schools, hospitals, and emergency services. The public users can also see measurements from air monitors and generate a report when using the tool.

The EPA has reviewed this material but has determined that conducting a comprehensive EJ analysis is not necessary in the context of this SIP submission for addressing planning elements for the 2008 and 2015 ozone 8-hour NAAQS, as the CAA and its applicable implementing regulations neither prohibit nor require such an evaluation of EJ in relation to the relevant requirements. Additionally, there is no evidence suggesting that this action contradicts the goals of E.O. 12898 or that it will disproportionately harm any specific group or have severe health or environmental impacts.

However, the EPA expects that this action, which assesses whether New Jersey's SIP adequately addresses planning elements for the 2008 and 2015 ozone 8-hour NAAQS, will generally have a neutral impact on all populations, including communities of color and low-income groups. At the very least, it will not worsen existing air quality standards.

In summary, the EPA concludes, for informational purposes only, that this proposed rule will not disproportionately harm communities with environmental justice concerns. New Jersey did evaluate EJ considerations voluntarily in its SIP submission, but the EPA's assessment of these considerations is provided for context, not as the basis for the action. The EPA is taking action under the CAA independently of the State's EJ assessment.

VI. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the CAA and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, EPA's role is to approve State choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve State law as meeting Federal requirements and does not impose additional requirements beyond those imposed by State law. For that reason, this proposed action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 14094 (88 FR 21879, April 11, 2023);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not subject to Executive Order 13045 (62 FR 19885, April 23, 1997) because it approves a State program;
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the Clean Air Act.

In addition, this proposed rulemaking action pertaining to New Jersey's submissions, is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the rule does not have Tribal implications and will not impose substantial direct costs on Tribal governments or preempt Tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, Feb. 16, 1994) directs Federal agencies to identify and address ''disproportionately high and adverse human health or environmental effects'' of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. EPA defines environmental justice (EJ) as ''the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies.'' EPA further defines the term fair treatment to mean that ''no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.''

The NJDEP evaluated environmental justice as part of its SIP submittal even though the CAA and applicable implementing regulations neither prohibit nor require an evaluation. The EPA's evaluation of the NJDEP's environmental justice considerations is described above in the section titled, ''Environmental Justice Considerations.'' The analysis was done for the purpose of providing additional context and information about this rulemaking to the public, not as a basis of the action. The EPA is taking action under the CAA on bases independent of New Jersey's evaluation of environmental justice. In addition, there is no information in the record upon which this decision is based that is inconsistent with the stated goal of E.O. 12898 of achieving environmental justice for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Incorporation by reference, Nitrogen dioxide, Intergovernmental relations, Ozone, Reporting and recordkeeping requirements, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Lisa Garcia,

Regional Administrator, Region 2.

[FR Doc. 2024–14927 Filed 7–8–24; 4:15 pm]

BILLING CODE 6560–50–P

ENVIRONMENTAL PROTECTION AGENCY

40 CFR Part 52

[EPA–R08–OAR–2023–0495; FRL–12052–01–R8]

Air Plan Partial Approval and Partial Disapproval; North Dakota; Regional Haze State Implementation Plan for the Second Implementation Period

AGENCY: Environmental Protection Agency (EPA).

ACTION: Proposed rule.

SUMMARY: The Environmental Protection Agency (EPA) is proposing to partially approve and partially disapprove the regional haze state implementation plan (SIP) revision submitted by the State of North Dakota on August 11, 2022 (North Dakota's 2022 SIP submission), as satisfying applicable requirements under the Clean Air Act (CAA) and the EPA's Regional Haze Rule (RHR) for the program's second implementation period. North Dakota's 2022 SIP submission addresses the requirement

that states revise their long-term strategies every implementation period to make reasonable progress towards the national goal of preventing any future, and remedying any existing, anthropogenic impairment of visibility, including regional haze, in mandatory Class I Federal areas. North Dakota's 2022 SIP submission also addresses other applicable requirements for the second implementation period of the regional haze program. The EPA is taking this action pursuant to the CAA.

DATES: Written comments must be received on or before August 9, 2024.

ADDRESSES: Submit your comments, identified by Docket ID No. EPA–R08–OAR–2023–0495, to the Federal Rulemaking Portal: *https://www.regulations.gov.* Follow the online instructions for submitting comments. Once submitted, comments cannot be edited or removed from *https://www.regulations.gov.* The EPA may publish any comment received to its public docket. Do not submit electronically any information you consider to be Confidential Business Information (CBI) or other information whose disclosure is restricted by statute. Multimedia submissions (audio, video, etc.) must be accompanied by a written comment. The written comment is considered the official comment and should include discussion of all points you wish to make. The EPA will generally not consider comments or comment contents located outside of the primary submission (*i.e.,* on the web, cloud, or other file sharing system). For additional submission methods, the full public comment policy of the EPA, information about CBI or multimedia submissions, and general guidance on making effective comments, please visit *https://www.epa.gov/dockets/commenting-epa-dockets.*

Docket: All documents in the docket are listed in the *https://www.regulations.gov* index. Although listed in the index, some information is not publicly available, *e.g.,* CBI or other information whose disclosure is restricted by statute. Certain other material, such as copyrighted material, will be publicly available only in hard copy. Publicly available docket materials are available electronically in *https://www.regulations.gov.* Please email or call the person listed in the **FOR FURTHER INFORMATION CONTACT** section if you need to make alternative arrangements for access to the docket.

FOR FURTHER INFORMATION CONTACT: Holly DeJong, Air and Radiation Division, EPA, Region 8, Mailcode 8ARD–IO, 1595 Wynkoop Street, Denver, Colorado 80202–1129, telephone number: (303) 312–6241, email address: *dejong.holly@epa.gov;* or Joe Stein, Air and Radiation Division, EPA, Region 8, Mailcode 8ARD–IO, 1595 Wynkoop Street, Denver, Colorado 80202–1129, telephone number: (303) 312–7078, email address: *stein.joseph@epa.gov.*

SUPPLEMENTARY INFORMATION: Throughout this document wherever ''we,'' ''us,'' or ''our'' is used, we mean the EPA.

Table of Contents

I. What action is the EPA proposing?

On August 11, 2022, the North Dakota Department of Environmental Quality submitted a revision to its SIP to address regional haze for the second implementation period. North Dakota made this SIP submission to satisfy the requirements of the CAA's regional haze program under CAA sections 169A and 169B and 40 CFR 51.308(f). The EPA is proposing to approve the portions of North Dakota's 2022 SIP submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions, progress to date, and the uniform rate of progress; 40 CFR 51.308(f)(4): reasonably attributable visibility impairment; 40 CFR 51.308(f)(5) and 40 CFR 51.308(g): progress report requirements; and 40 CFR 51.308(f)(6): monitoring strategy and other implementation plan requirements. The EPA is proposing to disapprove the portions of North Dakota's 2022 SIP submission relating to CAA 169A and 40 CFR 51.308(f)(2): long-term strategy; 40 CFR 51.308(f)(3): reasonable progress goals; and 40 CFR 51.308(i): FLM consultation. Consistent with section 110(k)(3) of the CAA, the EPA may partially approve portions of a submittal if those elements meet all applicable requirements and may disapprove the remainder so long as the elements are fully separable.[1]

II. Background

A. History of the Regional Haze Program

In the 1977 CAA Amendments, Congress created a program for protecting visibility in the nation's mandatory Class I Federal areas, which include certain national parks and wilderness areas.[2] CAA 169A. The CAA

[1] *See* CAA section 110(k)(3) and July 9, 1992 EPA memorandum titled ''Processing of State Implementation Plan (SIP) Submittals'' from John Calcagni, at *https://www.epa.gov/sites/default/files/2015-07/documents/procsip.pdf.*

[2] Areas statutorily designated as mandatory Class I Federal areas consist of national parks exceeding 6,000 acres, wilderness areas and national memorial parks exceeding 5,000 acres, and all international parks that were in existence on August 7, 1977. CAA 162(a). There are 156 mandatory Class I areas. The list of areas to which the requirements of the

establishes as a national goal the ''prevention of any future, and the remedying of any existing, impairment of visibility in mandatory Class I Federal areas which impairment results from manmade air pollution.'' CAA 169A(a)(1). The CAA further directs the EPA to promulgate regulations to assure reasonable progress toward meeting this national goal. CAA 169A(a)(4). On December 2, 1980, the EPA promulgated regulations to address visibility impairment in mandatory Class I Federal areas (hereinafter referred to as ''Class I areas'') that is ''reasonably attributable'' to a single source or small group of sources. (45 FR 80084, December 2, 1980). These regulations, codified at 40 CFR 51.300 through 51.307, represented the first phase of the EPA's efforts to address visibility impairment. In 1990, Congress added section 169B to the CAA to further address visibility impairment, specifically, impairment from regional haze. CAA 169B. The EPA promulgated the Regional Haze Rule (RHR), codified at 40 CFR 51.308,[3] on July 1, 1999. (64 FR 35714, July 1, 1999). On January 10, 2017, the EPA promulgated additional regulations that address visibility impairment for the second and subsequent implementation periods (82 FR 3078, January 10, 2017). These regional haze regulations are a central component of the EPA's comprehensive visibility protection program for Class I areas.

Regional haze is visibility impairment that is produced by a multitude of anthropogenic sources and activities that are located across a broad geographic area and that emit pollutants that impair visibility. Visibility impairing pollutants include fine and coarse particulate matter (PM) (*e.g.,* sulfates, nitrates, organic carbon, elemental carbon, and soil dust) and their precursors (*e.g.,* sulfur dioxide (SO_2), nitrogen oxides (NO_X), and, in some cases, volatile organic compounds (VOC) and ammonia (NH_3)). Fine particle precursors react in the atmosphere to form fine particulate matter ($PM_{2.5}$), which impairs visibility by scattering and absorbing light. Visibility impairment reduces the perception of clarity and color, as well as visible distance.[4]

To address regional haze visibility impairment, the 1999 RHR established an iterative planning process that requires both states in which Class I areas are located and states ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I area to periodically submit SIP revisions to address such impairment. CAA 169A(b)(2);[5] see also 40 CFR 51.308(b), (f) (establishing submission dates for iterative regional haze SIP revisions); (64 FR at 35768, July 1, 1999). Under the CAA, each SIP submission must contain ''a long-term (ten to fifteen years) strategy for making reasonable progress toward meeting the national goal,'' CAA 169A(b)(2)(B); the initial round of SIP submissions also had to address the statutory requirement that certain older, larger sources of visibility impairing pollutants install and operate the best available retrofit technology (BART). CAA 169A(b)(2)(A); 40 CFR 51.308(d), (e). States' first regional haze SIPs were due by December 17, 2007, 40 CFR 51.308(b), with subsequent SIP submissions containing updated long-term strategies originally due July 31, 2018, and every ten years thereafter. (64 FR at 35768, July 1, 1999). The EPA established in the 1999 RHR that all states either have Class I areas within their borders or ''contain sources whose emissions are reasonably anticipated to contribute to regional haze in a Class I area''; therefore, all states must submit regional haze SIPs.[6] Id. at 35721.

Much of the focus in the first implementation period of the regional haze program, which ran from 2007 through 2018, was on satisfying states' BART obligations. First implementation period SIPs were additionally required to contain long-term strategies for making reasonable progress toward the national visibility goal, of which BART is one component. The core required elements for the first implementation period SIPs (other than BART) are laid out in 40 CFR 51.308(d). Those provisions required that states containing Class I areas establish reasonable progress goals (RPGs) that are measured in deciviews and reflect the anticipated visibility conditions at the end of the implementation period including from implementation of states' long-term strategies. The first planning period[7] RPGs were required to provide for an improvement in visibility for the most impaired days over the period of the implementation plan and ensure no degradation in visibility for the least impaired days over the same period. In establishing the RPGs for any Class I area in a state, the state was required to consider four statutory factors: the costs of compliance, the time necessary for compliance, the energy and non-air quality environmental impacts of compliance, and the remaining useful life of any potentially affected sources. CAA 169A(g)(1); 40 CFR 51.308(d)(1).

States were also required to calculate baseline (using the five-year period of 2000–2004) and natural visibility conditions (*i.e.,* visibility conditions without anthropogenic visibility impairment) for each Class I area, and to calculate the linear rate of progress needed to attain natural visibility conditions, assuming a starting point of baseline visibility conditions in 2004 and ending with natural conditions in 2064. This linear interpolation is known as the uniform rate of progress (URP) and is used as a tracking metric to help states assess the amount of progress they are making towards the national visibility goal over time in each Class I area.[8] 40 CFR 51.308(d)(1)(i)(B), (d)(2).

visibility protection program apply is in 40 CFR part 81, subpart D.

[3] In addition to the generally applicable regional haze provisions at 40 CFR 51.308, the EPA also promulgated regulations specific to addressing regional haze visibility impairment in Class I areas on the Colorado Plateau at 40 CFR 51.309. The latter regulations are applicable only for specific jurisdictions' regional haze plans submitted no later than December 17, 2007, and thus are not relevant here.

[4] There are several ways to measure the amount of visibility impairment, *i.e.,* haze. One such measurement is the deciview, which is the principal metric used by the RHR. Under many circumstances, a change in one deciview will be perceived by the human eye to be the same on both clear and hazy days. The deciview is unitless. It is proportional to the logarithm of the atmospheric extinction of light, which is the perceived dimming of light due to its being scattered and absorbed as it passes through the atmosphere. Atmospheric light extinction (b^{ext}) is a metric used for expressing visibility and is measured in inverse megameters (Mm^{-1}). The EPA's Guidance on Regional Haze State Implementation Plans for the Second Implementation Period (''2019 Guidance'') offers the flexibility for the use of light extinction in certain cases. Light extinction can be simpler to use in calculations than deciviews, since it is not a logarithmic function. See, *e.g.,* 2019 Guidance at 16, 19, *https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period,* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (August 20, 2019). The formula for the deciview is 10 ln (bext)/10 Mm^{-1}). 40 CFR 51.301.

[5] The RHR expresses the statutory requirement for states to submit plans addressing out-of-state Class I areas by providing that states must address visibility impairment ''in each mandatory Class I Federal area located outside the State that may be affected by emissions from within the State.'' 40 CFR 51.308(d), (f).

[6] In addition to each of the fifty states, the EPA also concluded that the Virgin Islands and District of Columbia must also submit regional haze SIPs because they either contain a Class I area or contain sources whose emissions are reasonably anticipated to contribute regional haze in a Class I area. See 40 CFR 51.300(b), (d)(3).

[7] The EPA uses the terms ''implementation period'' and ''planning period'' interchangeably.

[8] The EPA established the URP framework in the 1999 RHR to provide ''an equitable analytical approach'' to assessing the rate of visibility

Continued

The 1999 RHR also provided that states' long-term strategies must include the ''enforceable emissions limitations, compliance schedules, and other measures as necessary to achieve the reasonable progress goals.'' 40 CFR 51.308(d)(3). In establishing their long-term strategies, states are required to consult with other states that also contribute to visibility impairment in a given Class I area and include all measures necessary to obtain their shares of the emission reductions needed to meet the RPGs. 40 CFR 51.308(d)(3)(i), (ii). Section 51.308(d) also contains seven additional factors states must consider in formulating their long-term strategies, 40 CFR 51.308(d)(3)(v), as well as provisions governing monitoring and other implementation plan requirements. 40 CFR 51.308(d)(4). Finally, the 1999 RHR required states to submit periodic progress reports—SIP revisions due every five years that contain information on states' implementation of their regional haze plans and an assessment of whether anything additional is needed to make reasonable progress, see 40 CFR 51.308(g), (h)—and to consult with the Federal Land Manager(s) [9] (FLMs) responsible for each Class I area according to the requirements in CAA 169A(d) and 40 CFR 51.308(i).

On January 10, 2017, the EPA promulgated revisions to the RHR, (82 FR 3078, January 10, 2017), that apply for the second and subsequent implementation periods. The 2017 rulemaking made several changes to the requirements for regional haze SIPs to clarify states' obligations and streamline certain regional haze requirements. The revisions to the regional haze program for the second and subsequent implementation periods focused on the requirement that states' SIPs contain long-term strategies for making reasonable progress towards the national visibility goal in line with CAA 169A(b)(2)(B). The reasonable progress requirements as revised in the 2017 rulemaking (referred to here as the 2017 RHR Revisions) are codified at 40 CFR 51.308(f). Among other changes, the 2017 RHR Revisions adjusted the deadline for states to submit their second implementation period SIPs from July 31, 2018, to July 31, 2021, clarified the order of analysis and the relationship between RPGs and the long-term strategy, and focused on making visibility improvements on the days with the most *anthropogenic* visibility impairment, as opposed to the days with the most visibility impairment overall. The EPA also revised requirements of the visibility protection program related to periodic progress reports and FLM consultation. The specific requirements applicable to second implementation period regional haze SIP submissions are addressed in detail below.

