

THE SCENIC PROTECTIONS OF THE CLEAN AIR ACT

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*“If you can see the air, it’s not clean.”*¹

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1. Jeremy Nichols, *Citizens to Speak out in Favor of North Dakota Clean Air Plan*, WILDEARTH GUARDIANS (Oct. 13, 2011), <http://www.wildearthguardians.org/site/News2?page=NewsArticle&id=7268> (quoting Wayne Schafer, Dacotah Chapter of the Sierra Club).

I. INTRODUCTION

The purpose of the Clean Air Act (CAA) is to make sure there is clean air throughout the United States.² The air in many places was badly polluted before Congress passed the CAA in 1970. The CAA, therefore, contains numerous provisions designed to clean up that air to the standards set forth in the law.³ The goal in those places where the air was already clean when Congress passed the CAA is to maintain the clean air.⁴

North Dakota was one of the places where the air was already clean when Congress passed the CAA. The air was especially clear in Theodore Roosevelt National Park (TRNP), located in the badlands of western North Dakota. Established as a “national memorial park” in 1947 and promoted to a full-fledged national park in 1978, TRNP is one of only fifty-eight places that Congress has preserved as a national park.⁵

Those fifty-eight places are revered for many characteristics, especially their spectacular scenery. As the leading historian of national parks has proclaimed, “America’s incentive for national parks lay in the discovery that scenery was a cultural asset.”⁶ The law even recognizes the importance of the scenic values of national parks through the Organic Act of 1916, which lists the conservation of scenery as the “the fundamental purpose” of national parks.⁷

The combination of the CAA, which seeks to provide clean air throughout the United States, and the Organic Act, which seeks to conserve the scenery of national parks, provides a double justification for ensuring the air in national parks is particularly clear. Scenic values presume both an aesthetically appealing landscape and the ability of people to perceive it. Like the proverbial falling tree in the forest, is a sight really spectacular if no one can see it? The sightseeing quality of national parks disappears if the sights cannot be seen.

2. See 42 U.S.C. § 7401(b)(1) (2006) (stating the purpose of the CAA is “to protect and enhance the quality of the Nation’s air resources”).

3. See, e.g., *id.* § 7410 (requiring state implementation plans to achieve national ambient air quality standards).

4. See *id.* § 7491(a)(1) (stating a national goal of 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”).

5. See generally JOHN COPELAND NAGLE, *LAW’S ENVIRONMENT: HOW THE LAW SHAPES THE PLACES WE LIVE* 98-113 (2010) (describing the establishment of TRNP).

6. ALFRED RUNTE, *NATIONAL PARKS: THE AMERICAN EXPERIENCE* 11 (4th ed. 2010).

7. 16 U.S.C. § 1 (referring to “the fundamental purpose of the said parks, monuments, and reservations, which purpose is to conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations”).

Air pollution interferes with the ability to enjoy the scenic sights of national parks. Indeed, air pollution has been described as perhaps the greatest threat to national parks.⁸ “In the eastern United States, the average visual range in most national parks and wilderness areas . . . is less than [thirty] kilometers, about [twenty] percent of what it would be under natural conditions.”⁹

The air at TRNP was extremely clear when Congress established the national memorial park in 1947 and when it established the national park in 1978. The region’s air was probably nearly as pristine then as it was when Theodore Roosevelt himself wrote about the clean air in western North Dakota’s badlands. Almost immediately, though, the new national memorial park collided with the discovery of oil in the area in 1950, and then an unexpected oil, gas, and coal development boom occurred immediately following the establishment of the national park in 1978. The air at TRNP has suffered to the extent that the NPS has said “[d]egradation of the air quality over the park is the most significant threat to park resources.”¹⁰ It has been estimated that it may take 156 years to return to natural visibility conditions at TRNP.¹¹ The management of TRNP, and of the areas surrounding TRNP, has thus experienced repeated conflicts between the national park’s scenic values and the economic benefits of oil, gas, and coal production.

While the stated statutory purpose of the national park cited its scenic and historic values, the park’s local boosters saw it as an economic boon. Local North Dakotans were the biggest champions of the idea of the park during the 1930s, presuming the presence of a national park would be a

8. See Vickie Patton & Bruce Polkowsky, *The EPA’s Regional Haze Proposal: Protecting Visibility in National Parks and Wilderness Areas*, 11 TUL. ENVTL. L.J. 299, 316-17 (1998); see also *Problems with Clean Air Act Protection for National Parks and Wilderness Areas: Hearing Before the Env’t, Energy, & Natural Res. Subcomm. of the H. Comm. on Gov’t Operations*, 101st Cong. 7 (1990) [hereinafter *1990 House Hearing*] (statement of Rep. Wyden) (stating “from coast to coast, manmade pollution is creeping quietly into our parks, scarring the trees and the foliage and robbing these treasures of their natural beauty”); *1990 House Hearing*, *supra* note 8, at 44 (statement of National Park Service Director James M. Ridenour) (noting that “in addition to natural sources of visibility impairment, manmade pollution, primarily sulphates, impairs the visibility of scenic park vistas to some extent at nearly all of the parks almost all of the time”).

9. *Util. Air Regulatory Grp. v. Env’t. Prot. Agency*, 471 F.3d 1333, 1334 (D.C. Cir. 2006) (citing NAT’L RESEARCH COUNCIL, PROTECTING VISIBILITY IN NATIONAL PARKS AND WILDERNESS AREAS I (1993)).

10. DAVID HARMON, AT THE OPEN MARGIN: THE NPS’S ADMINISTRATION OF THEODORE ROOSEVELT NATIONAL PARK ch. 6 (1986), available at http://www.nps.gov/history/history/online_books/thro/adhi.htm (quoting the draft of Theodore Roosevelt’s Natural Resources Management Plan).

11. See Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze, 76 Fed. Reg. 58,570, 58,628 (Sept. 21, 2011) (to be codified at 40 C.F.R. pt. 52).

boon to the area's economy. They repeatedly claimed the creation of a national park would attract countless tourists whose visits would benefit the local economy.¹² "For some in North Dakota," begins David Harmon's history of TRNP, "the national park idea was nothing more than a money idea."¹³ TRNP has never lived up to those expectations. It is the leading tourist destination in North Dakota, but it is one of the least visited of the national parks. TRNP attracted 623,748 people in 2010, compared to the 9,463,538 who visited Great Smoky National Park and the 4,388,386 who visited the Grand Canyon National Park.¹⁴ Meanwhile, the area has become a leading producer of oil, gas, and coal. But those activities can pollute the air and interfere with the scenic enjoyment of the national park. Furthermore, the designation of the national park means energy development outside of the park is constrained by the especially stringent CAA regulations applicable to lands near national parks.

Therein lays the irony of TRNP. It has become an obstacle to regional economic development instead of the engine that its local boosters anticipated. The fact that the badlands are now designated as a national park means they receive more stringent treatment under the CAA.

This article uses the example of TRNP to examine the relationship between air pollution and national parks in three parts. First, I consider the nature of scenic values, how national parks seek to conserve them, and how those values are maintained at TRNP in particular. Second, I examine how air pollution interferes with visibility at national parks, how the CAA is

12. See, e.g., S. REP. NO. 80-1417, at 2 (1948) ("This area is about midway between the heavily populated sections in the Great Lakes region and the Yellowstone and Glacier National Parks on Transcontinental Highways Nos. 2 and 10. Because of its excellent geographical location, tourist travel in the vicinity has been increasing each year and thus insures the proposed park's widespread use."); *Theodore Roosevelt National Memorial Park: Hearings Before the Subcomm. on Pub. Lands of the H. Comm. on Pub. Lands*, 80th Cong. 6 (1948) [hereinafter *1948 House Hearing*] (testimony of Dan C. Price) (insisting TRNP would "be a real contribution to the traveling public . . . and will provide a recreational area desired and deserved by many good Americans in eastern Montana and western North Dakota and the American tourist").

13. HARMON, *supra* note 10, at ch. 1.

14. *Grand Canyon NP*, NPS STATS, <http://www.nature.nps.gov/stats/viewReport.cfm> (last visited Mar. 13, 2012); *Great Smoky Mountain National Park: Park Visitation*, NPS.GOV, <http://www.nps.gov/grsm/parkmgmt/visitation.htm> (last updated May 31, 2011); *Theodore Roosevelt National Park-Visitation Statistics*, NAT'L PARK SERVICE, <http://www.nps.gov/thro/parkmgmt/visitation-statistics.htm> (last updated July 30, 2011). Even the half million number is misleading, for the Painted Butte Visitor Center registered nearly half of the visitors to TRNP. Painted Butte offers a spectacular vista of the badlands, but it is little more than a glorified rest stop along Interstate 94 where travelers can get out of the car for a minute to gaze at the scenery, buy a souvenir, and return to the highway. "Though the park is located at the edge of an interstate, the highway is not heavily traveled. A lot of people don't stop at the park. 'Most,' one observer said, 'are passing through on their way to somewhere else—the general fate of all of North Dakota.'" Jennifer C. Urquhart, *Theodore Roosevelt: Dakota Adventure*, in AMERICA'S HIDDEN TREASURE: EXPLORING OUR LITTLE-KNOWN NATIONAL PARKS 66 71 (1992).

supposed to eliminate that pollution, and how those efforts have fared at TRNP. Third, I consider why the CAA has struggled to eliminate air pollution from TRNP and other national parks. The experience at TRNP offers three lessons: the implementation of the CAA's provisions will not necessarily accomplish the statutory goal, the public commitment to scenic values is not as strong as the statutory requirements for protecting those values, and the cooperative federalism framework embedded in the CAA confronts special difficulties in the context of visibility issues.

II. SCENIC

There are many reasons for maintaining clean air besides the visibility of scenic landscapes, just as there are many things that interfere with the visibility of scenic landscapes besides air pollution. This section examines why scenic landscapes are valuable, considers which scenic landscapes should qualify as national parks, and examines how national parks are managed to preserve scenic values. The scenic landscape of the badlands of western North Dakota and the establishment and management of TRNP illustrate these general issues.

