

Appendix I. Interstate Consultation Documentation

This appendix contains copies of the communications between Minnesota and other states as part of the required consultation with other states that have emissions that are reasonable anticipated to contribute visibility impairment in the same Class I area(s). The specific requirements for interstate consultation are identified in 40 CFR § 51.308(f)(2)(ii).

The MPCA participated in monthly calls with U.S. EPA Region 5, states (Illinois, Indiana, Iowa, Michigan, Minnesota, Ohio, and Wisconsin), FLMs, and Tribes facilitated by LADCO known as the “LADCO Regional Haze Workgroup.” These monthly calls began in January 2018, continued through until October 2021, and moved to a bimonthly schedule after the October 2021 call.

The MPCA also met with representatives from specific states during the development of this SIP submittal. This included states that the MPCA determined were states that reasonably contributed to visibility impairment at Minnesota Class I areas, or where Minnesota emissions reasonably contributed to visibility impairment at Class I areas in other states, and states that initiated consultation for other reasons.

Briefly summarized, the MPCA determined that North Dakota, Iowa, Nebraska, Wisconsin, and Missouri had emissions that are reasonably anticipated to contribute to visibility impairment in Minnesota Class I areas and Minnesota emissions reasonably contribute to visibility impairment at Michigan Class I areas. Information regarding how MPCA determined which states were reasonably contributing states for the purpose of consultation is available in Section 2.2.3 of the comprehensive update to Minnesota’s Regional Haze SIP for the second implementation period.

The various communications between Minnesota and other states are included in this appendix while a summary of the interstate consultation is available in Section 2.9.1 of the comprehensive update to Minnesota’s Regional Haze SIP for the second implementation period.

From: [Palmer, Kari \(MPCA\)](#)
To: jessica.resemcintyre@dnr.iowa.gov
Cc: matthew.johnson@dnr.iowa.gov; [deAlwis, Deepa \(MPCA\)](#); [Bouchareb, Hassan \(MPCA\)](#); [Wenger, Maggie \(MPCA\)](#)
Subject: Minnesota consultation regarding regional haze impairment
Date: Wednesday, June 1, 2022 9:41:35 AM
Attachments: [image001.jpg](#)

Dear Ms. McIntyre,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe Iowa contributes to visibility impairment at the Boundary Waters Canoe Area Wilderness and Voyageurs National Park, Minnesota Class I areas. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding those states that we believe are contributing to visibility impairment in Minnesota Class I areas.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



Our mission is to protect and improve the environment and human health.

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Thursday, June 30, 2022 12:22 PM
To: matthew.johnson@dnr.iowa.gov; jessica.reesemcintyre@dnr.iowa.gov; jim.mcgraw@dnr.iowa.gov; peter.zayudis@dnr.iowa.gov
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA)
Subject: RE: Regional Haze :: Minnesota & Iowa Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

Good afternoon everyone,

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); matthew.johnson@dnr.iowa.gov; jessica.reesemcintyre@dnr.iowa.gov
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Subject: Regional Haze :: Minnesota & Iowa Consultation

When: Thursday, June 30, 2022 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

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Thanks!

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Bouchareb, Hassan (MPCA)

From: Johnson, Matthew <matthew.johnson@dnr.iowa.gov>
Sent: Friday, July 1, 2022 7:41 AM
To: Bouchareb, Hassan (MPCA)
Cc: jessica.reesemcintyre@dnr.iowa.gov; jim.mcgraw@dnr.iowa.gov; peter.zayudis@dnr.iowa.gov; deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA)
Subject: Re: Regional Haze :: Minnesota & Iowa Consultation

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Hello Hassan and All,

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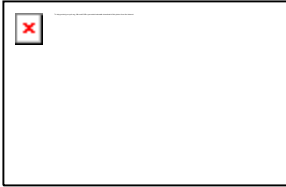
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Walter Scott Jr. Energy Center	78-01-026	Coal-fired EGU	Pottawattamie	41.1811	-95.8380

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Total	13,993	4,305	-9,688

LGS and WSEC were selected for 4-factor analysis based on our evaluation of CenSARA's Area of Influence (AOI) analysis. These were the only Iowa sources that contributed to the majority of the combined sulfate and nitrate EWRT*Q/d metric at downwind Class I areas.

If you'd like any additional information, please let us know.

Thank you,
Matthew



www.iowadnr.gov

Matthew Johnson | Environmental Specialist Senior
Air Quality Bureau
Iowa Department of Natural Resources
P: 515-725-9554
502 E. 9th Street, Des Moines, IA 50319



On Thu, Jun 30, 2022 at 12:21 PM Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us> wrote:

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)

Office: (651) 757-2653 | Fax: (651) 296-8324

Pronouns: he/him/his

Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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Sent: Thursday, June 2, 2022 9:29 AM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); matthew.johnson@dnr.iowa.gov; jessica.reesemcintyre@dnr.iowa.gov

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Subject: Regional Haze :: Minnesota & Iowa Consultation

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 12:09 PM
To: Johnson, Matthew
Subject: RE: Regional Haze :: Minnesota & Iowa Consultation

Hi Matthew,

Sharing the language I'll be including in the consultation section of our SIP. Let me know if you have any questions or comments.

Iowa. MPCA contacted representatives from Iowa on June 1, 2022, for the purpose of state-to-state consultation as MPCA had identified Iowa emissions as reasonably anticipated to contribute to visibility impairment at Minnesota Class I areas. In a meeting on June 30, 2022, MPCA shared details regarding what Minnesota planned to include in its Regional Haze SIP submittal including the visibility contribution analysis that MPCA performed to determine which Class I areas are potentially impacted by Minnesota sources and which states potentially impact Minnesota Class I areas. Minnesota identified that this was an opportunity for information sharing. MPCA requested that Iowa representatives provide additional information regarding the approach their state is taking regarding emission reduction measures contemplated for the second regional haze implementation period.

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Thanks!

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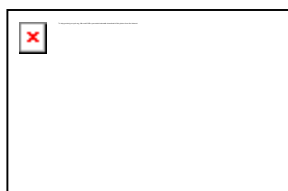
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Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)

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Pronouns: he/him/his

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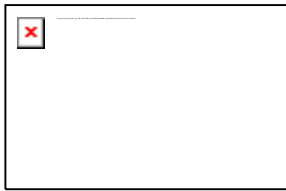
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Bouchareb, Hassan (MPCA)

From: Johnson, Matthew <matthew.johnson@dnr.iowa.gov>
Sent: Monday, August 8, 2022 6:22 AM
To: Bouchareb, Hassan (MPCA)
Cc: Mcgraw, Jim
Subject: Re: Regional Haze :: Minnesota & Iowa Consultation

Looks good - thank you for sharing!

Matthew



www.iowadnr.gov

Matthew Johnson | Environmental Specialist Senior
Air Quality Bureau
Iowa Department of Natural Resources
P: 515-725-9554
502 E. 9th Street, Des Moines, IA 50319



On Fri, Aug 5, 2022 at 12:08 PM Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us> wrote:

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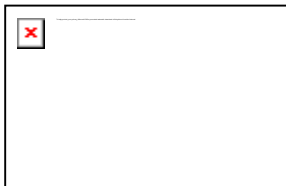
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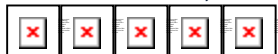
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 502 E. 9th Street, Des Moines, IA 50319

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On Thu, Jun 30, 2022 at 12:21 PM Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us> wrote:

Good afternoon everyone,

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)

Office: (651) 757-2653 | Fax: (651) 296-8324

Pronouns: he/him/his

Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)

Sent: Thursday, June 2, 2022 9:29 AM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); matthew.johnson@dnr.iowa.gov; jessica.reesemcintyre@dnr.iowa.gov

Cc: jim.mcgraw@dnr.iowa.gov; peter.zayudis@dnr.iowa.gov

Subject: Regional Haze :: Minnesota & Iowa Consultation

When: Thursday, June 30, 2022 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

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Thanks!

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Bouchareb, Hassan (MPCA)

From: Johnson, Matthew <matthew.johnson@dnr.iowa.gov>
Sent: Monday, August 8, 2022 10:16 AM
To: Bouchareb, Hassan (MPCA)
Subject: Re: Regional Haze :: Minnesota & Iowa Consultation

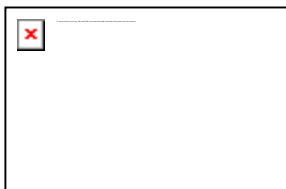
Hello Hassan,

I have a slight update. I received minor revisions late last week that I hadn't yet incorporated when I responded earlier today. Nothing substantive, but this is the latest draft of the language we intend to use (ignore previous version).

In response to a request from Minnesota for direct consultation, the Iowa DNR met virtually with the Minnesota Pollution Control Agency (MPCA) on June 30, 2022. During the meeting the MPCA overviewed its regional haze planning efforts and related technical data, including its own CAMx PSAT results and the outcomes of its source selection and four-factor analyses. Minnesota shared that it is on track to meet the 2064 goal and had no formal “asks” for Iowa, but did identify Iowa as a state that contributes to visibility impairment at both of its Class I areas (Boundary Waters and Voyageurs). The DNR found these conclusions reasonable and consistent with LADCO’s 2028₂₀₁₆ CAMx PSAT modeling results. The DNR also summarized its planning efforts and its decision that the dry scrubber improvements at both LGS and WSEC-3 are necessary to satisfy Iowa’s regional haze obligations for the second implementation period.^[1] Neither Minnesota, Michigan, nor Missouri (or any other state) requested that Iowa reduce its emissions for the second implementation period of the regional haze program. No measures were identified for Iowa by an upwind state pursuant to 40 CFR 51.308(f)(2)(ii)(B).