The EPA provided guidance to the states for their second implementation period SIP submissions in the preamble to the 2017 RHR Revisions as well as in subsequent, stand-alone guidance documents. In August 2019, the EPA issued ''Guidance on Regional Haze State Implementation Plans for the Second Implementation Period'' (''2019 Guidance'').[10] On July 8, 2021, the EPA issued a memorandum containing ''Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period'' (''2021 Clarifications Memo'').[11] Additionally, the EPA further clarified the recommended procedures for processing ambient visibility data and optionally adjusting the URP to account for international anthropogenic and prescribed fire impacts in two technical guidance documents: the December 2018 ''Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program'' (''2018 Visibility Tracking Guidance''),[12] and the June 2020 ''Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program'' and associated Technical Addendum (''2020 Data Completeness Memo'').[13]

As explained in the 2021 Clarifications Memo, the EPA intends the second implementation period of the regional haze program to secure meaningful reductions in visibility impairing pollutants that build on the significant progress states have achieved to date. The Agency also recognizes that analyses regarding reasonable progress are state-specific and that, based on states' and sources' individual circumstances, what constitutes reasonable reductions in visibility impairing pollutants will vary from state-to-state. While there exist many opportunities for states to leverage both ongoing and upcoming emission reductions under other CAA programs, the Agency expects states to undertake rigorous reasonable progress analyses that identify further opportunities to advance the national visibility goal consistent with the statutory and regulatory requirements. See generally 2021 Clarifications Memo. This is consistent with Congress's determination that a visibility protection program is needed in addition to the CAA's National Ambient Air Quality Standards and Prevention of Significant Deterioration programs, as further emission reductions may be necessary to adequately protect visibility in Class I areas throughout the country.[14]

improvement at Class I areas across the country. The starting point for the URP analysis is 2004 and the endpoint was calculated based on the amount of visibility improvement that was anticipated to result from implementation of existing CAA programs over the period from the mid-1990s to approximately 2005. Assuming this rate of progress would continue into the future, the EPA determined that natural visibility conditions would be reached in 60 years, or 2064 (60 years from the baseline starting point of 2004). However, the EPA did not establish 2064 as the year by which the national goal *must* be reached. 64 FR at 35731–32. That is, the URP and the 2064 date are not enforceable targets but are rather tools that ''allow for analytical comparisons between the rate of progress that would be achieved by the state's chosen set of control measures and the URP.'' (82 FR 3078, 3084, January 10, 2017).

[9] The EPA's regulations define ''Federal Land Manager'' as ''the Secretary of the department with authority over the Federal Class I area (or the Secretary's designee) or, with respect to Roosevelt-Campobello International Park, the Chairman of the Roosevelt-Campobello International Park Commission.'' 40 CFR 51.301.

[10] Guidance on Regional Haze State Implementation Plans for the Second Implementation Period. *https://www.epa.gov/visibility/guidance-regional-haze-state-implementation-plans-second-implementation-period.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (August 20, 2019).

[11] Clarifications Regarding Regional Haze State Implementation Plans for the Second Implementation Period. *https://www.epa.gov/system/files/documents/2021-07/clarifications-regarding-regional-haze-state-implementation-plans-for-the-second-implementation-period.pdf.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (July 8, 2021).

[12] Technical Guidance on Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program. *https://www.epa.gov/visibility/technical-guidance-tracking-visibility-progress-second-implementation-period-regional.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park. (December 20, 2018).

[13] Recommendation for the Use of Patched and Substituted Data and Clarification of Data Completeness for Tracking Visibility Progress for the Second Implementation Period of the Regional Haze Program. *https://www.epa.gov/visibility/memo-and-technical-addendum-ambient-data-usage-and-completeness-regional-haze-program.* The EPA Office of Air Quality Planning and Standards, Research Triangle Park (June 3, 2020).

[14] See, *e.g.,* H.R. Rep. No. 95–294 at 205 (''In determining how to best remedy the growing visibility problem in these areas of great scenic importance, the committee realizes that as a matter of equity, the national ambient air quality standards cannot be revised to adequately protect visibility in all areas of the country.''), (''the mandatory Class I increments of [the PSD program] do not adequately protect visibility in Class I areas'').

B. Roles of Agencies in Addressing Regional Haze

Because the air pollutants and pollution affecting visibility in Class I areas can be transported over long distances, successful implementation of the regional haze program requires long-term, regional coordination among multiple jurisdictions and agencies that have responsibility for Class I areas and the emissions that impact visibility in those areas. To address regional haze, states need to develop strategies in coordination with one another, considering the effect of emissions from one jurisdiction on the air quality in another. Five regional planning organizations (RPOs),[15] which include representation from state and Tribal governments, the EPA, and FLMs, were developed in the lead-up to the first implementation period to address regional haze. RPOs evaluate technical information to better understand how emissions from state and tribal land impact Class I areas across the country, pursue the development of regional strategies to reduce emissions of particulate matter and other pollutants leading to regional haze, and help states meet the consultation requirements of the RHR.

The Western Regional Air Partnership (WRAP), one of the five RPOs described in the previous paragraph, is a collaborative effort of state governments, local air agencies, tribal governments, and various federal agencies established to initiate and coordinate activities associated with the management of regional haze, visibility, and other air quality issues in the western United States. Members include the states of Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, Wyoming, and 28 tribal governments.[16] The federal partner members of WRAP are the EPA, U.S. National Parks Service (NPS), U.S. Fish and Wildlife Service (USFWS), U.S. Forest Service (USFS), and the U.S. Bureau of Land Management (BLM).

C. North Dakota's First Implementation Period SIP Submissions

The governor of North Dakota submitted North Dakota's Regional Haze SIP for the first implementation period to the EPA on March 3, 2010, followed by SIP Supplement No. 1 submitted on July 27, 2010, and SIP Amendment No. 1 submitted on July 28, 2011 (collectively, the ''2010 Regional Haze SIP''). On April 6, 2012, the EPA promulgated a final rule titled ''Approval and Promulgation of Implementation Plans; North Dakota; Regional Haze State Implementation Plan; Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze; Final Rule'' (2012 Final Rule).[17] The 2012 Final Rule approved in part and disapproved in part the 2010 Regional Haze SIP. The EPA's disapproval included portions of the plan that addressed reasonable progress requirements and North Dakota's BART determinations for Coal Creek Station (Coal Creek) Units 1 and 2 and Antelope Valley Station (Antelope Valley) Units 1 and 2. In the same rulemaking, the EPA promulgated a FIP that imposed, among other things, a NO_X emission limit for Antelope Valley Units 1 and 2, and a NO_X BART determination and emission limit for Coal Creek Units 1 and 2.

Subsequently, North Dakota and other petitioners challenged the 2012 Final Rule in the United States Court of Appeals for the Eighth Circuit. On January 2, 2013, North Dakota submitted a SIP revision to the EPA to provide additional information supporting its original NO_X BART determination for Coal Creek.[18] On September 23, 2013, the Eighth Circuit concluded in *North Dakota* v. *EPA* that the EPA properly disapproved portions of the 2010 Regional Haze SIP, including the reasonable progress determination for Antelope Valley Units 1 and 2.[19] The court also upheld the EPA's FIP promulgating an emission limit of 0.17 lb/MMBtu NO_X (30-day rolling average) for Antelope Valley Units 1 and 2.[20] However, the court vacated and remanded the EPA's FIP promulgating an emission limit of 0.13 lb/MMBtu NO_X (30-day rolling average) for Coal Creek.[21]

Several SIP submissions and EPA actions for the first implementation period followed the Eighth Circuit's decision. On January 12, 2015, North Dakota submitted a SIP revision for a regional haze five-year progress report, pursuant to 40 CFR 51.308(g). On April 26, 2018, the EPA proposed to approve the Coal Creek NO_X BART determination submitted in North Dakota's January 2013 SIP submission.[22] The EPA did not finalize that action.[23] [24] On August 3, 2020, North Dakota submitted a SIP revision to incorporate the 2012 FIP requirements for Antelope Valley, which the EPA approved on April 5, 2022.[25] In the same action, the EPA withdrew from the Code of Federal Regulations the FIP requirements for Coal Creek that the Eighth Circuit vacated in *North Dakota* v. *EPA.*

D. North Dakota's Second Implementation Period SIP Submissions

In accordance with CAA section 169A and the RHR at 40 CFR 51.308(f), on August 11, 2022, the governor of North Dakota submitted North Dakota's 2022 SIP submission to address the State's regional haze obligations for the second implementation period, which runs through 2028. North Dakota's 2022 SIP submission also addressed the first planning period NO_X BART determination for Coal Creek that was remanded in *North Dakota* v. *EPA.* Concurrently, North Dakota also withdrew its 2013 SIP submission that addressed NO_X BART for Coal Creek.[26] The EPA is acting on North Dakota's 2022 SIP submission as it pertains to Coal Creek NO_X BART and North Dakota's 2015 SIP submission for the five-year progress report in a separate action.

III. Requirements for Regional Haze Plans for the Second Implementation Period

Under the CAA and the EPA's regulations, all 50 states, the District of Columbia, and the U.S. Virgin Islands are required to submit regional haze SIPs satisfying the applicable requirements for the second implementation period of the regional haze program by July 31, 2021. Each state's SIP must contain a long-term strategy for making reasonable progress toward meeting the national goal of remedying any existing and preventing any future anthropogenic visibility impairment in Class I areas. CAA 169A(b)(2)(B). To this end, § 51.308(f) lays out the process by which states

[15] RPOs are sometimes also referred to as ''multi-jurisdictional organizations,'' or MJOs. For the purposes of this document, the terms RPO and MJO are synonymous.

[16] A full list of WRAP members is available at *https://www.westar.org/wrap-council-members/.*

[17] 77 FR 20894 (April 6, 2012).

[18] North Dakota referred to the January 2, 2013 SIP submission as ''Supplement No. 2.'' The EPA herein refers to North Dakota's January 2, 2013 submission as a SIP submission.

[19] *North Dakota* v. *EPA,* 730 F.3d 750, 766 (8th Cir. 2013).

[20] Id.

[21] Id. at 764.

[22] 83 FR 18248 (April 26, 2018).

[23] North Dakota's 2022 SIP submission, Letter from North Dakota Governor Doug Burgum to EPA Administrator Michael Regan.

[24] As explained in this document in section II.D., North Dakota subsequently withdrew the Coal Creek Station NO_X BART portion of its 2013 SIP submission in its 2022 SIP submission to the EPA that included a revised NO_X BART determination for Coal Creek. The EPA is acting on the Coal Creek Station NO_X BART portion of the 2022 SIP submission in a separate action.

[25] 87 FR 19635 (April 5, 2022).

[26] North Dakota refers to its January 2, 2013, SIP submission as SIP Supplement No. 2.

determine what constitutes their long-term strategies, with the order of the requirements in § 51.308(f)(1) through (3) generally mirroring the order of the steps in the reasonable progress analysis [27] and (f)(4) through (6) containing additional, related requirements. Broadly speaking, a state first must identify the Class I areas within the state and determine the Class I areas outside the state in which visibility may be affected by emissions from the state. These are the Class I areas that must be addressed in the state's long-term strategy. See 40 CFR 51.308(f), (f)(2). For each Class I area within its borders, a state must then calculate the baseline, current, and natural visibility conditions for that area, as well as the visibility improvement made to date and the URP. See 40 CFR 51.308(f)(1). Each state having a Class I area and/or emissions that may affect visibility in a Class I area must then develop a long-term strategy that includes the enforceable emission limitations, compliance schedules, and other measures that are necessary to make reasonable progress in such areas. A reasonable progress determination is based on applying the four factors in CAA section 169A(g)(1) to sources of visibility impairing pollutants that the state has selected to assess for controls for the second implementation period. Additionally, as further explained below, the RHR at 40 CFR 51.3108(f)(2)(iv) separately provides five ''additional factors'' [28] that states must consider in developing their long-term strategies. See 40 CFR 51.308(f)(2). A state evaluates potential emission reduction measures for those selected sources and determines which are necessary to make reasonable progress. Those measures are then incorporated into the state's long-term strategy. After a state has developed its long-term strategy, it then establishes RPGs for each Class I area within its borders by modeling the visibility impacts of all reasonable progress controls at the end of the second implementation period, *i.e.,* in 2028, as well as the impacts of other requirements of the CAA. The RPGs include reasonable progress controls not only for sources in the state in which the Class I area is located, but also for sources in other states that contribute to visibility impairment in that area. The RPGs are then compared to the baseline visibility conditions and the URP to ensure that progress is being made towards the statutory goal of preventing any future and remedying any existing anthropogenic visibility impairment in Class I areas. 40 CFR 51.308(f)(2)–(3).

In addition to satisfying the requirements at 40 CFR 51.308(f) related to reasonable progress, the regional haze SIP revisions for the second implementation period must address the requirements in § 51.308(g)(1) through (5) pertaining to periodic reports describing progress towards the RPGs, 40 CFR 51.308(f)(5), as well as requirements for FLM consultation that apply to all visibility protection SIPs and SIP revisions. 40 CFR 51.308(i).

A state must submit its regional haze SIP and subsequent SIP revisions to the EPA according to the requirements applicable to all SIP revisions under the CAA and the EPA's regulations. See CAA 169A(b)(2); CAA 110(a). Upon approval by the EPA, a SIP is enforceable by the Agency and the public under the CAA. If the EPA finds that a state fails to make a required SIP revision, or if the EPA finds that a state's SIP is incomplete or if it disapproves the SIP, the Agency must promulgate a federal implementation plan (FIP) that satisfies the applicable requirements. CAA 110(c)(1).

A. Identification of Class I Areas

The first step in developing a regional haze SIP is for a state to determine which Class I areas, in addition to those within its borders, ''may be affected'' by emissions from within the state. In the 1999 RHR, the EPA determined that all states contribute to visibility impairment in at least one Class I area, 64 FR at 35720–22, and explained that the statute and regulations lay out an ''extremely low triggering threshold'' for determining ''whether States should be required to engage in air quality planning and analysis as a prerequisite to determining the need for control of emissions from sources within their State.'' *Id.* at 35721.

A state must determine which Class I areas must be addressed by its SIP by evaluating the total emissions of visibility impairing pollutants from all sources within the state. While the RHR does not require this evaluation to be conducted in any particular manner, EPA's 2019 Guidance provides recommendations for how such an assessment might be accomplished, including by, where appropriate, using the determinations previously made for the first implementation period. 2019 Guidance at 8–9. In addition, the determination of which Class I areas may be affected by a state's emissions is subject to the requirement in 40 CFR 51.308(f)(2)(iii) to ''document the technical basis, including modeling, monitoring, cost, engineering, and emissions information, on which the State is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I Federal area it affects.''

B. Calculations of Baseline, Current, and Natural Visibility Conditions; Progress to Date; and the Uniform Rate of Progress

As part of assessing whether a SIP submission for the second implementation period is providing for reasonable progress towards the national visibility goal, the RHR contains requirements in § 51.308(f)(1) related to tracking visibility improvement over time. The requirements of this section apply only to states having Class I areas within their borders; the required calculations must be made for each such Class I area. The EPA's 2018 Visibility Tracking Guidance [29] provides recommendations to assist states in satisfying their obligations under § 51.308(f)(1); specifically, in developing information on baseline, current, and natural visibility conditions, and in making optional adjustments to the URP to account for the impacts of international anthropogenic emissions and prescribed fires. See 82 FR at 3103–05.

The RHR requires tracking of visibility conditions on two sets of days: the clearest and the most impaired days. Visibility conditions for both sets of days are expressed as the average deciview index for the relevant five-year period (the period representing baseline or current visibility conditions). The RHR provides that the relevant sets of days for visibility tracking purposes are the 20% clearest (the 20% of monitored days in a calendar year with the lowest values of the deciview index) and 20% most impaired days (the 20% of monitored days in a calendar year with the highest amounts of anthropogenic visibility impairment).[30] 40 CFR 51.301. A state must calculate visibility conditions for both the 20% clearest and

[27] The EPA explained in the 2017 RHR Revisions that we were adopting new regulatory language in 40 CFR 51.308(f) that, unlike the structure in § 51.308(d), ''tracked the actual planning sequence.'' (82 FR at 3091).

[28] The five ''additional factors'' for consideration in § 51.308(f)(2)(iv) are distinct from the four factors listed in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2)(i) that states must consider and apply to sources in determining reasonable progress.

