will be held on Monday, June 23, 2025, from 10:00 a.m. to 11:00 a.m.

Official Notices

To find out if a public information webinar will be held, please contact Lauren Dickerson at 651-757-2184 or lauren.dickerson@state.mn.us after Wednesday, June 18, 2025. The public information webinar, if one is requested, will provide information and answer questions about the proposed second implementation period progress report.

State Grants & Loans

In addition to requests by state agencies for technical/professional services (published in the State Contracts Section), the *State Register* also publishes notices about grants and loans available through any agency or branch of state government. Although some grant and loan programs specifically require printing in a statewide publication such as the *State Register*, there is no requirement for publication in the *State Register* itself. Agencies are encouraged to publish grant and loan notices, and to provide financial estimates as well as sufficient time for interested parties to respond.

SEE ALSO: Office of Grants Management (OGM) at: <https://mn.gov/admin/citizen/grants/>

Department of Commerce

Division of Energy Resources

Request for Proposals for Conservation Applied Research and Development Grant Program to Perform Field study or Demonstration, Conduct Market or Saturation Study, Produce a White Paper, or Research Data Centers – Ref No. COMM-CARD02-20250520

The Minnesota Department of Commerce, Division of Energy Resources (“Department”) seeks proposals from organizations or individuals interested in applied research and development projects that serve to accelerate the development and adoption of new energy efficient technologies and program strategies in Minnesota. The information obtained from this effort is intended to inform electric and natural gas utility Energy Conservation and Optimization (ECO) program development.

This Request for Proposal (RFP) process consists of two stages:

- Stage 1: Notice of Intent to propose for CARD Grant project; and
- Stage 2: Submission of full proposal application for CARD Grant.

Only Responders who have submitted an NOI (Stage 1) will be eligible to submit a full proposal (Stage 2). To ensure Responders understand and appreciate what will ultimately be required of a full proposal, the RFP provides complete information on both stages. Please see important dates below:

- *Stage 1: Notices of Intent (NOI) to propose a CARD Grant project must be submitted no later than 5:00 p.m. CT, Tuesday, June 24, 2025.*
- *Stage 2: Submission of full proposal application for CARD Grant must be completed by 5:00 p.m. CT, Wednesday, October 29, 2025.*

The Request for Proposal (RFP) will be available for download starting Tuesday, May 20, 2025 on the Department’s RFP website at ***Request for Proposals (RFP) / Minnesota Department of Commerce - Business (mn.gov)***.

All responses to this RFP need to be submitted through a single responder user account via the grant portal. Applications must be submitted by the deadline of each respective round. **Late proposals will not be considered.** Instructions and links for submitting bids are detailed in the RFP and attachments.

State Grants & Loans

This request does not obligate the State to complete the work contemplated in this notice. The State reserves the right to cancel this solicitation. All expenses incurred in responding to this notice are solely the responsibility of the responder.

Department of Commerce

Division of Energy Resources

Request for Proposals for Solar on Public Buildings Grant Program

The Minnesota Department of Commerce seeks proposals for the Solar on Public Buildings Grant Program.

In 2023 the Minnesota Legislature established the Solar on Public Buildings (SPB) Grant Program (*Minn. Stat. § 216C.377*). The purpose of this program is to provide grants to stimulate the installation of solar energy systems on public buildings. The Department of Commerce will administer \$4.3M in grants to local governments in Xcel Energy electric service territory. This is the third round of funding requests.

Eligible applicants for this grant program are local units of government including a county, statutory or home rule charter city, town, or other local government jurisdiction, excluding a school district eligible to receive financial assistance under section *216C.375*; or a federally recognized Indian Tribe in Minnesota. (*Minn. Stat. § 216C.377, subd. 1*).

Grants will be awarded for up to 70% of the project costs (dependent on the government's financial capacity) for a solar array that is built on or adjacent to a public building and is the lesser of 40kW system capacity or 120% of the building's annual energy consumption.