A. PRESERVING SCENIC VALUES

Scenic landscapes, like beauty generally, are widely valued for reasons that often escape empirical description. The Forest Service, in one of the few government documents that attempts to describe scenic values, cites the physiological and psychological benefits of viewing natural landscapes.¹⁵ Perhaps the most extended reflection on the value appears in the report on Yosemite prepared by Frederick Law Olmsted in 1865.¹⁶ According to Olmsted, Congress acted in 1863 to protect Yosemite for two reasons. First, Congress supported ecotourism.¹⁷ That is undoubtedly true, but the fact that people spend money to visit scenic landscapes simply begs the question of why such places are so attractive. Thus, Olmsted turned to his second, "more important class of considerations."¹⁸ To wit, the government

15. U.S. DEP'T OF AGRIC. FOREST SERV., *LANDSCAPE AESTHETICS: A HANDBOOK FOR SCENERY MANAGEMENT* 14 (1995).

16. See Frederick Law Olmsted, *Yosemite and the Mariposa Grove: A Preliminary Report, 1865*, YOSEMITE, <http://www.yosemite.ca.us/library/olmsted/report.html> (last visited Mar. 2, 2012).

17. See *id.* (describing Congress' real reason as "the direct and obvious pecuniary advantage which comes to a commonwealth from the fact that it possesses objects which cannot be taken out of its domain that are attractive to travellers and the enjoyment of which is open to all"); see also Pub. L. No. 184, 13 Stat. 325 (1864) (directing the state to manage Yosemite "for public use, resort, and recreation").

18. Olmsted, *supra* note 16.

has the duty to help “all citizens in the pursuit of happiness,” and visiting scenic landscapes achieved that end.¹⁹ As Olmsted explained:

It is a scientific fact that the occasional contemplation of natural scenes of an impressive character, particularly if this contemplation occurs in connection with relief from ordinary cares, change of air and change of habits, is favorable to the health and vigor of men and especially to the health and vigor of their intellect beyond any other conditions which can be offered them, that it not only gives pleasure for the time being but increases the subsequent capacity for happiness and the means of securing happiness.²⁰

Olmsted also cited “the operation of scenes of beauty upon the mind,” especially because “natural scenery . . . is for itself and at the moment it is enjoyed,” thereby relieving those who experience “the severe and excessive exercise of the mind.”²¹

The United States has long prided itself on its scenery, which offered an alternative to the cultural treasures of Europe. Thomas Jefferson insisted that scene of the Blue Ridge and Shenandoah Mountains was “worth a voyage across the Atlantic.”²² “America’s best idea” was to establish national parks, which are monuments to the nation’s scenic beauty.²³ Today, many Americans act to preserve what they variously describe as scenic areas, visual resources, and viewsheds from things that could detract from their aesthetic values.

But the popular priority given to scenic values is surprisingly uncommon in environmental law. There are few federal statutes that regulate private activities that interfere with scenic values. The Highway Beautification Act is the most obvious example of such a statute, while scenic values serve as a secondary purpose for regulations imposed by the Clean Water Act and the Coastal Zone Management Act.²⁴ There is a similar paucity of state regulation of activities that interfere with scenic values. California and Maine are notable for their efforts to preserve their

19. *Id.*

20. *Id.*

21. *Id.*

22. THOMAS JEFFERSON, NOTES ON THE STATE OF VIRGINIA 19 (William Peden ed. 1955); see also RUNTE, *supra* note 6, at 11-14 (quoting Jefferson and explaining the importance of American scenery compared to European culture).

23. See generally DAYTON DUNCAN, THE NATIONAL PARKS: AMERICA’S BEST IDEA (2009); RUNTE, *supra* note 6, at 11 (observing that “American’s incentive for national parks lay in the discovery that scenery was a cultural asset”).

24. 23 U.S.C. § 131 (2006) (Highway Beautification Act); see also 16 U.S.C. §§ 1451-66 (Coastal Zone Management Act); 33 U.S.C. § 1313 (Clean Water Act’s water quality standards).

scenic coastlines. Maine state law prohibits building along scenic coastal areas, which is one of the few instances in which a court is called upon to determine whether a particular area is “scenic.”²⁵ The California Coastal Act prohibits interferences with the scenic vistas of the Pacific Coast, as demonstrated most recently by the California Coastal Commission’s denial of U2’s *The Edge*’s application to build several mansions in Malibu.²⁶ Numerous cities have enacted “Viewshed Protection Ordinances” to protect views that are judged to be especially valuable.²⁷ There are also a variety of both federal and state scenic byways, scenic trails, scenic rivers, and other areas whose characterization as “scenic” triggers affirmative efforts to protect scenic values.²⁸

Rather than regulating, the most common approach to preserving scenic landscapes is for the government to acquire scenic properties and manage them accordingly. National parks are the most obvious example of this strategy, as described below. But the federal government also manages other public lands to preserve their scenic values. The Bureau of Land Management (BLM) manages scenic lands and evaluates how proposed energy, mining, and other projects may interfere with the viewsheds on those lands.²⁹ The Forest Service relies on a Scenery Management System that “provides an overall framework for the orderly inventory, analysis, and management of scenery” in national forests.³⁰ State parks often emphasize scenic values as well.³¹

25. *See, e.g.*, *Uliano v. Bd. of Env’tl. Prot.*, 977 A.2d 400, 413 (Me. 2009) (rejecting a vagueness challenge to the application of a state statute to deny permission to build a pier because it would interfere with scenic uses).

26. *See* CAL. PUB. RES. CODE § 30251 (Deering 2009) (providing that “[t]he scenic and visual qualities of coastal areas shall be considered and protected as a resource of public importance”); CAL. COASTAL COMM’N, STAFF REP., APPLICATION NOS. 4-10-040 ET AL. (Nov. 17, 2010) (concluding the *Edge*’s proposed mansions fails to comply with the California Coastal Act).

27. *See, e.g.*, *Templeton v. Town of Boone*, 701 S.E.2d 709, 711 (N.C. Ct. App. 2010) (describing a municipal viewshed protection ordinance).

28. *See, e.g.*, 16 U.S.C. § 1242(a)(2) (provision of the National Trails System Act authorizing “[n]ational scenic trails”); *id.* §§ 1271-87 (Wild and Scenic Rivers Act). The use of carrots instead of sticks to preserve scenic values also characterizes the forty “Areas of Outstanding Beauty” that have been designated in England and Wales. *See* John Copeland Nagle, *Britain’s AONBs* 37-39 (Sep. 26, 2012) (unpublished manuscript) (on file with author).

29. *See* 43 U.S.C. § 1701(a)(8) (directing BLM to manage land within its jurisdiction “in a manner that will protect the quality of . . . scenic . . . values”). *See generally* John Copeland Nagle, *See the Mojave!*, 89 OR. L. REV. 1357, 1389-96 (2011) (describing the BLM’s efforts to consider aesthetics when siting solar facilities).

30. U.S. DEP’T OF AGRIC. FOREST SERV., *supra* note 15, at 12; *see also* ALFRED RUNTE, PUBLIC LAND, PUBLIC HERITAGE: THE NATIONAL FOREST IDEA 84 (1991) (stating the founders of the national forests believed that forests should be functional as well as beautiful).

31. *See, e.g.*, ALASKA STAT. § 41.21.131(a) (2010) (establishing Kachemak Bay State Park “to protect and preserve this land and water for its unique and exceptional scenic value” and directed that it “is reserved from all uses incompatible with its primary function as a scenic park”).

B. DESIGNATING SCENIC AREAS AS NATIONAL PARKS

National parks are the premier instance of the law's protection of scenic values. There are innumerable places that are championed as potential national parks, but opponents respond that the stature of the existing national parks would be diminished by lesser additions. The question of what deserves to be a national park was debated throughout the first several decades of the twentieth century when many new national parks were created, many proposed national parks were rejected, and the newly created National Park Service (NPS) was thrust into the debate. For example, in a famous 1918 letter, Secretary of the Interior Franklin Lane advised NPS Director Stephen Mather that "[i]n studying new park projects, you should seek to find scenery of supreme and distinctive quality or some natural feature so extraordinary or unique as to be of national interest or importance."³² Lane further warned that "[t]he national park system as now constituted should not be lowered in standard, dignity, and prestige by the inclusion of areas which express in less than the highest terms the particular class or kind of exhibit which they represent."³³ The most recent expression of these standards appears in the 2006 NPS management policies, which identify national significance, the absence of similar resources in existing national parks, the size and feasibility of managing the area, and the necessity of NPS management as the four required criteria for inclusion in the national park system.³⁴ Not surprisingly, these standards yield different responses when applied to particular places, and Congress always retains the final word about what should be a national park in any event.³⁵

The history of TRNP illustrates the contested nature of national park designations and the disputed understandings of scenic values. Early visitors to western North Dakota's badlands provided strikingly different reports. John Burroughs, a naturalist writer who visited the region early in the twentieth century, described it as "utterly demoralized and gone to the bad"³⁶ A *New York Times* reporter wrote around 1880 that "[t]he lands are sterile, the hills bleak and without verdure, and the buttes fantastic and

32. Letter from Franklin Lane, Sec. of the Interior, to Stephen T. Mather, Dir., Nat'l Park Serv. (May 13, 1918), *available at* http://www.nps.gov/history/history/online_books/anps/anps_1j.htm.

33. *Id.*

34. *See generally* NAT'L PARK SERV., MANAGEMENT POLICIES (2006).

35. *Id.*

36. HARMON, *supra* note 10, at ch. 1.

curious in shape”³⁷ General William Tecumseh Sherman described the area between the Red and Missouri Rivers as “barren and worthless” and as “bad as God ever made, or anyone could scare up this side of Africa.”³⁸ General Alfred Sully was even less discrete when he dismissed the area as “[h]ell with the fires out.”³⁹ But Sully also praised the landscape in his official reports of his military actions against the local Sioux peoples: “I have not sufficient power of language . . . to describe the country in front of us,” he wrote, settling for “grand, dismal and majestic” and “a wonderful and most interesting country.”⁴⁰ Teddy Roosevelt credited the badlands with reviving him and equipping him for the more famous years that he had ahead of him. His many writings about western North Dakota extol the region’s beauty: “The winter scenery is especially striking in the Bad Lands, with their queer fantastic formations.”⁴¹

The state legislature made the first proposal to establish a national park in the badlands in 1921, only two years after Teddy Roosevelt had died and only five years after the establishment of the NPS. The congressional hearings regarding the national park proposal generated several familiar arguments. Florida’s J. Hardin Peterson, who chaired the House Committee on Public Lands, said North Dakota’s badlands reminded him of Bryce Canyon.⁴² North Dakota’s own representative, William Lemke, repeatedly described the area as “scenic.”⁴³ Lemke compared the badlands to other western national parks, insisting “the big things do not always contain all of the beauty.”⁴⁴ In particular, Lemke told the NPS the badlands were “a whole lot more picturesque than that Jackson Hole,”⁴⁵ the site of a contemporary dispute that was the opposite of what was occurring in North Dakota’s badlands. That dispute concerned the NPS wanting to establish Grand Teton National Park over the objections of the local residents in Wyoming. But NPS Director Newton Drury responded the “area does not possess the qualities, the outstanding qualities, of scenic or scientific or

37. D. JEROME TWETON, *THE MARQUIS DE MORÈS: DAKOTA CAPITALIST, FRENCH NATURALIST* 13 (1972).

38. Olaf T. Hagen & Ray H. Mattison, *Pyramid Park: Where Roosevelt Came to Hunt*, N.D. HIST., Oct. 1952, 215, 217.

39. *Id.* at 215.