[29] The 2018 Visibility Tracking Guidance references and relies on parts of the 2003 Tracking Guidance: ''Guidance for Tracking Progress Under the Regional Haze Rule,'' which can be found at *https://www.epa.gov/sites/default/files/2021-03/documents/tracking.pdf.*

[30] This document also refers to the 20% clearest and 20% most anthropogenically impaired days as the ''clearest'' and ''most impaired'' or ''most anthropogenically impaired'' days, respectively.

20% most impaired days for the baseline period of 2000–2004 and the most recent five-year period for which visibility monitoring data are available (representing current visibility conditions). 40 CFR 51.308(f)(1)(i), (iii). States must also calculate natural visibility conditions for the clearest and most impaired days,[31] by estimating the conditions that would exist on those two sets of days absent anthropogenic visibility impairment. 40 CFR 51.308(f)(1)(ii). Using all these data, states must then calculate, for each Class I area, the amount of progress made since the baseline period (2000–2004) and how much improvement is left to achieve to reach natural visibility conditions.

Using the data for the set of most impaired days only, states must plot a line between visibility conditions in the baseline period and natural visibility conditions for each Class I area to determine the URP—the amount of visibility improvement, measured in deciviews, that would need to be achieved during each implementation period to achieve natural visibility conditions by the end of 2064. The URP is used in later steps of the reasonable progress analysis for informational purposes and to provide a non-enforceable benchmark against which to assess a Class I area's rate of visibility improvement.[32] Additionally, in the 2017 RHR Revisions, the EPA provided states the option of proposing to adjust the endpoint of the URP to account for impacts of anthropogenic sources outside the United States and/or impacts of certain types of wildland prescribed fires. These adjustments, which must be approved by the EPA, are intended to avoid any perception that states should compensate for impacts from international anthropogenic sources and to give states the flexibility to determine that limiting the use of wildland-prescribed fire is not necessary for reasonable progress. 82 FR at 3107 footnote 116.

The EPA's 2018 Visibility Tracking Guidance can be used to help satisfy the 40 CFR 51.308(f)(1) requirements, including in developing information on baseline, current, and natural visibility conditions, and in making optional adjustments to the URP. In addition, the 2020 Data Completeness Memo provides recommendations on the data completeness language referenced in § 51.308(f)(1)(i) and provides updated natural conditions estimates for each Class I area.

C. Long-Term Strategy for Regional Haze

The core component of a regional haze SIP submission is a long-term strategy that addresses regional haze in each Class I area within a state's borders and each Class I area outside the state that may be affected by emissions from the state. The long-term strategy ''must include the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress, as determined pursuant to (f)(2)(i) through (iv).'' 40 CFR 51.308(f)(2). The amount of progress that is ''reasonable progress'' is based on applying the four statutory factors in CAA section 169A(g)(1) in an evaluation of potential control options for sources of visibility impairing pollutants, which is referred to as a ''four-factor'' analysis.[33] The outcome of that analysis is the emission reduction measures that a particular source or group of sources needs to implement to make reasonable progress towards the national visibility goal. See 40 CFR 51.308(f)(2)(i). Emission reduction measures that are necessary to make reasonable progress may be either new, additional control measures for a source, or they may be the existing emission reduction measures that a source is already implementing. See 2019 Guidance at 43; 2021 Clarifications Memo at 8–10. Such measures must be represented by ''enforceable emissions limitations, compliance schedules, and other measures'' (*i.e.,* any additional compliance tools) in a state's long-term strategy in its SIP. 40 CFR 51.308(f)(2).

Section 51.308(f)(2)(i) provides the requirements for the four-factor analysis. The first step of this analysis entails selecting the sources to be evaluated for emission reduction measures; to this end, the RHR requires states to consider ''major and minor stationary sources or groups of sources, mobile sources, and area sources'' of visibility impairing pollutants for potential four-factor control analysis. 40 CFR 51.308(f)(2)(i). A threshold question at this step is which visibility impairing pollutants will be analyzed. As the EPA previously explained, consistent with the first implementation period, the EPA generally expects that each state will analyze at least SO_2 and NO_X in selecting sources and determining control measures. See 2019 Guidance at 12, 2021 Clarifications Memo at 4. A state that chooses not to consider at least these two pollutants should demonstrate why such consideration would be unreasonable. 2021 Clarifications Memo at 4.

While states have the option to analyze *all* sources, the 2019 Guidance explains that ''an analysis of control measures is not required for every source in each implementation period,'' and that ''[s]electing a set of sources for analysis of control measures in each implementation period is . . . consistent with the Regional Haze Rule, which sets up an iterative planning process and anticipates that a state may not need to analyze control measures for all its sources in a given SIP revision.'' 2019 Guidance at 9. However, given that source selection is the basis of all subsequent control determinations, a reasonable source selection process ''should be designed and conducted to ensure that source selection results in a set of pollutants and sources the evaluation of which has the potential to meaningfully reduce their contributions to visibility impairment.'' 2021 Clarifications Memo at 3.

The EPA explained in the 2021 Clarifications Memo that each state has an obligation to submit a long-term strategy that addresses the regional haze visibility impairment that results from emissions from within that state. Thus, source selection should focus on the in-state contribution to visibility impairment and be designed to capture a meaningful portion of the state's total contribution to visibility impairment in Class I areas. A state should not decline to select its largest in-state sources on the basis that there are even larger out-of-state contributors. 2021 Clarifications Memo at 4.[34]

Thus, while states have discretion to choose any source selection

[31] The RHR at 40 CFR 51.308(f)(1)(ii) contains an error related to the requirement for calculating two sets of natural conditions values. The rule says ''most impaired days or the clearest days'' where it should say ''most impaired days and clearest days.'' This is an error that was intended to be corrected in the 2017 RHR Revisions but did not get corrected in the final rule language. This is supported by the preamble text at 82 FR at 3098: ''In the final version of 40 CFR 51.308(f)(1)(ii), an occurrence of ''or'' has been corrected to ''and'' to indicate that natural visibility conditions for both the most impaired days and the clearest days must be based on available monitoring information.''

[32] Being on or below the URP is not a ''safe harbor''; *i.e.,* achieving the URP does not mean that a Class I area is making ''reasonable progress'' and does not relieve a state from using the four statutory factors to determine what level of control is needed to achieve such progress. See, *e.g.,* 82 FR at 3093.

[33] Four-factor analysis considers the four statutory factors specified in CAA 169A(g)(1) and 40 CFR 51.308(f)(2)(i).

[34] Similarly, in responding to comments on the 2017 RHR Revisions the EPA explained that ''[a] state should not fail to address its many relatively low-impact sources merely because it only has such sources and another state has even more low-impact sources and/or some high impact sources.'' Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016) at 87–88.

methodology that is reasonable, whatever choices they make should be reasonably explained. To this end, 40 CFR 51.308(f)(2)(i) requires that a state's SIP submission include ''a description of the criteria it used to determine which sources or groups of sources it evaluated.'' The technical basis for source selection, which may include methods for quantifying potential visibility impacts such as emissions divided by distance metrics, trajectory analyses, residence time analyses, and/or photochemical modeling, must also be appropriately documented, as required by 40 CFR 51.308(f)(2)(iii).

Once a state has selected the set of sources, the next step is to determine the emissions reduction measures for those sources that are necessary to make reasonable progress for the second implementation period.[35] This is accomplished by considering the four factors—''the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements.'' CAA 169A(g)(1). The EPA has explained that the four-factor analysis is an assessment of potential emission reduction measures (*i.e.,* control options) for sources; ''use of the terms 'compliance' and 'subject to such requirements' in section 169A(g)(1) strongly indicates that Congress intended the relevant determination to be the requirements with which sources would have to comply to satisfy the CAA's reasonable progress mandate.'' 82 FR at 3091. Thus, for each source it has selected for four-factor analysis,[36] a state must consider a ''meaningful set'' of technically feasible control options for reducing emissions of visibility impairing pollutants. Id. at 3088. The 2019 Guidance provides that ''[a] state must reasonably pick and justify the measures that it will consider, recognizing that there is no statutory or regulatory requirement to consider all technically feasible measures or any particular measures. A range of technically feasible measures available to reduce emissions would be one way to justify a reasonable set.'' 2019 Guidance at 29.

The EPA's 2021 Clarifications Memo provides further guidance on what constitutes a reasonable set of control options for consideration: ''A reasonable four-factor analysis will consider the full range of potentially reasonable options for reducing emissions.'' 2021 Clarifications Memo at 7. In addition to add-on controls and other retrofits (*i.e.,* new emissions reduction measures for sources), the EPA explained that states should generally analyze efficiency improvements for sources' existing measures as control options in their four-factor analyses, as in many cases such improvements are reasonable given that they typically involve only additional operation and maintenance costs. Additionally, the 2021 Clarifications Memo provides that states that have assumed a higher emissions rate than a source has achieved or could potentially achieve using its existing measures should also consider lower emissions rates as potential control options. That is, a state should consider a source's recent actual and projected emission rates to determine if it could reasonably attain lower emission rates with its existing measures. If so, the state should analyze the lower emission rate as a control option for reducing emissions. 2021 Clarifications Memo at 7. The EPA's recommendations to analyze potential efficiency improvements and achievable lower emission rates apply to both sources that have been selected for four-factor analysis and those that have forgone a four-factor analysis on the basis of existing ''effective controls.'' See 2021 Clarifications Memo at 5, 10.

After identifying a reasonable set of potential control options for the sources it has selected, a state then collects information on the four factors with regard to each option identified. The EPA has also explained that, in addition to the four statutory factors, states have flexibility under the CAA and RHR to reasonably consider visibility benefits as an additional factor alongside the four statutory factors.[37] The 2019 Guidance provides recommendations for the types of information that can be used to characterize the four factors (with or without visibility), as well as ways in which states might reasonably consider and balance that information to determine which of the potential control options is necessary to make reasonable progress. See 2019 Guidance at 30–36. The 2021 Clarifications Memo contains further guidance on how states can reasonably consider modeled visibility impacts or benefits in the context of a four-factor analysis. 2021 Clarifications Memo at 12–13, 14–15. Specifically, the EPA explained that while visibility can reasonably be used when comparing and choosing between multiple reasonable control options, it should not be used to summarily reject controls that are reasonable given the four statutory factors. 2021 Clarifications Memo at 13. Ultimately, while states have discretion to reasonably weigh the factors and to determine what level of control is needed, § 51.308(f)(2)(i) provides that a state ''must include in its implementation plan a description of . . . how the four factors were taken into consideration in selecting the measure for inclusion in its long-term strategy.''

As explained above, § 51.308(f)(2)(i) requires states to determine the emission reduction measures for sources that are necessary to make reasonable progress by considering the four factors. Pursuant to § 51.308(f)(2), measures that are necessary to make reasonable progress towards the national visibility goal must be included in a state's long-term strategy and in its SIP.[38] If the outcome of a four-factor analysis is a new, additional emission reduction measure for a source, that new measure is necessary to make reasonable progress towards remedying existing anthropogenic visibility impairment and must be included in the SIP. If the

[35] The CAA provides that, ''[i]n determining reasonable progress there shall be taken into consideration'' the four statutory factors. CAA 169A(g)(1). However, in addition to four-factor analyses for selected sources, groups of sources, or source categories, a state may also consider additional emission reduction measures for inclusion in its long-term strategy, *e.g.,* from other newly adopted, on-the-books, or on-the-way rules and measures for sources not selected for four-factor analysis for the second implementation period.

[36] ''Each source'' or ''particular source'' is used here as shorthand. While a source-specific analysis is one way of applying the four factors, neither the statute nor the RHR requires states to evaluate individual sources. Rather, states have ''the flexibility to conduct four-factor analyses for specific sources, groups of sources or even entire source categories, depending on state policy preferences and the specific circumstances of each state.'' 82 FR at 3088. However, not all approaches to grouping sources for four-factor analysis are necessarily reasonable; the reasonableness of grouping sources in any particular instance will depend on the circumstances and the manner in which grouping is conducted. If it is feasible to establish and enforce different requirements for sources or subgroups of sources, and if relevant factors can be quantified for those sources or subgroups, then states should make a separate reasonable progress determination for each source or subgroup. 2021 Clarifications Memo at 7–8.

[37] See, *e.g.,* Responses to Comments on Protection of Visibility: Amendments to Requirements for State Plans; Proposed Rule (81 FR 26942, May 4, 2016), Docket ID Number EPA–HQ–OAR–2015–0531, U.S. Environmental Protection Agency at 186; 2019 Guidance at 36–37.

[38] States may choose to, but are not required to, include measures in their long-term strategies beyond just the emission reduction measures that are necessary for reasonable progress. See 2021 Clarifications Memo at 16. For example, states with smoke management programs may choose to submit their smoke management plans to the EPA for inclusion in their SIPs but are not required to do so. See, *e.g.,* 82 FR at 3108–09 (requirement to consider smoke management practices and smoke management programs under 40 CFR 51.308(f)(2)(iv) does not require states to adopt such practices or programs into their SIPs, although they may elect to do so).

outcome of a four-factor analysis is that no new measures are reasonable for a source, continued implementation of the source's existing measures is generally necessary to prevent future emission increases and thus to make reasonable progress towards the second part of the national visibility goal: preventing future anthropogenic visibility impairment. See CAA 169A(a)(1). That is, when the result of a four-factor analysis is that no new measures are necessary to make reasonable progress, the source's existing measures are generally necessary to make reasonable progress and must be included in the SIP. However, there may be circumstances in which a state can demonstrate that a source's existing measures are *not* necessary to make reasonable progress. Specifically, if a state can demonstrate that a source will continue to implement its existing measures and will not increase its emissions rate, it may not be necessary to have those measures in the long-term strategy to prevent future emissions increases and future visibility impairment. The EPA's 2021 Clarifications Memo provides further explanation and guidance on how states may demonstrate that a source's existing measures are not necessary to make reasonable progress. See 2021 Clarifications Memo at 8–10. If the state can make such a demonstration, it need not include a source's existing measures in the long-term strategy or its SIP.

As with source selection, the characterization of information on each of the factors is also subject to the documentation requirement in § 51.308(f)(2)(iii). The reasonable progress analysis, including source selection, information gathering, characterization of the four statutory factors (and potentially visibility), balancing of the four factors, and selection of the emission reduction measures that represent reasonable progress, is a technically complex exercise, but also a flexible one that provides states with bounded discretion to design and implement approaches appropriate to their circumstances. Given this flexibility, § 51.308(f)(2)(iii) plays an important function in requiring a state to document the technical basis for its decision making so that the public and the EPA can comprehend and evaluate the information and analysis the state relied upon to determine what emission reduction measures must be in place to make reasonable progress. The technical documentation must include the modeling, monitoring, cost, engineering, and emissions information on which the state relied to determine the measures necessary to make reasonable progress. This documentation requirement can be met through the provision of and reliance on technical analyses developed through a regional planning process, so long as that process and its output has been approved by all state participants. In addition to the explicit regulatory requirement to document the technical basis of their reasonable progress determinations, states are also subject to the general principle that those determinations must be reasonably moored to the statute.[39] That is, a state's decisions about the emission reduction measures that are necessary to make reasonable progress must be consistent with the statutory goal of remedying existing and preventing future visibility impairment.

The four statutory factors (and potentially visibility) are used to determine what emission reduction measures for selected sources must be included in a state's long-term strategy for making reasonable progress. Additionally, the RHR at 40 CFR 51.3108(f)(2)(iv) separately provides five ''additional factors'' [40] that states must consider in developing their long-term strategies: (1) Emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment; (2) measures to reduce the impacts of construction activities; (3) source retirement and replacement schedules; (4) basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and (5) the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. The 2019 Guidance provides that a state may satisfy this requirement by considering these additional factors in the process of selecting sources for four-factor analysis, when performing that analysis, or both, and that not every one of the additional factors needs to be considered at the same stage of the process. See 2019 Guidance at 21. The EPA provided further guidance on the five additional factors in the 2021 Clarifications Memo, explaining that a state should generally not reject cost-effective and otherwise reasonable controls merely because there have been emission reductions since the first planning period owing to other ongoing air pollution control programs or merely because visibility is otherwise projected to improve at Class I areas. Additionally, states generally should not rely on these additional factors to summarily assert that the state has already made sufficient progress and, therefore, no sources need to be selected or no new controls are needed regardless of the outcome of four-factor analyses. 2021 Clarifications Memo at 13.