A Request for Proposals (RFP) is available for download on the Department's RFP website at *Request for Proposals (RFP) / Minnesota Department of Commerce - Business (mn.gov)*.

All responses to this RFP need to be submitted through a single responder user account via the grant portal, see the RFP for details. Applications must be submitted by the deadline of each respective round. **Late proposals will not be considered.** Instructions and links for submitting bids are detailed in the RFP and attachments.

This request does not obligate the State to complete the work contemplated in this notice. The State reserves the right to cancel this solicitation. All expenses incurred in responding to this notice are solely the responsibility of the responder.

Department of Employment and Economic Development (DEED)

Notice of Grant Opportunity

NOTICE IS HEREBY GIVEN that the Minnesota Department of Employment and Economic Development (DEED) places notice of any available grant opportunities online at <https://mn.gov/deed/about/contracts/open-rfp.jsp>

Minnesota Department of Human Services

Notice of Grant Opportunities

NOTICE IS HEREBY GIVEN that the Minnesota Department of Human Services (DHS) places notice of any available grant opportunities on the DHS Grant Requests for Proposals website: <https://mn.gov/dhs/partners-and-providers/grants-rfps/open-rfps/>.

State Grants & Loans

Department of Public Safety

Office of Justice Programs

Request for Proposals for Community Crime Intervention and Prevention Programs Grant Program

The Department of Public Safety, Office of Justice Programs (DPS-OJP) is requesting proposals to fund Community Crime Intervention and Prevention Programs. There is a cap on each grant award of \$500,000 for the 2-year grant period (Jan. 1, 2026 – Dec. 31, 2027). Applicants may propose less than the \$500,000 2-year cap and may submit more than one proposal. Eligible applicants are public and private non-profit agencies; Tribal nations; and local units of government, including cities, counties, and townships; local educational agencies. Eligible applicants must be registered with the Minnesota Secretary of State.

To view the RFP, go to the OJP website: *Funding opportunities | Minnesota Department of Public Safety*. All applications must be submitted using the *e-grants* web-based grants management system by 4:00 pm CST on June 30, 2025. For more information contact Michael Hreha at michael.hreha@state.mn.us or Casey Cashman at casey.cashman@state.mn.us.

State Contracts

Informal Solicitations: Informal solicitations for professional/technical (consultant) contracts valued at over \$5,000 through \$50,000, may either be published in the *State Register* or posted on the Department of Administration, Office of State Procurement (OSP) Website. Interested vendors are encouraged to monitor the P/T Contract Section of the OSP Website at <https://mn.gov/admin/osp> for informal solicitation announcements.

Formal Solicitations: Department of Administration procedures require that formal solicitations (announcements for contracts with an estimated value over \$50,000) for professional/technical contracts must be published in the *State Register*. Certain quasi-state agency and Minnesota State College and University institutions are exempt from these requirements.

Requirements: There are no statutes or rules requiring contracts to be advertised for any specific length of time, but the Office of State Procurement strongly recommends meeting the following requirements: \$0 - \$5000 does not need to be advertised; \$5,000 - \$25,000 should be advertised in the *State Register* for a period of at least seven calendar days; \$25,000 - \$50,000 should be advertised in the *State Register* for a period of at least 14 calendar days; and anything above \$50,000 should be advertised in the *State Register* for a minimum of at least 21 calendar days.

Contact the Office of State Procurement at: (651) 296-2600

Department of Administration

Real Estate and Construction Services (RECS)

Request for Proposal (RFP) for Building Commissioning Services for Master Contract Program (T#2602A)

The State of Minnesota (State), through its Department of Administration's Real Estate and Construction Services (RECS), requests proposals and fee schedules from firms and individuals (Responder). Responder to provide under the direct supervision of a Professional in the field of building commissioning with a minimum of five (5) years' experience with the type of work requiring building commissioning. The purpose of this RFP is to create a new Master Contract program.

