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THE NATIONAL PARK SERVICE ORGANIC ACT AND CLIMATE CHANGE

ABSTRACT

This article examines the future of the National Park Service Organic Act in a changing climate. Managers and scholars have raised questions about whether the Organic Act gives the Park Service sufficient authority to undertake the steps necessary to adapt to climate change. This article concludes that the Organic Act and park-specific enabling acts, as interpreted by the courts, grant the Park Service wide discretion to pursue management options for adaptation to climate change impacts on national park resources. It also concludes that the Organic Act, properly understood, does impose some necessary constraints on agency decision-making, constraints that prevent inappropriate development projects and that require thoughtful decision-making to minimize the risk of unintended management consequences. Overall, the Organic Act will remain relevant into the next century.

I. INTRODUCTION

Congress created the National Park Service (Park Service) in 1916 with the enactment of the Organic Act. The Organic Act establishes the basic standards by which the Park Service manages the public lands entrusted to it. As such, the Organic Act provides a crucial legal framework for Park Service management decisions. It also provides the basis for many (although by no means all) legal challenges to the Park Service’s decision-making in the courts. It is the legal standard that Park Service policy documents generally cite as the basis for the standards they set and is often referred to and relied upon in political debates over Park Service decision-making.

Climate change is a fundamental challenge to the future management of our national parks—perhaps the most important challenge.¹ Thus, it is no surprise that

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1. In the National Park Service’s (NPS) 2010 Climate Change Response Strategy, Director Jonathan Jarvis asserted that “climate change is fundamentally the greatest threat to the integrity of our national parks that we have ever experienced.” NAT’L PARK SERV., CLIMATE CHANGE RESPONSE STRATEGY 1 (2010) [hereinafter NAT’L PARK SERV., CLIMATE CHANGE RESPONSE STRATEGY]. See also, *The Impacts of Climate Change on America’s National Parks: Hearing Before the H. Comm. On Nat. Resources*, 111th Cong. (2009) (statement of Regional Director, Pacific West Region, Nat’l Park Serv., Dep’t of the Interior, Jonathan B. Jarvis) (“Climate change is potentially the most far-reaching and consequential challenge to our mission than any previously encountered in the entire history of the NPS.”) [hereinafter JARVIS TESTIMONY].

managers, scientists, and scholars have discussed whether the fundamental legal authority for the Park Service and its management of the park system—the Organic Act—will allow the Park Service to adequately respond to climate change.²

The Organic Act requires that the Park Service manage the national parks to “conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery, natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.”³ Some observers contend that this standard requires the Park Service to maintain park conditions that are more or less consistent with those present before European contact with the Americas, and to emphasize hands-off or passive management to achieve that goal.⁴ Given the large-scale impacts that climate change will impose on park ecosystems, maintenance of those pre-contact conditions will require massive human intervention (inconsistent with passive management); alternatively, passive management will allow fundamental changes in park conditions (inconsistent with maintaining pre-contact baseline conditions).⁵ Accordingly, some observers argue that the legal standards in the Organic Act are inconsistent with the 21st century management needs of the Park Service, and should be reconsidered.⁶ Even the Park Service has pondered whether

2. See *id.*; see also Alejandro E. Camacho & Robert L. Glicksman, *Legal Adaptive Capacity: How Program Goals and Processes Shape Federal Land Adaptation to Climate Change*, U. COLO. L. REV. (forthcoming 2016) (“The statutory regimes that govern management of . . . the national parks are rooted in historical and wildness preservation goals that impair agencies’ ability to meet climate-related threats.”); L.C. Jantarasami, J. J. Lawler, & C. W. Thomas, *Institutional Barriers to Climate Change Adaptation in U.S. National Parks and Forests*, 15 *ECOLOGY & SOC’Y* 33 (2010) (NPS employees from three national parks in Washington State overwhelmingly identified the Organic Act as a barrier to climate change adaptation).

3. 54 U.S.C. § 100101(a) (2014) (amending and replacing 16 U.S.C. § 1 (repealed 2014)). The Organic Act, 16 U.S.C. § 1 (repealed 2014), was amended and recodified in 54 U.S.C. § 100101(a) (2014). See National Park Service and Related Programs, Pub. L. 113-287, § 7, Dec. 19, 2014, 128 Stat. 3272. Although this article refers to “Section 1” and “Section 3” of the Organic Act, the code sections have changed. We refer to Sections 1 and 3 because of their long historical use in describing the relevant sections of the Act.

4. See WILLIAM C. TWEED, *UNCERTAIN PATH: A SEARCH FOR THE FUTURE OF NATIONAL PARKS* 2, 34 (2010); Camacho & Glicksman, *supra* note 2; Alejandro E. Camacho, *Transforming the Means and Ends of Natural Resources Management*, 89 N.C. L. REV. 1405, 1429–30 (2011) (stating that the Organic Act has a “preservation goal [that] mandates that the NPS cannot approve an action if it could lead to the impairment of any preexisting resources.”).