Because the air pollution that causes regional haze crosses state boundaries, § 51.308(f)(2)(ii) requires a state to consult with other states that also have emissions that are reasonably anticipated to contribute to visibility impairment in a given Class I area. Consultation allows for each state that impacts visibility in an area to share whatever technical information, analyses, and control determinations may be necessary to develop coordinated emission management strategies. This coordination may be managed through inter- and intra-RPO consultation and the development of regional emissions strategies; additional consultations between states outside of RPO processes may also occur. If a state, pursuant to consultation, agrees that certain measures (*e.g.,* a certain emission limitation) are necessary to make reasonable progress at a Class I area, it must include those measures in its SIP. 40 CFR 51.308(f)(2)(ii)(A). Additionally, the RHR requires that states that contribute to visibility impairment at the same Class I area consider the emission reduction measures the other contributing states have identified as being necessary to make reasonable progress for their own sources. 40 CFR 51.308(f)(2)(ii)(B). If a state has been asked to consider or adopt certain emission reduction measures, but ultimately determines those measures are not necessary to make reasonable progress, that state must document in its SIP the actions taken to resolve the disagreement. 40 CFR 51.308(f)(2)(ii)(C). The EPA will consider the technical information and explanations presented by the submitting state and the state with which it disagrees when considering whether to approve the state's SIP. See id.; 2019 Guidance at 53. Under all circumstances, a state must document in

[39] See *Arizona ex rel. Darwin* v. *U.S. EPA,* 815 F.3d 519, 531 (9th Cir. 2016); *Nebraska* v. *EPA,* 812 F.3d 662, 668 (8th Cir. 2016); *North Dakota* v. *EPA,* 730 F.3d 750, 761 (8th Cir. 2013); *Oklahoma* v. *EPA,* 723 F.3d 1201, 1206, 1208–10 (10th Cir. 2013); cf. *Nat'l Parks Conservation Ass'n* v. *EPA,* 803 F.3d 151, 165 (3d Cir. 2015); *Alaska Dep't of Envtl. Conservation* v. *EPA,* 540 U.S. 461, 485, 490 (2004).

[40] The five ''additional factors'' for consideration in § 51.308(f)(2)(iv) are distinct from the four factors listed in CAA section 169A(g)(1) and 40 CFR 51.308(f)(2)(i) that states must consider and apply to sources in determining reasonable progress.

its SIP submission all substantive consultations with other contributing states. 40 CFR 51.308(f)(2)(ii)(C).

D. Reasonable Progress Goals

Reasonable progress goals ''measure the progress that is projected to be achieved by the control measures states have determined are necessary to make reasonable progress based on a four-factor analysis.'' 82 FR at 3091. Their primary purpose is to assist the public and the EPA in assessing the reasonableness of states' long-term strategies for making reasonable progress towards the national visibility goal for Class I areas within the state. See 40 CFR 51.308(f)(3)(iii)–(iv). States in which Class I areas are located must establish two RPGs, both in deciviews—one representing visibility conditions on the clearest days and one representing visibility on the most anthropogenically impaired days—for each area within their borders. 40 CFR 51.308(f)(3)(i). The two RPGs are intended to reflect the projected impacts, on the two sets of days, of the emission reduction measures the state with the Class I area, as well as all other contributing states, have included in their long-term strategies for the second implementation period.[41] The RPGs also account for the projected impacts of implementing other CAA requirements, including non-SIP based requirements. Because RPGs are the modeled result of the measures in states' long-term strategies (as well as other measures required under the CAA), they cannot be determined before states have conducted their four-factor analyses and determined the control measures that are necessary to make reasonable progress. See 2021 Clarifications Memo at 6.

For the second implementation period, the RPGs are set for 2028. Reasonable progress goals are not enforceable targets, 40 CFR 51.308(f)(3)(iii); rather, they ''provide a way for the states to check the projected outcome of the [long-term strategy] against the goals for visibility improvement.'' 2019 Guidance at 46. While states are not legally obligated to achieve the visibility conditions described in their RPGs, § 51.308(f)(3)(i) requires that ''[t]he long-term strategy and the reasonable progress goals must provide for an improvement in visibility for the most impaired days since the baseline period and ensure no degradation in visibility for the clearest days since the baseline period.'' Thus, states are required to have emission reduction measures in their long-term strategies that are projected to achieve visibility conditions on the most impaired days that are better than the baseline period and that show no degradation on the clearest days compared to the clearest days from the baseline period. The baseline period for the purpose of this comparison is the baseline visibility condition—the annual average visibility condition for the period 2000–2004. See 40 CFR 51.308(f)(1)(i), 82 FR at 3097–98.

So that RPGs may also serve as a metric for assessing the amount of progress a state is making towards the national visibility goal, the RHR requires states with Class I areas to compare the 2028 RPG for the most impaired days to the corresponding point on the URP line (representing visibility conditions in 2028 if visibility were to improve at a linear rate from conditions in the baseline period of 2000–2004 to natural visibility conditions in 2064). If the most impaired days RPG in 2028 is above the URP (*i.e.,* if visibility conditions are improving more slowly than the rate described by the URP), each state that contributes to visibility impairment in the Class I area must demonstrate, based on the four-factor analysis required under 40 CFR 51.308(f)(2)(i), that no additional emission reduction measures would be reasonable to include in its long-term strategy. 40 CFR 51.308(f)(3)(ii). To this end, 40 CFR 51.308(f)(3)(ii) requires that each state contributing to visibility impairment in a Class I area that is projected to improve more slowly than the URP provide ''a robust demonstration, including documenting the criteria used to determine which sources or groups [of] sources were evaluated and how the four factors required by paragraph (f)(2)(i) were taken into consideration in selecting the measures for inclusion in its long-term strategy.'' The 2019 Guidance provides suggestions about how such a ''robust demonstration'' might be conducted. See 2019 Guidance at 50–51.

The 2017 RHR, 2019 Guidance, and 2021 Clarifications Memo also explain that projecting an RPG that is on or below the URP based on only on-the-books and/or on-the-way control measures (*i.e.,* control measures already required or anticipated before the four-factor analysis is conducted) is not a ''safe harbor'' from the CAA's and RHR's requirement that all states must conduct a four-factor analysis to determine what emission reduction measures constitute reasonable progress. The URP is a planning metric used to gauge the amount of progress made thus far and the amount left before reaching natural visibility conditions. However, the URP is not based on consideration of the four statutory factors and therefore cannot answer the question of whether the amount of progress being made in any particular implementation period is ''reasonable progress.'' See 82 FR at 3093, 3099–3100; 2019 Guidance at 22; 2021 Clarifications Memo at 15–16.

E. Monitoring Strategy and Other State Implementation Plan Requirements

Section 51.308(f)(6) requires states to have certain strategies and elements in place for assessing and reporting on visibility. Individual requirements under this section apply either to states with Class I areas within their borders, states with no Class I areas but that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area, or both. A state with Class I areas within its borders must submit with its SIP revision a monitoring strategy for measuring, characterizing, and reporting regional haze visibility impairment that is representative of all Class I areas within the state. SIP revisions for such states must also provide for the establishment of any additional monitoring sites or equipment needed to assess visibility conditions in Class I areas, as well as reporting of all visibility monitoring data to the EPA at least annually. Compliance with the monitoring strategy requirement may be met through a state's participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) monitoring network, which is used to measure visibility impairment caused by air pollution at the 156 Class I areas covered by the visibility program. 40 CFR 51.308(f)(6), (f)(6)(i), (f)(6)(iv). The IMPROVE monitoring data is used to determine the 20% most anthropogenically impaired and 20% clearest sets of days every year at each Class I area and tracks visibility impairment over time.

All states' SIPs must provide for procedures by which monitoring data and other information are used to determine the contribution of emissions from within the state to regional haze visibility impairment in affected Class I areas. 40 CFR 51.308(f)(6)(ii), (iii). Section 51.308(f)(6)(v) further requires

[41] RPGs are intended to reflect the projected impacts of the measures all contributing states include in their long-term strategies. However, due to the timing of analyses, control determinations by other states, and other on-going emissions changes, a particular state's RPGs may not reflect all control measures and emissions reductions that are expected to occur by the end of the implementation period. The 2019 Guidance provides recommendations for addressing the timing of RPG calculations when states are developing their long-term strategies on disparate schedules, as well as for adjusting RPGs using a post-modeling approach. 2019 Guidance at 47–48.

that all states' SIPs provide for a statewide inventory of emissions of pollutants that are reasonably anticipated to cause or contribute to visibility impairment in any Class I area; the inventory must include emissions for the most recent year for which data are available and estimates of future projected emissions. States must also include commitments to update their inventories periodically. The inventories themselves do not need to be included as elements in the SIP and are not subject to the EPA's review as part of the Agency's evaluation of a SIP revision.[42] All states' SIPs must also provide for any other elements, including reporting, recordkeeping, and other measures, that are necessary for states to assess and report on visibility. 40 CFR 51.308(f)(6)(vi). Per the 2019 Guidance, a state may note in its regional haze SIP that its compliance with the Air Emissions Reporting Rule (AERR) in 40 CFR part 51, subpart A satisfies the requirement to provide for an emissions inventory for the most recent year for which data are available. To satisfy the requirement to provide estimates of future projected emissions, a state may explain in its SIP how projected emissions were developed for use in establishing RPGs for its own and nearby Class I areas.[43]

Separate from the requirements related to monitoring for regional haze purposes under 40 CFR 51.308(f)(6), the RHR also contains a requirement at § 51.308(f)(4) related to any additional monitoring that may be needed to address visibility impairment in Class I areas from a single source or a small group of sources. This is called ''reasonably attributable visibility impairment.'' [44] Under this provision, if the EPA or the FLM of an affected Class I area has advised a state that additional monitoring is needed to assess reasonably attributable visibility impairment, the state must include in its SIP revision for the second implementation period an appropriate strategy for evaluating such impairment.

F. Requirements for Periodic Reports Describing Progress Towards the Reasonable Progress Goals

Section 51.308(f)(5) requires a state's regional haze SIP revision to address the requirements of paragraphs 40 CFR 51.308(g)(1) through (5) so that the plan revision due in 2021 will serve also as a progress report addressing the period since submission of the progress report for the first implementation period. The regional haze progress report requirement is designed to inform the public and the EPA about a state's implementation of its existing long-term strategy and whether such implementation is in fact resulting in the expected visibility improvement. See 81 FR 26942, 26950 (May 4, 2016), (82 FR at 3119, January 10, 2017). To this end, every state's SIP revision for the second implementation period is required to describe the status of implementation of all measures included in the state's long-term strategy, including BART and reasonable progress emission reduction measures from the first implementation period, and the resulting emissions reductions. 40 CFR 51.308(g)(1) and (2).

A core component of the progress report requirements is an assessment of changes in visibility conditions on the clearest and most impaired days. For second implementation period progress reports, § 51.308(g)(3) requires states with Class I areas within their borders to first determine current visibility conditions for each area on the most impaired and clearest days, 40 CFR 51.308(g)(3)(i), and then to calculate the difference between those current conditions and baseline (2000–2004) visibility conditions to assess progress made to date. See 40 CFR 51.308(g)(3)(ii). States must also assess the changes in visibility impairment for the most impaired and clearest days since they submitted their first implementation period progress reports. See 40 CFR 51.308(g)(3)(iii), (f)(5). Since different states submitted their first implementation period progress reports at different times, the starting point for this assessment will vary state by state.

Similarly, states must provide analyses tracking the change in emissions of pollutants contributing to visibility impairment from all sources and activities within the state over the period since they submitted their first implementation period progress reports. See 40 CFR 51.308(g)(4), (f)(5). Changes in emissions should be identified by the type of source or activity. Section 51.308(g)(5) also addresses changes in emissions since the period addressed by the previous progress report and requires states' SIP revisions to include an assessment of any significant changes in anthropogenic emissions within or outside the state. This assessment must explain whether these changes in emissions were anticipated and whether they have limited or impeded progress in reducing emissions and improving visibility relative to what the state projected based on its long-term strategy for the first implementation period.

G. Requirements for Federal Land Manager Coordination

CAA section 169A(d) requires that before a state holds a public hearing on a proposed regional haze SIP revision, it must consult with the appropriate FLM or FLMs; pursuant to that consultation, the state must include a summary of the FLMs' conclusions and recommendations in the notice to the public. Consistent with this statutory requirement, the RHR also requires that states ''provide the [FLM] with an opportunity for consultation, in person and at a point early enough in the State's policy analyses of its long-term strategy emission reduction obligation so that information and recommendations provided by the [FLM] can meaningfully inform the State's decisions on the long-term strategy.'' 40 CFR 51.308(i)(2). Consultation that occurs 120 days prior to any public hearing or public comment opportunity will be deemed ''early enough,'' but the RHR provides that in any event the opportunity for consultation must be provided at least 60 days before a public hearing or comment opportunity. This consultation must include the opportunity for the FLMs to discuss their assessment of visibility impairment in any Class I area and their recommendations on the development and implementation of strategies to address such impairment. 40 CFR 51.308(i)(2). For the EPA to evaluate whether FLM consultation meeting the requirements of the RHR has occurred, the SIP submission should include documentation of the timing and content of such consultation. The SIP revision submitted to the EPA must also describe how the state addressed any comments provided by the FLMs. 40 CFR 51.308(i)(3). Finally, a SIP revision must provide procedures for continuing consultation between the state and FLMs regarding the state's visibility protection program, including development and review of SIP revisions, five-year progress reports, and the implementation of other programs having the potential to contribute to impairment of visibility in Class I areas. 40 CFR 51.308(i)(4).

IV. The EPA's Evaluation of North Dakota's Regional Haze Submission for the Second Implementation Period

The EPA is proposing approval for the portions of North Dakota's 2022 SIP submission relating to CAA 169A and 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility

[42] See ''Step 8: Additional requirements for regional haze SIPs'' in 2019 Guidance at 55.

[43] Id.

[44] The EPA's visibility protection regulations define ''reasonably attributable visibility impairment'' as ''visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.'' 40 CFR 51.301.

conditions, progress to date, and the uniform rate of progress; 40 CFR 51.308(f)(4): reasonably attributable visibility impairment; 40 CFR 51.308(f)(5): progress report requirements; and 40 CFR 51.308(f)(6): monitoring strategy and other implementation plan requirements. The EPA is proposing disapproval for the portions of North Dakota's 2022 SIP submission relating to CAA 169A and 40 CFR 51.308(f)(2): long-term strategy; 40 CFR 51.308(f)(3): reasonable progress goals; and 40 CFR 51.308(i): FLM consultation.

A. Calculations of Baseline, Current, and Natural Visibility Conditions; Progress to Date; and the Uniform Rate of Progress Under 40 CFR 51.308(f)(1)

Section 51.308(f)(1) requires states to determine the following for ''each mandatory Class I Federal area located within the State'': baseline visibility conditions for the most impaired and clearest days, natural visibility conditions for the most impaired and clearest days, progress to date for the most impaired and clearest days, the differences between current visibility conditions and natural visibility conditions, and the URP. This section also provides the option for states to propose adjustments to the URP line for a Class I area to account for visibility impacts from anthropogenic sources outside the United States and/or the impacts from wildland prescribed fires that were conducted for certain specified objectives. 40 CFR 51.308(f)(1)(vi)(B).

North Dakota has two Class I areas located within the state: Lostwood Wilderness Area and Theodore Roosevelt National Park. North Dakota included visibility condition determinations for these Class I areas in its 2022 SIP submission.