It is the goal of this RFP to enter into a Professional and Technical Services Master Contract (Master Contract) with

Responders meeting the criteria noted under section Proposal Evaluation. Multiple Responders may be offered a Master Contract to perform work. Projects will vary in nature and scope. Most will involve projects of significant size and complexity; however, other services could be used, as needed during design phase, during construction phase, during Occupancy and Operations phase associated to a renovation, new construction and/or mechanical engineering projects.

The Master Contract for Building Commissioning Services program RFP will be available online throughout the five (5) year Master Contract period (July 1, 2025 – June 30, 2030). Responses will only be accepted until April 30, 2030. Responses that meet the pass/fail qualifications will be awarded a Master Contract.

The Request for Proposals (RFP) is available for download on the Minnesota Department of Administration's Construction Projects Contracts website at <https://mn.gov/admin/government/construction-projects/contracts/building-commissioning/>

Prospective responders who have any questions regarding this request for proposal should email the questions to: recs.contract.drafting@state.mn.us, Real Estate and Construction Services, Subject line of email should be labeled: **"Questions to Building Commissioning RFP."**

The State is not obligated to complete this RFP and the State reserves the right to cancel this solicitation if it is considered to be in its best interest. This Request for Proposals and Fee Schedules is not a guarantee of work and it does not obligate the State to award any contracts or work orders. The State reserves the right to not use Master Contracts if it is considered to be in its best interest.

Department of Administration

Real Estate and Construction Services

Notice of Availability of Request for Qualifications (RFQ) for Construction Manager at Risk for Demolition of COB (Centennial Office Building) and Associated Site Restoration

NOTICE IS HEREBY GIVEN that the State of Minnesota Department of Administration, represented by Real Estate and Construction Services Division (RECS), is seeking Construction Manager at Risk to provide services for demolition of COB (Centennial Office Building) and associated site restoration located in St. Paul, MN.

A full Request for Qualifications is available on the Department of Administration's website at <https://mn.gov/admin/osp/vendors/solicitations-and-contract-opportunities/> click "Virtual Plan Room – Construction Contracts". Project Name **"RECS RFQ CMR COB Demolition"**, QUESTCDN Project Number: **9670425**, RECS Project Number: 02CO0073. To be considered for selection and a contract, responses must be submitted by the date and time indicated in the RFQ.

Firms must Pre-Register for the Mandatory Pre-Qualifications Submittal/Proposal Meeting by 3:00 p.m. CDT, Monday, June 9, 2025. A Mandatory Pre-Qualifications Submittal/Proposal Meeting is scheduled for Tuesday, June 10, 2025, at 1:00 p.m. CDT. Questions regarding this RFQ must be received by 2:00 p.m. CDT, Wednesday, June 11, 2025. Project questions will be taken by Samantha Hicks at samantha.hicks@state.mn.us.

Responses must be received by the Real Estate and Construction Services, Department of Administration, Samantha Hicks no later than Monday, June 16, 2025, by 12:00 noon CDT. Late responses will not be accepted.

The Department of Administration, Real Estate and Construction Services Division is not obligated to complete the proposed project and reserves the right to cancel the solicitation if it is considered to be in its best interest. All expenses incurred in responding to this notice are solely the responsibility of the responder.

State Contracts

Minnesota Office of the Attorney General

Request For Qualifications For Outside Counsel Services Relating To: Representing The Department Of Employment And Economic Development And Potentially Other State Agencies In Complex Commercial Lending And Grant-Making Transactions

SUBMITTALS DUE BY 4:00 P.M. (Central time) on June 2, 2025

Please email submittals to RFQ.response@ag.state.mn.us

INTRODUCTION

This Request for Qualification (RFQ) has been prepared and released by the State of Minnesota Office of the Attorney General for the purpose of creating a list of qualified counsel to provide legal services to the Department of Employment and Economic Development (DEED) and potentially other State agencies under the supervision of the Minnesota Attorney General's Office (AGO).