^[1] Iowa’s measures were not established or needed pursuant to an official agreement through a regional planning process under 40 CFR 51.308(f)(2)(ii)(A).

Matthew



www.iowadnr.gov

Matthew Johnson | Environmental Specialist Senior
Air Quality Bureau
Iowa Department of Natural Resources
P: 515-725-9554
502 E. 9th Street, Des Moines, IA 50319



On Fri, Aug 5, 2022 at 12:08 PM Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us> wrote:

Hi Matthew,

Sharing the language I'll be including in the consultation section of our SIP. Let me know if you have any questions or comments.

Iowa. MPCA contacted representatives from Iowa on June 1, 2022, for the purpose of state-to-state consultation as MPCA had identified Iowa emissions as reasonably anticipated to contribute to visibility impairment at Minnesota Class I areas. In a meeting on June 30, 2022, MPCA shared details regarding what Minnesota planned to include in its Regional Haze SIP submittal including the visibility contribution analysis that MPCA performed to determine which Class I areas are potentially impacted by Minnesota sources and which states potentially impact Minnesota Class I areas. Minnesota identified that this was an opportunity for information sharing. MPCA requested that Iowa representatives provide additional information regarding the approach their state is taking regarding emission reduction measures contemplated for the second regional haze implementation period.

On July 1, 2022, Iowa provided additional information identifying that they would be requiring their two largest EGUs, Louisa Generating Station and Walter Scott Jr. Energy Center, to make operational improvements to their existing control equipment. The improvements would result in an estimated 9,000 - 10,000 ton per year reduction in SO₂ emissions. The emission limits contemplated for these sources were still under development but were estimated to be equivalent to approximately 0.10 lb/MMBtu. These two EGUs were selected as part of Iowa's four-factor analysis process.

Thanks!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)

Office: (651) 757-2653 | Fax: (651) 296-8324

Pronouns: he/him/his

Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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From: Johnson, Matthew <matthew.johnson@dnr.iowa.gov>

Sent: Friday, July 1, 2022 7:41 AM

To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>

Cc: jessica.reesemcintyre@dnr.iowa.gov; jim.mcgraw@dnr.iowa.gov; peter.zayudis@dnr.iowa.gov; deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>; Smith, Michael D (MPCA) <michael.smith@state.mn.us>

Subject: Re: Regional Haze :: Minnesota & Iowa Consultation

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Hello Hassan and All,

We appreciated the consultation opportunity and found the discussion productive. The modeling and technical analyses presented were clear, concise, logical, and informative. The conclusions we've developed through review of the LADCO PSAT modeling results are consistent with your findings.

As mentioned yesterday, we will require our two largest EGUs, Louisa Generating Station (LGS) and Walter Scott Jr. Energy Center (WSEC) - Unit 3, to make operational improvements to their existing dry scrubbers. These control measures will reduce their actual SO₂ emissions by a combined 9,000 - 10,000 tons per year. The emission limits are still under development, but should be equivalent to ~0.10 lb/MMBtu. Summary information is provided in the tables below. Our SIP timeline will hopefully lag yours by no more than ~3 months.

Facility Name	DNR Facility ID	Source Type	County	Latitude	Longitude
Louisa Generating Station	58-07-001	Coal-fired EGU	Louisa	41.3181	-91.0933
Walter Scott Jr. Energy Center	78-01-026	Coal-fired EGU	Pottawattamie	41.1811	-95.8380

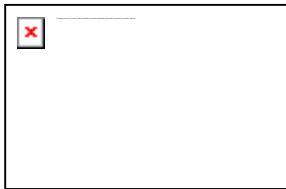
Source	Baseline SO ₂ Emissions [2017-2019 Average] (tpy)	SO ₂ Emissions after FGD Improvements (tpy)	Change in Actual SO ₂ Emissions (tpy)
Louisa Generating Station (Unit 101)	5,952	2,049	-3,903
Walter Scott Jr. Energy Center - Unit 3	8,041	2,256	-5,785
Total	13,993	4,305	-9,688

LGS and WSEC were selected for 4-factor analysis based on our evaluation of CenSARA's Area of Influence (AOI) analysis. These were the only Iowa sources that contributed to the majority of the combined sulfate and nitrate EWRT*Q/d metric at downwind Class I areas.

If you'd like any additional information, please let us know.

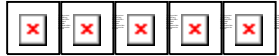
Thank you,

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Thank you!

Hassan M. Bouchareb | Engineer
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Office: (651) 757-2653 | Fax: (651) 296-8324

Pronouns: he/him/his

Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

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Sent: Thursday, June 2, 2022 9:29 AM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); matthew.johnson@dnr.iowa.gov; jessica.reesemcintyre@dnr.iowa.gov

Cc: jim.mcgraw@dnr.iowa.gov; peter.zayudis@dnr.iowa.gov

Subject: Regional Haze :: Minnesota & Iowa Consultation

When: Thursday, June 30, 2022 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

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Bouchareb, Hassan (MPCA)

From: Palmer, Kari (MPCA)
Sent: Wednesday, June 1, 2022 10:07 AM
To: olaguerj@michigan.gov
Cc: 'Bob Irvine'; mcdonaldt@michigan.gov; Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA)
Subject: Minnesota consultation regarding regional haze impairment

Dear Mr. Olaguer,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe that Minnesota contributes to visibility impairment at Isle Royale National Park and Seney National Wildlife Refuge, Michigan's Class I areas. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding where we believe Minnesota is contributing to visibility impairment.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



Our mission is to protect and improve the environment and human health.

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, June 24, 2022 12:19 PM
To: Irvine, Robert (EGLE); olaguerj@michigan.gov
Cc: Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); deAlwis, Deepa (MPCA); Smith, Michael D (MPCA); Palmer, Kari (MPCA)
Subject: RE: Regional Haze :: Minnesota & Michigan Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

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Pronouns: he/him/his
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From:
Sent: Friday, June 3, 2022 9:27 AM
To: Bouchareb, Hassan (MPCA); Irvine, Robert (EGLE); olaguerj@michigan.gov; Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); deAlwis, Deepa (MPCA); Smith, Michael D (MPCA); Palmer, Kari (MPCA)
Subject: Regional Haze :: Minnesota & Michigan Consultation
When: Friday, June 24, 2022 12:30 PM-1:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 12:11 PM
To: Bob Irvine
Subject: RE: Regional Haze :: Minnesota & Michigan Consultation

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Cc: Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Smith, Michael D (MPCA) <michael.smith@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>
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Subject: Regional Haze :: Minnesota & Michigan Consultation

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Bouchareb, Hassan (MPCA)

From: Irvine, Robert (EGLE) <IRVINER@michigan.gov>
Sent: Monday, August 8, 2022 10:25 AM
To: Bouchareb, Hassan (MPCA)
Subject: RE: Regional Haze :: Minnesota & Michigan Consultation

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Hi Hassan, the language regarding consultation looks good to me!

From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 1:11 PM
To: Irvine, Robert (EGLE) <IRVINER@michigan.gov>
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CAUTION: This is an External email. Please send suspicious emails to abuse@michigan.gov

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Subject: RE: Regional Haze :: Minnesota & Michigan Consultation

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Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

Attached is the presentation used in today's discussion that outlines what Minnesota plans to include in its Regional Haze SIP. This included the visibility contribution analysis that Minnesota used to determine which Class I areas are potentially impacted by Minnesota sources and which Class I areas in Minnesota are potentially impacted by sources in other states. As mentioned in our meeting, we are not making a formal "Ask" regarding any sources in particular and viewed this as more of an information sharing opportunity.

We would appreciate any information you can provide regarding the approach your state is taking regarding emission reduction measures contemplated for this regional haze implementation period. I'll be working to summarize our interactions within Minnesota's Regional Haze SIP and we'll provide you with an opportunity to review the summary and offer comments/clarifications.

For easy reference, we're currently in the middle of the formal FLM consultation period (May 11th - July 11th) and are hoping to go on public notice in late July this year. If you would please provide any relevant information you would like to share at your earliest convenience, I'll attempt to include that in my write-up before sharing it with you for your review.

If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From:
Sent: Friday, June 3, 2022 9:27 AM
To: Bouchareb, Hassan (MPCA); Irvine, Robert (EGLE); olaguerj@michigan.gov; Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); deAlwis, Deepa (MPCA); Smith, Michael D (MPCA); Palmer, Kari (MPCA)
Subject: Regional Haze :: Minnesota & Michigan Consultation
When: Friday, June 24, 2022 12:30 PM-1:30 PM (UTC-05:00) Eastern Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

Bob and I talked regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you

If you have any questions, please send them my way.

Thanks!

Microsoft Teams meeting

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Bouchareb, Hassan (MPCA)

From: Palmer, Kari (MPCA)
Sent: Wednesday, June 1, 2022 9:56 AM
To: Emily.wilbur@dnr.mo.gov
Cc: deAlwis, Deepa (MPCA); Bouchareb, Hassan (MPCA); Wenger, Maggie (MPCA)
Subject: Minnesota consultation regarding regional haze impairment

Dear Ms. Wilbur,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe Missouri contributes to visibility impairment at the Boundary Waters Canoe Area Wilderness, a Minnesota Class I area. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding those states that we believe are contributing to visibility impairment in Minnesota Class I areas.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



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Bouchareb, Hassan (MPCA)

From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Tuesday, June 21, 2022 1:18 PM
To: Bouchareb, Hassan (MPCA)
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); Palmer, Kari (MPCA); Alsharafi, Adel; Basham, Aaron
Subject: Missouri Proposed Regional Haze Plan for the Second Planning Period

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Hassan,

It was very nice getting to talk to you and the other folks in Minnesota regarding the progress both of us are making with regard to our planning obligations for the second planning period for Regional Haze.