In its 2022 SIP submission, North Dakota determined that Lostwood Wilderness Area has 2000–2004 baseline visibility conditions of 8.2 deciviews on the 20% clearest days and 18.3 deciviews on the 20% most impaired days.[45] North Dakota calculated an estimated natural background visibility of 2.9 deciviews on the 20% clearest days and 5.9 deciviews on the 20% most impaired days.[46] The current visibility conditions, which are based on 2014–2018 monitoring data, were 7.5 deciviews on the clearest days and 16.2 deciviews on the most impaired days, which are 4.6 deciviews and 10.3 deciviews greater than natural conditions on the respective sets of days.[47] North Dakota noted that while the five-year rolling average IMPROVE data from 2014–2018 indicate that Lostwood Wilderness Area is 0.80 deciviews above the unadjusted URP, that data also show that the area is 0.77 deciviews below the URP when adjusted for international impacts and prescribed fire.[48] When the URP is adjusted for these impacts, an annual decrease of 0.08 deciviews is needed to reach natural visibility on the 20% most impaired days.[49]

In its 2022 SIP submission, North Dakota determined that Theodore Roosevelt National Park has 2000–2004 baseline visibility conditions of 7.8 deciviews on the 20% clearest days and 16.4 deciviews on the 20% most impaired days.[50] North Dakota calculated an estimated natural background visibility of 3.0 deciviews on the 20% clearest days and 5.9 deciviews on the 20% most impaired days.[51] The current visibility conditions, which are based on 2014–2018 monitoring data, were 5.9 deciviews on the clearest days and 14.1 deciviews on the most impaired days, which are 2.9 deciviews and 8.2 deciviews greater than natural conditions on the respective sets of days.[52] North Dakota noted that while the five-year rolling average IMPROVE data from 2014–2018 indicates that Theodore Roosevelt National Park is 0.80 deciviews above the unadjusted URP, the five-year rolling average IMPROVE data from 2014–2018 indicates that the park is 1.17 deciviews below the URP when adjusted for international impacts and prescribed fire.[53] When the URP is adjusted for these impacts, an annual decrease of 0.06 deciviews is needed to reach natural visibility on the 20% most impaired days.[54]

Based on this information, which is provided in section 3.2 of North Dakota's 2022 SIP submission, the EPA finds that the visibility condition calculations for Lostwood Wilderness Area and Theodore Roosevelt National Park meet the requirements of 40 CFR 51.308(f)(1). For this reason, the EPA proposes to approve the portions of North Dakota's 2022 SIP submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions, progress to date, and the uniform rate of progress.

B. North Dakota's Long-Term Strategy Under CAA 169A and 40 CFR 51.308(f)(2)

Each state having a Class I area within its borders or emissions that may affect visibility in any Class I area outside the state must develop a long-term strategy for making reasonable progress towards the national visibility goal for each impacted Class I area. CAA 169A(b)(2)(B). As explained in the Background section of this document, reasonable progress is achieved when all states contributing to visibility impairment in a Class I area are implementing the measures determined—through application of the four statutory factors to sources of visibility impairing pollutants—to be necessary to make reasonable progress. 40 CFR 51.308(f)(2)(i). Each state's long-term strategy must include the enforceable emission limitations, compliance schedules, and other measures that are necessary to make reasonable progress. 40 CFR 51.308(f)(2). All new (*i.e.,* additional) measures that are the outcome of four-factor analyses are necessary to make reasonable progress and must be in the long-term strategy. If the outcome of a four-factor analysis and other measures necessary to make reasonable progress is that no new measures are reasonable for a source, that source's existing measures are necessary to make reasonable progress, unless the state can demonstrate that the source will continue to implement those measures and will not increase its emission rate. Existing measures that are necessary to make reasonable progress must also be in the long-term strategy. In developing its long-term strategy, a state must also consider the five additional factors in § 51.308(f)(2)(iv). As part of its reasonable progress determinations, the state must describe the criteria used to

[45] North Dakota's 2022 SIP submission, 49, ''Table 6: ''IMPROVE Sites Clearest and Most Impaired Days Values.''

[46] Id. at 49, ''Table 7: ''Natural Visibility for the Most Impaired and Clearest Days.''

[47] Id. at 50, ''Table 8: ''Current (2014–2018) Visibility for the Most Impaired and Clearest Days.''

[48] Id. at 52, ''Figure 17: LWA Most Impaired Days Progress from 2000–2018'' and ''Figure 21: LWA Most Impaired Days Progress with Adjusted Glidepath from 2000–2018.''

[49] Id. at 56, ''Figure 21: LWA Most Impaired Days Progress with Adjusted Glidepath from 2000–2018.''

[50] Id. at 49, ''Table 6: ''IMPROVE Sites Clearest and Most Impaired Days Values.''

[51] Id. at 49, ''Table 7: ''Natural Visibility for the Most Impaired and Clearest Days.''

[52] Id. at 50, ''Table 8: ''Current (2014–2018) Visibility for the Most Impaired and Clearest Days.''

[53] Id. at 53, ''Figure 18: TRNP Most Impaired Days Progress from 2000–2018'' and 57, ''Figure 22: TRNP Most Impaired Days Progress with Adjusted Glidepath from 2000–2018.''

[54] Id. at 57, ''Figure 22: TRNP Most Impaired Days Progress with Adjusted Glidepath from 2000–2018.''

determine which sources or group of sources were evaluated (*i.e.,* subjected to four-factor analysis) for the second implementation period and how the four factors were taken into consideration in selecting the emission reduction measures for inclusion in the long-term strategy. 40 CFR 51.308(f)(2)(iii).

States may rely on technical information developed by the RPOs of which they are members to select sources for four-factor analysis and to conduct that analysis, as well as to satisfy the documentation requirements under § 51.308(f). Where an RPO has performed source selection and/or four-factor analyses (or considered the five additional factors in § 51.308(f)(2)(iv)) for its member states, those states may rely on the RPO's analyses for the purpose of satisfying the requirements of § 51.308(f)(2)(i) so long as the states have a reasonable basis to do so and all state participants in the RPO process have approved the technical analyses. 40 CFR 51.308(f)(3)(iii). States may also satisfy the requirement of § 51.308(f)(2)(ii) to engage in interstate consultation with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in a given Class I area under the auspices of intra- and inter-RPO engagement.

The EPA is proposing to disapprove North Dakota's long-term strategy for the second planning period. As detailed in this notice of proposed rulemaking, we find that North Dakota has not met the requirements of CAA 169A(b)(2) and § 51.308(f)(2) on two separate grounds: (1) it relied on non-statutory rationales to reject controls it evaluated under the four statutory factors at Coyote Station and Antelope Valley; and (2) it failed to consider the four factors for Coal Creek and unreasonably rejected controls at Coal Creek and Leland Olds.

1. North Dakota's Long-Term Strategy Under CAA 169A and 40 CFR 51.308(f)(2)(i)

Section 169A(b)(2) of the CAA requires each state in which any Class I area is located or ''the emissions from which may reasonably be anticipated to cause or contribute to any impairment of visibility'' in a Class I area to have a plan for making reasonable progress toward the national visibility goal. CAA section 169A(g)(1) specifies: ''[I]n determining reasonable progress there shall be taken into consideration the costs of compliance, the time necessary for compliance, and the energy and nonair quality environmental impacts of compliance, and the remaining useful life of any existing source subject to such requirements.'' [55] The RHR implements this statutory requirement in 40 CFR 51.308(f) for the second and subsequent planning periods for regional haze. 40 CFR 51.308(f) requires states to submit a long-term strategy that addresses regional haze visibility impairment for each mandatory Class I area within the state and for each mandatory Class I area located outside the state that may be affected by emissions from the state. 40 CFR 51.308(f)(2)(i) lays out the CAA 169A four-factor criteria for the evaluation and development of the long-term strategy.

In its 2022 SIP submission, North Dakota focused its control strategy analysis for the second planning period on emissions of NO_X and SO_2. NO_X and SO_2 are the two main pollutants that react to form ammonium nitrates and ammonium sulfates, the main visibility impairing pollutants that affect visibility at Class I areas in North Dakota on the most impaired days. In North Dakota, point sources are the largest contributors to SO_2 and NO_X. Thus, North Dakota focused on existing point sources in this planning period. North Dakota also evaluated oil and gas upstream operations.

North Dakota selected ten facilities for four-factor analysis: Coyote Station, Antelope Valley, Milton R. Young Station, Coal Creek Station, Leland Olds Station, Heskett Station, Little Knife Gas Plant, Tioga Gas Plant, Northern Border Compressor Station #4, and Synfuels. Based on an analysis of the four factors, North Dakota declined to require additional emissions limitations, compliance schedules, or control measures at the selected sources. It determined that existing measures for all ten facilities comprise what is necessary to make reasonable progress and included those measures in its long-term strategy for the second implementation period. As detailed below, we are proposing to disapprove North Dakota's long-term strategy because the State did not meet the requirements of CAA 169A(b)(2), CAA 169A(g)(1), and 40 CFR 51.308(f)(2) by improperly relying on non-statutory considerations in its evaluation of Coyote Station and Antelope Valley and unreasonably rejecting controls at Coal Creek and Leland Olds.

[55] We refer to the CAA section 169A(g)(1) requirements as the four factors.

a. Reliance on Non-Statutory Considerations To Reject Reasonable Controls at Coyote Station and Antelope Valley

Coyote Station and Antelope Valley are EGUs located in Mercer County, North Dakota. Coyote Station is a single unit EGU with a capacity to produce approximately 450 megawatts (MW) per hour of electricity. Antelope Valley is a two-unit EGU. Each unit at Antelope Valley has the capacity to produce approximately 470 MW per hour of electricity. For Coyote Station and Antelope Valley, North Dakota evaluated the time necessary for compliance, energy and nonair quality environmental impacts, and remaining useful life, ultimately concluding that these factors were not significant enough to eliminate any of the potential control measures the State identified. Of the four statutory factors, North Dakota considered the costs of compliance most heavily in its identification of controls for modeling review and to determine whether those controls are necessary for reasonable progress.[56] For Coyote Station, North Dakota evaluated two sets of controls: (1) selective non-catalytic reduction (SNCR) for NO_X control (at $1,700/ton of NO_X removed) and replacement of the existing SO_2 absorber (at $1,800/ton of SO_2 removed), which are consistent with control technologies and emissions rates of similar EGUs subject to the BART requirements; and (2) modification of the flue gas desulfurization (FGD) controls for SO_2 (at $400/ton of SO_2 removed), which would limit capital expenditures and facility modifications.[57] For Antelope Valley, North Dakota evaluated an SO_2 control of increasing the stoichiometric ratio [58] on the existing FGD (at $700/ton of SO_2 removed), in line with control technologies and emissions rates of similar EGUs subject to the BART requirements; it did not select any NO_X controls for evaluation.[59]

Following its evaluation of controls under the four-factor analysis, the State then conducted a visibility modeling evaluation to assess the visibility improvements that could result from installation of controls at Coyote Station

[56] North Dakota's 2022 SIP submission at 99, 101.

[57] Id. at 99–100. North Dakota did not determine these costs to be unreasonable in its 2022 SIP submission.

[58] Stoichiometric ratio relates to the efficiency of the use of the reagent that reacts with SO_2. Stoichiometric ratio is defined as moles of reagent per mole of SO_2. Increasing the stoichiometric ratio will reduce the emission of SO_2.

[59] North Dakota's 2022 SIP submission at 101–02. North Dakota did not determine the costs of the evaluated controls to be unreasonable in its 2022 SIP submission.

and Antelope Valley. North Dakota then declined to impose new emission limits on Coyote Station and Antelope Valley associated with the controls evaluated through its four-factor analysis, citing two separate bases: (1) the modeling showed no significant change in visibility at Lostwood Wilderness Area and Theodore Roosevelt National Park because improvements were smaller than could be perceived by an unaided human eye; and (2) Lostwood Wilderness Area and Theodore Roosevelt National Park were projected to achieve the adjusted URP by 2028.[60] North Dakota made no argument that the controls were not cost-effective. The State's rationales, whether individually or in combination, are not supported by the CAA and the RHR and do not justify North Dakota's rejection of cost-effective[61] and otherwise reasonable controls at Coyote Station and Antelope Valley.

i. North Dakota Unreasonably Rejected Controls Based on Visibility Modeling

North Dakota used two emission control scenarios to model potential visibility improvements at Theodore Roosevelt National Park and Lostwood Wilderness. Visibility modeling for the first scenario (installing controls similar to BART at Coyote Station and increasing the stoichiometric ratio on the existing FGD unit at Antelope Valley) resulted in projected visibility improvement of 0.10 deciviews at Lostwood Wilderness Area and 0.08 deciviews at Theodore Roosevelt National Park. Visibility modeling for the second scenario (installing controls at Coyote Station based on ''limited capital expenditure and facility modifications, while still achieving sizeable [emission] reductions'') produced projected visibility improvement of 0.04 deciviews at Lostwood Wilderness Area and 0.03 deciviews at Theodore Roosevelt National Park.[62] North Dakota rejected both control scenarios for inclusion in its long-term strategy because these visibility improvements ''are not considered significant since the improvements are smaller than what is perceptible by an unaided human eye.''[63]

As explained in section B.1.a.i.(a) below, we find that North Dakota unreasonably relied on visibility modeling to reject controls at Coyote Station and Antelope Valley. Whether visibility impacts are ''significant'' or ''perceptible'' is not a sufficient basis to reject cost-effective and otherwise reasonable emission controls under the CAA and RHR. In addition, North Dakota's visibility analysis failed to account for visibility impacts at out-of-state Class I areas that may be affected by emissions from North Dakota.

(a) Modeling Showing No ''Significant'' Change in Visibility Is Not a Sufficient Basis To Reject Controls Under CAA 169A and 40 CFR 51.308(f)(2)(i)

North Dakota improperly rejected controls for Coyote Station and Antelope Valley that it evaluated via the four-factor analysis required by CAA 169A(g)(1) and 40 CFR 51.308(f)(2)(i) based on consideration of whether the visibility improvement from those controls would be ''significant.'' The State's rationale lacks foundation in both the text and the purpose of the CAA and RHR. Nowhere in the statute or regulations is there a requirement that control measures produce perceptible visibility improvements to be considered necessary to make reasonable progress at a particular Class I area. The 2017 RHR explained: ''Regional haze is visibility impairment that is caused by the emission of air pollutants from numerous sources located over a wide geographic area. At any given Class I area, hundreds or even thousands of individual sources may contribute to regional haze. Thus, it would not be appropriate for a state to reject a control measure (or measures) because its effect on the RPG is subjectively assessed as not 'meaningful.' ''[64] Even though the visibility impacts of emissions from some individual sources may not be ''perceptible'' (as determined by North Dakota), those sources may still have a meaningful impact on visibility in the aggregate.[65] Achieving Congress's national goal will require serious evaluation of control measures at Antelope Valley and Coyote Station, particularly because the largest individual contributors to visibility impairment have already been controlled or retired.[66]

After evaluating control measures for Coyote Station and Antelope Valley using four-factor analysis, North Dakota then determined, based on the results of visibility modeling, that those controls were not necessary to make reasonable progress toward meeting the national goal without tying that determination back to the four statutory factors. The CAA and RHR are clear that the four statutory factors must be considered when determining the enforceable emissions limitations, schedules of compliance, or other measures that are necessary for reasonable progress toward meeting the national goal. Nothing in the language of either the CAA or the RHR suggests that non-statutory factors, such as whether visibility improvement is ''perceptible'' or ''significant,'' can outweigh the results of an analysis based on those factors explicitly prescribed in the statute. As the EPA has previously explained, states should not use visibility impacts to summarily dismiss cost-effective potential controls,[67] as North Dakota has done.[68] The EPA has interpreted the CAA and RHR to allow states to consider visibility alongside the four statutory factors. For example, visibility modeling can be used to compare the visibility benefits of cost-effective controls selected through four-factor analysis to determine which controls produce the greatest visibility benefits compared to their costs, or prioritizing which among several sources should install controls during a planning period.[69] By contrast, North

[60] Id. at 100, 102.

[61] The 2019 Guidance emphasized that ''[w]hen the cost/ton of a possible measure is within the range of the cost/ton values that have been incurred multiple times by sources of similar type to meet regional haze requirements or any other CAA requirement, this weighs in favor of concluding that the cost of compliance is not an obstacle to the measure being considered necessary to make reasonable progress.'' 2019 Guidance at 40. The NO_X and SO_2 controls that North Dakota evaluated for Coyote Station and Antelope Valley range from $400/ton to $1800/ton. North Dakota did not determine these costs to be unreasonable. Indeed, these cost-effectiveness values are in line with—and in some cases well below—those the EPA and states found reasonable for regional haze control measures in the first planning period, even without adjusting for inflation. After evaluating first planning period cost of compliance values, plus the other BART statutory factors and/or the four reasonable progress statutory factors, the vast majority of cost/ton values <$2,500/ton were found to be reasonable and cost-effective. This includes control determinations for sources both within North Dakota and in other states. Examples for several sources can be found at: 76 FR 16168, 16180–81 (Mar. 22, 2011) (proposed), finalized at 76 FR 81728 (Dec. 28, 2011) (Oklahoma); 76 FR 58570, 58586 (Sept. 21, 2011) (proposed), finalized at 77 FR 20894 (Apr. 6, 2012) (North Dakota); 77 FR 24794, 24817 (Apr. 25, 2012) (proposed), finalized at 77 FR 51915 (Aug. 28, 2012) (New York); 77 FR 18052, 18070–71 (Mar. 26, 2012) (proposed), finalized at 77 FR 76871 (Dec. 31, 2012) (Colorado); and 77 FR 73369, 73378 (Dec. 10, 2012) (proposed), finalized at 78 FR 53250 (Aug. 29, 2013) (Florida). The cited costs have not been adjusted for inflation.