Counsel in these matters would advise and represent DEED and potentially other State agencies in complex transactional matters in which the State is providing repayable loans, forgivable loans, and grants to facilitate economic development and infrastructure projects ("identified matters").

The AGO seeks to review responses from law firms and qualify counsel for engagement. All services contemplated in this RFQ would be provided on an hourly fee basis.

The AGO has full-time lawyers who handle the majority of legal work for the State. Occasionally, the AGO seeks to engage attorneys with expertise in particular types of legal matters to supplement AGO resources and assist in representing the State and its agencies. In order to ensure that the State is getting the highest quality legal service at the most reasonable rates, and that all law firms who wish to perform this work are able to compete for it, the AGO is issuing this RFQ as an open solicitation.

The review of qualifications and the possible engagement resulting from this RFQ may not be exclusive and the AGO reserves the right to assign litigation of the identified matter work to more than one firm. In responding to this solicitation, it is understood by all proposers that the AGO reserves the right to select none, any, or all proposers whom the AGO deems to be in the State's best interest. The AGO is not required to submit this work to a competitive bidding process. Any possible engagement letter following this RFQ will depend on the proposals received in response to this RFQ.

The anticipated engagement letter will be for three years.

II. AGO CONTACT INFORMATION

This RFQ is being released by the AGO, which is also the sole point of contact during the review process. Any Special Attorney appointment[s] resulting from this RFQ will be administered by the AGO. The contract administrators are Oliver Larson, Manager of the Environmental and Natural Resources Division at the AGO, and Liz Kramer, Solicitor General. If additional information is necessary to interpret the requirements of this RFQ, please direct questions to RFQ.response@ag.state.mn.us.

III. CONDITIONS OF SUBMITTING RESPONSES

Proposers responding to this RFQ understand that the following conditions apply to any proposal:

A. **RESPONSE PREPARATION.** The minimum qualifications stated in Section IV and the submission content stated in section V of this RFQ are mandatory. Failure by a respondent to respond to a specific requirement can be the basis for elimination from consideration during the comparative evaluation.

B. **RESPONSE SUBMISSION/ DEADLINE.** Response(s) should be provided in Adobe (pdf) format and submitted by email to the address on the cover of this RFQ by no later than 4:00PM (Central Time) on **May 9, 2025**. No

responses submitted after this deadline will be accepted.

C. **INCURRING COSTS.** The AGO is not liable for any cost incurred by respondents in replying to this RFQ.

D. **ORAL INTERVIEWS AND FURTHER INFORMATION.** While not planned at this time, the AGO reserves a right to schedule and conduct an oral interview with any or all the respondents to this RFQ. The AGO also reserves the right to request additional data or a presentation in support of any or all proposals at any time.

E. **PROPRIETARY INFORMATION.** Any restrictions on the use of data contained within a response must be clearly stated in the response itself. Information deemed proprietary submitted in response to this RFQ will be handled in accordance with applicable State data practices law.

F. **ACCEPTANCE OF TERMS.** The proposer has reviewed and understands the RFQ process and requirements as stated in this RFQ.

G. **CONTROL BY ATTORNEY GENERAL.** The identified matter shall be overseen by the Attorney General. The Attorney General shall retain control of all aspects of the representation.

H. **NO ENDORSEMENT.** Selection as outside counsel does not constitute an endorsement by the State of Minnesota or the AGO. A chosen firm may not promote or advertise its designation without permission of the AGO.

I. **RESERVED RIGHTS.** The AGO reserves the right to reject any and all proposals received in response to this RFQ when determined to be in the State's best interest, and to waive minor noncompliance in a proposal. The AGO further reserves the right to make such investigations as deemed necessary as to the qualifications of any and all firms submitting proposals in response to this RFQ. If all proposals are rejected, the AGO reserves the right to re-solicit proposals. Nothing in this RFQ is intended to limit or constrain the discretion of the AGO in exercising any authority, duty, prerogative, or power established or recognized by the Constitution, statutes, executive orders, regulations, case law, or other applicable law.