40. *Id.* at 215-16.

41. THEODORE ROOSEVELT, *RANCH LIFE AND THE HUNTING TRAIL* 76 (University of Nebraska Press 1983) (1888).

42. *Theodore Roosevelt National Park: Hearings Before the H. Comm. on Pub. Lands*, 79th Cong. 10 (1946) [hereinafter *1946 House Hearing*] (statement of Rep. Peterson).

43. See *1948 House Hearing*, *supra* note 12, at 2-3 (statement of Rep. Lemke); *1946 House Hearing*, *supra* note 42, at 2-4 (statement of Rep. Lemke).

44. *1946 House Hearing*, *supra* note 42, at 4.

45. *Id.* at 17.

historic interest that would justify pressing the matter of its being included in the National Park system.”⁴⁶ Acting Secretary of the Interior Oscar Chapman echoed that view and stated his preference for making the area a national wildlife refuge.⁴⁷

Lemke succeeded in pushing a national park bill through Congress in 1946. To do so, however, he emphasized the area’s scenic qualifications and downplayed both the historical association with Teddy Roosevelt, which could have resulted in a less desirable national historic park designation, and the area’s wildlife, which could have supported the national wildlife refuge plan. Lemke’s strategy backfired when President Truman pocket-vetoed the bill in August 1946 because of the insufficiency of the scenery argument. Truman explained “[t]he area that would be established by this bill as the Theodore Roosevelt National Park does not possess those outstanding natural features or scenic qualities that would justify its establishment as a national park,” echoing the advice he received from the Department of the Interior and prominent conservationists.⁴⁸ Truman’s veto message also elaborated his understanding of the standards for establishing a national park, observing that national parks should “contain or relate to areas that possess scenic, scientific, or historic features of outstanding national significance.”⁴⁹

The feuding parties reached a compromise in 1947. The new park would be called “Theodore Roosevelt National Memorial Park.” The NPS acquiesced, and Lemke spun the deal by claiming the additional word “memorial” connoted “something more, not less, than a national park in the ordinary usage.”⁵⁰ The House Committee on Public Lands reported “there is a Nation-wide desire that the unique scenery of the Badlands be set apart for posterity.”⁵¹ Warming to the task, the committee report added: “This area is about midway between the heavily populated sections in the Great Lakes region and the Yellowstone and other national parks. Its scenery is different from that of any other national park. Many tourists have pronounced it as more interesting than any other national park they have

46. *Id.* at 20 (statement of Newton B. Drury).

47. Letter from Oscar L. Chapman to J. Hardin Peterson (Feb. 14, 1946), *in* S. REP. NO. 79-1897, at 2 (1946).

48. Memorandum of Disapproval of Bill to Create a Theodore Roosevelt National Park in Medora, North Dakota (Aug. 10, 1946), *available at* <http://www.presidency.ucsb.edu/ws/print.php?pid=12491>.

49. *Id.*

50. David Harmon, *At the Open Hearing: The NPS’s Administration of Theodore Roosevelt National Park* 9 (1986), *available at* http://www.nps.gov/history/online_books/thro/adhi.htm.

51. H.R. REP. NO. 80-49, at 2 (1947).

visited.”⁵² President Truman approved as well. Not to be outdone, Watford City’s leaders now wanted their share of a national park and compared their northern stretch of the badlands to Yellowstone and Glacier National Parks. “They do not have the geysers or the freaks of nature there, but from a scenic standpoint I think it is as beautiful as anything I have seen,” testified a longtime North Dakota resident and Izaak Walton League member.⁵³ Congress quickly added the North Unit to the national park in 1948. But the national *memorial* park compromise proved to be unstable, and after years of complaints from the North Dakota’s congressional delegation, Congress upgraded the area to a full national park in 1978.⁵⁴

C. MANAGING THE SCENIC VALUES OF NATIONAL PARKS

The Organic Act directs the NPS to manage national parks for their scenic values. Again, though, the law is surprisingly silent on what that means. The current, 2006 edition of the NPS management guidelines says very little about scenic management.⁵⁵ Instead, the scenic values of national parks are preserved on an ad hoc basis, possibly because the protection of land as a national park eliminates many of the things that could interfere with the scenic beauty of such land. But national park designation does not eliminate all of the threats to an area’s scenery.

There are three types of interferences with those scenic values. First, there may be something located within the park that negatively affects the park’s scenic values. Examples include the construction of cell phone towers in Yellowstone, bumper-to-bumper traffic in popular national parks, and vegetation that threatens to obscure famed views at Yosemite.⁵⁶ A second threat to the scenic values of national parks arises from structures located outside of the park. For example, the NPS is struggling to preserve the views of the scenic desert landscape that prompted Congress to create

52. *Id.*

53. *1948 House Hearing, supra* note 12, at 14.

54. See National Parks and Recreation Act of 1978, Pub. L. No. 95-625, 92 Stat. 3467, 3521, § 610 (changing the park’s name).

55. See NAT’L PARK SERV., *supra* note 34, at 11 (listing scenery as one of “[t]he ‘park resources and values’ that are subject to the no-impairment standard”); *id.* at 132 (directing NPS to consider whether a proposed project “will take maximum advantage of . . . scenic values” before deciding whether to approve it); *id.* at 138 (“Billboard advertising will in no case be permitted within a park and, in general, will be discouraged on approach roads outside of parks when it would adversely affect a park’s scenic values.”).

56. See NAT’L PARK SERV., SCENIC VISTA MANAGEMENT PLAN FOR YOSEMITE NATIONAL PARK: ENVIRONMENTAL ASSESSMENT I-1 to I-2 (July 2010), *available at* http://www.nps.gov/yose/parkmgmt/upload/SVMP_YOSE_EA.pdf; NAT’L PARK SERV., YELLOWSTONE NATIONAL PARK, WIRELESS COMMUNICATIONS SERVICES PLAN: ENVIRONMENTAL ASSESSMENT I-11 (Sept. 2008), *available at* http://www.nps.gov/yell/parkmgmt/upload/WIRELESS%20EA%20September_9_08%Final.pdf.

Death Valley National Park, Joshua Tree National Park, and the Mojave National Preserve in 1994. Much of the land outside those parks is a prime candidate for industrial-scale solar energy facilities. Solar energy provides an environmentally desirable form of renewable energy, but the large, metallic structures are a jarring presence in the otherwise vast and empty natural desert landscapes.⁵⁷ A third type of interference with the scenic values of national parks comes from sources located outside of a park, but it affects the view within the park. Air pollution is the leading example of that type of problem.

In each instance, the goal of the NPS is to preserve the scenic values of a park. Thus, at TRNP “[m]aintenance of the visual scene is a first priority.”⁵⁸ There are drilling rigs, tank batteries, pumps, cell phone towers, and other “[i]nappropriate man-made structures near the borders of the park” that interfere with the views from and of the park.⁵⁹ Altogether, “although the resources aesthetic management seeks to protect are often intangible or obscure, their loss can have a remarkable effect on the visitor experience.”⁶⁰

III. HOW THE CAA’S SCENIC PROVISIONS ARE SUPPOSED TO WORK

Today, air pollution is seen primarily as a threat to public health, as well as harming property and affecting ecological processes.⁶¹ Before Congress acted though, air pollution was often regarded as an aesthetic problem. Numerous cities enacted “smoke ordinances” during the late

57. See Nagle, *supra* note 29, at 1389-96.

58. HARMON, *supra* note 10, at ch. 5. The park’s historian explained, [a] clear, sharp view of the badlands was important to Roosevelt when he ranched in Dakota territory The only sources of visibility impairment he experienced were smoke from wildfires and burning coal seams, blowing dust, and perhaps small plumes emanating from the Marquis de Moers’ short-lived beef packing plant in Medora.

Id. Now the park’s scenic views are impaired by agricultural cultivation and increased oil company traffic along scoria-dirt roads, causing ‘fugitive dust’; flash burning of sludge from pits next to oil wells, creating heavy columns of black smoke which can be seen for miles; automotive emissions from traffic on Interstate 94; and suspended particulate matter carried aloft to the park from electrical generating and coal gasification plants a long distance away.

Id.

59. *Id.*

60. *Id.*

61. See 42 U.S.C. § 7401(a)(2) (2006) (describing how Congress finds air pollution poses “mounting dangers to the public health and welfare, including injury to agricultural crops and livestock, damage to and the deterioration of property, and hazards to air and ground transportation”).

nineteenth century.⁶² “Smoke” captured the image of air pollution as something you saw and it interfered with other things you wanted to see.

Air pollution interferes with the enjoyment of scenic landscapes by making them more difficult to see.

Visibility is affected by pollutant concentrations, the viewing angle, relative humidity, cloud characteristics, and other physical factors such as color contrast between objects. Without the effects of manmade air pollution, a natural visual range would be nearly 140 miles (225 km) in western areas and 90 miles (145 km) in eastern areas.⁶³

Visibility is impaired when particles in the atmosphere absorb light or scatter light in a different direction.⁶⁴ The five types of particles that contribute most to impairment are sulfates, nitrates, organic carbon, elemental carbon, and crustal material.⁶⁵

National parks are especially vulnerable to the effect of air pollution on visibility because of the importance attached to their scenic landscapes. An NPS report concluded air pollution interferes with “the beautiful and dramatic views” of national parks through “haze that reduces contrast, washes out colors, and renders distant landscape features indistinct or invisible.”⁶⁶

Grand Canyon National Park has been a subject of special concern because of its combination of extraordinary scenic features, naturally clean air, and the visibility impairment that could be caused by development in the region.⁶⁷ Visibility at Great Smoky Mountains National Park “has been cut by about [forty] percent in winter and [eighty] percent in summer, and

62. *See, e.g.*, *People v. Lewis*, 49 N.W. 140, 140-41 (Mich. 1891) (upholding a carpentry shop managers’ convictions for violating Detroit’s “smoke ordinance”).