Below is a link to the plan we proposed for public hearing back in April. We anticipate a few minor updates to the proposed plan in response to comments that we received during the public comment period. We are planning to propose the plan to our Commission for adoption on July 28, 2022.

<https://dnr.mo.gov/document-search/proposed-state-implementation-plan-revision-missouri-regional-haze-plan-second-planning-period-april-28-2022>

Feel free to send us a draft version of the narrative that you intend to include in your plan regarding Missouri, and we can take a look at it before you go out for public comment.

Let us know if you have any questions.

Thank you,

Mark Leath, P.E.
Air Quality Planning Section Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Tuesday, June 21, 2022 1:26 PM
To: Leath, Mark; Basham, Aaron; Alsharafi, Adel
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Smith, Michael D (MPCA); Palmer, Kari (MPCA)
Subject: RE: Regional Haze :: Minnesota & Missouri Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

Good afternoon everyone,

Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

Attached is the presentation used in today's discussion that outlines what Minnesota plans to include in its Regional Haze SIP. This included the visibility contribution analysis that Minnesota used to determine which Class I areas are potentially impacted by Minnesota sources and which Class I areas in Minnesota are potentially impacted by sources in other states. As mentioned in our meeting, we are not making a formal "Ask" regarding any sources in particular and viewed this as more of an information sharing opportunity.

We would appreciate any information you can provide regarding the approach your state is taking regarding emission reduction measures contemplated for this regional haze implementation period. I'll be working to summarize our interactions within Minnesota's Regional Haze SIP and we'll provide you with an opportunity to review the summary and offer comments/clarifications.

For easy reference, we're currently in the middle of the formal FLM consultation period (May 11th - July 11th) and are hoping to go on public notice in late July this year. If you would please provide any relevant information you would like to share at your earliest convenience, I'll attempt to include that in my write-up before sharing it with you for your review.

If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)
Sent: Thursday, June 2, 2022 2:28 PM
To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Smith, Michael D (MPCA); Palmer, Kari (MPCA); Leath, Mark; Basham, Aaron; Alsharafi, Adel
Subject: Regional Haze :: Minnesota & Missouri Consultation
When: Tuesday, June 21, 2022 11:00 AM-12:00 PM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

Adel and I discussed potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you.

If you have any questions, please send them my way.

Thanks!

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 12:31 PM
To: Leath, Mark
Subject: RE: Missouri Proposed Regional Haze Plan for the Second Planning Period

Hi Mark,

Sharing the language I'll be including the consultation section of our SIP. Let me know if you have any questions or comments.

Missouri. MPCA contacted representatives from Missouri on June 1, 2022, for the purpose of state-to-state consultation as MPCA had identified Iowa emissions as reasonably anticipated to contribute to visibility impairment at Minnesota Class I areas. In a meeting on June 21, 2022, MPCA shared details regarding what Minnesota planned to include in its Regional Haze SIP submittal including the visibility contribution analysis that MPCA performed to determine which Class I areas are potentially impacted by Minnesota sources and which states potentially impact Minnesota Class I areas. Minnesota identified that this was an opportunity for information sharing. MPCA requested that Missouri representatives provide additional information regarding the approach their state is taking regarding emission reduction measures contemplated for the second regional haze implementation period.

On June 21, 2022, Missouri provided a link to their proposed Regional Haze SIP that was available for public notice in April 2022. Missouri's identified approach was that the on-the-books and on-the-way controls were sufficient to achieve reasonable progress goals alongside consent agreements with facilities selected as part of Missouri's four-factor analysis. In general, these consent agreements require the facilities to burn lower-sulfur coal and operate existing control devices at all times when burning coal in the affected emission units. Missouri identified that no additional measures beyond the newly established consent agreements were necessary to make reasonable progress in the second regional haze implementation period.

Thanks!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Tuesday, June 21, 2022 1:18 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>; Alsharafi, Adel <adel.alsharafi@dnr.mo.gov>; Basham, Aaron <aaron.basham@dnr.mo.gov>
Subject: Missouri Proposed Regional Haze Plan for the Second Planning Period

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Hassan,

It was very nice getting to talk to you and the other folks in Minnesota regarding the progress both of us are making with regard to our planning obligations for the second planning period for Regional Haze.

Below is a link to the plan we proposed for public hearing back in April. We anticipate a few minor updates to the proposed plan in response to comments that we received during the public comment period. We are planning to propose the plan to our Commission for adoption on July 28, 2022.

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Feel free to send us a draft version of the narrative that you intend to include in your plan regarding Missouri, and we can take a look at it before you go out for public comment.

Let us know if you have any questions.

Thank you,

Mark Leath, P.E.
Air Quality Planning Section Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

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Bouchareb, Hassan (MPCA)

From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Monday, August 8, 2022 7:59 AM
To: Bouchareb, Hassan (MPCA)
Cc: Weidenbenner, Nicole; Alsharafi, Adel
Subject: RE: Missouri Proposed Regional Haze Plan for the Second Planning Period

Good morning Hassan,

We reviewed the information you are planning to include in your Regional Haze Plan for your consultation with Missouri.

The content all looks accurate except that in the first sentence it appears you say “Iowa” where you meant to say “Missouri”. Other than that, we concur with the statement.

Let us know if there’s anything else you need from us.

Thank you,

Mark Leath, P.E.
Air Quality Planning Section Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

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From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 12:31 PM
To: Leath, Mark <mark.leath@dnr.mo.gov>
Subject: RE: Missouri Proposed Regional Haze Plan for the Second Planning Period

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Thanks!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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From: Leath, Mark <mark.leath@dnr.mo.gov>
Sent: Tuesday, June 21, 2022 1:18 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>; Alsharafi, Adel <adel.alsharafi@dnr.mo.gov>; Basham, Aaron <aaron.basham@dnr.mo.gov>
Subject: Missouri Proposed Regional Haze Plan for the Second Planning Period

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Hassan,

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<https://dnr.mo.gov/document-search/proposed-state-implementation-plan-revision-missouri-regional-haze-plan-second-planning-period-april-28-2022>

Feel free to send us a draft version of the narrative that you intend to include in your plan regarding Missouri, and we can take a look at it before you go out for public comment.

Let us know if you have any questions.

Thank you,

Mark Leath, P.E.
Air Quality Planning Section Chief
Missouri Department of Natural Resources
Air Pollution Control Program
Phone: 573-526-5503
Email: mark.leath@dnr.mo.gov

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From: [Wharton, Tracy](#)
To: [Bouchareb, Hassan \(MPCA\); Stones, Kevin J](#)
Subject: RH consultation call (NE-MN)
Attachments: [NE Regional Haze Impacts - MN.docx](#)
[NE Source Selection data - MN - Jun 2020.xlsx](#)

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Good morning,

For the purpose of Regional Haze state-to-state consultation, the Nebraska Department of Environment and Energy (NDEE) is requesting a consultation call with your agency to discuss Nebraska's process for source screening and selection for four-factor analysis as part of our SIP planning process.

Call-in number 1-888-820-1398

Attendee code 9571864#

Attached you will find information on Nebraska's source selection process and identified sources that show impacts at Class I Area(s) in your state.

We look forward to our call!

Tracy

Respectfully,

Tracy Wharton
NAAQS-SIP COORDINATOR
Air Quality Division

Nebraska Department of Environment and Energy

PO Box 89822

Lincoln, NE 68509-8922

Main Office: 402-471-2186

Direct Line: (402) 471-6410

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**** NEW ****

Bouchareb, Hassan (MPCA)

From: Wharton, Tracy <tracy.wharton@nebraska.gov>
Sent: Tuesday, July 7, 2020 10:40 AM
To: Bouchareb, Hassan (MPCA)
Subject: Follow-up to RH Consultation call (NE-MN)
Attachments: NE Source Selection data - MN - Jun 2020.xlsx; 20200605-NPS_4F_Scorecard-
compilationStateMethods (1).xlsx

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Hassan,

Hi, I hope all is well with you! I apologize for this late reply following our call. Last week was my first week (physically) back in the office and I had a couple of time-sensitive projects that managed to fill up the short holiday week.

Per our discussion, I've attached NDEE's calculations for Boundary Waters, as well as the NPS list of states/source selection criteria for you. Since I'm not sure how up-to-date this NPS list is, I've listed below the approaches being used by a few of the CenSARA states. All of these states (including Nebraska) used the Ramboll AOI Analysis datasets.