J. **FEES.** Attorney fees and costs for the identified matter will be paid by DEED or the agency represented by the selected firm. Proposals should include information concerning the hourly rates, fees, and costs of the proposer. Invoices must be submitted for review and approval on at least a monthly basis. Additional requirements and terms of payment will be negotiated prior to appointment of any proposer.

K. **COSTS.** Allowable costs will be determined by a retainer fee agreement and/or special attorney appointment. Firms are expected to take measures to control and reduce costs.

IV. RFQ PROCESS AND REQUIRED QUALIFICATIONS

A. **MINIMUM QUALIFICATIONS.** At a minimum, firms submitting a proposal in response to this RFQ should have:

1. Substantial experience in representing clients in complex commercial transactions, including experience representing clients in the documentation of loans, security agreements, intercreditor agreements, liens, and land record filings;
2. Substantial experience in state or federal grant issues, representing either governments or grant applicants/recipients; and
3. No current or anticipated conflict of interests with representation of DEED specifically or the State generally.

B. **EVALUATION CRITERIA.** Responses to this RFQ meeting the minimum qualifications will be evaluated based on the following criteria:

- General quality of response;

State Contracts

- Qualifications of firm attorneys;
- Experience of firm with the identified matters;
- Fee proposal;
- Cost proposal;
- Ability of the firm to provide significant services in short timeframes during the negotiation and documentation of proposed transactions;
- Minimal potential ethical and business conflicts.

The AGO reserves the right to consider other factors if it deems the information relevant to the evaluation and selection process.

C. **LEGISLATIVE ADVISORY COMMISSION APPROVAL MAY BE NEEDED.** Proposers should be aware that Minn. Stat § 8.065 requires notice to the Legislative Advisory Commission of certain outside counsel hires, and the Commission has a right to make a recommendation on the hire.

V. **SUBMITTAL CONTENT.** Responses must address all the questions and requests in this section. Please also include a cover letter with an executive summary of the proposal.

A. **CONTACT NAME.** Name, phone number and email address of individual or individuals responsible for this RFQ response who may be contacted in the event of questions or notification. The proposer also should identify the individual who would be designated as the contact person with the AGO for billings and special attorney appointment[s] administration in the case of retention.

B. **GENERAL FIRM QUALIFICATIONS.** Provide or identify the following information about the firm:

1. The firm's experience in representing clients in complex commercial transactions, including experience representing clients in the documentation of grants, loans, security agreements, intercreditor agreements, liens, and land record filings.
2. The firm's hiring, training, retention, and advancing of traditionally underrepresented attorneys within their firm (including women, lawyers of color, veterans, and the LGBTQ+ community), especially in the area of the identified matters.
3. Any agency or department of the State of Minnesota represented by the firm during the last five years. For each matter, provide the name of the State agency or department, and a description of the matter.
4. The firm's professional liability insurance coverage. Specify the type of malpractice or errors and omissions insurance that the firm carries and the limits of coverage.

C. **QUALIFICATIONS AND EXPERIENCE OF PARTICULAR ATTORNEYS.** The proposal should identify the specific attorneys likely to be assigned to perform the requested legal services. For each of these attorneys, provide or identify the following:

1. A professional resume.
2. Their experience handling matters in the area of the identified matter and other indications of expertise (writing articles, giving presentations, etc).
3. Hourly rate or example(s) of any other rates that you would like the AGO to consider (flat fee, capped/collared arrangements), and metrics for diligence of timely and accurate time entry.

G. **ACTUAL OR POTENTIAL CONFLICTS OF INTEREST.** State whether any attorneys within the firm represent any clients or interests adverse to any entity of the State, including lawsuits, administrative proceedings, other

legal actions, or lobbying activities. Without violating your duty of confidentiality, the proposal should describe the nature of any such representation. The proposal also must indicate whether any other activities of the firm potentially pose a conflict of interest, or the appearance of a conflict of interest, in representation of the State in the identified matters. The firm should immediately advise the AGO in writing of any real or possible conflicts that arise after the submission of the proposal.