63. ENVTL. PROT. AGENCY, VISIBILITY IN MANDATORY FEDERAL CLASS I AREAS (1994-1998): A REPORT TO CONGRESS 1-1 to 1-2 (Nov. 2001), available at <http://www.epa.gov/visibility/report/index.html>.

64. *See* NAT’L RESEARCH COUNCIL, *supra* note 9, at 1-2, 19.

65. *See id.* at 2, 22.

66. *Id.* at 1; *see also id.* at 19 (“Many U.S. national parks and wilderness areas—the Grand Canyon, Yosemite, Shenandoah, and many others—are famous for their beautiful and dramatic scenery. Millions of people visit these areas each year to observe and appreciate nature firsthand. Visibility lies at the heart of this experience—the ability to look out over great vistas to see shapes and colors with crystalline clarity. In parts of the Southwest, the views can be spectacular. But such superb visibility is possible only when the air is extremely clean and particle concentrations are low. Even small increases in particle concentrations can substantially degrade visibility.”).

67. *See* 42 U.S.C. § 7492(f) (2006) (directing the Environmental Protection Agency to “establish a visibility transport commission for the region affecting the visibility of the Grand Canyon National Park”); *1990 House Hearing, supra* note 8, at 45 (statement of NPS Director James M. Ridenour) (stating “although the Grand Canyon is blessed with some of the cleanest air in the National Park System, the views are perceptively degraded to various degrees by manmade pollutants on most days and are significantly obscured during multiday visibility episodes . . .”).

sometimes less than one mile, meaning visitors may not even see surrounding mountains.”⁶⁸ There is additional concern over visibility due to twenty-eight proposed coal-fired power plants within the air sheds of ten leading national parks.⁶⁹

The air at TRNP was virtually unpolluted when the park was first established, but it quickly changed. During the 1948 hearings addressing the TRNP proposal, Representative Lemke assured his colleagues “[t]here is no mineral in North Dakota outside of the freak, a little manganese around the spring in the Indian reservation near Rolette. We have so much lignite coal nobody is interested in any that might be in this area.”⁷⁰ And, responding to a direct question from Colorado Representative Robert Rockwell, Lemke confidently stated there is “[n]o chance of oil.”⁷¹

Lemke was wrong. North Dakota experienced an oil boom immediately after Congress created the national memorial park, and it experienced another energy boom after Congress transformed the area into a national park in 1978. The area’s clean air was threatened.⁷² Today, “the primary sources of anthropogenic emissions include electric utility steam generating units, energy production and processing sources, agricultural production and processing sources, prescribed burning, and fugitive dust sources.”⁷³

Three provisions of the CAA address the pollution that interferes with aesthetics at TRNP and other national parks. The original 1970 version of the CAA calls for the Environmental Protection Agency (EPA) to establish national ambient air quality standards (NAAQS). In 1977, Congress added the prevention of significant deterioration (PSD) provision to the CAA. Section 169, enacted as part of the 1977 and 1990 amendments, specifically addresses national parks. I describe each provision and how it applies to TRNP, in turn.

68. NAT’L PARKS CONSERVATION ASS’N, DARK HORIZONS: 10 NATIONAL PARKS MOST THREATENED BY NEW COAL-FIRED POWER PLANTS 15 (May 2008), *available at* http://www.npca.org/protecting-our-parks/air-land-water/clean-air/dark-horizons-map/pdf/Dark_Horizons_Report.pdf.

69. *Id.* at 5.

70. 1948 House Hearing, *supra* note 12, at 9.

71. *Id.*

72. HARMON, *supra* note 10, at ch. 6 (“The most remarkable aspect of the air quality problem is how suddenly it arose. Before the mid-1970s the park’s air was ‘uncompromised,’ substantially the same as it was during the life of Roosevelt. When the Clean Air Act of 1970 created nationwide ambient air quality standards, it had no immediate effect on the park—all the standards were already being easily met.”).

73. Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze, 76 Fed. Reg. 58,570, 58,633 (Sept. 21, 2011) (to be codified at 40 C.F.R. pt. 52).

A. NATIONAL AMBIENT AIR QUALITY STANDARDS

NAAQS are the central provision of the 1970 enactment of the CAA. The EPA must establish NAAQS for each “criteria pollutant.”⁷⁴ The primary NAAQS for each such pollutant must protect human health with an adequate margin of safety; the secondary NAAQS can address other aspects of public welfare, including aesthetics.⁷⁵ The NAAQS are uniform throughout the United States, and the EPA may only consider health considerations when establishing them. In particular, the EPA may not consider the cost of achieving the necessary health standards when it establishes the NAAQS.⁷⁶

The EPA has established NAAQS for six criteria pollutants, several of which affect visibility. Sulfur dioxide (SO₂), most commonly emitted from coal-fired power plants, and nitrogen oxide (NO_x), most commonly emitted from motor vehicles, both impair visibility when they are present in the atmosphere in high amounts. Particulates resulting from dust, dirt, soot, or smoke interfere with visibility, as well. The presence of such pollutants in the atmosphere has decreased significantly since the NAAQS took effect, thereby achieving the primary goal of protecting human health, but also making “an indirect contribution to visibility improvement and maintenance.”⁷⁷ But the NAAQS have been less successful in combating the fine particulates the EPA describes as “the major cause of reduced visibility (haze) in parts of the United States, including many of our treasured national parks and wilderness areas.”⁷⁸ The EPA did not adopt NAAQS for fine particulates until 1997, and it tightened those standards in 2006.

North Dakota is one of only twelve states that has achieved all of the NAAQS.⁷⁹ The existing NAAQS are, thus, limited in their ability to produce further visibility improvements in TRNP. The EPA could pursue

74. 42 U.S.C. § 7409(a) (2006).

75. See NAT’L RESEARCH COUNCIL, *supra* note 9, at 57. The CAA’s “broad definition of welfare (protected by secondary standards) . . . includes effects on visibility.” *Id.* at 65.

76. See *Whitman v. American Trucking Ass’n*, 531 U.S. 457 (2001).

77. *Id.* at 65; see also ENVTL. PROT. AGENCY, *supra* note 63, at ES-4 (observing that the reductions in sulfur dioxide and nitrogen oxide emissions resulting from the CAA’s acid rain program and the implementation of the particular and ozone NAAQS were “expected to improve visibility in urban and rural areas across the country”).

78. *Particulate Matter: Basic Information*, U.S. ENVTL. PROT. AGENCY, <http://www.epa.gov/air/particlepollution/basic.html> (last updated July 6, 2011).

79. *Dalrymple Tells EPA to Accept State’s Regional Haze Plan*, N.D. OFFICE OF THE GOVERNOR (Oct. 13, 2011), <http://www.governor.nd.gov/media-center/news/dalrymple-tells-epa-accept-states-regional-haze-plan> (stating “North Dakota has successfully designed, implemented and enforced air quality programs resulting in the state being one of only [twelve] states that comply with all federal ambient air quality standards”).

this goal by adopting secondary NAAQS that are designed to ensure adequate visibility. It has declined to do so, though, because of the lack of sufficient quantitative data and because the uniform nature of NAAQS may not work as effectively in the context of visibility.⁸⁰

B. PREVENTION OF SIGNIFICANT DETERIORATION

The 1977 amendments to the CAA mandate the prevention of significant deterioration of air that was already clean at the time the provisions took effect.⁸¹ One of the express purposes of the PSD program adopted by Congress is “to preserve, protect, and enhance the air quality” in national parks, wilderness areas, and similar scenic and recreational areas.⁸² The PSD provisions allow the least amount of new air pollution in national parks and many wilderness areas that are collectively denominated “Class I” areas. Each Class I area may tolerate a limited decline in air quality. The permissible decline within a Class I area depends upon the initial measurement of air quality—known as the “base level”—and the amount of additional pollution the area is allowed—known as the “increment.” The PSD regulations then limit the amount of SO₂ and particulates that may be emitted by facilities that have been built since 1975.⁸³ The effect of the PSD program is to restrict the number of new polluters in areas that already have clean air.

The PSD provision gives the appropriate federal land manager the “affirmative responsibility” of protecting the “air quality related values” of Class I areas.⁸⁴ The federal land manager must also determine “whether a proposed major emitting facility will have an adverse impact on such values.”⁸⁵ A variance from the applicable PSD limits is available if the federal land manager determines the pollution in excess of the permissible increment will have no unacceptable adverse impact on air quality related values in the park and if the state agrees. The state’s governor or the

80. See NAT’L RESEARCH COUNCIL, *supra* note 9, at 65 (citing both reasons and explaining “a particulate standard sufficient to protect visibility in the “Golden Circle” of parks in the Southwest would require a reduction of pollution concentrations below natural background levels (those that exist in the absence of pollution) in the East”).

81. See generally 42 U.S.C. §§ 7470, 7473(a)-(b) (2006).

82. *Id.* § 7470(2).

83. See HARMON, *supra* note 10, at ch. 6 (explaining the PSD program); Craig N. Oren, *Prevention of Significant Deterioration: Control-Compelling Versus Site-Shifting*, 74 IOWA L. REV. 1, 25-27 (1988).

84. 42 U.S.C. § 7475(d)(2)(B).

85. *Id.*

President may order a variance even if the facility would produce an unacceptably adverse effect on air quality within a Class I area.⁸⁶

The creation of the PSD program in 1977 quickly complicated the state's efforts to develop the economy in the western part of North Dakota. The PSD provision made it difficult for the state to approve the construction of several large electric power plants in the region because they would consume all of the increment of new SO₂ and particulates tolerated by the CAA. TRNP began monitoring its air quality in 1974, when it installed a total suspended particulates collector in the South Unit.⁸⁷ The monitoring effort expanded with the oil and gas development boom of the time, yet the particulate levels within the park stayed below—sometimes just below—the legal standards. But the energy boom of the late 1970s immediately strained the PSD program. Five new facilities within range of TRNP consumed the entire available increment of air pollution allowed by the PSD regulations. The next facilities in line had to seek variances in order to gain permission to operate. By 1980, eight energy plants were proposed for what the press characterized as the “Smokestack Triangle” within TRNP's airshed, and six received variances.⁸⁸ Therefore, TRNP received six of the seven variances that were issued for polluters exceeding Class I increments in all of the United States.⁸⁹

The issue remained dormant for nearly two decades corresponding to the bust in North Dakota's energy development. The renewed interest in oil, gas, and coal activities produced a corresponding interest in the application of the PSD program. This time, the legality of new sources of pollution depended upon contested understandings of the baseline air

86. See HARMON, *supra* note 10, at ch. 6.

87. See *id.*; see also Approval and Promulgation of Air Quality Implementation Plans; New Hampshire; Regional Haze, 77 Fed. Reg. 50602, 50605 (2012) (explaining that “[t]otal suspended particulates, or TSP, is the measure of total particulate matter, regardless of size, and therefore accounts for all particulate matter emissions”).