[62] North Dakota's 2022 SIP submission at 100.

[63] Id. at 100 (Coyote Station), 102 (Antelope Valley).

[64] 82 FR at 3093.

[65] 2021 Clarifications Memo at 14.

[66] Id.

[67] Id. at 13.

[68] North Dakota's 2022 SIP submission at 100 (concluding that ''[s]ince the modeling has indicated no expected significant change in visibility . . . the Department does not believe any additional SO_2 or NO_X controls at Coyote should be required for installation during this planning period''), 102 (reaching same conclusion for Antelope Valley).

[69] 2021 Clarifications Memo at 12–13.

Dakota employed the non-statutory factor of ''insignificant'' visibility benefit as the basis for rejecting controls, using it to outweigh controls shown to be reasonable by proper application of the four statutory factors. This is inconsistent with the CAA.

Recent annual emissions data from EPA's Clean Air Markets Program Data also contradict North Dakota's conclusion that no controls are needed for Antelope Valley and Coyote Station due to the lack of ''significant'' visibility improvement for otherwise cost-effective controls. In fact, Antelope Valley and Coyote Station ranked 17th and 18th, respectively, in facility-wide SO_2 emissions across the United States.[70] Across all states, North Dakota's EGU SO_2 emissions ranked 10th.[71] The magnitude of SO_2 emissions from Antelope Valley and Coyote Station specifically, as well as all of North Dakota's EGUs statewide, combined with the outcome of the four-factor analyses, emphasize that emission reductions at Antelope Valley and Coyote Station from additional SO_2 controls could result in meaningful improvement at impacted Class I areas and achieve reasonable progress.

Additionally, even if using ''insignificant'' visibility benefit to outweigh the four statutory factors were allowable, North Dakota relied on an overly narrow analysis of the visibility modeling. The State considered projected visibility improvements only on the most impaired days, as opposed to analyzing projected visibility improvements for all of the days, to reject controls at Coyote Station and Antelope Valley.[72] The CAA and RHR, however, require states to make reasonable progress toward both remedying any existing *and* preventing any future visibility impairment; focusing on only the most impaired days ignores the latter statutory directive.[73] As the EPA has previously explained, assessing overall visibility impairment on the 20 percent most impaired and clearest days is the required metric for tracking visibility impairment at Class I areas.[74] Assessing modeled visibility improvement on only the most impaired days may not accurately reflect individual sources' contribution to overall visibility impairment at Class I areas.[75] Depending on wind direction and other meteorological factors, emissions from a single source may not always or frequently impact a particular Class I area, but there may be individual day visibility impacts that are important to consider (both within the set of 20 percent most impaired days and outside that set of days). Thus, the EPA has recommended examination of the maximum daily visibility impact on all days as a more meaningful metric for individual source visibility modeling.[76]

Finally, even if these values from the modeled visibility improvement projections adequately accounted for the important meteorological variability and other parameters, North Dakota improperly discounted these values in formulating its long-term strategy. Put into the proper context, visibility improvements in two Class I areas in the range of 0.03 to 0.04 deciviews (in the case of ''limited capital expenditure'' controls at just one source, Coyote Station) and 0.08 to 0.10 deciviews (in the case of BART-consistent and modification-based controls at Coyote Station and Antelope Valley) may be considered a meaningful improvement. Because regional haze is caused by hundreds of thousands of sources across a wide geographic area, very few if any sources will individually have impacts that would meet a threshold considered perceptible to the human eye.[77] Nonetheless, these impacts, even if not individually perceptible, have a meaningful impact on visibility in Class I areas in the aggregate.[78]

(b) North Dakota Failed To Consider Visibility Impacts at Out-of-State Class I Areas

North Dakota's reliance on visibility modeling to reject controls at Coyote Station and Antelope Valley is also unreasonable because it failed to consider visibility impacts at out-of-state Class I areas. North Dakota modeled potential visibility improvements only at its two in-state Class I areas: Theodore Roosevelt National Park and Lostwood Wilderness Area. However, the record shows that North Dakota sources are reasonably anticipated to cause or contribute to visibility impairment at out-of-state Class I areas including Medicine Lake Wilderness Area, Badlands National Park, Voyageurs National Park, and Boundary Waters Canoe Area Wilderness. North Dakota's evaluation of visibility improvements did not consider these out-of-state Class I areas; in fact, the long-term strategy chapter (section 5) of North Dakota's 2022 SIP submission does not even reference out-of-state Class I areas. Thus, North Dakota's evaluation of visibility improvements, which it relied on to determine that controls at Coyote Station and Antelope Valley are not necessary to make reasonable progress at Class I areas that may be affected by emissions from North Dakota, is not supported by the record.

North Dakota's 2022 SIP submission includes numerous data points showing the impact of North Dakota sources on out-of-state Class I areas. However, it is not entirely clear whether North Dakota made a determination on whether its sources ''may reasonably be anticipated to cause or contribute to any impairment of visibility'' in those out-of-state Class I areas.[79] On the one hand, North Dakota asserted that ''[d]ue to the insignificant impacts from North Dakota sources on out of state CIAs, no sources were identified as reasonably anticipated to impact out of state CIAs.'' [80] On the other, North Dakota also repeatedly acknowledged, based on its review of WRAP visibility modeling data, that its sources potentially contribute to visibility impairment in several out-of-state Class I areas.[81] Based on our review of WRAP Weighted Emission Potential (WEP) [82] results, WRAP source-apportionment data available via WRAP's Technical Support System (TSS), and visibility impairment contribution modeling from Minnesota's 2022 SIP submission, we find that North Dakota sources are reasonably anticipated to contribute to impairment in out-of-state Class I areas including Medicine Lake Wilderness Area, Badlands National Park, Voyageurs National Park, and Boundary Waters Canoe Area Wilderness. Thus, North Dakota was required to develop a long-term strategy that includes the emission reduction measures necessary to make reasonable progress in both in-state and out-of-state Class I areas that may be affected by emissions from North Dakota.

For impacts on Montana's Class I areas, North Dakota states in its 2022 SIP submission that Figure 14 in appendix C.3–9 (WEP results for Medicine Lake Wilderness Area in Montana) ''shows that North Dakota EGU sources have some potential for impairment regarding SO_2 and NO_X.'' Also, in appendix C.3 of North Dakota's

[70] ''CAMPD Emissions Custom Data Download,'' available in the docket for this action.

[71] Id.

[72] North Dakota's 2022 SIP submission, 100, 102.

[73] CAA 169A(a)(1), (b)(2)(B), and (g)(1); 40 CFR 51.308(f)(2)(i).

[74] 40 CFR 51.308(f)(1); 2019 Guidance at 15.

[75] 2019 Guidance at 15–16.

[76] Id.

[77] 2021 Clarifications Memo at 14.

[78] Id.

[79] CAA 169A(b)(2).

[80] North Dakota's 2022 SIP submission at 39.

[81] Id., appendix C.3.3–C.3.9, C.3.12–C.3.13, C.3.16.

[82] WEP is a quantitative method of analyzing how pollutants from particular sources may be transported to other areas.

2022 SIP submission, North Dakota states that ''Figure 15 demonstrates the potential for impairment from North Dakota oil and gas sources.'' In Figures 14 and 15, sources in the western half of North Dakota have ammonium nitrate and ammonium sulfate extinction weighted residence time impacts as large as 5 to 10% of the total extinction weighted residence time at Medicine Lake Wilderness Area.[83] Thus, Figures 14 and 15 clearly show potential for impairment of Medicine Lake Wilderness Area from both North Dakota EGU and oil and gas sources. North Dakota's own data, presented in Figures 14 and 15, demonstrates the potential for impairment of visibility at Medicine Lake Wilderness Area from sources within North Dakota.

In addition, the data in WRAP's TSS indicate that North Dakota sources are reasonably anticipated to impact Medicine Lake Wilderness Area. The EPA used WRAP's State Source Group Contributions to U.S. Anthropogenic Impairment tool for Medicine Lake Wilderness Area to analyze North Dakota sources' contribution to visibility impairment in that area. In terms of both ammonium sulfate extinction (0.86 Mm^{-1}) and ammonium nitrate extinction (0.99 Mm^{-1}), North Dakota had a greater impact on visibility impairment than any other WRAP state, including Montana (0.64 Mm^{-1} ammonium nitrate extinction and 0.57 Mm^{-1} ammonium sulfate extinction), where Medicine Lake Wilderness Area is located.[84] Even with all this data, North Dakota did not consider the visibility impacts on Medicine Lake Wilderness Area when it rejected controls at Coyote Station and Antelope Valley, following four-factor analysis, on the basis that the associated visibility benefits at Class I areas were not significant enough to justify inclusion of those controls in its long-term strategy.

For impacts on South Dakota's Class I areas, North Dakota's analysis of WEP results indicates that in-state potential contributions to impairment to Badlands National Park are due to emissions from the EGU and oil and gas sectors. In Figure 21 of appendix C.3–13 of North Dakota's 2022 SIP submission, several sources in the western half of North Dakota show impacts greater than 0.5% to 10% of the total extinction weighted residence time at Badlands National Park.[85] Figure 22 in North Dakota's 2022 SIP submission shows EGU ammonium nitrate and ammonium sulfate extinction weighted residence time impacts of 1 to 10% of the total extinction weighted residence time at Badlands National Park.[86] In Figure 23, multiple grid cells in North Dakota with oil and gas sources show contributions of 1 to 3% of the total extinction weighted residence time at Badlands National Park.[87]

In addition, WRAP's State Source Group Contributions to US Anthropogenic Impairment tool for Badlands National Park shows that visibility impairing pollutants from North Dakota sources contribute more to visibility impairment at Badlands National Park than any other state. In fact, North Dakota sources have a greater contribution to visibility impairment at Badlands National Park than sources in South Dakota, where Badlands National Park is located.[88] North Dakota sources contribute ammonium sulfate extinction of 0.74 Mm^{-1} and ammonium nitrate extinction of 0.36 Mm^{-1}, while South Dakota sources contribute ammonium sulfate extinction of 0.03 Mm^{-1} and ammonium nitrate extinction of 0.13 Mm^{-1}.[89] Here too, North Dakota failed to consider visibility impacts on Badlands National Park when it rejected controls at Coyote Station and Antelope Valley, following four-factor analysis, on the basis that the associated visibility benefits at Class I areas were not significant enough to justify inclusion of those controls in its long-term strategy.

For impacts on Minnesota Class I areas, North Dakota states in Figure 10 in appendix C.3–7 of its 2022 SIP submission (WEP results for Voyageurs National Park in Minnesota) that ''North Dakota EGU sources show some potential for impairment regarding SO_2.'' [90] North Dakota considered the WEP results at Voyageurs National Park as reflective of the impairment at Boundary Waters Canoe Area Wilderness and did not perform a separate WEP analysis for that area.

The data in WRAP's TSS indicate that North Dakota sources are reasonably anticipated to impact Voyageurs National Park. The EPA used WRAP's State Source Group Contributions to US Anthropogenic Impairment tool for Voyageurs National Park to analyze North Dakota sources' contribution to visibility impairment in that area. In terms of both ammonium sulfate extinction (0.55 Mm^{-1}) and ammonium nitrate extinction (0.57 Mm^{-1}), North Dakota had a greater impact on visibility impairment than any other WRAP state.[91]

Further, Minnesota performed modeling in its 2022 SIP submission to assess contributions to visibility impairment in its two Class I areas: Voyageurs National Park and Boundary Waters Canoe Area Wilderness. This modeling showed that North Dakota contributed 5.9% of the total visibility impairment at Voyageurs National Park and 4.8% of the total visibility impairment at Boundary Waters Canoe Area Wilderness.[92] These contributions are higher than any other state besides Minnesota. According to Minnesota's 2022 SIP submission, Minnesota began state-to-state consultation with North Dakota in March 2021, and informed North Dakota about its potential contributions to Minnesota Class I areas in June 2022, prior to when North Dakota submitted its 2022 SIP submission.[93] And again, even with all this data, North Dakota did not consider impacts on Voyagers National Park and Boundary Waters Canoe Area Wilderness when it rejected controls for Coyote Station and Antelope Valley, following four-factor analysis, on the basis that the associated visibility benefits at Class I areas were not significant enough to justify requiring those controls in its long-term strategy.

In sum, data from the WEP analysis, WRAP's TSS, and visibility modeling performed by Minnesota indicate that

[83] North Dakota's 2022 SIP submission, 42 (Figure 14) and 44 (Figure 15). While there is no numerical threshold in the CAA or RHR for determining when a state ''may be reasonably anticipated to cause or contribute'' to a Class I area, the Ninth Circuit has interpreted the language ''may reasonably be anticipated to cause or contribute'' under CAA section 169A(b)(2) to establish an extremely low triggering threshold for requiring a source to control emissions for the purposes of addressing its impact on Class I areas. *Central Arizona Water Conservation Dist.* v. *EPA,* 990 F.2d 1531 (1993). The EPA referenced this decision in the 1999 Regional Haze Rule, noting that the court found that the language ''may reasonably be anticipated to cause or contribute'' establishes an ''extremely low triggering threshold'' for requiring a source to control emissions, adding that ''the NAS [National Academy of Sciences] correctly noted that Congress has not required ironclad scientific certainty establishing the precise relationship between a source's emission and resulting visibility impairment.'' 64 FR at 35721.

[84] ''TSS XY Chart—Product #XMTP_SASB_LUCS.'' WRAP Technical Support System (TSS); CSU and the Cooperative Institute for Research in the Atmosphere (CIRA), 04 Dec 2023.

[85] *See* footnote 55.

[86] North Dakota's 2022 SIP submission, appendix C.3–13.

[87] Id.

[88] ''TSS XY Chart—Product #XMTP_SASB_LUCS.'' WRAP Technical Support System (TSS); CSU and the Cooperative Institute for Research in the Atmosphere (CIRA), 04 Dec 2023.

[89] Id.

[90] North Dakota's 2022 SIP submission, appendix C.3–7.

[91] ''TSS XY Chart—Product #XMTP_SASB_LUCS.'' WRAP Technical Support System (TSS); CSU and the Cooperative Institute for Research in the Atmosphere (CIRA), 04 Dec 2023. WRAP states include Alaska, Arizona, California, Colorado, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, Oregon, South Dakota, Utah, Washington, and Wyoming.

[92] Minnesota's 2022 SIP submission, 31.

[93] Id. at 144.

North Dakota sources are reasonably anticipated to cause or contribute to visibility impairment at out-of-state Class I areas including Medicine Lake Wilderness Area, Badlands National Park, Voyageurs National Park, and Boundary Waters Canoe Area Wilderness. When it considered the visibility improvements associated with the potential emission controls it evaluated through four-factor analysis, however, North Dakota only considered visibility impacts at in-state Class I areas. Thus, the visibility improvement values that North Dakota characterized as insignificant did not reflect potential improvements at any affected out-of-state Class I areas. As a result, North Dakota's evaluation of visibility improvements and its subsequent conclusion that emission controls at Coyote Station and Antelope Valley are not necessary to make reasonable progress at Class I areas are not adequately supported on the record.

ii. Projections That North Dakota Class I Areas Will Meet the Adjusted Uniform Rate of Progress Is Not a Sufficient Basis To Reject Controls Under 40 CFR 51.308(f)(2)(i)

In rejecting controls it evaluated for Coyote Station and Antelope Valley through four-factor analysis, North Dakota also reasoned that Lostwood Wilderness Area and Theodore Roosevelt National Park were projected to achieve the adjusted URP by 2028.[94] As the EPA has consistently explained, it is not appropriate for states to use the URP as a ''safe harbor'' to conclude that additional controls, including potentially cost-effective and otherwise reasonable controls, are not necessary for reasonable progress on the basis that Class I areas are below their URPs. The 2017 RHR explains:

The CAA requires that each SIP revision contain long-term strategies for making reasonable progress, and that in determining reasonable progress states must consider the four statutory factors. Treating the URP as a safe harbor would be inconsistent with the statutory requirement that states assess the potential to make further reasonable progress towards [the] natural visibility goal in every implementation period. Even if a state is currently on or below the URP, there may be sources contributing to visibility impairment for which it would be reasonable to apply additional control measures in light of the four factors. Although it may conversely be the case that no such sources or control measures exist in a particular state with respect to a particular Class I area and implementation period, this should be determined based on a four-factor analysis for a reasonable set of in-state sources that are contributing the most to the visibility impairment that is still occurring at the Class I area. It would bypass the four statutory factors and undermine the fundamental structure and purpose of the reasonable progress analysis to treat the URP as a safe harbor, or as a rigid requirement.[95]

The EPA reiterated this concept in the 2019 Guidance [96] and in the 2021 Clarifications Memo.[97] Treating the URP as safe harbor is inconsistent with statutory requirements and undermines the core structure of a proper regional haze analysis.