Minnesota State Colleges and Universities (Minnesota State) Notice of Bid and Contracting Opportunities

Minnesota State is now placing additional public notices for contract opportunities for goods and services on its Vendor and Supplier Opportunities website (<https://www.minnstate.edu/vendors/index.html>). Minnesota State may add new public notices to the website daily and post for the time indicated within the public notice.

If you have any questions regarding this notice or are having problems viewing the information on the Vendor and Supplier Opportunities website, please email the Minnesota State Procurement Unit at Sourcing@MinnState.edu.

Minnesota Competency Attainment Board (MNCAB) Request for Proposals for Intranet Development Using Microsoft SharePoint Platform

MNCAB is requesting proposals to develop an intranet site utilizing the Microsoft SharePoint platform. To view the RFP go to the MNCAB website, <https://mn.gov/cab>. All applications must be submitted by **12:00 p.m. CST on Monday, June 2, 2025**.

Minnesota State Lottery Request for Proposals for Development of Integrated Lottery Website and Cloud Infrastructure

PROJECT NAME: Development of Integrated Lottery Website and Cloud Infrastructure

DETAILS: The Minnesota State Lottery is requesting proposals for the purpose of partnering with a development team to design, build, host, and maintain a website that supports its mission and objectives.

Work is anticipated to start after August 27, 2025.

COPY REQUEST: The RFP is publicly available at <https://www.mnlottery.com/vendor-opportunities>. To receive a copy of the Request for Proposals, please send a written request by email to:

Kolby Sabrina
Procurement Contract & Purchasing Lead
Kolby.sabrina@mnlottery.com

PROPOSAL DEADLINE: Proposals in response to the Request for Proposals in this advertisement must be received via mail not later than 2pm, Central Time, 6/25/25. **Late proposals will not be considered.** Emailed and fax proposals will **not** be considered.

This request does not obligate the State of Minnesota to award a contract or complete the proposed program, and the State reserves the right to cancel this solicitation if it is considered in its best interest. All costs incurred in responding to this solicitation will be borne by the responder.

State Contracts

Minnesota Department of Transportation (MnDOT)

Engineering Services Division

Notices Regarding Professional/Technical (P/T) Contracting

P/T Contracting Opportunities: MnDOT is now placing additional public notices for P/T contract opportunities on the MnDOT's Consultant Services website. New public notices may be added to the website on a daily basis and be available for the time period as indicated within the public notice.

Taxpayers' Transportation Accountability Act (TTAA) Notices: MnDOT is posting notices as required by the TTAA on the MnDOT Consultant Services website.

MnDOT's Prequalification Program: MnDOT maintains a Pre-Qualification Program in order to streamline the process of contracting for highway related P/T services. Program information, application requirements, application forms and contact information can be found on MnDOT's Consultant Services website. Applications may be submitted at any time for this Program.

MnDOT Consultant Services website: www.dot.state.mn.us/consult

If you have any questions regarding this notice, or are having problems viewing the information on the Consultant Services website, please call the Consultant Services Help Line at 651-366-4611, Monday – Friday, 9:00am – 4:00pm.

Minnesota Zoo

Request for Proposals for Guest Experience Research and Assessment

PROJECT NAME: Guest Experience Research and Assessment

DETAILS: The Minnesota Zoological Garden, in Apple Valley, Minnesota, is seeking proposals from qualified firms to conduct comprehensive research on guest experiences. This research will incorporate a variety of assessments which will include guest satisfaction survey(s), intercept interviews, focus groups, and social listening to assess various aspects of the guest experience, including pre-trip planning, ticket purchasing, membership, guest services, food and beverage, retail, programs, and the condition of zoo grounds.

Work is anticipated to start in June 2025.