5. See William C. Tweed, *An Idea In Trouble: Thoughts About the Future of Traditional National Parks in the United States*, 27 *GEORGE WRIGHT F.* 6, 8 (2010) (“Proactive management elements that today would be clearly rejected, such as facilitating the migration of native species to new locales where they might survive in a changing climate regime, would become acceptable.”); *id.* (future will call for “a degree of hands-on management of natural resources that rejects completely the nineteenth century assumptions of the national park movement’s founders.”); TWEED, *UNCERTAIN PATH*, *supra* note 4, at 195–201; Camacho, *Transforming the Means*, *supra* note 4, at 1407, 1432–36. See also NATIONAL PARK SYSTEM ADVISORY BOARD, *REVISITING LEOPOLD: RESOURCE STEWARDSHIP IN THE NATIONAL PARKS* 8 (2012) (noting “necessity that management ‘may involve active manipulation of the plant and animal communities, or protection from modification or external influences.’”).

6. See Tweed, *An Idea In Trouble*, *supra* note 5, at 6 (“The concept that a ‘fence of law’ can be erected around a portion of an ecosystem and that the area contained within that hypothetical fence can be maintained forever ‘unimpaired for future generations’ can no longer be defended.”); TWEED, *UNCERTAIN PATH*, *supra* note 4, at 206 (calling for consideration to change the unimpaired mandate to be

“[m]odification to existing laws and policies may be necessary to clarify roles, responsibilities, and authorities for enacting climate change response actions.”⁷ However, not everyone in the Park Service believes that these modifications are necessary. According to Park Service Director Jonathan Jarvis, the Organic Act provides much needed guidance in the face of climate change—it directs that the Park Service “shall not sit idle,” but rather “conserve” the resources in national parks “in such manner and by such means as will leave them unimpaired for future generations.”⁸ Director Jarvis interprets the phrase “by such manner and by such means” as giving the Park Service “latitude to use whatever resources we have to protect parks in a future that has been characterized as ‘hot, flat and crowded.’”⁹

These specific critiques of the Organic Act coincide with more general arguments that environmental and natural resources law must become more flexible to allow for adaptation to climate change. According to some scholars, climate change will make obsolete many of the goals under existing environmental and natural resources law, particularly those based on a vision of a stable natural world that can be protected from human intervention.¹⁰ Likewise, the rigidity in existing environmental law is incompatible with adaptation to climate change because it constrains the experimentation and novel active management tools needed to deal with unprecedented changes in natural systems.¹¹ In a similar vein, some

“more in line with our times.”); Camacho, *Transforming the Means*, *supra* note 4, at 1407 (stating that by producing “fundamental ecological changes from prior conditions, climate change makes the significant costs and ultimate unsuitability of the National Parks Organic Act’s historical preservation . . . goal particularly evident”); Camacho & Glicksman, *supra* note 2 (“we urge refashioning the standards, statutory and otherwise that govern federal lands to enhance” the ability of agencies to respond to climate change) (calling for changes away from historical baselines as the management guidance for national parks, “changes [that] may come in the form of statutory amendments to the Park Service Organic Act”). For analysis that concedes the challenges that climate change poses to the Park System but argues that existing law is up to the task, see Robert B. Keiter, *Revisiting the Organic Act: Can It Meet the Next Century’s Conservation Challenges?* 28 *GEORGE WRIGHT F.* 240, 246 (2011).

7. NAT’L PARK SERV., CLIMATE CHANGE RESPONSE STRATEGY, *supra* note 1, at 15, 23 (among the “several overarching questions [that] must be addressed” are: “How does the NPS reconcile its definition of ‘natural’ (absence of human domination over the landscape) with the effects on resources resulting from climate changes that are understood to be caused, at least in part, by human activities? How does the NPS comply with mandates and policies for conservation and maintenance of natural conditions? . . . How does the NPS comply with the ‘no impairment’ mandate when the geographic range and even existence of resources is threatened by climate change? . . . How will the NPS comply with laws and regulations that do not take into account climate change?”).

8. *Id.* at 1.

9. *Id.*

10. Robin Kundis Craig, “Stationarity Is Dead”—Long Live Transformation: Five Principles for Climate Change Adaptation Law, 34 *HARV. ENVTL. L. REV.* 9, 17 (2010) (“Existing environmental and natural resource laws are preservationist, grounded in the old stationarity framework that no longer reflects ecological realities. In contrast, the new climate change adaptation law needs to incorporate a far more flexible view of the natural world.”); Camacho, *Transforming the Means*, *supra* note 4, at 1436; Julie Lurman Joly, *Climate Adaptation Strategies are Limited by Outdated Legal Interpretations*, 30 *GEORGE WRIGHT F.* 45, 45 (2013) (“A cogent criticism of current US federal public lands law, particularly with regard to the most preservation-oriented protected areas, is its emphasis on maintaining, restoring, or reproducing historical conditions.”).