88. See Final Certification of No Adverse Impact on Theodore Roosevelt National Park, 47 Fed. Reg. 41,480, 41,480-81, 41,483 (Sept. 20, 1982). The EPA explained:

[s]ix Prevention of Significant Deterioration (PSD) permit applications have been submitted to the State of North Dakota. The applicants are Basin Electric Power Cooperative for a 500 MW unit expansion to the Antelope Valley electric generating station; Warren Petroleum for an expansion of a natural gas processing facility; Nokota Company for a coal-to-methanol plant; Minnesota Power and Light for a 500 MW electric generating station; Amoco Production Company for a natural gas processing facility; and Phillips Petroleum Company for a natural gas processing facility Based on the above findings and the overall analysis, the Federal Land Manager concludes the following: 1. Granting these permits will not cause an unacceptable, adverse impact on the natural resources of Theodore Roosevelt NP or the wilderness portion of Lostwood NWR.

Id. at 41,480-81.

89. See Craig N. Oren, *The Protection of Parklands from Air Pollution: A Look at Current Policy*, 13 HARV. ENVTL. L. REV. 313, 372 (1989).

quality, against which any additional pollution is measured. The EPA opposed the state's plan because the agency contended North Dakota already exceeded the permissible increments for SO₂ at TRNP.

Then, in December 2003, the EPA accepted most of the state's calculations of the available PSD increment. That decision prompted a group of EPA air quality modellers to object that the agreement adopting procedures "can artificially inflate the baseline, and so artificially expand the available increment."⁹⁰ Mark Trechock of the Dakota Resource Council accused the state of engaging in a process of "backward science" that began with the desired conclusion and then sought to develop the model to support it.⁹¹ The EPA staff and most environmental groups preferred air quality modelling, while the state preferred air quality monitoring. The Dakota Resource Council challenged the agreement between EPA and the state in federal court, but the case was dismissed after the agency announced the agreement was not final and enforceable.⁹²

The PSD program has thus done little to restrict new development—and new pollution—in North Dakota. Nationally, the EPA has concluded the program has fared slightly better in improving visibility:

The PSD program has protected visibility to some extent by reducing the *growth* of emissions of pollutants that contribute to regional haze. The program's requirement that major new sources locating in clean air areas install the best available control technology has been particularly important. But the limits on growth in air pollutant concentrations established by the PSD program have been only partially effective. First, the restrictive Class I increments apply only to large parks created before enactment of the Clean Air Act Amendments of 1977; many other scenic areas receive no special protection. Second, it is not even

90. *See id.*; *see also A Change in the Air; Two Views on What a Change in North Dakota's Emission Standards Could Mean*, BISMARCK TRIB., Mar. 3, 1997, at 1C; Lauren Donovan, *Air Pollution Dispute in Final Hours*, BISMARCK TRIB., Dec. 29, 2003, at 1B; *Regional Staff Warn Against EPA Agreement with North Dakota on Measuring Pollution*, 35 Env't Rep. 932 (Apr. 30, 2004).

91. *See* NAGLE, *supra* note 5, at 128 (quoting an interview with Trechock); *see also* Transcript of Public Hearing at 133, *In re North Dakota Regional Haze Implementation Plan* (testimony of Mark Trechock) ("In 1998, standard modeling for sulfur dioxide pollution disclosed ongoing violations of PSD standards in several areas designated under federal law as Class I airsheds. These violations should have triggered a review and revision of North Dakota's State Implementation Plan for PSD compliance. However, instead of taking action to reduce pollution and come into compliance with federal standards, the Department of Health embarked on an effort to design a novel methodology to measure PSD increment production -- consumption, which was at variance with approved EPA methodologies.").

92. *See* NAGLE, *supra* note 5, at 128.

clear that the Class I increments ensure effective protection against new sources that might cause visibility impairment.⁹³

The equivocal success of the PSD program in addressing visibility led to efforts to tackle the issue more directly.

C. REGIONAL HAZE

Congress first explicitly addressed the problem of visibility in national parks when it enacted the 1977 amendments to the CAA. The amendments added section 169A to the CAA, which declares the national goal of “the prevention of any future, and the remedying of any existing, impairment of visibility in mandatory [C]lass I Federal areas which impairment results from manmade air pollution.”⁹⁴ Section 169A(a)(2) requires the EPA, in conjunction with the Department of the Interior, to list mandatory Class I areas in which visibility is an important value.⁹⁵ States that include such areas or that contain sources that might contribute to visibility impairment in these areas are required by section 169A(b)(2)(B) to include in their state implementation plans (SIPs) a long-term strategy for making reasonable progress toward the visibility goal. In 1980, the EPA sought to implement section 169(a) regulations that addressed “reasonably attributable” visibility impairment from a single polluter or a small group of polluters⁹⁶ and “deferred action on regional haze that emanates from a variety of sources until monitoring, modeling, and scientific knowledge about the relationships between pollutants and visibility impairment had improved.”⁹⁷

The EPA’s 1980 regulations also directed states to identify “integral vistas,” which were defined as the “view perceived from within the mandatory Class I Federal area of a specific landmark or panorama located outside the boundary of the mandatory Class I Federal area.”⁹⁸ In January 1981, the NPS promulgated proposed guidelines for states to use in identifying integral vistas.⁹⁹ Those guidelines generated numerous public comments. For example, in response to the suggestion the federal land managers “should rank vistas within an area and those in one area with the

93. NAT’L RESEARCH COUNCIL, *supra* note 9, at 3.

94. 42 U.S.C. § 7491(a)(1) (2006).

95. *Id.* § 7491(a)(2).

96. Visibility Protection for Federal Class I Areas, 45 Fed. Reg. 80,084, 80,086 (Dec. 2, 1980) (to be codified at 40 C.F.R. pt. 51).

97. Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze, 76 Fed. Reg. 58,570, 58,575 (Sept. 21, 2011) (to be codified at 40 C.F.R. pt. 52).

98. 45 Fed. Reg. at 80,090.

99. *See* Identification of Integral Vistas Associated with Federal Class I Areas, 46 Fed. Reg. 3646, 3646-58 (Jan. 15, 1981).

vistas in another area,” the NPS asserted the national parks and the vistas associated with them vary so significantly that it is difficult if not impossible to objectively rank the relative importance of vistas within one area, or those in one area with vistas in another area.¹⁰⁰ The NPS further explained it would determine the extent of the visibility impacts on integral vistas “on a case-by-case basis taking into account the geographic extent, intensity, duration, frequency and times of visibility impairment and how these factors correlate with (1) times of visitor use of the Federal class I area, and (2) the frequency and timing of natural conditions that reduce visibility.¹⁰¹ The NPS also rejected the claim that integral vistas would operate as “a ‘federal land grab’ and a *de facto* restriction of energy and economic development,” emphasizing “the states have the ultimate decision-making authority over the appropriate measure of protection to be given any integral vista, and may consider and balance competing interests such as energy and economic development.”¹⁰² Ultimately, the proposed regulations were never finalized, and the EPA and the NPS abandoned the integral vista approach.

Congress itself addressed regional haze by adding section 169B to the CAA as part of the law’s 1990 amendments. The provision directed the EPA to conduct further research into visibility problems, authorized the creation of “visibility transport commissions” to respond to pollution from multiple states that affects Class I areas located in another state, and required the EPA to develop any appropriate regulations including “criteria for measuring ‘reasonable progress’ toward the national goal” stated in Section 169A.¹⁰³

Again, the EPA promulgated regulations to implement the statutory directives.¹⁰⁴ Its regulations first addressed the statutory command for states to establish goals that provide for reasonable progress toward achieving natural visibility conditions. In the EPA’s published “Natural Visibility Guidance” from 2003, the agency described the meaning of the “natural visibility conditions” that states are commanded to achieve.¹⁰⁵ The

100. *Id.* at 3649.

101. *Id.* at 3649-50.

102. *Id.* at 3650.

103. 42 U.S.C. § 7492(e) (2006).

104. *See generally* Regional Haze Regulations, 64 Fed. Reg. 35,714 (July 1, 1999) (to be codified at 40 C.F.R. pt. 51).

105. *See* U.S. ENVTL. PROT. AGENCY, GUIDANCE FOR ESTIMATING NATURAL VISIBILITY CONDITIONS UNDER THE REGIONAL HAZE RULE 1-1 (Sept. 2003), *available at* http://www.epa.gov/ttncaaa1/t1/memoranda/rh_envcurhr_gd.pdf; *see also* Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze, 76 Fed. Reg. 58,570, 58,580 (Sept. 21, 2011) (to be codified at 40 C.F.R. pt. 52) (“Natural background visibility, as defined in our 2003 Natural Visibility Guidance, is estimated by calculating the

EPA next addressed the “reasonable progress” that states must demonstrate toward reaching natural visibility conditions. According to the EPA, “these reasonable progress goals are interim goals that must provide for incremental visibility improvement for the most impaired visibility days, and ensure no degradation for the least impaired visibility days.”¹⁰⁶ States must consider (1) the costs of compliance, (2) the degree of visibility improvement from using new technology, (3) the energy and non-air quality environmental impacts of compliance, and (4) the remaining useful life of any potentially affected sources when establishing their reasonable progress goals.¹⁰⁷ The regulations also require states to develop a “long-term strategy,” which “is a compilation of state-specific control measures relied on by the state for achieving its reasonable progress goals.”¹⁰⁸

The regulations specifically require states to impose best available retrofit technology (BART) on specific polluters, unless a state or group of states adopts an alternative approach that would improve visibility more rapidly than under BART.¹⁰⁹ The BART process consists of two steps. First, in the attribution step, the state must review each “BART-eligible source” within the state to determine whether any such source emits “any air pollutant which may reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area;”

expected light extinction using default estimates of natural concentrations of fine particle components adjusted by site-specific estimates of humidity.”).