COPY REQUEST: To receive a copy of the Request for Proposals, please send a written request by email to:

Lisa Fay, Contracts Coordinator
Minnesota Zoological Garden
lisa.fay@state.mn.us

PROPOSAL DEADLINE: Proposals in response to the Request for Proposals in this advertisement must be received by email not later than 1:00 PM, Central Time, June 11, 2025. **Late proposals will not be considered.** Printed/fax/mailed proposals will **not** be considered.

This request does not obligate the State of Minnesota to award a contract or complete the proposed program, and the State reserves the right to cancel this solicitation if it is considered in its best interest. All costs incurred in responding to this solicitation will be borne by the responder.

Non-State Public Bids, Contracts & Grants

The State Register also serves as a central marketplace for contracts let out on bid by the public sector. The *State Register* meets state and federal guidelines for statewide circulation of public notices. Any tax-supported institution or government jurisdiction may advertise contracts and requests for proposals from the private sector. It is recommended that contracts and RFPs include the following: 1) name of contact person; 2) institution name, address, and telephone number; 3) brief description of commodity, project or tasks; 4) cost estimate; and 5) final submission date of completed contract proposal. Allow at least three weeks from publication date (four weeks from the date article is submitted for publication). Surveys show that subscribers are interested in hearing about contracts for estimates as low as \$1,000. Contact editor for further details.

Besides the following listing, readers are advised to check: <https://mn.gov/admin/osp> as well as the Office of Grants Management (OGM) at: <https://mn.gov/admin/citizen/grants/>.

Metropolitan Airports Commission (MAC) Notice of Call for Bids for 2025 Apron Lighting LED Upgrade

Airport Location: Minneapolis-St. Paul International Airport
Project Name: 2025 Apron Lighting LED Upgrade
MAC Contract No.: 106-1-377
Bids Close At: 2:00 PM on June 17, 2025
Bid Opening Conference Call: 3:00 PM on June 17, 2025
Teleconference Dial In #: 1-612-405-6798
Conference ID #: 897 927 742#

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via **QuestCDN's website** until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our web site (<https://metroairports.org/doing-business/solicitations>) to receive email notifications of new business opportunities.

Disadvantaged Business Enterprises (DBE): The goal of the MAC for the utilization of Disadvantaged Business Enterprises on this project is 13%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability of Construction Documents: Plans and specifications are available at QuestCDN Online as indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the **QuestCDN website**. Bidders may download the complete set of digital documents for \$22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ # 9681041 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will ONLY be received electronically. Contractors submitting an electronic bid will be charged an additional \$42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on May 19, 2025, at MAC's web address of <https://metroairports.org/doing-business/solicitations> (construction bids).

Non-State Public Bids, Contracts & Grants ==

Metropolitan Airports Commission (MAC)

Notice of Call for Bids for 2025 Conveyance System Upgrades

Airport Location:	Minneapolis-St. Paul International Airport
Project Name:	2025 Conveyance System Upgrades
MAC Contract No.:	106-2-1053
Bids Close At:	2:00 PM on June 17, 2025
Bid Opening Conference Call:	3:00 PM on June 17, 2025
Teleconference Dial-In #:	1-612-405-6798
Conference ID #:	897 927 742#

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via *QuestCDN's website* until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our web site (<https://metroairports.org/doing-business/solicitations>) to receive email notifications of new business opportunities.

Targeted Group Business (TGB): The goal of the MAC for the utilization of Targeted Group Businesses on this project is 14%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Project Labor Agreement: This project is subject to the MAC's Project Labor Agreement requirements. A copy (or sample) of the Project Labor Agreement and Contract Riders are included in Appendix B.

Availability of Construction Documents: Plans and specifications are available at QuestCDN Online indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the *QuestCDN website*. Bidders may download the complete set of digital documents for \$22.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #9620717 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will ONLY be received electronically. Contractors submitting an electronic bid will be charged an additional \$42.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on May 19, 2025, at MAC's web address of <https://metroairports.org/doing-business/solicitations> (construction bids).