Notably, the CAA and RHR do not include the URP among the four statutory factors states must consider in developing their long-term strategies. North Dakota relied on this consideration to reject controls that its four-factor analysis did not show to be unreasonable. Thus, North Dakota's conclusion that no new controls are necessary (whether in whole or in part) because the State's Class I areas are below the adjusted URP is inconsistent with the plain text of the CAA and RHR.

b. Failure To Consider the Four Factors at Coal Creek and Unreasonable Rejection of Controls at Coal Creek and Leland Olds

Coal Creek is a two-unit mine-mouth power plant located in McLean County, North Dakota with a capacity to produce approximately 1,200 gross MW per hour of electricity. For the second implementation period, North Dakota did not perform a separate four-factor analysis for NO_X controls at Coal Creek, pointing to its first planning period NO_X BART determination for Coal Creek to satisfy reasonable progress for NO_X.[98] The 2017 RHR Revisions clarified that, as specified in CAA section 169A(g)(1), reasonable progress must be determined by applying the four statutory factors (costs of compliance, time necessary for compliance, energy and nonair quality environmental impacts of compliance, and remaining useful life of the source): ''The CAA requires that each SIP revision contain long-term strategies for making reasonable progress, and that in determining reasonable progress states must consider the four statutory factors.'' [99] Here, North Dakota used a five-factor BART analysis performed for the first planning period in an attempt to satisfy the requirement to consider the four statutory factors under reasonable progress in the second planning period. Though there is some overlap between the four factors considered under reasonable progress and the five factors considered under BART,[100] North Dakota's analysis failed to consider one of the four factors under reasonable progress: time necessary for compliance. North Dakota failed to satisfy a core statutory requirement by not considering each of the four statutory factors in its reasonable progress analysis focused on NO_X for Coal Creek.

Further, as we explained in the 2021 Clarifications Memo, a state that is relying on a source's existing effective controls to avoid performing a four-factor analysis should explain why an analysis ''would not result in new controls and would, therefore, be a futile exercise.'' [101] Here, however, in its BART five-factor analysis for Coal Creek Units 1 and 2 (which the EPA is not acting on in this proposed rulemaking), North Dakota evaluated more stringent control technologies (SNCR and SCR) beyond what North Dakota selected for BART. It stated that the average cost-effectiveness of SNCR at $3,300/ton appeared reasonable, but ultimately concluded that the incremental costs were high enough to warrant selection of a less stringent cost-effective technology.[102] Thus, it is clear that additional, more stringent NO_X controls for Coal Creek exist, and should be evaluated under the four statutory factors for the purpose of determining the measures necessary to make reasonable progress for the second implementation period.

We also find that North Dakota unreasonably rejected emission reduction measures at Coal Creek and Leland Olds. In its four-factor analysis of Coal Creek Units 1 and 2 for reasonable progress for SO_2, North Dakota evaluated two different controls: a new wetstack and a natural gas reheat

[94] North Dakota's 2022 SIP submission, 100, 102.

[95] 82 FR at 3099–3100.

[96] 2019 Guidance at 50.

[97] 2021 Clarifications Memo at 15–16.

[98] North Dakota's 2022 SIP submission, 103, 144.

[99] 82 FR at 3099; *see also* CAA 169A(b)(2)(B), (g)(1).

[100] CAA 169A(g)(1)–(2); 40 CFR 51.308(e)(1)(ii)(A), 51.308(f)(2)(i). Under CAA 169A(g)(2), the five BART factors are costs of compliance, the energy and nonair quality environmental impacts of compliance, any existing pollution control technology in use at the source, the remaining useful life of the source, and the degree of improvement in visibility which may reasonably be anticipated to result from the use of such technology.

[101] 2021 Clarifications Memo at 5; see also 2019 Guidance at 22 (explaining that the reason underlying this flexibility is the low likelihood of a significant technological advancement that could provide further reasonable emission reductions).

[102] North Dakota's 2022 SIP submission, appendix F.1–5–F.1–8, F.1–14–F.1–15.

system. North Dakota's cost effectiveness evaluation of the new wetstack resulted in an estimated cost of $2,890/ton of SO_2 removed, while evaluation of the natural gas reheat system resulted in an estimated cost of $2,460/ton of SO_2 removed.[103] In its four-factor analysis of Leland Olds Unit 2 (which currently operates SNCR and separated overfire air for NO_X control as a result of the State's BART determination [104]), North Dakota's cost effectiveness evaluation of optimized SNCR resulted in an estimated cost of $3,582/ton of NO_X removed.[105] Each of these evaluated controls, both at Coal Creek and Leland Olds, are consistent with what the EPA has previously found to be cost-effective in prior regional haze rulemakings,[106] and are otherwise reasonable when considering the other three statutory factors.[107] Indeed, North Dakota did not determine the costs to be unreasonable.[108] Nonetheless, North Dakota rejected these controls.

North Dakota did not explain why it declined to require a new wet stack or natural gas reheat system at Coal Creek Units 1 and 2. Neither the four-factor analysis in appendix A.4 nor the narrative discussion in section 5.2.4 of North Dakota's 2022 SIP submission provide any insight into the State's reasoning.[109] Therefore, we cannot conclude that North Dakota's rejection of these controls was justified under the CAA and RHR.

As for Leland Olds Unit 2, North Dakota offered the following reasoning for its determination not to require optimized SNCR or other NO_X controls for the second implementation period: ''[F]our-factor analysis confirmed that these [existing] BART controls operate effectively, and the Department has no reason to believe effective operation of the BART controls will change in the future. Therefore, no additional measures were selected for the modeling evaluation and the Department does not believe additional controls are warranted during this planning period.'' [110] The presence of BART controls, however, does not exempt sources from installing additional reasonable controls that are shown to be necessary, through four-factor analysis, to make reasonable progress during the second planning period.[111] We explained that principle in the 2021 Clarifications Memo: ''A state relying on an 'effective control' to avoid performing a four-factor analysis for a source should demonstrate why, for that source specifically, a four-factor analysis would not result in new controls and would, therefore, be a futile exercise.'' [112] Here, North Dakota conducted a four-factor analysis of NO_X controls at Leland Olds Unit 2, which identified optimized SNCR as a cost-effective and otherwise reasonable new control. But North Dakota then concluded, without providing any justification grounded in the CAA or RHR, that because the source still operates and will continue to operate BART controls, any additional controls are not warranted. Here, North Dakota's analysis identified a cost-effective potential NO_X control, but the State did not reasonably explain why it declined to require that control because, as described in the preceding paragraphs, it improperly relied on the presence of BART controls and did not properly consider the four statutory factors.

2. Other Long-Term Strategy Requirements Under 40 CFR 51.308(f)(2)(ii)–(iv)

States must meet the additional requirements specified in 40 CFR 51.308(f)(2)(ii)-(iv) when developing their long-term strategies. 40 CFR 51.308(f)(2)(ii) requires states to consult with other states that have emissions that are reasonably anticipated to contribute to visibility impairment in Class I areas to develop coordinated emission management strategies. North Dakota engaged with other states throughout the development of its 2022 SIP submission by participating in WRAP regional haze workgroup meetings. Additionally, North Dakota directly communicated with other states about the SIP submission, including South Dakota, Montana, and Minnesota.[113]

40 CFR 51.308(f)(2)(iii) requires states to document the technical basis, including modeling, monitoring, costs, engineering, and emissions information, on which the state is relying to determine the emission reduction measures that are necessary to make reasonable progress in each mandatory Class I area it impacts. Section 4.1 of North Dakota's 2022 SIP submission describes the emissions inventories and projections the State used in its analysis.

40 CFR 51.308(f)(2)(iv) specifies five additional factors states must consider in developing their long-term strategies. The five additional factors are: emission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment; measures to mitigate the impacts of construction activities; source retirement and replacement schedules; basic smoke management practices for prescribed fire used for agricultural and wildland vegetation management purposes and smoke management programs; and the anticipated net effect on visibility due to projected changes in point, area, and mobile source emissions over the period addressed by the long-term strategy. North Dakota described each of the five additional factors in section 5.3 of its 2022 SIP submission.

Regardless, as explained in the preceding sections, due to flaws and omissions in its four-factor analyses and the resulting control determinations, the EPA finds that North Dakota failed to submit to the EPA a long-term strategy that includes ''the enforceable emissions limitations, compliance schedules, and other measures that are necessary to make reasonable progress'' as required by 40 CFR 51.308(f)(2).[114] Consequently,

[103] Id., appendix A.4–4.

[104] North Dakota's 2022 SIP submission, appendix A.3–2–A.3–3; 77 FR 20894, 20897 (April 6, 2012) (approving the State's NO_X BART determination).

[105] Id., appendix A.3–8.

[106] These cost-effectiveness values are in line with those the EPA and states found reasonable for regional haze control measures adopted in the first planning period, even without adjusting for inflation. After evaluating first planning period cost of compliance values, plus the other BART statutory factors and/or the four reasonable progress statutory factors, states and the EPA found numerous instances of cost-effectiveness values up to and sometimes higher than $4,500/ton to be reasonable and cost effective. This includes control determinations for sources within North Dakota and in other states. Examples for several sources can be found at: 76 FR 16168, 16181 (Mar. 22, 2011) (proposed), finalized at 76 FR 81728 (Dec. 28, 2011) (Oklahoma); 76 FR 58570, 58587–88 (Sept. 21, 2011) (proposed), finalized at 77 FR 20894 (Apr. 6, 2012) (North Dakota); 77 FR 11022, 11033–34 (Feb. 24, 2012) (proposed), finalized at 78 FR 10546 (Feb. 14, 2013) (Alaska); and 79 FR 5032, 5039 (Jan. 30, 2014) (Wyoming) (final rule). The cited costs have not been adjusted for inflation.

[107] In its consideration of the three non-cost statutory factors, North Dakota did not identify any barriers that would render these controls unreasonable. North Dakota's 2022 SIP submission, appendix A.3–8–A.3–9 (Leland Olds), appendix A.4.4–A.4.5 (Coal Creek).

[108] North Dakota's 2022 SIP submission, 103–04, appendix A.3–8, A.4–4.

[109] While North Dakota stated that future operations and SO_2 emissions at Coal Creek are expected to remain consistent with current conditions, the State did not identify these future conditions as a reason for its rejection of the controls evaluated through four-factor analysis. Id. at 104.

[110] Id. at 103.

[111] 40 CFR 51.308(e)(5) states that ''[a]fter a State has met the requirements for BART or implemented an emissions trading program or other alternative measure that achieves more reasonable progress than the installation and operation of BART, BART-eligible sources will be subject to the requirements of paragraphs (d) and (f) of this section.''

[112] 2021 Clarifications Memo at 5.

[113] Id. at 33–34, appendix E.2.

[114] See also CAA 169A(b)(2), 169A(b)(2)(B) (requiring regional haze SIPs to ''contain such emission limits, schedules of compliance and other measures as may be necessary to make reasonable progress toward meeting the national goal, . . .

we find that North Dakota's 2022 SIP Submission does not satisfy the long-term strategy requirements of 40 CFR 51.308(f)(2). Therefore, the EPA proposes to disapprove all elements of North Dakota's 2022 SIP submission as it relates to 51.308(f)(2)'s long-term strategy requirements.

C. Reasonable Progress Goals

The EPA proposes to find that North Dakota did not meet the reasonable progress goal requirements under 40 CFR 51.308(f)(3). Section 51.308(f)(3)(i) requires a state in which a Class I area is located to establish RPGs—one each for the most impaired and clearest days—reflecting the visibility conditions that will be achieved at the end of the implementation period as a result of the emission limitations, compliance schedules and other measures required under paragraph (f)(2) in states' long-term strategies, as well as implementation of other CAA requirements.

After establishing its long-term strategy, North Dakota developed reasonable progress goals for each Class I area for the 20% most impaired days and 20% clearest days based on the results of 2028 WRAP modeling.[115] The reasonable progress goals are based on North Dakota's long-term strategy, the long-term strategy of other states that may affect Class I areas in North Dakota, and other CAA requirements.

Per 40 CFR 51.308(f)(3)(iv), the EPA must evaluate the demonstrations the State developed pursuant to 40 CFR 51.308(f)(2) to determine whether the State's reasonable progress goals for visibility improvement provide for reasonable progress towards natural visibility conditions. As previously explained in section IV.B., we are proposing to disapprove North Dakota's long-term strategy for failing to meet the requirements of 40 CFR 51.308(f)(2).[173] Therefore, we also propose to disapprove North Dakota's reasonable progress goals under 40 CFR 51.308(f)(3) because compliance with that requirement is dependent on compliance with 40 CFR 51.308(f)(2).

D. Reasonably Attributable Visibility Impairment (RAVI)

The RHR contains a requirement at § 51.308(f)(4) related to any additional monitoring that may be needed to address visibility impairment in Class I areas from a single source or a small group of sources. This is called ''reasonably attributable visibility impairment,'' [116] also known as RAVI. Under this provision, if the EPA or the FLM of an affected Class I area has advised a state that additional monitoring is needed to assess RAVI, the state must include in its SIP revision for the second implementation period an appropriate strategy for evaluating such impairment. The EPA has not advised North Dakota to that effect, and the FLMs for the Class I areas that North Dakota contributes to have not identified any RAVI from North Dakota sources.[117] For this reason, the EPA proposes to approve the portions of North Dakota's 2022 SIP submission relating to 40 CFR 51.308(f)(4).

E. Monitoring Strategy and Other Implementation Plan Requirements

Section 51.308(f)(6) specifies that each comprehensive revision of a state's regional haze SIP must contain or provide for certain elements, including monitoring strategies, emissions inventories, and any reporting, recordkeeping and other measures needed to assess and report on visibility. A main requirement of this section is for states with Class I areas to submit monitoring strategies for measuring, characterizing, and reporting on visibility impairment. Compliance with this requirement may be met through participation in the Interagency Monitoring of Protected Visual Environments (IMPROVE) network. North Dakota participates in the IMPROVE network.

Section 51.308(f)(6)(i) requires SIPs to provide for the establishment of any additional monitoring sites or equipment needed to assess whether reasonable progress goals to address regional haze for all mandatory Class I Federal areas within the state are being achieved. As noted in the 2017 RHR Revisions, ''neither the EPA nor any state has concluded that the IMPROVE network is not sufficient in this way.'' [118] Regional haze data for Theodore Roosevelt National Park and Lostwood Wilderness Area are collected by IMPROVE monitors that are operated and maintained by the NPS and the USFWS, respectively. The EPA is not aware of information suggesting that those IMPROVE monitors are no longer sufficient to assess the status of reasonable progress goals at those Class I areas. Therefore, the EPA finds that North Dakota has satisfied § 51.308(f)(6)(i).

Section 51.308(f)(6)(ii) requires SIPs to provide for procedures by which monitoring data and other information are used in determining the contribution of emissions from within the state to regional haze visibility impairment at mandatory Class I Federal areas both within and outside the state. For the second implementation period, WRAP performed technical analyses to help assess source and state-level contributions to visibility impairment.[119] North Dakota relied on these source-apportionment analyses to determine the contribution of emissions from within the State to visibility impairment in Class I areas outside the State.[120] As explained in section IV.B.1.a. of this document, the record does not support North Dakota's determination that its sources are not reasonably anticipated to impact out-of-state Class I areas; instead, the technical data the State relied on, including WRAP data, indicate the opposite. Regardless of the State's interpretation of that data, because the 2022 SIP submission relies on WRAP technical data and provides for procedures to determine in-state contributions to visibility impairment, we find that North Dakota has satisfied § 51.308(f)(6)(ii) by relying on WRAP's source-apportionment analyses.

Section 51.308(f)(6)(iii) does not apply to North Dakota, as it has Class I areas. Section 51.308(f)(6)(iv) requires the SIP to provide for the reporting of all visibility monitoring data to the Administrator at least annually for each Class I area in the state. North Dakota's monitoring strategy relies upon the continued availability of the IMPROVE network, whose monitors are operated and maintained by the NPS and the USFWS. The IMPROVE Steering committee and Data Analysis and Reporting subcommittee develop policies to generate and distribute IMPROVE data, metadata, and data products. The data is made available on IMPROVE, FLM, and the EPA Air Quality System databases. North Dakota supports the continued operation of the IMPROVE network through state funding mechanisms. We find that North Dakota has satisfied § 51.308(f)(6)(iv).