11. See J.B. Ruhl, *Climate Change Adaptation and the Structural Transformation of Environmental Law*, 40 *ENVTL. L.* 363, 422 (2009) (“[T]he role of environmental law, if it is to contribute to climate change adaptation, cannot be to impede and obstruct [adaptation] through rigid command-and-control

commentators have argued that flexibility in environmental law is essential for the implementation of adaptive management, which in turn is required to reduce uncertainty in a world affected by climate change.¹²

Thus, understanding whether and how the Organic Act facilitates management for a future of climate change is important—not just for the future of our national parks, but also for understanding the broader implications of climate change for environmental and natural resources law in the United States.

It is important to note, however, that the Organic Act is far from the only important legal framework for Park Service management decision-making. Most national parks were created as units of the National Park System through their own specific enabling legislation—this legislation often imposes specific mandates, duties, or powers on the Park Service in managing individual units.¹³ Indeed, the legal constraints imposed by these enabling laws can be much more significant for day-to-day management than those imposed by the Organic Act.¹⁴

Apart from the Organic Act, a range of other environmental and natural resources laws that apply to all federal agencies also apply to the Park Service. The National Environmental Policy Act (NEPA)¹⁵ and the Endangered Species Act (ESA)¹⁶ are the most important of these laws. NEPA requires all federal agencies to assess the potential environmental impacts of actions they propose to undertake, to evaluate alternatives to proposed actions, and to receive public comment on any major environmental review documents.¹⁷ The ESA prohibits federal agencies from taking actions that would jeopardize the existence of threatened and endangered species.¹⁸ Both laws have had major impacts on the Park Service's decision-making, and are potentially more likely than the Organic Act to lead to litigation against the Park Service.¹⁹ Thus, an assessment of the amount of leeway the Park Service has under the Organic Act to respond to climate change is not a complete assessment of whether the entire legal framework under which the Park Service operates allows for adequate responses to climate change.

mechanisms.”); *id.* at 416–23 (arguing for shift from decision-making that focuses on ex ante analysis of environmental impacts, including significant judicial review, because it interferes with the flexibility and experimentation that climate change adaptation requires); J.B. Ruhl, *General Design Principles for Resilience and Adaptive Capacity in Legal Systems—With Applications to Climate Change Adaptation*, 89 N.C. L. REV. 1373, 1392–93 (2011); Camacho, *Transforming the Means*, *supra* note 4, at 1413–17.

12. See Eric Biber, *Adaptive Management and the Future of Environmental Law*, 46 AKRON L. REV. 933, 934–39 (2013) (summarizing this literature); see also Joly, *supra* note 10, at 48 (“Developing new laws or amendments to older ones that rely on resilience theory, adaptive management, and managing uncertainty is an important, though perhaps long-range, goal.”).

13. See Robert L. Fischman, *The Problem of Statutory Detail in National Park Establishment Legislation and Its Relationship to Pollution Control Law*, 74 DENV. U. L. REV. 779 (1997).

14. See *id.*

15. 42 U.S.C. § 4332 (2012).

16. 16 U.S.C. § 1536 (2012).

17. 42 U.S.C. § 4332 (2012).

18. 16 U.S.C. § 1536 (2012).

19. See, e.g., Denise E. Antolini, *National Park Law in the U.S.: Conservation, Conflict, and Centennial Values*, WM. & MARY ENVTL. L. & POL’Y REV. 851, 896 (2009) (“Many cases against the NPS involve both the Organic Act and the National Environmental Policy Act.”).

Nonetheless, a focused analysis on the role the Organic Act will play in climate change adaptation is important, given the high-profile nature of the Organic Act, its central role in restricting the kinds of actions that the Park Service can consider undertaking, and the specific critiques of the law that it may be inadequate to address climate change. If the Organic Act is inadequate, then changes in the law will be required, regardless of amendments to NEPA and the ESA. Our question is whether such changes are, indeed, required.

Part II begins with a very brief overview of the management options that have been proposed for adaptation to climate change impacts on national park resources. Part III describes the amount of leeway the Park Service may have to pursue those management options under the Organic Act and park-specific enabling acts. Part IV concludes by noting the tremendous discretion that the Park Service has to pursue climate change adaptation efforts on its lands, while complying with the necessary constraints.