— Non-State Public Bids, Contracts & Grants

Metropolitan Airports Commission (MAC) Notice of Call for Bids for 2025 FCM Gate Replacements

Airport Location: Flying Cloud Airport
Project Name: 2025 FCM Gate Replacements
MAC Contract No.: 108-1-065
Bids Close At: 2:00 PM on June 18, 2025
Bid Opening Conference Call: 3:00 PM on June 18, 2025
Teleconference Dial In #: 1-612-405-6798
Conference ID #: 897 927 742#

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a public corporation, via *QuestCDN's website* until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our web site (<https://metroairports.org/doing-business/solicitations>) to receive email notifications of new business opportunities.

Disadvantaged Business Enterprises (DBE): The goal of the MAC for the utilization of Disadvantaged Business Enterprises on this project is 19%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Availability of Construction Documents: Plans and specifications are on file for inspection at the office of Short Elliott Hendrickson Inc.; at QuestCDN Online as indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the *QuestCDN website*. Bidders may download the complete set of digital documents for \$15.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #9517340 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will ONLY be received electronically. Contractors submitting an electronic bid will be charged an additional \$30.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on May 19, 2025, at MAC's web address of <https://metroairports.org/doing-business/solicitations> (construction bids).

Metropolitan Airports Commission (MAC) Notice of Call for Bids for 2025 STP Customs and Border Protection General Aviation Facility

Airport Location: Saint Paul Downtown Airport (STP)
Project Name: 2025 STP Customs and Border Protection General Aviation Facility
MAC Contract No.: 107-1-085
Bids Close At: 2:00 PM on June 17, 2025
Bid Opening Conference Call: 3:00 PM on June 17, 2025
Teleconference Dial In #: 1-612-405-6798
Conference ID #: 897 927 742 #

Notice to Contractors: Electronic Bid Submission for the project listed above will be received by the MAC, a

Non-State Public Bids, Contracts & Grants ==

public corporation, via **QuestCDN's website** until the official time and date as displayed in QuestCDN Online.

Note: You can sign up on our web site (<https://metroairports.org/doing-business/solicitations>) to receive email notifications of new business opportunities.

Disadvantaged Business Enterprises (DBE): The goal of the MAC for the utilization of Disadvantaged Business Enterprises on this project is 11%.

Bid Security: Each bid shall be accompanied by a "Bid Security" in the form of a certified check made payable to the MAC in the amount of not less than five percent (5%) of the total bid, or a surety bond in the same amount, running to the MAC, with the surety company thereon duly authorized to do business in the State of Minnesota.

Project Labor Agreement: This project is subject to the MAC's Project Labor Agreement requirements. A copy [or a sample] of the Project Labor Agreement and Contract Riders are included in the Appendix X.

Availability Of Construction Documents: Plans and specifications are at QuestCDN Online as indicated below and at the Minnesota Builders Exchange; Rochester Builders Exchange; Dodge Data and Analytics; and NAMC-UM Plan Room. Bidders desiring drawings and specifications for personal use may secure a complete digital set at the **QuestCDN website**. Bidders may download the complete set of digital documents for \$15.00, or other fee as determined by QuestCDN, by entering eBidDoc™ #9685274 in the "Search Projects" page. Contact Quest Construction Data Network at (952) 233-1632 or info@questcdn.com for assistance. Hard copy drawings and specifications will not be made available to Bidders. Bid documents for this project may be viewed for no cost at QuestCDN Online. For this project, bids will ONLY be received electronically. Contractors submitting an electronic bid will be charged an additional \$30.00, or other fee as determined by QuestCDN, at the time of bid submission via the online electronic bid service QuestCDN Online.

MAC Internet Access of Additional Information: A comprehensive Notice of Call for Bids for this project will be available on May 19, 2025, at MAC's web address of <https://metroairports.org/doing-business/solicitations> (construction bids).