Oklahoma - applied criteria to the 2016 dataset (based on 2016 emissions) - (One Class I Areas)

- 1) Screen using $Q/d > 5$
- 2) Remove those sources that implemented BART in Round 1
- 3) Select sources with $EWRT * Q/d > 0.5\%$

Iowa (no Class I Areas)

Selected sources within the 50th percentile of contribution to a Class I Area (% Cumulative Source Impact $\leq 50.00\%$)

Texas (Two Class I Areas)

Selected sources with an individual pollutant $Q/d \geq 5$

Louisiana (One Class I Areas)

1. Excluded any facility with a SO_4 or NO_3 $EWRT$ less than 0.05% of the total domain $EWRT$. This eliminated those facilities in geographical areas with an extremely low probability of influencing visibility from either NO_x or SO_2 .
2. The $EWRT * Q/d$ for SO_4 and NO_3 were summed and sorted from highest to lowest to rank the combined SO_4 and NO_3 light extinction contribution for each facility. A cumulative combined $EWRT * Q/d$ percent contribution threshold of 75% was set to ensure that a significant portion of the overall light extinction would be addressed.
3. A final 1% combined $EWRT * Q/d$ contribution threshold eliminated individual facilities that do not significantly contribute to the overall light extinction.

Nebraska (no Class I Areas)

Similar to Louisiana, but used a 90% cumulative threshold (detailed instructions on READ ME tab of attached spreadsheet)

Please feel free to reach out if/when you are ready for another call, and I will do the same. Great talking to you!

Tracy

Respectfully,

Tracy Wharton

NAAQS-SIP COORDINATOR
Air Quality Division

Nebraska Department of Environment and Energy

PO Box 98922
Lincoln, NE 68509-8922

Main Office: 402-471-2186
Direct Line: (402) 471-6410

<http://dee.ne.gov>

<http://dee.ne.gov> | [Twitter](#) | [Facebook](#) **** NEW ****

From: [Brockwell, Hissam \(NDEP\)](#) on behalf of [Wharren, Tracy](#)
To: [Tracy, Wharren](#); [Brockwell, Hissam \(NDEP\)](#)
Subject: FW: NE-NSP EIR Consultation

-----Original Appointment-----
 From: Wharren, Tracy <tracy.wharren@nd.gov> (mailto:tracy.wharren@nd.gov)
 Sent: Thursday, December 1, 2020 11:48 AM
 To: Wharren, Tracy; Brockwell, Hissam (NDEP)
 Subject: NE-NSP EIR Consultation
 When: Wednesday, December 16, 2020 1:00 PM - 1:30 PM (UTC-06:00) Central Time (US & Canada)
 Where:

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- Good morning,
- I'm contacting you to propose a Regional three state consultation call/discussion. A brief agenda is provided below - if there are additional topics you wish to discuss please include those in your reply.
- If the date/time for this invitation is not feasible, please propose an alternative for consideration. Also, please note if you have a preference regarding call format (phone call VS Zoom meeting) - I can do either! If no preference is noted, I will plan for a phone call, and will provide a conference line number.
- * Information received from NE sources selected for Four-factor analysis
 - * Evaluating CMAx modeling profiles and information from NE sources
 - * Visibility photographs and reasonable program goals for Class I Areas impacted by NE sources
 - * Have photographs been adjusted per EPA recommendations?
 - * Do reasonable program goals require reductions from Nebraska?
 - * Does your agency intend to request emission reductions from NE sources?
 - * Next steps in Nebraska's SIP development

I look forward to talking with you!

Tracy
 Tracy Wharren
 Program Specialist - NAAQS-SIP COORDINATOR
 Legal Division

Nebraska Department of Environment and Energy
 PO Box 99022
 Lincoln, NE 68508-0922
 Main Office: 402-471-2188
 Direct Line: (402) 471-6410

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Bouchareb, Hassan (MPCA)

From: Wharton, Tracy <tracy.wharton@nebraska.gov>
Sent: Wednesday, December 16, 2020 11:31 AM
To: Bouchareb, Hassan (MPCA); McCourtney, Margaret (MPCA)
Cc: Kovar, Annette; Thomas, Steven; Schneider, Shelley
Subject: Some notes for today's call
Attachments: Notes for call - 16 Dec 2020.docx

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Good morning,

For today's call, please see the attached document which contains some details for our discussion. We look forward to talking with you.

Tracy

Respectfully,

Tracy Wharton
NAAQS-SIP COORDINATOR
Air Quality Division

Nebraska Department of Environment and Energy
PO Box 98922
Lincoln, NE 68509-8922

Main Office: 402-471-2186
Direct Line: (402) 471-6410

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Notes for NE-MN RH Consultation call – 16 Dec 2020

Information from selected sources (OPPD)

- Evaluated controls at Nebraska City Station, Unit 1 (interest rate = 3.25%)
 - WFGD
 - Effectiveness (efficiency) set at 92.5%
 - Estimated reductions = 11,415 tpy (SO₂) → projected Unit 1 emissions = 925 tpy
 - Time for compliance: approximately 4 years from SIP approval (2027)
 - Cost per ton SO₂ removed = \$3,138
 - SDA
 - Effectiveness (efficiency) set at 90%
 - Estimated reductions = 11,106 tpy (SO₂) → projected Unit 1 emissions = 1,234 tpy
 - Time for compliance: approximately 4 years from SIP approval (2027)
 - Cost per ton SO₂ removed = \$3,287
 - DSI (*deviations to the cost analysis method were required due to conditions and attributes specific to NCS Unit 1*)
 - Effectiveness (efficiency) set at 40%
 - Estimated reductions = 4,936 tpy (SO₂) → projected Unit 1 emissions = 7,404 tpy
 - Time for compliance: approximately 4 years from SIP approval (2027)
 - Cost per ton SO₂ removed = \$3,298

NOTE: Projected 2028 emissions for NCS were based on incorrect assumptions, our selection of this source was based on 2016 actual emissions.

SO₂ Emissions from Unit 1 have fallen significantly since 2018 to around 8,000-9,000 tpy, almost a 50% decrease as compared to 2014-2018

- NO_x controls are currently optimized as needed; no additional controls identified
 - NO_x emissions have ranged from 4,000-6,000 tpy (since 2016) – 2019 emissions were just over 4,000 tpy, and 2020 emissions are anticipated to be around 4,000 tons as well.
- Controls for North Omaha Station were not evaluated
 - Fuel switch (to natural gas) for remaining two coal units to be completed by 2023 – relies on board resolution, not currently in a federally enforceable document/agreement

Facility SO₂ emissions have fallen significantly since fuel switch on Units 1/2/3 in 2016 to around 5,000-6,000 tpy, almost a 60% decrease – Units 1/2/3 each emit 1 tpy or less since switching to natural gas due to fuel switch and decreased operation.

Facility NO_x emissions have remained consistent, around 3,500 tpy (since 2016).

- Additional information may be forthcoming – CAMx modeling was contracted in coordination with NPPD, and we anticipate receipt by end of December

Bouchareb, Hassan (MPCA)

From: Palmer, Kari (MPCA)
Sent: Wednesday, June 1, 2022 9:53 AM
To: tracy.wharton@nebraska.gov
Cc: steven.thomas@nebraska.gov; shelley.schneider@nebraska.gov; deAlwis, Deepa (MPCA); Bouchareb, Hassan (MPCA); Wenger, Maggie (MPCA)
Subject: Minnesota consultation regarding regional haze impairment

Dear Ms. Wharton,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe Nebraska contributes to visibility impairment at the Boundary Waters Canoe Area Wilderness and Voyageurs National Park, Minnesota Class I areas. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding those states that we believe are contributing to visibility impairment in Minnesota Class I areas.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Tuesday, June 21, 2022 1:24 PM
To: tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelley.schneider@nebraska.gov
Cc: Smith, Michael D (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA)
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

Good afternoon everyone,

Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

Attached is the presentation used in today's discussion that outlines what Minnesota plans to include in its Regional Haze SIP. This included the visibility contribution analysis that Minnesota used to determine which Class I areas are potentially impacted by Minnesota sources and which Class I areas in Minnesota are potentially impacted by sources in other states. As mentioned in our meeting, we are not making a formal "Ask" regarding any sources in particular and viewed this as more of an information sharing opportunity.

We would appreciate any information you can provide regarding the approach your state is taking regarding emission reduction measures contemplated for this regional haze implementation period. I'll be working to summarize our interactions within Minnesota's Regional Haze SIP and we'll provide you with an opportunity to review the summary and offer comments/clarifications.

For easy reference, we're currently in the middle of the formal FLM consultation period (May 11th - July 11th) and are hoping to go on public notice in late July this year. If you would please provide any relevant information you would like to share at your earliest convenience, I'll attempt to include that in my write-up before sharing it with you for your review.

If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis & Outcomes Division
520 Lafayette Road | St. Paul, MN | 55155
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us



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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)

Sent: Wednesday, June 1, 2022 10:11 AM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelly.schneider@nebraska.gov
Cc: Smith, Michael D (MPCA)

Subject: Regional Haze :: Minnesota & Nebraska Consultation

When: Tuesday, June 21, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

Tracy and I talked briefly this morning regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you

If you have any questions, please send them my way.

Thanks!

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 1:32 PM
To: Wharton, Tracy
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation

Hi Tracy,

Sharing the language I'll be including the consultation section of our SIP. Let me know if you have any questions or comments.

Nebraska. On June 26, 2020, representatives from Nebraska and MPCA met for the purpose of state-to-state consultation regarding Nebraska's process for source screening and selection for the four-factor analysis portion of their SIP planning process. Nebraska provided information on their source selection process and identified Nebraska sources that show impacts at Minnesota Class I areas. On December 16, 2020, Nebraska and MPCA met again to discuss the information they had received from Nebraska sources selected for a four-factor analysis, upcoming modeling information and source information expected for Nebraska, visibility glidepaths and RPGs, and the next steps in Nebraska's SIP development.