II. MANAGEMENT OPTIONS

The Park Service's recent focus has been on "no regrets" climate change adaptation actions.²⁰ Similarly, the Department of the Interior's (Interior) 2014 Climate Change Adaptation Plan instructs agencies to "[a]void 'maladaptive' actions, that is, actions intended to avoid or reduce vulnerability to climate change that negatively impact or increase the vulnerability of other systems, sectors, or social groups."²¹ However, the scientific literature, and reports produced by conservation organizations and agencies alike, question whether more aggressive adaptation actions, like assisted migration, are desirable in national parks to respond to climate change. This begs the question—does the Organic Act allow the Park Service discretion to use all of the management resources in its climate change adaptation arsenal? In order to begin exploring that question, this section briefly reviews a range of climate change impacts on national parks, both extant and projected, and then discusses a number of adaptation actions that have been or could be proposed in national parks.²²

Climate change will cause a variety of transformations in national parks. Interior's 2014 Climate Change Adaptation Plan recognizes that "[c]limate change is now affecting, and will increasingly affect the ability of the NPS to conserve park resources in an 'unimpaired' condition."²³ Indeed, changes have already begun. Even a decade ago, there was evidence that pine forests in Bandelier and Rocky Mountain National Parks were experiencing elevated mortality due to higher temperatures, drought, and the expansion of beetle infestations to higher elevations and new

20. NAT'L PARK SERV., CLIMATE CHANGE ACTION PLAN 2012–2014 4 (2012) [hereinafter NPS ACTION PLAN].

21. DEP'T OF INTERIOR, CLIMATE CHANGE ADAPTATION PLAN 18 (2014) [hereinafter DOI ADAPTATION PLAN].

22. For a more extensive discussion of climate change adaptation strategies suggested by managers and scientists for application on federal lands, see Elisabeth Long & Eric Biber, *The Wilderness Act and Climate Change Adaptation*, 44 ENVTL. L. 623 (2014); Elisabeth Long, *Wyoming v. USDA: A Look Down the Road at Management of Inventoried Roadless Areas for Climate Change Mitigation and Adaptation*, 40 ECOLOGY L.Q. 329 (2013).

23. DOI ADAPTATION PLAN, *supra* note 21, at 7.

ranges.²⁴ Scientists have likewise documented high elevation species like the pika and alpine chipmunk in Yosemite and Great Basin National Parks “moving upslope, thereby reducing the effective area for their survival.”²⁵ Park Service leaders suggest that climate change may be contributing to changes in the frequency and intensity of wildfire²⁶—data shows that the average duration of wildfires in national parks has increased from less than 10 days to more than one month and that fire seasons are growing longer.²⁷

These types of changes will continue and intensify. Interior recognizes that “climate change will fundamentally alter iconic features or resources of parks” by causing negative impacts to cultural resources, the loss of glaciers from Denali, Glacier, and Mount Rainier National Parks, and Joshua trees from Joshua Tree National Park.²⁸ Climate change will affect forest health by causing an increase in

24. JARVIS TESTIMONY, *supra* note 1; *see also* Sandra Zellmer, *Wilderness, Water, and Climate Change*, 42 ENVTL. L. 313, 329–30 (2012) (summarizing studies on the effects of bark beetles in western parks) (citing STEPHEN SAUNDERS ET AL., NATIONAL PARKS IN PERIL: THE THREATS OF CLIMATE DISRUPTION 21 (2009); A. Park Williams et al., *Forest Responses to Increasing Aridity and Warmth in the Southwestern United States*, 107 PROC. NAT’L ACAD. SCI. 21289, 21291 (2010); David N. Cole & Laurie Yung, *Park and Wilderness Stewardship: The Dilemma of Management Intervention*, in BEYOND NATURALNESS: RETHINKING PARK AND WILDERNESS STEWARDSHIP IN AN ERA OF RAPID CHANGE 1, 2–4 (David N. Cole & Laurie Yung eds., 2010).

25. JARVIS TESTIMONY, *supra* note 1; *see also* Wendee Holtcamp, *Silence of the Pikas*, 60 BIOSCIENCE 8 (2010); C. Moritz et al., *Impact of a Century of Climate Change on Small-Mammal Communities in Yosemite National Park*, 322 SCI. 261 (2008); COLLARED PIKA, NAT’L PARK SERV. (Oct. 3, 2015), <http://www.nps.gov/articles/collared-pika.htm> (discussing risks of climate change altering the alpine environment in Alaska and northwest Canada where collared pika presently live).

26. JARVIS TESTIMONY, *supra* note 1 (“Fire frequency and intensity may also be related to climate change.”); *see also* IPCC, CLIMATE CHANGE 2014 SYNTHESIS REPORT 51, http://epic.awi.de/37530/1/IPCC_AR5_SYR_Final.pdf (“Increases in the frequency or intensity of ecosystem disturbances such as droughts, windstorms, fires and pest outbreaks have been detected in many parts of the world and in some cases are attributed to climate change (*medium confidence*).”).