106. 76 Fed. Reg. at 58,628.

107. N.D. DEP’T OF HEALTH, NORTH DAKOTA STATE IMPLEMENTATION PLAN FOR REGIONAL HAZE 57 (Feb. 2010), *available at* <http://www.ndhealth.gov/AQ/RegionalHaze/Regional%20Haze%20Link%20Documents/Main%20SIP%20Sections%201-12.pdf> [hereinafter N.D. REGIONAL HAZE SIP]. The D.C. Circuit has held the EPA’s definition of “reasonable progress” is entitled to deference under Chevron. *See Util. Air Regulatory Grp. v. Evtl. Prot. Agency*, 471 F.3d 1333, 1340 (D.C. Cir. 2006).

108. 76 Fed. Reg. at 58,632. A state’s long-term strategy consider:

- (a) [e]mission reductions due to ongoing air pollution control programs, including measures to address reasonably attributable visibility impairment;
- (b) measures to mitigate the impacts of construction activities;
- (c) emissions limitations and schedules for compliance to achieve the reasonable progress goals;
- (d) source retirement and replacement schedules;
- (e) smoke management techniques for agricultural and forestry management purposes including plans as currently exist within the state for these purposes;
- (f) enforceability of emissions limitations and control measures; and
- (g) 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.

109. *See Regional Haze Regulations and Guidelines for Best Available Retrofit Technology (BART) Determinations*, 70 Fed. Reg. 39,104, 39,105 (July 6, 2005) (to be codified at 40 C.F.R. pt. 51). The regulation indicated that BART was required for “major stationary sources” that “were put in place between August 7, 1962 and August 7, 1977, and whose operations fall within one or more of 26 specifically listed source categories.” *Id.* Additionally, the regulation requires BART if a polluter “may reasonably be anticipated to cause or contribute to any impairment of visibility in any mandatory Class I Federal area.” 40 C.F.R. § 51.308(e)(1)(ii) (2011).

sources that do so are “subject to BART.”¹¹⁰ The determination step then asks states to determine the particular technology that an individual source must install.¹¹¹

The EPA has long recognized it will take many years to attain the visibility goal stated in section 169A,¹¹² but its process has moved slowly by any standard. In January 2009, the EPA found thirty-seven states had failed to submit an SIP that addressed the regional haze requirements prior to the December 17, 2007 deadline.¹¹³ That finding started the clock on the two-year statutory period within which a state must submit an approved SIP lest the EPA promulgate a federal implementation plan (FIP) instead.

North Dakota was one of the thirty-seven states that failed to submit an SIP for regional haze by 2009. WildEarth Guardians sued the EPA for failing to prepare an FIP, and the parties entered a consent decree requiring the EPA to act by February 9, 2012.¹¹⁴ North Dakota then submitted its regional haze SIP in March 2010.¹¹⁵ The EPA, however, proposed to approve only part of the SIP, and it further proposed to issue an FIP for the other parts. The EPA agreed with the state’s determination of baseline visibility conditions at TRNP, the state’s estimate of natural visibility impairment, and the state’s calculation of the uniform rate of progress needed to reach natural visibility conditions by 2064.¹¹⁶ But the EPA proposed to disapprove the state’s NO_x BART determinations for three large coal-fired power plants located in central North Dakota about seventy-five miles east of TRNP, as well as aspects of the state’s required reasonable progress goals and determinations.¹¹⁷ The EPA changed its mind in March 2012 and accepted the state’s SIP “in large part,” including most of the BART determinations for the three most controversial power

110. See 40 C.F.R. § 51.308(e)(1)(ii).

111. 42 U.S.C. § 7491(g)(2) (2006). The determination requires consideration of five factors:

the cost 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

Id.

112. See NAT’L RESEARCH COUNCIL, *supra* note 9, at 242 (observing that “[a]chieving the national visibility goal will require a substantial, long-term program”).

113. Finding of Failure to Submit State Implementation Plans Required by the 1999 Regional Haze Rule, 74 Fed. Reg. 2392, 2393 (Jan. 15, 2009).

114. See Federal Implementation Plan for Interstate Transport of Pollution Affecting Visibility and Regional Haze, 76 Fed. Reg. 58,570, 58,576 (Sept. 21, 2011) (to be codified at 40 C.F.R. pt. 52) (describing the litigation).

115. See generally N.D. REGIONAL HAZE SIP, *supra* note 108.

116. See 76 Fed. Reg. at 58,581.

117. See *id.* at 58,573.

plants.¹¹⁸ The EPA's reversal of course won the praise of the state and the regulated utilities, but it prompted the National Parks Conservation Association and the Sierra Club to petition for review of the decision in the Eighth Circuit.¹¹⁹

The disagreement centers on the technology that North Dakota should require for the state's largest coal-fired plants. The state concluded Selective Catalytic Reduction (SCR) technology could not be employed because of the unique characteristics of North Dakota's lignite coal. The EPA insisted that SCR technology is feasible and cost effective.¹²⁰

The same technological issue has arisen in other contexts as well. In 2006, the EPA and North Dakota entered into a consent decree to resolve litigation challenging the compliance of the state's largest power plant with the CAA's new source review program requirements. Again, "the State concluded that selective non-catalytic reduction ("SNCR") technology was BACT for the boilers based on the unique physical and chemical characteristics of a boiler combusting North Dakota lignite," but the EPA insisted SCR technology was necessary.¹²¹ The district court sided with North Dakota. The court emphasized the consent decree required the court to uphold the state's determination unless it was "not reasonable."¹²² Applying that standard, the court held the state's determination of what constituted the BACT was "not unreasonable" given the state made its decision "after lengthy and careful consideration, and after it reasonably found that SCR would not be technically feasible at the Milton R. Young Station."¹²³

The EPA relied on the December 2011 district court decision in the consent decree litigation to change its position with respect to the necessary air pollution controls in the regional haze rule dispute. The EPA emphasized its "vigorous challenge of the information and analysis relied upon by North Dakota" in the consent decree litigation,¹²⁴ but it

118. ENVTL. PROT. AGENCY, APPROVAL AND PROMULGATION OF IMPLEMENTATION PLANS 30 (2012), available at http://www.epa.gov/region8/air/FinalActionND_RegionalHazePlanMar2012.pdf (proposing the final rule to North Dakota's Regional Haze SIP to be codified at 40 C.F.R. pt. 52).

119. See National Parks Conservation Ass'n, Press release, Conservation Organizations Challenge Weak Air Pollution Standards in North Dakota: Urge Reinstatement of Earlier, Stronger Protections, June 6, 2012, available at <http://www.npca.org/news/media-center/press-releases/2012/conservation-organizations.html>.

120. See *id.* at 58,602.

121. Order Denying Plaintiff's Motion to Stay and Motion for Dispute Resolution at 3, *United States v. Minnkota Power Coop., Inc.*, No. 1-06-cv-34 (D.N.D. Dec. 21, 2011).

122. *Id.* at 15.

123. *Id.* at 34.

124. 40 C.F.R. PT. 52.

acknowledged the court had ruled against it. Thus, the EPA “concluded that it would be inappropriate to proceed with [their] proposed disapproval of [SCR] as BART” for the three most controversial power plants.¹²⁵ In other words, the EPA accepted the state’s determination of what technology was needed to comply with the CAA’s regional haze provisions.

The EPA was also aware its proposed decision produced a predictable uproar in North Dakota. State officials, the state’s congressional delegation, a newly-formed “Stop EPA” organization, and individual citizens accused the EPA of ignoring the CAA’s cooperative federalism framework, failing to recognize the state’s expertise, and insisting on a one-size-fits-all solution.¹²⁶ Opponents of the EPA’s position were present at the public hearing the EPA held on its proposed rule in Bismarck, North Dakota in October 2011.¹²⁷ The state threatened to sue the EPA to defend its own proposed SIP, a potential resort to environmental litigation that is uncommon in North Dakota.¹²⁸ North Dakota’s congressional delegation even proposed federal legislation that would empower states to resolve such issues.¹²⁹ North Dakota’s congressional delegation then secured a promise from the EPA Administrator Lisa Jackson to consider testing the contested SCR technology before requiring the state to mandate the technology as part of its SIP. The EPA, in turn, cited the state’s willingness to test the

125. *Id.*

126. See, e.g., *Berg Presses EPA to Adopt North Dakota Regional Haze Management Plan*, CONGRESSMAN RICK BERG (Oct. 14, 2011), <http://berg.house.gov/press-releases/berg-presses-epa-to-adopt-north-dakota-regional-haze-management-plan/> (stating that “[u]nfortunately, the EPA has all-too-often ignored the states’ knowledge of local conditions and needs and issued federal implementation plans, despite the efforts of states to remedy their own issues” and “[t]he EPA one-size fits all requirement makes no sense”); *Dalrymple Tells EPA to Accept State’s Regional Haze Plan*, *supra* note 79 (arguing “[t]he EPA should abide by the Clean Air Act which allows the state to regulate its own industries”); *Learn More*, STOP EPA, www.stopepa.com/Learn_More/index.html (last visited Mar. 5, 2012) (asserting that “North Dakota lignite is unique among U.S. coal due to its high concentrations of sodium and potassium, alkaline metals that pose a significant problem when it comes to the operation of Selective Catalytic Reduction (SCR) technology.”).

127. See generally Transcript of Public Hearing, *supra* note 92. The EPA also received 24,000 comment letters in support of its proposal, and an unspecified number of “petitions and mass mailer letters from nine rural power cooperative associations and over 3,000 comments generated through a website established by an organization named Partners for Affordable Energy,” all of which opposed EPA’s proposal. 40 C.F.R. PT. 52.

128. See Eloise Ogden, *Regional Haze Issue*, MINOT DAILY NEWS, Oct. 7, 2011, available at <http://www.minotdailynews.com/page/content.detail/id/559273.html> (reporting “the N.D. Department of Health appropriation budget that was passed by the Legislature included \$1 million for the state to sue EPA”).

129. See *Hoeven Calls on EPA to Adopt State Implementation Plan for Regional Haze*, SENATOR JOHN HOEVEN (Oct. 14, 2011), http://hoeven.senate.gov/public/index.cfm/news-releases?ContentRecord_id=43acfeac-9aeb-4ff9-9739-8ca8b6b3de3f.