MPCA contacted representatives from Nebraska on June 1, 2022, for the purpose of state-to-state consultation as MPCA had identified Iowa emissions as reasonably anticipated to contribute to visibility impairment at Minnesota Class I areas. In a meeting on June 21, 2022, MPCA shared details regarding what Minnesota planned to include in its Regional Haze SIP submittal including the visibility contribution analysis that MPCA performed to determine which Class I areas are potentially impacted by Minnesota sources and which states potentially impact Minnesota Class I areas. Minnesota identified that this was an opportunity for information sharing. MPCA requested that Nebraska representatives provide additional information regarding the approach their state is taking regarding emission reduction measures contemplated for the second regional haze implementation period.

Nebraska previously identified that they were evaluated potential SO₂ emission controls for one Nebraska EGU and fuel switching (from coal to natural gas) for another Nebraska EGU. Nebraska's draft regional haze SIP was not available during the time period that this interstate consultation was conducted.

Thanks!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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From: Bouchareb, Hassan (MPCA)
Sent: Tuesday, June 21, 2022 1:24 PM
To: tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelly.schneider@nebraska.gov
Cc: Smith, Michael D (MPCA) <michael.smith@state.mn.us>; deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation

Good afternoon everyone,

Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis & Outcomes Division
520 Lafayette Road | St. Paul, MN | 55155
Office: (651) 757-2653 | Fax: (651) 296-8324
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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)
Sent: Wednesday, June 1, 2022 10:11 AM
To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelley.schneider@nebraska.gov
Cc: Smith, Michael D (MPCA)
Subject: Regional Haze :: Minnesota & Nebraska Consultation
When: Tuesday, June 21, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

Tracy and I talked briefly this morning regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you

If you have any questions, please send them my way.

Thanks!

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Bouchareb, Hassan (MPCA)

From: Wharton, Tracy <tracy.wharton@nebraska.gov>
Sent: Friday, August 5, 2022 1:47 PM
To: Bouchareb, Hassan (MPCA)
Cc: Thomas, Steven
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation

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Hassan,

Thanks for your email. I looked over your narrative below – did you mean to write “Iowa” in the first sentence of your second paragraph, or is that meant to read “Nebraska”? Also, in the last paragraph/first sentence the word “evaluated” should read “evaluating”, correct?

At the present time, we are in the process of finalizing our LTS and working on the draft SIP. I will touch base with you when I have more to share.

Have a great weekend!

Tracy

From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 1:32 PM
To: Wharton, Tracy <tracy.wharton@nebraska.gov>
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation

Hi Tracy,

Sharing the language I’ll be including the consultation section of our SIP. Let me know if you have any questions or comments.

Nebraska. On June 26, 2020, representatives from Nebraska and MPCA met for the purpose of state-to-state consultation regarding Nebraska’s process for source screening and selection for the four-factor analysis portion of their SIP planning process. Nebraska provided information on their source selection process and identified Nebraska sources that show impacts at Minnesota Class I areas. On December 16, 2020, Nebraska and MPCA met again to discuss the information they had received from Nebraska sources selected for a four-factor analysis, upcoming modeling information and source information expected for Nebraska, visibility glidepaths and RPGs, and the next steps in Nebraska’s SIP development.

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Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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To: tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelly.schneider@nebraska.gov
Cc: Smith, Michael D (MPCA) <michael.smith@state.mn.us>; deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & Nebraska Consultation

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Hassan M. Bouchareb | Engineer
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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)

Sent: Wednesday, June 1, 2022 10:11 AM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); tracy.wharton@nebraska.gov; steven.thomas@nebraska.gov; shelley.schneider@nebraska.gov

Cc: Smith, Michael D (MPCA)

Subject: Regional Haze :: Minnesota & Nebraska Consultation

When: Tuesday, June 21, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

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If you have any questions, please send them my way.

Thanks!

Microsoft Teams meeting

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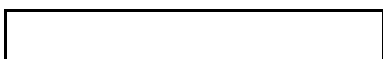
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Phone Conference ID: 731 092 158#

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Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Thursday, March 4, 2021 2:49 PM
To: Bouchareb, Hassan (MPCA)
Subject: Regional Haze Consultation

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Hi Hassan,

As a follow-up to my voicemail, I would like to gauge your interest in beginning state-to-state consultation. A couple items that come to mind are SIP submittal timelines and expectations, progress to date, and any input required from North Dakota to Minnesota or vice-versa for planning purposes.

Feel free to give me a call when you have time or respond via email and we can coordinate a time for discussion.

Hope you are doing well.

Regards,
David

David Stroh

Environmental Engineer

701-328-5229 • destroh@nd.gov



918 E. Divide Ave. • Bismarck, ND 58501

Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Wednesday, June 9, 2021 8:49 AM
To: Bouchareb, Hassan (MPCA)
Subject: North Dakota's Regional Haze Determination on Impact of Facilities On North Dakota's Class I Area

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Hi Hassan,

Following up on my voicemail. Under various sections of the Regional Haze regulation, states with Class I areas are required to develop reasonable progress goals (RPG) for visibility improvement at their Class I areas. When developing each Class I area RPG, states are required to consult with other states which may reasonably be anticipated to cause or contribute to visibility impairment in a Class I area. This email provides some general information and requests feedback from Minnesota.

Outside sources contributing to impairment in North Dakota Class I areas

Visibility in North Dakota's Class I areas is not significantly impaired by Minnesota sources on the most impaired days and Minnesota sources are not impeding North Dakota's ability to make reasonable progress during this planning period. Therefore, North Dakota is not requesting the adoption of any controls or emission reduction measures from Minnesota during the second-planning period for the Regional Haze regulation.

North Dakota sources contributing to impairment in Minnesota Class I areas

North Dakota has reviewed the impacts our sectors have on visibility impairment in the Class I areas closest to North Dakota. This review indicated North Dakota sector contributions do not appear to be significantly impacting visibility in these Minnesota Class I areas (e.g. Voyageurs NP "VOYA2") on the most impaired days. We believe our determination is supported by the Source Apportionment Charts provided by WRAP, specifically the "WRAP State Source Group Contributions - U.S. Anthro" (Tool 9 on the TSSv2, <https://views.cira.colostate.edu/tssv2/Express/ModelingTools.aspx>). Should Minnesota disagree with this position, please notify North Dakota accordingly. Notification can be provided at any time, before or during the required public comment period. This email provides an early opportunity for Minnesota to inform North Dakota of any expectations Minnesota has regarding North Dakota's Regional Haze SIP for round 2 of the planning process.

Thank you in advance for your participation in this consultation process.

Please contact me at 701-328-5229 or destroh@nd.gov should you require additional information on this matter.

Regards,
David

David Stroh
Environmental Engineer

701-328-5229 • destroh@nd.gov



918 E. Divide Ave. • Bismarck, ND 58501

Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Wednesday, September 15, 2021 10:03 AM
To: Bouchareb, Hassan (MPCA); McCourtney, Margaret (MPCA)
Cc: Thorton, Rhannon T.; Semerad, Jim L.
Subject: North Dakota - DRAFT Regional Haze SIP for Consultation
Attachments: 20210915_MN Ltr.pdf

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Hi Hassan and Margaret,

Attached is a signed electronic notice for the North Dakota Department of Environmental Quality (NDDEQ) DRAFT regional haze state implementation plan (RH SIP) revision. This plan is being made available to provide you with an early opportunity to comment on NDDEQ's current DRAFT RH SIP Revision.

The location of the material available for review is included in the attached notice and can be found at:

<https://www.deq.nd.gov/AQ/planning/RegHaze.aspx>

(note: webpage and material will be updated prior to Sept. 20th)

Comments can be sent through the mail or electronically to: AirQuality@nd.gov

If electronic comments are provided, please include "Regional Haze Consultation Comments" in the subject line.

Please review the attached and reach out with any comments or questions. We look forward to engaging with you in the next steps of the regional haze process.

Regards,

David

David Stroh

Environmental Engineer

701-328-5229 • destroh@nd.gov
4201 Normandy St., Bismarck, ND 58503-1324

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Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Tuesday, April 19, 2022 8:59 AM
To: Bouchareb, Hassan (MPCA); McCourtney, Margaret (MPCA)
Cc: Thorton, Rhannon T.
Subject: North Dakota Proposed Regional Haze SIP Revision Notice
Attachments: 20220418_MPCA.pdf; Notice_of_Intent.pdf

This message may be from an external email source.

Do not select links or open attachments unless verified. Report all suspicious emails to Minnesota IT Services Security Operations Center.

Attached is a signed electronic notice and notice of intent to issue for the North Dakota Department of Environmental Quality (NDDEQ) proposed regional haze state implementation plan (RH SIP) revision for public comment. This plan is being made available to provide you with an opportunity to comment on NDDEQ's proposed RH SIP revision.

The location of the material available for review is included in the attached notice and can be found at:

<https://www.deq.nd.gov/AQ/planning/RegHaze.aspx>

(note: webpage and material will be updated prior to April 27th)

Comments can be sent through the mail or electronically to: AirQuality@nd.gov

If electronic comments are provided, please include "Regional Haze Public Comments" in the subject line.

Please review the attached and reach out with any comments or questions.