27. JARVIS TESTIMONY, *supra* note 1 (“fire ignitions are occurring both earlier and later in the season”) (citing A.L. Westerling et al., *Warming and Earlier Spring Increase in Western U.S. Forest Wildfire Activity*, 313 SCI. 940 (2006)). Changes in fire intensity and extent have had effects on both natural and cultural resources. For example, at Mesa Verde National Park and Bandelier National Monument, fires have caused damage to historic structures and threatened archeological sites. JARVIS TESTIMONY, *supra* note 1; FIRE, SOIL, AND PRESERVING HISTORY AT BANDELIER, NAT’L PARK SERV. (Oct. 3, 2015), <http://www.nps.gov/articles/bandfire.htm> (discussing efforts by park staff to “help archaeological sites to resist climate change by slowing the factors that exacerbate the effects of climate change.”).

28. DOI ADAPTATION PLAN, *supra* note 21, at 7; *see also* JARVIS TESTIMONY, *supra* note 1, at 3 (noting that Joshua Tree National Park “may lose its namesake species as warmer winters cause the freezing temperatures required for the trees’ reproduction to occur less frequently”); AGGRADATION, AVULSION, AND THE HISTORIC NISQUALLY ROAD AT MOUNT RAINIER, NAT’L PARK SERV. (Oct. 3, 2015), <http://www.nps.gov/articles/moraroad.htm>; GLACIER MONITORING IN DENALI, NAT’L PARK SERV. (Oct. 3, 2015), <http://www.nps.gov/articles/denali-glacier-monitoring.htm>; Cameron W. Barrows et al., *Designing a Sustainable Monitoring Framework for Assessing Impacts of Climate Change at Joshua Tree National Park, USA*, 23 BIODIVERSITY & CONSERVATION 3263 (2014) (discussing climate change risk to Joshua Trees and other species); Elspeth Dehnert, *Climate Change Threatens U.S. National Parks*, SCI. AM., (Jul. 3, 2014), <http://www.scientificamerican.com/article/climate-change-threatens-u-s-national-parks/> (quoting Secretary of the Interior Sally Jewell as saying: “Through sound science and collaboration, we need to examine how we can help cultural and natural resources adapt to climate change and become more resilient to its impacts.”).

disturbances such as fire, insects, and disease.²⁹ Climate change will also increase species extinctions and cause extirpations of local populations.³⁰

Sea level rise may present a particular challenge because the Park Service manages approximately 34 million acres of land in 84 marine and coastal national parks.³¹ Rising sea levels may cause the inundation of low-lying coastal parks, resulting in the loss of habitat, cultural, and historical features.³² Likewise, climate change may bring more frequent and intense coastal storms and flooding.³³

To address these and other climate change effects, a wide variety of adaptation actions may be proposed in national parks. The Park Service has defined climate change adaptation as “activities that help people and natural systems better cope with climate change effects by moderating harm or exploiting beneficial opportunities.”³⁴ Adaptation includes both passive (e.g., “selecting certain areas in which no interventions will occur”³⁵) and active management strategies. Passive

29. See Nicholas A. Fisichelli et al., *Climate, Trees, Pests, and Weeds: Change, Uncertainty, and Biotic Stressors in Eastern U.S. National Park Forests*, 327 *FOREST ECOLOGY & MGMT.* 31 (2014); DAVID L. PETERSON ET AL., U.S. DEP’T OF AGRIC., PNW-GTR-855, *RESPONDING TO CLIMATE CHANGE IN NATIONAL FORESTS: A GUIDEBOOK FOR DEVELOPING ADAPTATION OPTIONS I* (2011), http://www.fs.fed.us/pnw_gtr855/htm [hereinafter *GUIDEBOOK FOR DEVELOPING ADAPTATION OPTIONS*]; JOHN T. KLIEJUNAS, U.S. FOREST SERV., PSW-GTR-236, *A RISK ASSESSMENT OF CLIMATE CHANGE AND THE IMPACT OF FOREST DISEASES ON FOREST ECOSYSTEMS IN THE WESTERN UNITED STATES AND CANADA* 7 (2011), http://www.fs.fed.us/psw/publications/documents/psw_gtr236/pse_gtr236.pdf (“Climate influences the survival and spread of pathogens as well as the susceptibility of their hosts. Climate change could alter stages and rates of development of the pathogen, modify host resistance, and lead to changes in the physiology of host-pathogen interactions.”); C. Drew Harvell, et al., *Climate Warming and Disease Risks for Terrestrial and Marine Biota*, 296 *SCI.* 2158, 2159–60 (2002) (explaining that higher winter temperatures will likely increase plant disease severity because “[g]reater overwintering success of pathogens will likely increase disease severity.”).