Section 51.308(f)(6)(v) requires SIPs to provide for a statewide inventory of emissions of pollutants that are

including . . . a long-term . . . strategy for making reasonable progress[.]'').

[115] North Dakota's 2022 SIP Submission, section 6.

[116] The EPA's visibility protection regulations define ''reasonably attributable visibility impairment'' as ''visibility impairment that is caused by the emission of air pollutants from one, or a small number of sources.'' 40 CFR 51.301.

[117] North Dakota's 2022 SIP submission, 139.

[118] 82 FR at 3085.

[119] WRAP Technical Support System (TSS); CSU and the Cooperative Institute for Research in the Atmosphere (CIRA), 09 Oct 2023, *https://views.cira.colostate.edu/tssv2.*

[120] North Dakota's 2022 SIP submission, 39.

reasonably anticipated to cause or contribute to visibility impairment, including emissions for the most recent year for which data are available. North Dakota provides for emissions inventories and estimates of future projected emissions by participating in WRAP and by complying with the EPA's Air Emissions Reporting Rule (AERR). In 40 CFR part 51, subpart A, the AERR requires states to submit updated emissions inventories for criteria pollutants to the EPA's Emission Inventory System (EIS) annually or triennially depending on the source type. The EPA uses the inventory data from the EIS to develop the NEI, which is a comprehensive estimate of air emissions of criteria pollutants, criteria precursors, and hazardous air pollutants from air emissions sources. The EPA releases an NEI every three years.

Section 4 of North Dakota's 2022 SIP submission includes tables of NEI data. The source categories of the emissions inventories include point sources, area and non-point sources, non-road mobile sources, on-road mobile sources, natural sources, and international anthropogenic emissions. The inventories account for emissions of SO_2, NO_X, PM_{10}, $PM_{2.5}$, VOC, and NH_3 in 2002 (one of the regional haze program baseline years), 2011, 2014, and 2017.

Section 51.308(f)(6)(v) also requires states to include estimates of future projected emissions. North Dakota used three different modeling scenarios in WRAP modeling, which produced a range of future projected emissions for 2028.[121]

The EPA finds that North Dakota has met the requirements of 40 CFR 51.308(f)(6)(v) through its ongoing compliance with the AERR, its compilation of a statewide emissions inventory based on NEI data, its use of WRAP modeling to project future emissions, and its commitment to update its inventory periodically.[122]

Finally, § 51.308(f)(6)(vi) requires the SIP to provide for any other elements, including reporting, recordkeeping, and other measures, that are necessary for states to assess and report on visibility. North Dakota assesses and reports on visibility through participation in the IMPROVE network. The EPA finds that North Dakota has satisfied the requirements of 40 CFR 51.308(f)(6)(vi) and that no further elements are necessary at this time for North Dakota to assess and report on visibility.

In sum, for all the reasons discussed in this section IV.E., the EPA is proposing to approve North Dakota's 2022 submission as meeting the requirements of 40 CFR 51.308(f)(6).

F. Requirements for Periodic Reports Describing Progress Towards the Reasonable Progress Goals

40 CFR 51.308(f)(5) requires that periodic comprehensive revisions of states' regional haze plans also address the progress report requirements of 40 CFR 51.308(g)(1) through (5). The purpose of these requirements is to evaluate progress towards the applicable RPGs for each Class I area within the state and each Class I area outside the state that may be affected by emissions from within that state. Sections 51.308(g)(1) and (2) apply to all states and require a description of the status of implementation of all measures included in a state's first implementation period regional haze plan and a summary of the emission reductions achieved through implementation of those measures. Section 51.308(g)(3) applies only to states with Class I areas within their borders and requires such states to assess current visibility conditions, changes in visibility relative to baseline (2000–2004) visibility conditions, and changes in visibility conditions relative to the period addressed in the first implementation period progress report. Section 51.308(g)(4) applies to all states and requires an analysis tracking changes in emissions of pollutants contributing to visibility impairment from all sources and sectors since the period addressed by the first implementation period progress report. This provision further specifies the year or years through which the analysis must extend depending on the type of source and the platform through which its emission information is reported. Finally, § 51.308(g)(5), which also applies to all states, requires an assessment of any significant changes in anthropogenic emissions within or outside the state that have occurred since the period addressed by the first implementation period progress report, including whether such changes were anticipated and whether they have limited or impeded expected progress towards reducing emissions and improving visibility.

Section 9 of North Dakota's 2022 SIP submission describes the status of the long-term strategy measures from the first implementation period. The State's regional haze SIP submission for the first implementation period relied primarily on SO_2 and NO_X reductions from existing coal-fired EGUs. The requirements for those reductions were based on both the BART requirements in 40 CFR 51.308(e) and the reasonable progress requirements in 40 CFR 51.308(d). Additional control measures that North Dakota relied on to meet the requirements under the first implementation period are described in section 5.3.1 of North Dakota's 2022 SIP submission. North Dakota's BART limits from the first planning period SIP submission have been incorporated into the State's permits for the affected sources, except for Coal Creek Station NO_X BART.[123] All EGUs with BART controls from the first planning period have associated limits at 40 CFR 52.1820(d).

North Dakota states that since the baseline period of 2000–2004, there have been significant reductions of most visibility impairing pollutants in North Dakota that can be attributed to the point and mobile source categories.[124] The State attributes the implementation of new controls at coal-fired EGUs and new federal requirements for on- and off-road engines as the main reasons for the reductions. Sections 4.1.1, 4.1.2, and 4.1.5 contain emission inventories for WRAP's 2002 Plan 02d and the 2011 and 2017 National Emissions Inventory (NEI). As evidence of overall emission reductions at the EGUs, North Dakota points to Table 20 in section 4.2.1, which shows the emissions of visibility impairing pollutants from North Dakota's coal-fired EGUs for each inventory year. SO_2 and NO_X reductions from individual coal-fired EGUs are listed in sections 4.2.1.1.1 and 4.2.1.1.2. The EPA finds that North Dakota has met the requirements of 40 CFR 51.308(g)(1) and (2) by describing the measures included in the long-term strategy from the first implementation period, as well as the status of their implementation and the emission reductions achieved through such implementation.

Section 3 summarizes the visibility conditions and the trend of the 5-year averages through 2017 at Theodore Roosevelt National Park and Lostwood Wilderness Area. Section 3.2.1 describes the 5-year baseline (2000–2004) visibility conditions for the clearest and most impaired days, while section 3.2.3 sets out the current 5-year rolling average (2014–2018) for the clearest and most impaired days. Table 9 in section 3.2.4 identifies the progress to date for the clearest and most impaired days, showing data from 2008–2012 as

[121] North Dakota's 2022 SIP submission, 66–68, 140.

[122] Id. at 140.

[123] Coal Creek Station Unit 1 and 2 NO_X BART limits are addressed in section 8 and appendix F of North Dakota's 2022 SIP submission.

[124] North Dakota's 2022 SIP submission, 150.

representative of the first implementation period.

Section 4.1 summarizes emissions of NO_X, SO_2, PM_{10}, $PM_{2.5}$, VOC, and NH_3 from all sources and activities, including from point, nonpoint, non-road mobile, and on-road mobile sources, for 2002, 2011, 2014, 2017, current representative, and projected future emissions. Comparing the 2002 and 2017 emissions inventories shows that emissions of SO_2, NO_X, and NH_3 decreased, while emissions of VOC, $PM_{2.5}$, and PM_{10} increased. Comparing the 2002 and RepBase (current representative) emissions inventories shows that emissions of SO_2, NH_3, $PM_{2.5}$, and PM_{10} decreased, while emissions of NO_X and VOC increased.[125]

Section 9.3.5 assesses changes in anthropogenic emissions impeding visibility progress. Regarding NO_X, North Dakota concluded that total anthropogenic NO_X emissions have not changed significantly in the RepBase (current representative) emissions inventory compared to 2002.

In sum, because North Dakota's 2022 SIP submission addresses the requirements of 40 CFR 51.308(g)(1) through (5), the EPA is proposing to approve Section 9 of North Dakota's 2022 SIP submission as meeting the requirements of 40 CFR 51.308(f)(5) and 40 CFR 51.308(g) for periodic progress reports.

G. Requirements for Federal Land Manager Coordination

Section 169A(d) of the CAA requires states to consult with FLMs before holding the public hearing on a proposed regional haze SIP, and to include a summary of the FLMs' conclusions and recommendations in the notice to the public. In addition, the 40 CFR 51.308(i)(2) FLM consultation provision requires a state to provide FLMs with an opportunity for consultation that is early enough in the state's policy analyses of its emission reduction obligation so that information and recommendations provided by the FLMs can meaningfully inform the state's decisions on its long-term strategy. If the consultation has taken place at least 120 days before a public hearing or public comment period, the opportunity for consultation will be deemed early enough. Regardless, the opportunity for consultation must be provided at least sixty days before a public hearing or public comment period at the state level. Section 51.308(i)(2) also lists two substantive topics on which FLMs must be provided an opportunity to discuss with states: assessment of visibility impairment in any Class I area and recommendations on the development and implementation of strategies to address visibility impairment. Section 51.308(i)(3) requires states, in developing their implementation plans, to include a description of how they addressed FLMs' comments.

North Dakota's 2022 SIP submission summarizes the State's consultation and coordination with the FLMs. North Dakota engaged with FLMs early in the planning process by participating in WRAP meetings and by holding separate calls with FLMs to discuss visibility impairment in Class I areas and the State's plans for its 2022 SIP submission. North Dakota also met via video conference with the NPS on November 6, 2020, and December 15, 2020, and with the USFS on November 23, 2020. Upon completing its draft 2022 SIP submission, North Dakota provided it to FLMs for a review and consultation period from September 20, 2021, through November 19, 2021. Additionally, North Dakota held a video conference with the NPS, USFS, and EPA Region 8 staff on November 10, 2021, to discuss the draft and receive feedback from the FLMs. North Dakota received comments from USFS on November 17, 2021, and from the NPS on November 19, 2021.[126] North Dakota responded to the FLM comments and included the responses in appendix D of its 2022 SIP submission.

Compliance with 40 CFR 51.308(i) is dependent on compliance with 40 CFR 51.308(f)(2)'s long-term strategy provisions and (f)(3)'s reasonable progress goals provisions. Because the EPA is proposing to disapprove North Dakota's long-term strategy under 51.308(f)(2) and the reasonable progress goals under 51.308(f)(3), the EPA is also proposing to disapprove the State's FLM consultation under 51.308(i). While North Dakota did take administrative steps to provide the FLMs the opportunity to review and provide feedback on the State's draft regional haze plan, the EPA cannot approve that consultation because it was based on a plan that does not meet the statutory and regulatory requirements of the CAA and the RHR, as described in this notice of proposed rulemaking. In addition, if the EPA finalizes our proposed partial approval and partial disapproval of North Dakota's SIP submission, the State (or the EPA in the potential case of a FIP) will be required to again complete the FLM consultation requirements under 40 CFR 51.308(i). Therefore, the EPA proposes to disapprove the FLM consultation component of North Dakota's SIP submission for failure to meet the requirements of 40 CFR 51.308(i), as outlined in this section.

V. Proposed Action

The EPA is proposing approval of the portions of North Dakota's 2022 SIP submission relating to 40 CFR 51.308(f)(1): calculations of baseline, current, and natural visibility conditions, progress to date, and the uniform rate of progress; 40 CFR 51.308(f)(4): reasonably attributable visibility impairment; 40 CFR 51.308(f)(5) and 40 CFR 51.308(g): progress report requirements; and 40 CFR 51.308(f)(6): monitoring strategy and other implementation plan requirements. The EPA is proposing disapproval of the remainder of North Dakota's 2022 SIP submission, which addresses 40 CFR 51.308(f)(2): long-term strategy; 40 CFR 51.308 (f)(3): reasonable progress goals; and 40 CFR 51.308(i): FLM consultation.

VI. Environmental Justice

The EPA conducted an environmental justice (EJ) screening analysis around the location of the facilities associated with North Dakota's 2022 SIP submission to identify potential environmental stressors on these communities. The EPA is providing the information associated with this analysis for informational purposes only; it does not form any part of the basis of this proposed action.

The EPA conducted the screening analyses using EJScreen, an environmental justice mapping and screening tool that provides the EPA with a nationally consistent dataset and approach for combining various environmental and demographic indicators.[127] The EPA prepared EJScreen reports covering buffer areas of approximately six miles around the ten facilities selected for four-factor analysis in North Dakota's 2022 SIP submission. From those reports, no facilities showed environmental justice indices greater than the 80th national percentiles.[128]

[125] Section 9.3.5 of North Dakota's 2022 SIP submission considers the potential impact of oil and gas development on the increase in anthropogenic emissions of NO_X and VOC.

[126] The USFWS did not comment on North Dakota's 2022 SIP submission.

[127] The EJSCREEN tool is available at *https://www.epa.gov/ejscreen.*

[128] This means that 20 percent of the U.S. population has a higher value. The EPA identified the 80th percentile filter as an initial starting point for interpreting EJScreen results. The use of an initial filter promotes consistency for the EPA's programs and regions when interpreting screening results.

The full, detailed EJScreen reports are provided in the docket for this rulemaking.

VII. Statutory and Executive Order Reviews

Under the CAA, the Administrator is required to approve a SIP submission that complies with the provisions of the Act and applicable Federal regulations. 42 U.S.C. 7410(k); 40 CFR 52.02(a). Thus, in reviewing SIP submissions, the EPA's role is to approve state choices, provided that they meet the criteria of the CAA. Accordingly, this action merely proposes to approve state law as meeting Federal requirements and does not impose additional requirements beyond those imposed by state law. For that reason, this action:

- Is not a ''significant regulatory action'' subject to review by the Office of Management and Budget under Executive Orders 12866 (58 FR 51735, October 4, 1993) and 13563 (76 FR 3821, January 21, 2011);
- Does not impose an information collection burden under the provisions of the Paperwork Reduction Act (44 U.S.C. 3501 *et seq.*);
- Is certified as not having a significant economic impact on a substantial number of small entities under the Regulatory Flexibility Act (5 U.S.C. 601 *et seq.*);
- Does not contain any unfunded mandate or significantly or uniquely affect small governments, as described in the Unfunded Mandates Reform Act of 1995 (Pub. L. 104–4);
- Does not have Federalism implications as specified in Executive Order 13132 (64 FR 43255, August 10, 1999);
- Is not an economically significant regulatory action based on health or safety risks subject to Executive Order 13045 (62 FR 19885, April 23, 1997);
- Is not a significant regulatory action subject to Executive Order 13211 (66 FR 28355, May 22, 2001);
- Is not subject to requirements of section 12(d) of the National Technology Transfer and Advancement Act of 1995 (15 U.S.C. 272 note) because application of those requirements would be inconsistent with the CAA; and

In addition, the SIP is not approved to apply on any Indian reservation land or in any other area where the EPA or an Indian Tribe has demonstrated that a Tribe has jurisdiction. In those areas of Indian country, the proposed rule does not have tribal implications and will not impose substantial direct costs on tribal governments or preempt tribal law as specified by Executive Order 13175 (65 FR 67249, November 9, 2000).

Executive Order 12898 (Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, 59 FR 7629, Feb. 16, 1994) directs federal agencies to identify and address disproportionately high and adverse human health or environmental effects of their actions on minority populations and low-income populations to the greatest extent practicable and permitted by law. The EPA defines environmental justice as the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. The EPA further defines the term fair treatment to mean that no group of people should bear a disproportionate burden of environmental harms and risks, including those resulting from the negative environmental consequences of industrial, governmental, and commercial operations or programs and policies.

North Dakota did not evaluate environmental justice considerations as part of its SIP submission; the CAA and applicable implementing regulations neither prohibit nor require such an evaluation. The EPA performed an environmental justice screening analysis, as described above in section VI. Environmental Justice. The analysis was done for the purpose of providing additional context and information about this rulemaking to the public, not as a basis of the action. There is no information in the record upon which this decision is based inconsistent with the stated goal of E.O. 12898 of achieving environmental justice for people of color, low-income populations, and Indigenous peoples.

List of Subjects in 40 CFR Part 52

Environmental protection, Air pollution control, Carbon monoxide, Greenhouse gases, Incorporation by reference, Intergovernmental relations, Lead, Nitrogen dioxide, Ozone, Particulate matter, Reporting and recordkeeping requirements, Sulfur oxides, Volatile organic compounds.

Authority: 42 U.S.C. 7401 *et seq.*

Dated: June 27, 2024.

KC Becker,

Regional Administrator, Region 8.

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