Regards,

David

David Stroh

Environmental Engineer

701-328-5229 • destroh@nd.gov

4201 Normandy St., Bismarck, ND 58503-1324



Bouchareb, Hassan (MPCA)

From: Palmer, Kari (MPCA)
Sent: Wednesday, June 1, 2022 9:37 AM
To: 'destroh@nd.gov'
Cc: rThorton@nd.gov; jsemerad@nd.gov; Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA)
Subject: Minnesota consultation regarding regional haze impairment

Dear Mr. Stroh,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe North Dakota contributes to visibility impairment at the Boundary Waters Canoe Area Wilderness and Voyageurs National Park, Minnesota Class I areas. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding those states that we believe are contributing to visibility impairment in Minnesota Class I areas.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Thursday, June 23, 2022 2:28 PM
To: rThorton@nd.gov; jsemerad@nd.gov; 'destroh@nd.gov'
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA)
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

Good afternoon everyone,

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
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From: Bouchareb, Hassan (MPCA)
Sent: Wednesday, June 1, 2022 1:09 PM
To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); rThorton@nd.gov; jsemerad@nd.gov; 'destroh@nd.gov'
Subject: Regional Haze :: Minnesota & North Dakota Consultation
When: Thursday, June 23, 2022 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

David and I talked briefly this afternoon regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you

If you have any questions, please send them my way.

Thanks!

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Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Thursday, July 14, 2022 4:08 PM
To: Bouchareb, Hassan (MPCA)
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Thorton, Rhannon T.; Semerad, Jim L.; Palmer, Kari (MPCA); Smith, Michael D (MPCA)
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation
Attachments: NDDEQ RH SIP process.docx

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Hi Hassan,

As a follow-up to your request, I have attached a document that contains a few paragraphs outlining North Dakota's approach to regional haze planning.

Upon review, if you would like more/less specifics, or have questions – please let me know and we can work to address it accordingly.

Hope all is well,
David

David Stroh

Environmental Engineer

701-328-5229 • destroh@nd.gov
4201 Normandy St., Bismarck, ND 58503-1324



From: Stroh, David E.
Sent: Thursday, June 23, 2022 4:38 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>; Thorton, Rhannon T. <rThorton@nd.gov>; Semerad, Jim L. <jsemerad@nd.gov>
Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>; Smith, Michael D (MPCA) <michael.smith@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

Thank you for the follow-up email, Hassan.

Per your request, NDDEQ will work to provide MPCA with relevant information regarding our approach and contemplated emissions reductions measures. We should have no problem getting this to you around the end of your FLM consult period.

Let me know if you need anything in the meantime.

Regards,

David

David Stroh

Environmental Engineer

701-328-5229 • destroh@nd.gov

4201 Normandy St., Bismarck, ND 58503-1324



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>

Sent: Thursday, June 23, 2022 2:28 PM

To: Thorton, Rhannon T. <rThorton@nd.gov>; Semerad, Jim L. <jsemerad@nd.gov>; Stroh, David E. <deStroh@nd.gov>

Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>;

McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>;

Smith, Michael D (MPCA) <michael.smith@state.mn.us>

Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer

Minnesota Pollution Control Agency (MPCA)

Office: (651) 757-2653 | Fax: (651) 296-8324

Pronouns: he/him/his

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)

Sent: Wednesday, June 1, 2022 1:09 PM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); rThorton@nd.gov; jsemerad@nd.gov; 'destroh@nd.gov'

Subject: Regional Haze :: Minnesota & North Dakota Consultation

When: Thursday, June 23, 2022 10:30 AM-11:30 AM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

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If you have any questions, please send them my way.

Thanks!

Microsoft Teams meeting

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 1:34 PM
To: Stroh, David E.
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

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North Dakota. On March 22, 2021, representatives from North Dakota and MPCA met for the purpose of state-to-state consultation regarding North Dakota's process for source screening and selection for the four-factor analysis portion of their SIP planning process. On June 9, 2021, North Dakota notified Minnesota that they determined visibility in North Dakota Class I areas are not significantly impacted by Minnesota sources and Minnesota sources do not impede North Dakota's ability to make reasonable progress during the second regional haze implementation period. North Dakota also identified that they reviewed the impacts from North Dakota sources and do not believe they significantly impact visibility in Minnesota Class I areas

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Hassan M. Bouchareb | Engineer
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From: Stroh, David E. <deStroh@nd.gov>
Sent: Thursday, July 14, 2022 4:08 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>; McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Thorton, Rhannon T. <rThorton@nd.gov>; Semerad, Jim L. <jsemerad@nd.gov>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>; Smith, Michael D (MPCA)

<michael.smith@state.mn.us>

Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

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Hi Hassan,

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Upon review, if you would like more/less specifics, or have questions – please let me know and we can work to address it accordingly.

Hope all is well,
David

David Stroh
Environmental Engineer

701-328-5229 • destroh@nd.gov
4201 Normandy St., Bismarck, ND 58503-1324



From: Stroh, David E.

Sent: Thursday, June 23, 2022 4:38 PM

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Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

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Let me know if you need anything in the meantime.

Regards,
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To: Thorton, Rhannon T. <rThorton@nd.gov>; Semerad, Jim L. <jsemerad@nd.gov>; Stroh, David E. <deStroh@nd.gov>

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer

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Bouchareb, Hassan (MPCA)

From: Stroh, David E. <deStroh@nd.gov>
Sent: Monday, August 8, 2022 9:24 AM
To: Bouchareb, Hassan (MPCA)
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

Hi Hassan,

I think the consultation language reads well. Only comment – second ¶, first sentence. See **highlight** below, believe this should be “North Dakota”.

Let me know if you’d like to discuss,
David

From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 1:34 PM
To: Stroh, David E. <deStroh@nd.gov>
Subject: RE: Regional Haze :: Minnesota & North Dakota Consultation

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Hassan M. Bouchareb | Engineer
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Bouchareb, Hassan (MPCA)

From: Palmer, Kari (MPCA)
Sent: Wednesday, June 1, 2022 9:25 AM
To: Good, Gail - DNR
Cc: Denk, Brianna J -DNR; jason.treutel@wisconsin.gov; oliviae.salmon@wisconsin.gov; jonathon.loftus@wisconsin.gov; Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA)
Subject: Minnesota consultation regarding regional haze impairment

Dear Ms. Good,

The Minnesota Pollution Control Agency (MPCA) is contacting you for the purpose of Regional Haze state-to-state consultation. Based on our modeling analysis, we believe Wisconsin contributes to visibility impairment at the Boundary Waters Canoe Area Wilderness, a Minnesota Class I area. The MPCA is requesting a consultation call with your agency to discuss Minnesota's Regional Haze State Implementation Plan including our source selection process, the initial outcome of the four-factor analyses, and the results of our modeling analyses regarding those states that we believe are contributing to visibility impairment in Minnesota Class I areas.

Please contact Hassan Bouchareb of my staff at hassan.bouchareb@state.mn.us or 651-757-2653 to coordinate a time for discussion.

Thank you for your consideration and we hope to speak with you soon,

Sincerely,
Kari Palmer

Kari R.S. Palmer | Air Assessment Section Manager
Minnesota Pollution Control Agency (MPCA)
Environmental Analysis and Outcomes Division
520 Lafayette Rd N | St. Paul, MN | 55155
(w) 651-757-2635 (c) 651-235-5877
kari.palmer@state.mn.us | www.pca.state.mn.us

Pronouns: she/her/hers



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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Thursday, June 30, 2022 10:01 AM
To: Loftus, Jonathan P - DNR; jason.treutel@wisconsin.gov
Cc: deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA)
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation
Attachments: MPCA Regional Haze Update (June 2022).pdf

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To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); Loftus, Jonathan P - DNR; jason.treutel@wisconsin.gov
Subject: Regional Haze :: Minnesota & Wisconsin Consultation
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Where: Microsoft Teams Meeting

Hi everyone,

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Bouchareb, Hassan (MPCA)

From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Tuesday, July 12, 2022 2:57 PM
To: Bouchareb, Hassan (MPCA)
Cc: Treutel, Jason A - DNR
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Hassan,

Following up our 6/30 call with some additional Wisconsin point source emissions reduction information...

As noted in section 3.3.3 of Wisconsin's Regional Haze Round 2 SIP (p. 25) submitted to EPA in July 2021, WDNR provided "2028 Adjusted" emissions which accounted for additional Wisconsin point source NOx and SO2 emissions reductions from those used in LADCO's 2028 Modeled emissions:

There are significant emission reductions from the following unit shutdowns and committed controls in Wisconsin that are not included in LADCO's 2028 Modeled emissions (see Appendix 3):

- *Alliant Energy Columbia power plant shutdown (2025)*
- *We Energies South Oak Creek power plant shutdown (2023-2024)*
- *Georgia-Pacific Green Bay Broadway mill – retirement of coal boiler B29 (2018); replacement of coal boilers B26 and B28 with three natural gas boilers (2019-2020)*
- *Catalyst Paper – Biron mill – coal boiler B23 fuel switch to natural gas (2017)*
- *Cardinal FG – Menominee – installation of selective catalytic reductions (SCR) (2020)*
- *Cardinal FG – Portage – installation of SCR (2019)*
- *Green Bay Packaging Inc. mill – replacement of coal boiler B26 with two natural gas boilers (2019)*
- *Ahlstrom-Munksjo – De Pere mill – 10% annual heat input limitation for coal boilers B23 and B24 (2017)*

The WDNR developed the point source projected emissions scenario "2028 Adjusted" shown in Table 10...to reflect these additional emission reductions...Accounting for the lower EGU and non-EGU projected emissions in the 2028 Adjusted scenario is expected to produce more beneficial visibility results than the 2028 Modeled scenario used for the visibility modeling in Section 3.2.