30. David A. Keith et al., *Detecting Extinction Risk from Climate Change by IUCN Red List Criteria*, 28 *CONSERV. BIO.* 810, 810–19 (2014) (“Anthropogenic climate change is a key threat to global biodiversity.”); Jessica C. Stanton et al., *Warning Times for Species Extinctions Due to Climate Change*, 21 *GLOB. CHANGE BIO.* 1066, 1066 (2015) (describing climate change as “an increasingly major obstacle to slowing the rate of species extinctions.”); Jonathan R. Mawdsley et al., *A Review of Climate-Change Adaptation Strategies for Wildlife Management and Biodiversity Conservation*, 23 *CONSERV. BIO.* 1080, 1084 (2009); N. S. Sodhi et al., *Causes and Consequences of Species Extinctions*, in *THE PRINCETON GUIDE TO ECOLOGY* 514–20 (S. A. LEVIN ed., 2009).

31. DOI ADAPTATION PLAN, *supra* note 21, at 37.

32. *Id.* at 7; Maria Caffrey & Rebecca Beavers, *Planning for the Impact of Sea-Level Rise on U.S. National Parks*, 30 *PARK SCI.* 6 (2013); E. ROBERT THIELER ET AL., *VULNERABILITY OF U.S. NATIONAL PARKS TO SEA-LEVEL RISE AND COASTAL CHANGE*, USGS FACT SHEET 095-02, <http://pubs.usgs.gov/fs/fs095-02/fs095-02.html> (last visited May 31, 2015).

33. DOI ADAPTATION PLAN, *supra* note 21, at 37; U.S. EPA, *Climate Impacts on Coastal Areas*, <http://www3.epa.gov/climatechange/impacts/coasts.html> (last visited May 31, 2015) (summarizing climate change impacts on coastal areas).

34. NPS ACTION PLAN, *supra* note 20, at 9. Likewise, the Intergovernmental Panel on Climate Change defines adaptation as the “[a]djustment in natural or human systems in response to actual or expected climatic stimuli or their effects, which moderates harm or exploits beneficial opportunities.” INTERGOVERNMENTAL PANEL ON CLIMATE CHANGE, WORKING GROUP II, *FOURTH ASSESSMENT REPORT, CLIMATE CHANGE 2007: IMPACTS, ADAPTATION AND VULNERABILITY* § 18.1.2 (Martin Parry et al. eds., 2007), http://www.ipcc.ch/publications_and_data/ar4/wg2/en/ch18s18-1-2.html.

35. Nathan L. Stephenson & Constance I. Millar, *Climate Change: Wilderness’s Greatest Challenge*, 28 *PARK SCI.* 34, 35 (2012); Nathan L. Stephenson & Constance I. Millar, *Climate Change: Wilderness’s Greatest Challenge in USDA FOREST SERV. RMRS-P-71* 455 (2014). Other passive management

management strategies may be especially appropriate in national parks, and are frequently proposed for climate change adaptation. In addition to prohibiting interventions on specific national parks, other examples of passive management for climate change adaptation include acquiring additional land to provide a wider range of habitat or migration corridors, both of which may be crucial as climate change causes species shifts and spurs migration.³⁶ However, active management strategies tend to be more controversial, and will accordingly raise interesting legal questions. Therefore, this section focuses on active management strategies that have been proposed to respond to climate change effects, both in the near- and long-term.³⁷

A. Adaptation Actions for the Near-Term

Two categories of actions have been proposed in the scientific and management literature for near-term park management as a means of “buying time.”³⁸ One category of actions includes those that are “designed to resist change,” or promote climate change “resistance.”³⁹ The other category—actions to promote “resilience”—seeks to enhance the ability of ecosystems to “withstand or absorb increasing effects without irreversible changes” to processes or functions.⁴⁰ These strategies focus primarily on facilitating the persistence of current ecosystems and

strategies for climate change adaptation include protecting “unfragmented habitat areas and the key habitat linkages among them.” DOI ADAPTATION PLAN, *supra* note 21, at 18.