SCR technology when the EPA issued its final rule in March 2012, even though the EPA found such technology was not necessary at that time.¹³⁰

IV. WHY THE CAA'S SCENIC PROVISIONS HAVE NOT WORKED

In 1948 and again in 1978, Congress decided to protect the scenic landscapes of western North Dakota's badlands.¹³¹ In 1970, 1977, and 1990, Congress decided to ensure the air in scenic landscapes is sufficiently clean to allow people to see those sights.¹³² Scenic views are a primary purpose for national parks, and national parks are especially suited for scenic views, but the combined force of the national park's laws and the CAA has yet to actually achieve the clean air needed to see those scenic sights. Instead, there have been chronic complaints about the failure to achieve the visibility goals included in the CAA.¹³³

The statutory commitment to visibility is one now we are not sure we want to honor. The conservation of visibility at national parks, and at TRNP in particular, raises many problems and questions that are familiar to environmental law. Pursuit of the CAA's visibility goals is especially instructive for efforts to address climate change because it has long been understood it may take many years—perhaps as long as two centuries—to attain the clean air sought by the statute.¹³⁴

This section examines the reasons for the struggle to achieve the congressional goal of achieving clear visibility of national parks. Many explanations can be gleaned from the opinions expressed at the October 2011 public hearing on the EPA's proposed disapproval of North Dakota's

130. See 40 C.F.R. PT. 52.

131. See *supra* notes 2-5 and accompanying text.

132. See *supra* notes 2-5 and accompanying text.

133. See 136 CONG. REC. 4850 (Mar. 21, 1990) (observing that “the air in our parks is far worse than we ever imagined back in 1977”); NAT'L RESEARCH COUNCIL, *supra* note 9, at 2 (“[T]he federal government and the states have been extremely slow in developing an effective visibility protection program. The present program lacks sufficient resources, and it targets few of the major types of sources of visibility impairment in Class I areas. As a result, little progress has been made toward the national visibility goal established by Congress [fifteen] years ago.”); Patton & Polkowsky, *supra* note 8, at 310 (claiming that “[d]uring the 1980s . . . [t]he EPA repeatedly declined to address the technically and politically challenging problem of regional haze”). See generally *Problems with Clean Air Act Protection for National Parks and Wilderness Areas: Hearing Before the Env't, Energy, & Natural Res. Subcomm. of the H. Comm. on Gov't Operations*, 101st Cong. 131 (1990) (providing a chronology of events for EPA's visibility protection program).

134. See *EPA Regional Haze Rule: Hearing Before the Subcomm. on Forests & Pub. Land Mgmt. of the S. Comm. on Energy & Natural Res.*, 105th Cong. 22 (1997) (statement of NPS Associate Director Dr. Michael Soukup) (testifying that “reasonable progress” for the most impaired days at our most impacted parks under the current rule as it is now drafted suggests to us that it might take as much as 200 years to reach the required improvement); NAT'L RESEARCH COUNCIL, *supra* note 9, at 242 (advising that “[a]chieving the national visibility goal will require a substantial, long-term program”).

SIP. Three general themes emerged from that hearing and the other writings on how air pollution interferes with enjoyment of scenic national park landscapes: (1) the implementation of the CAA's provisions will not necessarily accomplish the statutory goal, (2) the public commitment to scenic values is not as strong as the statutory requirements for protecting those values, and (3) the cooperative federalism framework embedded in the CAA confronts special difficulties in the context of visibility issues.

A. THE QUESTIONABLE EFFICACY'S OF THE CAA'S
VISIBILITY REQUIREMENTS

The first obstacle to the implementation of the CAA's scenic provisions in North Dakota has been skepticism about whether the law will actually improve visibility in TRNP and other scenic landscapes. In other words, it is unclear whether people will be able to see the difference the law makes. The unbelief takes two forms. First, many observers emphasize the air around TRNP is already clean. Governor Dalrymple asserted "North Dakota's air is among the cleanest in the United States."¹³⁵ Dalrymple correctly observed the American Lung Association has ranked Billings County, the home of TRNP's headquarters and South Unit, the third cleanest county in the United States, and Mercer County, where several lignite fuel power plants are located, is one of the nation's twenty-five cleanest counties.¹³⁶ By contrast, a handful of participants at the October 2010 hearing insisted North Dakota's air was actually among the dirtiest in the nation, though they failed to point to any empirical support for that claim.¹³⁷

135. Transcript of Public Hearing, *supra* note 91, at 17 (testimony of Governor Dalrymple). Similarly, former Governor Schaeffer testified that an EPA regional administrator once acknowledged "North Dakota has the cleanest air in the nation," but that official then added that "if you super clean it, that then it will push down through the airwaves and get to the Grand Canyon and make it better." *Id.* at 45 (testimony of former Governor Schaeffer).

136. *Id.* at 17. In its final rule, the EPA responded that the American Lung Association's studies did not consider the pollutants that result in regional haze. *See* 40 C.F.R. PT. 52.

137. Transcript of Public Hearing, *supra* note 92, at 105 (testimony of Ardyce Taken of the Standing Rock Nation) (stating "North Dakota has the third most polluted air, next to Los Angeles and New York"); *id.* at 138 (testimony of Carol Jean Larsen, Nat'l Parks Conservation Ass'n) (contending TRNP and "the Badlands, the Voyageurs and the Wind Cave National Parks . . . are impacted by the haze pollution from North Dakota's outdated power plants"); *id.* at 227 (testimony of Charmaine White Face, Defenders of the Black Hills) (repeating that "North Dakota is said to have the third dirtiest air in the nation. Los Angeles and New York are first and then North Dakota."). *Compare id.* at 76 (testimony of Dennis Kost) (reporting that the air nearby "was sort of out of some kind of horror movie"), with Kate Bommarito, *One Lone Voice in Favor of Federal EPA's Haze Regs over State's*, PLAINS DAILY, Oct. 13, 2011, <http://plainsdaily.com/entry/one-lone-voice-in-favor-of-federal-epas-haze-regs-over-states/> ("[F]or all of Kost's assertions, he did not present even one piece of empirical evidence or quantitative data to back up his claims of widespread pollution, acid rain or diseased populations due to coal production. Ironically, Kost

The second basis for skepticism questions whether the implementation of the CAA's provisions will reduce any pollution that affects visibility at TRNP. Numerous opponents of the EPA's plan argued "the federal requirements would result in visibility differences that are unnoticeable to the human eye."¹³⁸ Or, as Senator Hoeven asserted, "it's a cosmetic issue, but nobody can tell the difference [I]f I were buying cosmetics and I could tell no difference in using them, I'm not sure it would be a very good buy."¹³⁹ The prevailing easterly wind currents suggest that regulating the large coal-fired power plants in central North Dakota will not affect the clarity of the air at TRNP.¹⁴⁰ The greatest source of frustration in North Dakota is much of the pollution that affects TRNP comes from sources located in other states or in Canada.¹⁴¹ North Dakota SIP concluded the state could eliminate *all* of its NOx emissions and still not achieve EPA's goals for TRNP.¹⁴²

drove to the hearing in an older, 'gas guzzling' van covered with anti-coal sentiments, and took up three parking spaces right by the entrance to the building where the hearing was held.").

138. STOP EPA, www.stopepa.com (last visited Mar. 5, 2012); *see also* Transcript of Public Hearing, *supra* note 92, at 33 (testimony of North Dakota Attorney General) (arguing "the visibility improvements that EPA claims would result from its plan are not even humanly perceptible"); Transcript of Public Hearing, *supra* note 92, at 207 (testimony of Senator Conrad) (asserting the EPA's regulation "would result in visibility differences that would be undetectable to the human eye"); Mac McLennan, Minnkota Power Coop., Letter to the Editor, *EPA Haze Proposal Doesn't Make Sense for Minnesota, North Dakota*, INT'L FALLS DAILY J., Oct. 12, 2011, http://www.ifallsjournal.com/opinion/letters_to_the_editor/epa-haze-proposal-doesn-t-make-sense-for-minnesota-north/article_4825572a-ef44-5337-a375-634acfa3433a.html ("Does it really make sense to require huge additional investments for visibility improvement that, even if it did work, would be imperceptible to the human eye?"). *But see* Transcript of Public Hearing, *supra* note 92, at 129 (testimony of Wayde Schafer, Sierra Club) (responding that "[o]pponents also stated that the improved visibility under the proposed EPA plan would not be perceptible to the naked eye, but reducing air pollution by 90 percent from the dirtiest coal-burning plants in the state will obviously improve a visitor's view within Teddy Roosevelt National Park").

139. Transcript of Public Hearing, *supra* note 91, at 223 (testimony of Senator Hoeven).

140. *See id.* at 162 (testimony of Robert Paine) (explaining that "with the wind patterns, the North Dakota power plants seldom affect haze in these areas [a]nd when they do affect haze, it's during the winter when there are the fewest tourists available, and often it's snowing anyway so you can't see anything"); *id.* at 168 (asserting that "the predominant winds from the west and northwest or secondarily from the southeast basically miss these Class I areas from this group of sources 1, 2 and 3, which are Coal Creek, Leland Olds and Milton R. Young, which are the subject of EPA's proposed").

141. *See* N.D. REGIONAL HAZE SIP, *supra* note 107, at 188 (concluding that the primary source-region contributors to twenty percent worst day visibility at TRNP and LWA are Canada, sources located outside of the WRAP modeling domain, North Dakota, and Montana).

142. *See id.* at 187; *see also* Transcript of Public Hearing, *supra* note 91, at 18-19 (testimony of Governor Dalrymple) (claiming "[t]he reality is the visibility requirements EPA seeks to impose on North Dakota cannot be achieved, even if every lignite-fueled power plant and every other source of sulfur dioxide and nitrogen oxides in the state was completely shut down"); Transcript of Public Hearing, *supra* note 92, at 224 (testimony of Senator Hoeven) (agreeing that North Dakota could not meet EPA's proposed standard because of particulates "particulate coming into our state from other states and from Canada").