There are a few EGU informal technical updates since we submitted our Round 2 SIP (but these don't change LADCO's 2028 Modeled emissions or WDNR's 2028 Adjusted emissions):

- Alliant Energy Columbia power plant shutdown was recently delayed from 2025 to **2026**
- We Energies South Oak Creek power plant shutdown was recently delayed from 2023-2024 to **2024-2025**
- Although Alliant Energy Edgewater power plant isn't listed above, I'd like to note that it's shutdown was also recently delayed from 2022 to **2025**. Note that this shutdown was already included in LADCO's 2028 Modeled emissions.

There are also a few non-EGU point source informal technical updates to the information used for WDNR's 2028 Adjusted emissions in our Round 2 SIP:

- Flambeau River Paper – coal boiler B24 last operated in June 2019 and was demolished in 2021.
- For the non-EGU facilities listed above, WDNR used potential-to-emit or 2016 base year emissions for the 2028 Adjusted emissions in Table 10. However, recent actual emissions are now more appropriate to use.

- As footnoted for Table 10 in the Round 2 SIP, NOx emissions at Theda Clark Medical Center were over-reported in WDNR’s Air Emissions Inventory by 905 tons/yr in 2016, and are thus also over-reported for 2028 Modeled emissions and 2028 Adjusted emissions. For Minnesota’s 2028 contribution modeling, these over-reported NOx emissions should be removed.
- I’m providing an informal technical update to Table 10 below with a new column “2028 Adjusted – Updated” which accounts for these additional reductions by using 2021 actual NOx and SO2 emissions.

Table 10 from WI Round 2 Reg Haze SIP

WI Point Sector	2028 Modeled	2028 Adjusted	2028 Adjusted - Updated
<i>NOx</i>			
Point – EGU	12,916	8,724	8,724
Point – Non-EGU	24,206	20,611	19,026
TOTAL Point	37,122	29,335	27,750
<i>SO₂</i>			
Point – EGU	4,700	2,882	2,882
Point – Non-EGU	19,559	15,417	15,025
TOTAL Point	24,259	18,299	17,907

In summary, the “2028 Adjusted – Updated” NOx and SO2 emissions for Wisconsin point sources in Table 10 above are **more appropriate to use** than LADCO’s 2028 Modeled emissions.

Thanks, and please let me know if you have any questions about this information.

Jon

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jonathan P. Loftus

Air Management Engineer
 Air Quality Planning and Standards Section
 Bureau of Air Management
 Wisconsin Department of Natural Resources
 Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Loftus, Jonathan P - DNR
Sent: Thursday, June 30, 2022 12:47 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

You're welcome, Hassan, and thanks for sending along the slides. We'll try to send any emission reduction information by July 11, as discussed.

Jon

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Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868

Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>

Sent: Thursday, June 30, 2022 10:01 AM

To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>

Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>;
McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>;
Smith, Michael D (MPCA) <michael.smith@state.mn.us>

Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Good morning everyone,

Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

Attached is the presentation used in today's discussion that outlines what Minnesota plans to include in its Regional Haze SIP. This included the visibility contribution analysis that Minnesota used to determine which Class I areas are potentially impacted by Minnesota sources and which Class I areas in Minnesota are potentially impacted by sources in other states. As mentioned in our meeting, we are not making a formal "Ask" regarding any sources in particular and viewed this as more of an information sharing opportunity.

We would appreciate any information you can provide regarding the approach your state is taking regarding emission reduction measures contemplated for this regional haze implementation period. I'll be working to summarize our interactions within Minnesota's Regional Haze SIP and we'll provide you with an opportunity to review the summary and offer comments/clarifications.

For easy reference, we're currently in the middle of the formal FLM consultation period (May 11th - July 11th) and are hoping to go on public notice in late July or early August this year. If you would please provide any relevant information you would like to share at your earliest convenience, I'll attempt to include that in my write-up before sharing it with you for your review.

If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)

Sent: Wednesday, June 1, 2022 2:18 PM

To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); Loftus, Jonathan P - DNR; jason.treutel@wisconsin.gov

Subject: Regional Haze :: Minnesota & Wisconsin Consultation

When: Thursday, June 30, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).

Where: Microsoft Teams Meeting

Hi everyone,

Jon and I talked regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you.

If you have any questions, please send them my way.

Thanks!

Microsoft Teams meeting

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Bouchareb, Hassan (MPCA)

From: Bouchareb, Hassan (MPCA)
Sent: Friday, August 5, 2022 1:35 PM
To: Loftus, Jonathan P - DNR
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Hi Jon,

Sharing the language I'll be including the consultation section of our SIP. Let me know if you have any questions or comments.

Wisconsin. MPCA contacted representatives from Wisconsin on June 1, 2022, for the purpose of state-to-state consultation as MPCA had identified Iowa emissions as reasonably anticipated to contribute to visibility impairment at Minnesota Class I areas. In a meeting on June 30, 2022, MPCA shared details regarding what Minnesota planned to include in its Regional Haze SIP submittal including the visibility contribution analysis that MPCA performed to determine which Class I areas are potentially impacted by Minnesota sources and which states potentially impact Minnesota Class I areas. Minnesota identified that this was an opportunity for information sharing. MPCA requested that Wisconsin representatives provide additional information regarding the approach their state is taking regarding emission reduction measures contemplated for the second regional haze implementation period.

On July 12, 2022, Wisconsin provided additional information regarding point source emission reductions at Wisconsin sources. This information focused on the additional emission reductions that were not included in the LADCO modeling analysis for 2028. Wisconsin summarized the additional emission reductions in NO_x and SO₂ emissions from Wisconsin sources that were not included in the modeling analysis would total an approximate 9,400 tpy reduction in NO_x emissions and 6,400 tpy reduction in SO₂ emissions.

Thanks!

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From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Wednesday, July 13, 2022 9:50 AM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Sounds good, Hassan, and yeah we were aware that you weren't planning to do additional modeling.

Have a good day!
Jon

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Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Wednesday, July 13, 2022 9:46 AM
To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Jon,

Thanks for sharing this information! It's great to see that there are additional reductions expected that weren't included in the various modeling efforts. Quick note there, we won't be doing any remodeling (at least in the immediate future), so we won't be able to account for these reductions in the contribution assessment.

However, we can certainly reference the additional reductions and that generally we would expect visibility conditions to be better than modeled given those reductions.

I'll send you something to review when I have a write-up put together.

Thanks again!

Hassan M. Bouchareb | Engineer
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Office: (651) 757-2653 | Fax: (651) 296-8324
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From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Tuesday, July 12, 2022 2:57 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>

Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>

Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Hassan,

Following up on our 6/30 call with some additional Wisconsin point source emissions reduction information...

As noted in section 3.3.3 of Wisconsin's Regional Haze Round 2 SIP (p. 25) submitted to EPA in July 2021, WDNR provided "2028 Adjusted" emissions which accounted for additional Wisconsin point source NOx and SO2 emissions reductions from those used in LADCO's 2028 Modeled emissions:

There are significant emission reductions from the following unit shutdowns and committed controls in Wisconsin that are not included in LADCO's 2028 Modeled emissions (see Appendix 3):

- Alliant Energy Columbia power plant shutdown (2025)
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In summary, the “2028 Adjusted – Updated” NO_x and SO₂ emissions for Wisconsin point sources in Table 10 above are more appropriate to use than LADCO’s 2028 Modeled emissions.

Thanks, and please let me know if you have any questions about this information.

Jon

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Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Loftus, Jonathan P - DNR
Sent: Thursday, June 30, 2022 12:47 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

You’re welcome, Hassan, and thanks for sending along the slides. We’ll try to send any emission reduction information by July 11, as discussed.

Jon

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Jonathan P. Loftus

Air Management Engineer
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Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>

Sent: Thursday, June 30, 2022 10:01 AM

To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>

Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>;

McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>;

Smith, Michael D (MPCA) <michael.smith@state.mn.us>

Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)
Sent: Wednesday, June 1, 2022 2:18 PM
To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); Loftus, Jonathan P - DNR; jason.treutel@wisconsin.gov
Subject: Regional Haze :: Minnesota & Wisconsin Consultation
When: Thursday, June 30, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

Jon and I talked regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you.

If you have any questions, please send them my way.

Thanks!

Microsoft Teams meeting

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Phone Conference ID: 377 279 574#

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Bouchareb, Hassan (MPCA)

From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Tuesday, August 9, 2022 8:43 AM
To: Bouchareb, Hassan (MPCA)
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Hey Hassan,

A couple suggested edits to your blurb below in **red**, with my explanations in **[blue]**.

Just let me know if you need any follow-up.

Thanks!
Jon

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Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Loftus, Jonathan P - DNR
Sent: Friday, August 5, 2022 3:15 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Thanks, Hassan, I know it's a simple blurb, but that'll just allow me some cushion to potentially catch anything with the wording.

Have a good weekend!
Jon

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Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section

Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 3:08 PM
To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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That's fine by me. Also, I noticed I hadn't caught a typo in the first paragraph (i.e., replace Iowa with Wisconsin).

Thanks Jon!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
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From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Friday, August 5, 2022 2:58 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Thanks for the courtesy review, Hassan, is sometime next week OK to let you know?