36. Scott G. Zolkos, *Projected Tree Species Redistribution Under Climate Change: Implications for Ecosystem Vulnerability Across Protected Areas in the Eastern United States*, 18 ECOSYSTEMS 202, 216 (2015) (“Given the rapid shifts in tree species habitats expected during the coming century, enhancing connectivity, conserving migration ‘corridors’, or augmenting protected areas to include ecosystems encompassing park units (that is, PACEs) could reduce species vulnerability to climate change over longer time scales by connecting current and future suitable habitat conditions . . . or by decreasing isolation and edge effects, particularly for species projected to lose habitat space in park units or those within migration distance of a PACE.”); Craig L. Shafer, *From Non-Static Vignettes to Unprecedented Change: The U.S. National Park System, Climate Impacts and Animal Dispersal*, 40 ENVTL. SCI. & POL’Y 26 (discussing Interior’s acknowledgement that habitat corridors are needed to allow dispersal of “climate stressed animals”); J.S. BARON ET AL., U.S. EPA, ADAPTATION OPTIONS FOR CLIMATE-SENSITIVE ECOSYSTEMS & RESOURCES 1, 29 (2008) [hereinafter NATIONAL PARKS ADAPTATION OPTIONS], <http://www.werc.usgs.gov/ProductDetails.aspx?ID=3615> (recommending the reduction of fragmentation and “maintain or restore species migration corridors to facilitate natural flow of genes, species and populations” in National Parks).

37. In identifying management options, we do not intend to endorse (or reject) any of them. Indeed, many of these options may not be appropriate or effective in particular circumstances, or in general. We also note that effective adaptation to climate change may require coordination across park borders with private and public land managers. *See, e.g.*, ROBERT B. KEITER, TO CONSERVE UNIMPAIRED: THE EVOLUTION OF THE NATIONAL PARK IDEA 267–70 (2013) [hereinafter KEITER, TO CONSERVE UNIMPAIRED].

38. Stephenson & Millar, PARK SCI., *supra* note 35, at 3–4; Stephenson & Millar, RMRS-P-71, *supra* note 35, at 456.

39. Stephenson & Millar, PARK SCI., *supra* note 35, at 4; Stephenson & Millar, RMRS-P-71, *supra* note 35, at 456.

40. PETERSON ET AL., GUIDEBOOK FOR DEVELOPING ADAPTATION OPTIONS, *supra* note 29, at 60 (resilience is the most often recommended strategy for climate change adaptation).

species assemblages, rather than assisting transitions to new states that may not have existed prior to European contact.⁴¹

A variety of examples for near-term adaptation have been suggested for implementation in national parks and their ecosystems. For example, a report on climate adaptation options for national parks discusses the benefits of removing barriers to upstream migration in rivers and streams in order to improve the resilience of aquatic species and ecosystems.⁴² Managers may also propose the management of natural ignitions, prescribed fire, or thinning projects to reduce risk of wildfire, promote forest health, reduce stand densities, or benefit plants and wildlife in national parks.⁴³ These treatments may be prescribed in parks⁴⁴ where a warmer and drier climate requires lower stand densities to reduce competition for resources, like water, to increase tree vigor, and to decrease the risk of tree mortality due to insect outbreaks.⁴⁵ For example, prescribed fire, felling and leaving trees in place, and management of wildfires have been proposed “to reduce stand densities and drought stress” in Olympic National Park.⁴⁶

Minimizing the alteration of natural disturbance regimes by allowing natural ignitions to burn or by decommissioning roads may build resilience in a

41. See Stephenson & Millar, PARK SCI., *supra* note 35, at 3; Stephenson & Millar, RMRS-P-71, *supra* note 35, at 456.

42. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 29.

43. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 18–19, 29 (“Use wildland fire, mechanical thinning, or prescribed burns where it is documented to reduce risk of anomalously severe fires.”); J.E. HALOFSKY & D.L. PETERSON, ADAPTING TO CLIMATE CHANGE AT OLYMPIC NATIONAL FOREST AND OLYMPIC NATIONAL PARK, PNW-GTR-844 (AUG. 2011); Thomas A. Spies et al., *Challenges and a Checklist for Biodiversity Conservation in Fire-Prone Forests: Perspectives from the Pacific Northwest of USA and Southern Australia*, 145 BIO. CONSERV. 5 (Jan. 2012) (discussing “options for dealing with fire”).

44. See, e.g., BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 12 (“Fire-resistant tree species that may have had their natural fire frequencies suppressed include giant sequoias (*Sequoia giganteum*) in Yosemite, Sequoia, and Kings Canyon National Parks; ponderosa pine (*Pinus ponderosa*) in Grand Canyon and other southwestern parks; and southwestern white pine (*Pinus strobiformis*) in Guadalupe Mountains National Park. In other areas, such as Yellowstone or the subalpine forests of Rocky Mountain National Park . . . fires are driven almost completely by historically infrequent weather events and post-fire forest regrowth (Romme and Despain, 1989). Recent land use or fire suppression have had little effect on fire regimes in the latter parks.”).