B. THE IMPORTANCE OF VISIBILITY

The second, and perhaps the greatest, obstacle to achieving the CAA's goals is the assumption visibility is not sufficiently important. The North Dakota debates featured repeated complaints the issues were "just" or "only" about visibility. Many observers insisted or implied the visibility provisions of the CAA are not as important as the provisions of the CAA designed to protect human health.¹⁴³ Even the supporters of the EPA's visibility efforts stress the health-related benefits that will accrue from improving the visibility of the air.¹⁴⁴

The CAA does not state a priority among the values of clean air, but one can glean an implicit hierarchy from the ways the CAA employs different provisions to achieve different goals. According to the National Academy of Sciences,

the nation has not given the same priority to meeting the national visibility goal as it has to addressing other air pollution problems. For instance, Section 169A(f) of the Clean Air Act makes it clear that the EPA is not required to achieve the visibility goal by any particular date. Rather, states are obliged only to make "reasonable progress" towards the goal and the federal government has devoted only modest resources to visibility regulation and research. In contrast, the act requires that the health-based primary air-quality standards be attained within a specified time.¹⁴⁵

The distinction arises because the air can be safe enough to breathe but still not clear enough for purposes of seeing scenic sights. It can also be

143. See Transcript of Public Hearing, *supra* note 91, at 70-71 (testimony of Carroll Dewing, president of North American Coal's Coteau Properties Company, Freedom Mine) (noting "[t]he current debate is not about health" and "[i]n contrast to health-based standards, the regional haze program is designed only to improve visibility"); *id.* at 96 (testimony of John Dwyer, president and CEO of the Lignite Energy Council) (stating "[r]egional haze is about visibility, not health"); *id.* at 219 (testimony of Senator Hoeven) (noting that "[w]e're talking about air visibility, again not any health issue, but just the visibility in the air in" TRNP); *id.* at 222-23 (testimony of Sen. Hoeven) (mentioning "this is not a health issue so there's absolutely no health aspect to it"); *id.* at 243 (testimony of Mr. Glatt) (contending that "[i]t is important to note that the regional haze program is not a health measure. It only involves aesthetics."); see also Ogden, *supra* note 129 (quoting Steve Van Dyke, vice president of communications for the Lignite Energy Council, who explained the EPA proposal "has nothing to do with health and everything to do with visibility").

144. See 40 C.F.R. PT. 52 (noting that "[s]everal commenters stated that haze pollution significantly impacts human health and ecosystem health," but responding that the EPA was "not authorized to consider these impacts in evaluating the State's [regional haze] SIP"); Transcript of Public Hearing, *supra* note 91, at 125 (testimony of Allison Fisher, Sierra Club's Beyond Coal Campaign) (insisting "it's not just about the visibility [because p]ollutants that cause visibility impairments also harm public health").

145. NAT'L RESEARCH COUNCIL, *supra* note 9, at 25.

more costly to maintain and preserve air for aesthetic purposes than for health purposes.

The cost of achieving visibility was another frequent source of complaint during the North Dakota debates. The EPA disputed North Dakota's cost estimates, which was a significant reason why the agency proposed to reject the state's SIP. The EPA continued to defend its cost analysis in its final rule even as the agency accepted most of the state's SIP.¹⁴⁶ Regardless of which amount is correct, numerous observers suggested the benefits of achieving greater visibility of scenic landscapes are not worth the costs.¹⁴⁷

Besides the actual cost of controlling emissions, the EPA's implementation of the CAA's visibility provisions have been faulted for sacrificing economic development. Governor Dalrymple testified the "EPA's plan would unnecessarily harm North Dakota's . . . entire economy."¹⁴⁸ He credited North Dakota's lignite industry with "an average annual impact of \$3 billion on the state," employing 4,000 workers, and indirectly supporting 23,000 jobs, and providing "\$90 million in state tax revenues . . ."¹⁴⁹ Other witnesses at the October 2010 hearing included the superintendent of the Fargo public schools, who estimated the school district would have to pay \$175,000 more in utility costs under the EPA's plan, and a utility employee who was "worried about my job and my husband's."¹⁵⁰ Again, only a few dissenting voices emphasized the economic benefits of preserving visibility at TRNP.¹⁵¹

C. COOPERATIVE FEDERALISM AND CONFLICTING FEDERAL AND STATE INCENTIVES

Economic factors also help explain the tension between federal efforts to improve visibility and the state's caution. North Dakota advocated for TRNP, but now it resists its regulation. Representative Lemke championed

146. See 40 C.F.R. PT. 52.

147. See generally Jerome Ostrov, *Visibility Protection Under the Clean Air Act: Preserving Scenic and Parkland Areas in the Southwest*, 10 *ECOLOGY L.Q.* 397, 435 (1982) (writing that "the question of whether BACT is worth its cost remains, particularly if costs are expected to rise disproportionately as one approaches higher levels of control").

148. Transcript of Public Hearing, *supra* note 91, at 16 (testimony of Governor Dalrymple).

149. *Id.* at 25.

150. *Id.* at 117 (testimony of Fargo school superintendent Rick Buresh); *id.* at 119 (testimony of Minnkota Power employee Denise Brorby).

151. See *id.* at 140-41 (statement of resident Carol Jean Larson) ("If we're really concerned about the economy, we need to take care of our parks, our national parks, some of our steadiest economic generators. In recent years, Theodore Roosevelt National Park has drawn over half a million annual visitors, supporting hundreds of local jobs and generating over \$25 million in local spending every year.").

the creation of TRNP for its scenic values. Local boosters expected tourism that would promote economic development. Both believed there were not a lot of other good economic choices. There was no oil, and the coal in the area was not needed.

The increased regulation the CAA imposes in North Dakota because of TRNP is another example of the unintended consequences of environmental law.¹⁵² The EPA is in an impossible position if the law requires it to do one thing, but we want it to do something else. The issue is further complicated by the CAA's strategy of cooperative federalism, which in this context means three governmental actors have a particular interest in the application of the CAA's visibility provisions to TRNP: the NPS, the EPA, and the State of North Dakota.¹⁵³

Even though its ultimate goal is to conserve the scenic values of national parks, the NPS has the least authority out of these three actors because it has virtually no actual legal authority to control activities that occur outside the boundaries of a national park. It should not be surprising, then, that "some of the most notable battlers in the history of the parks . . . have concerned park resources that have suddenly become valuable for other than park purposes."¹⁵⁴ Real or imagined buffer zones surrounding national parks have long been anathema to those who resist the extension of the NPS's authority.¹⁵⁵ Congress heeded those concerns when it enacted CAA section 169, which establishes the program to combat regional haze but which specifically provides the EPA "shall not require the use of any automatic or uniform buffer zone or zones."¹⁵⁶ All that NPS can do is comment on proposals that would affect a park's air quality and hope its views are respected.¹⁵⁷

152. See NAGLE, *supra* note 5, at 246-48 (noting the unintended effects of environmental law); William H. Rodgers, Jr., *The Environmental Laws of the 1970s: They Looked Good on Paper*, 12 VT. J. ENVTL. L. 1, 1-2 (2011) (same).

153. See, e.g., *MacClarence v. U.S. Env'tl. Prot. Agency*, 596 F.3d 1123, 1125 (9th Cir. 2010) (noting the CAA is "[b]uilt on a scheme of 'cooperative federalism'").

154. Oren, *supra* note 89, at 375.

155. See, e.g., *id.* at 370 (describing how "[i]ndustry groups circulated maps purporting to show large 'buffer zones' around national parks that would be precluded from development by the increments" under a proposed EPA PSD rule).

156. See 42 U.S.C. § 7491(e) (2006).

157. See NAT'L PARK SERV., *supra* note 34, at 30 (stating "[e]xternal threats may be addressed by using available tools—such as gateway community planning and partnership arrangements; NPS educational programs; and participation in the planning processes of federal agencies and tribal, state, and local governments"); *id.* at 38 (advising that "[t]he Service will seek the cooperation of others in minimizing the impacts of influences originating outside parks"); *id.* at 53 (describing the ways in which the CAA enables the NPS "to participate in the development of pollution control programs to preserve, protect, and enhance the air quality of all units of the national park system").

The law gives the EPA variable latitude in implementing the CAA as it relates to visibility at national parks. The EPA has modest discretion as it develops the primary NAAQS based on the health effects of a pollutant, without considering the costs of achieving those standards. The state then has the primary authority to develop an SIP, including the PSD and regional haze requirements. But the CAA empowers the EPA to disapprove a state's SIP,¹⁵⁸ and a court will only overturn a SIP disapproval if the EPA acted arbitrarily and capriciously, which is a famously difficult standard for a challenger to meet.¹⁵⁹ The EPA continued to defend its understanding of its authority even as it issued the final rule approving most of North Dakota's SIP, insisting its "review of SIPs is not limited to a ministerial type of automatic approval of a state's decisions. EPA must consider not only whether the State considered the appropriate factors but acted reasonably in doing so."¹⁶⁰

Senator Hoeven would change the federal-state balance. His proposed Empower States Act would "ensure that states, rather than the EPA, make decisions regarding regional haze based on good science, local expertise and minimal economic impact on local communities."¹⁶¹ Similarly, Representative Berg has proposed the Regional Haze Federalism Act that would afford states more flexibility in fulfilling the CAA's regional haze requirements.¹⁶² He proposed also that states and the EPA must consider the economic impacts on local communities when they develop BART as part of SIPs.¹⁶³ Neither bill has produced much attention, pro or con, so the cooperative federalism status quo remains in effect to guide the regional haze provisions of the CAA in North Dakota and throughout the United States.

V. CONCLUSION

Theodore Roosevelt National Park illustrates the difficulty in making sure the air is sufficiently clear to enjoy the scenic landscapes that inspired Congress to establish the national park in western North Dakota. The CAA

158. See 42 U.S.C. § 7410(k)(3) (granting Administrator authority for full and partial approval and disapproval of SIPs).

159. See G. Nelson Smith & Evelio M. Grillo, *Let's Clear the Air Once and for All: Municipal Liability for Failing to Comply with Section 110 of the Clean Air Act*, 44 CATH. U. L. REV. 1103, 1128 n.198 (1995) (observing that "[t]he imposition of an arbitrary and capricious standard of review on the disapproval of a SIP places a heavy burden on the state seeking to challenge an EPA disapproval of its SIP . . .").

160. 40 C.F.R. PT. 52.

161. *Hoeven Calls on EPA to Adopt State Implementation Plan for Regional Haze*, *supra* note 130.

162. See generally H.R. 3379, 112th Cong. (2011).

163. *Id.* § 3.

contains multiple tools to preserve or improve visibility at national parks, but none of them have been especially successful. The current debate about the implementation of the CAA's regional haze provision in North Dakota is just the latest chapter in the saga of preserving clean air for aesthetic purposes. The chapter is unfinished, and the larger story is incomplete as well, more than one hundred years after Teddy Roosevelt marveled "[t]he . . . scenery is especially striking in the Bad Lands."¹⁶⁴

164. ROOSEVELT, *supra* note 41, at 76.