Jon

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Jonathan P. Loftus
Air Management Engineer
Air Quality Planning and Standards Section

Bureau of Air Management
Wisconsin Department of Natural Resources
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Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Friday, August 5, 2022 1:35 PM
To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Jon,

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On July 12, 2022, Wisconsin provided additional information regarding point source emission reductions at Wisconsin sources. This information focused on the additional emission reductions – **including reductions additional to those included in Wisconsin's July 2021 regional haze SIP – [should be self-explanatory, but let me know if this is unclear]** that were not included in the LADCO modeling analysis for 2028. Wisconsin summarized the additional emission reductions in NO_x and SO₂ emissions from Wisconsin sources that were not included in the modeling analysis would total an approximate 9,400 tpy reduction in NO_x emissions and 6,400 tpy reduction in SO₂ emissions.

Thanks!

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Sent: Wednesday, July 13, 2022 9:50 AM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

Sounds good, Hassan, and yeah we were aware that you weren't planning to do additional modeling.

Have a good day!
Jon

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Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Wednesday, July 13, 2022 9:46 AM
To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Jon,

Thanks for sharing this information! It's great to see that there are additional reductions expected that weren't included in the various modeling efforts. Quick note there, we won't be doing any remodeling (at least in the immediate future), so we won't be able to account for these reductions in the contribution assessment.

However, we can certainly reference the additional reductions and that generally we would expect visibility conditions to be better than modeled given those reductions.

I'll send you something to review when I have a write-up put together.

Thanks again!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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From: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>
Sent: Tuesday, July 12, 2022 2:57 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Cc: Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Hi Hassan,

Following up on our 6/30 call with some additional Wisconsin point source emissions reduction information...

As noted in section 3.3.3 of Wisconsin's Regional Haze Round 2 SIP (p. 25) submitted to EPA in July 2021, WDNR provided "2028 Adjusted" emissions which accounted for additional Wisconsin point source NOx and SO2 emissions reductions from those used in LADCO's 2028 Modeled emissions:

There are significant emission reductions from the following unit shutdowns and committed controls in Wisconsin that are not included in LADCO's 2028 Modeled emissions (see Appendix 3):

- Alliant Energy Columbia power plant shutdown (2025)
- We Energies South Oak Creek power plant shutdown (2023-2024)
- Georgia-Pacific Green Bay Broadway mill – retirement of coal boiler B29 (2018); replacement of coal boilers B26 and B28 with three natural gas boilers (2019-2020)
- Catalyst Paper – Biron mill – coal boiler B23 fuel switch to natural gas (2017)
- Cardinal FG – Menominee – installation of selective catalytic reductions (SCR) (2020)
- Cardinal FG – Portage – installation of SCR (2019)
- Green Bay Packaging Inc. mill – replacement of coal boiler B26 with two natural gas boilers (2019)
- Ahlstrom-Munksjo – De Pere mill – 10% annual heat input limitation for coal boilers B23 and B24 (2017)

The WDNR developed the point source projected emissions scenario "2028 Adjusted" shown in Table 10...to reflect these additional emission reductions...Accounting for the lower EGU and non-EGU projected emissions in the 2028 Adjusted scenario is expected to produce more beneficial visibility results than the 2028 Modeled scenario used for the visibility modeling in Section 3.2.

There are a few EGU informal technical updates since we submitted our Round 2 SIP (but these don't change LADCO's 2028 Modeled emissions or WDNR's 2028 Adjusted emissions):

- Alliant Energy Columbia power plant shutdown was recently delayed from 2025 to **2026**
- We Energies South Oak Creek power plant shutdown was recently delayed from 2023-2024 to **2024-2025**

- Although Alliant Energy Edgewater power plant isn't listed above, I'd like to note that it's shutdown was also recently delayed from 2022 to **2025**. Note that this shutdown was already included in LADCO's 2028 Modeled emissions.

There are also a few non-EGU point source informal technical updates to the information used for WDNR's 2028 Adjusted emissions in our Round 2 SIP:

- Flambeau River Paper – coal boiler B24 last operated in June 2019 and was demolished in 2021.
- For the non-EGU facilities listed above, WDNR used potential-to-emit or 2016 base year emissions for the 2028 Adjusted emissions in Table 10. However, recent actual emissions are now more appropriate to use.
- As footnoted for Table 10 in the Round 2 SIP, NOx emissions at Theda Clark Medical Center were over-reported in WDNR's Air Emissions Inventory by 905 tons/yr in 2016, and are thus also over-reported for 2028 Modeled emissions and 2028 Adjusted emissions. For Minnesota's 2028 contribution modeling, these over-reported NOx emissions should be removed.
- I'm providing an informal technical update to Table 10 below with a new column "2028 Adjusted – Updated" which accounts for these additional reductions by using 2021 actual NOx and SO2 emissions.

Table 10 from WI Round 2 Reg Haze SIP

WI Point Sector	2028 Modeled	2028 Adjusted	2028 Adjusted - Updated
<i>NOx</i>			
Point – EGU	12,916	8,724	8,724
Point – Non-EGU	24,206	20,611	19,026
TOTAL Point	37,122	29,335	27,750
<i>SO₂</i>			
Point – EGU	4,700	2,882	2,882
Point – Non-EGU	19,559	15,417	15,025
TOTAL Point	24,259	18,299	17,907

In summary, the "2028 Adjusted – Updated" NOx and SO2 emissions for Wisconsin point sources in Table 10 above are **more appropriate to use** than LADCO's 2028 Modeled emissions.

Thanks, and please let me know if you have any questions about this information.

Jon

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Jonathan P. Loftus

Air Management Engineer
 Air Quality Planning and Standards Section
 Bureau of Air Management
 Wisconsin Department of Natural Resources
 Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



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From: Loftus, Jonathan P - DNR
Sent: Thursday, June 30, 2022 12:47 PM
To: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

You're welcome, Hassan, and thanks for sending along the slides. We'll try to send any emission reduction information by July 11, as discussed.

Jon

We are committed to service excellence.

Visit our survey at <http://dnr.wi.gov/customersurvey> to evaluate how I did.

Jonathan P. Loftus

Air Management Engineer
Air Quality Planning and Standards Section
Bureau of Air Management
Wisconsin Department of Natural Resources
Phone: (608) 264-8868
Jonathan.Loftus@wisconsin.gov



From: Bouchareb, Hassan (MPCA) <hassan.bouchareb@state.mn.us>
Sent: Thursday, June 30, 2022 10:01 AM
To: Loftus, Jonathan P - DNR <Jonathan.Loftus@wisconsin.gov>; Treutel, Jason A - DNR <Jason.Treutel@wisconsin.gov>
Cc: deAlwis, Deepa (MPCA) <deepa.dealwis@state.mn.us>; Wenger, Maggie (MPCA) <Maggie.Wenger@state.mn.us>;
McCourtney, Margaret (MPCA) <margaret.mccourtney@state.mn.us>; Palmer, Kari (MPCA) <kari.palmer@state.mn.us>;
Smith, Michael D (MPCA) <michael.smith@state.mn.us>
Subject: RE: Regional Haze :: Minnesota & Wisconsin Consultation

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Good morning everyone,

Thanks again for meeting with us today to discuss various aspects of the Regional Haze program and participating in the consultation process required under the Regional Haze Rules. Generally, states are required to consult with other states that have emissions that

are reasonably anticipated to contribute to visibility impairment in the same Class I area(s), in order to develop coordinated emission management strategies for making reasonable progress.

Attached is the presentation used in today's discussion that outlines what Minnesota plans to include in its Regional Haze SIP. This included the visibility contribution analysis that Minnesota used to determine which Class I areas are potentially impacted by Minnesota sources and which Class I areas in Minnesota are potentially impacted by sources in other states. As mentioned in our meeting, we are not making a formal "Ask" regarding any sources in particular and viewed this as more of an information sharing opportunity.

We would appreciate any information you can provide regarding the approach your state is taking regarding emission reduction measures contemplated for this regional haze implementation period. I'll be working to summarize our interactions within Minnesota's Regional Haze SIP and we'll provide you with an opportunity to review the summary and offer comments/clarifications.

For easy reference, we're currently in the middle of the formal FLM consultation period (May 11th - July 11th) and are hoping to go on public notice in late July or early August this year. If you would please provide any relevant information you would like to share at your earliest convenience, I'll attempt to include that in my write-up before sharing it with you for your review.

If you have any questions, please let me know.

Thank you!

Hassan M. Bouchareb | Engineer
Minnesota Pollution Control Agency (MPCA)
Office: (651) 757-2653 | Fax: (651) 296-8324
Pronouns: he/him/his
Hassan.Bouchareb@state.mn.us | www.pca.state.mn.us

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-----Original Appointment-----

From: Bouchareb, Hassan (MPCA)
Sent: Wednesday, June 1, 2022 2:18 PM
To: Bouchareb, Hassan (MPCA); deAlwis, Deepa (MPCA); Wenger, Maggie (MPCA); McCourtney, Margaret (MPCA); Palmer, Kari (MPCA); Smith, Michael D (MPCA); Loftus, Jonathan P - DNR; jason.treutel@wisconsin.gov
Subject: Regional Haze :: Minnesota & Wisconsin Consultation
When: Thursday, June 30, 2022 9:00 AM-10:00 AM (UTC-06:00) Central Time (US & Canada).
Where: Microsoft Teams Meeting

Hi everyone,

Jon and I talked regarding potential meeting times for consultation, and it looks like this time worked for everyone. Please hold this time and we look forward to speaking with you.

If you have any questions, please send them my way.

Thanks!

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