45. See, e.g., PETERSON ET AL., GUIDEBOOK FOR DEVELOPING ADAPTATION OPTIONS, *supra* note 29, at 76; Reed F. Noss et al., *Managing Fire-Prone Forests in the Western United States*, 4 FRONTIERS IN ECOLOGY & ENV'T 481, 483 (2006). For example, in response to the increase in insect and disease epidemics, managers and scientists may propose treatments for direct control of pests like mountain pine beetles, including single tree or small patch removal, prescribed burns, or application of pesticides. See Diana L. Six et al., *Management for Mountain Pine Beetle Outbreak Suppression: Does Relevant Science Support Current Policy?*, 5 FORESTS 103, 112 (2014) (noting serious questions about the effectiveness of some of these techniques). Scholars suggest that sanitation, chemical, and biological control treatments for exotic tree diseases and pests may be necessary for climate change resistance and resilience in the Boundary Waters National Park. They predict that managers may want to use pesticides to preserve “exemplary stands” and cite an example in Shenandoah and Great Smoky National Parks where chemical treatments have been used to save a few stands of eastern hemlock from the hemlock wooly adelgid. Lee E. Frelich & Peter B. Reich, *Wilderness Conservation in an Era of Global Warming and Invasive Species: A Case Study from Minnesota's Boundary Waters Canoe Area Wilderness*, 29 NAT. AREAS J. 385, 390–91 (2009).

46. HALOFSKY & PETERSON, *supra* note 43, at 81.

changing climate.⁴⁷ After climate-induced disturbances, managers may prescribe restoration treatments like erosion control⁴⁸ or the planting of native vegetation or tree species.⁴⁹ Further, after disturbances in forested ecosystems, managers may also recommend salvage logging,⁵⁰ although some acknowledge this strategy may be better suited for national forests rather than national parks.⁵¹ In response to increasingly intense disturbances, studies suggest that it may be important to enhance resilience of infrastructure. For example, the Park Service may propose altering road and culvert designs to accommodate more extreme weather events or relocating stream-adjacent roads.⁵²

Another recommendation for near-term climate change adaptation in national parks includes the “aggressive” prevention of non-native invasive species establishment and treatment of successful invaders.⁵³ Removal or control of these species might reduce stresses on native species and ecosystems otherwise impacted by climate change.⁵⁴ Non-native invasive species eradication has been a priority of the Park Service for several years. In 2009, now-Director Jarvis testified before Congress that “the NPS needs to be aggressive in its actions to prevent the intrusion of invasive species, eradicate where feasible, and control the spread when prevention and eradication efforts fail.”⁵⁵ Methods to prevent, eradicate, and control invasive plant and animal species that may be prescribed in national parks include manual (hand pulling and burning), chemical (pesticides), biological (the use of animals, diseases, or fungi), and mechanical (mowing or fencing).⁵⁶

47. *See id.*

48. *See* David L. Spittlehouse & Robert B. Stewart, *Adaptation to Climate Change in Forest Management*, 4 B.C. J. ECOSYSTEMS & MGMT. 1, 10 (2003).

49. *See, e.g.*, BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 29; V.H. Dale et al., *Climate Change and Forest Disturbances*, 51 BIOSCI. 723, 730–31 (2001).

50. *See, e.g.*, LINDA A. JOYCE ET AL., NATIONAL FORESTS. ADAPTATION OPTIONS FOR CLIMATE-SENSITIVE ECOSYSTEMS AND RESOURCES 22 (2008), <http://downloads.globalchange.gov/sap/sap4-4/sap4-4-final-report-Ch3-Forests.pdf> (prescribing salvage harvesting in national forests as a climate change response strategy: “Erosion and sediment loss following disturbances could be addressed by promptly reforesting affected areas and salvage-harvesting affected trees (where this activity will not cause further damage), so that a new forest canopy can be established before shrubs ‘capture’ the site.”). There is extensive controversy about the impacts and effectiveness of salvage logging. *See* Dale et al., *supra* note 49, at 730 (noting that salvage operations can cause erosion).

51. *Compare* JOYCE ET AL., *supra* note 50 (discussing salvage logging as a climate change response strategy in national forests) *with* BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36 (no similar discussion).

52. *See* HALOFSKY & PETERSON, *supra* note 43, at 28, 32, 35–38.

53. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 22 (“If invasive insects, either native or alien, are considered a threat to structures or the survival of valued flora, they may be treated aggressively. Direct management interventions include use of biocides, biological control, and plant removal in ‘front country’ areas where safety and visitor perception are paramount. Non-native diseases are another major threat to native plants and animals. White pine blister rust (*Cronartium ribicola*), for instance, has caused die-offs of five-needled pines in western and Midwestern parks.”); *id.* at 29 (“[A]ggressively prevent establishment of invasive non-native species where they are documented to threaten native species or current ecosystem function.”).

54. Long & Biber, *supra* note 22, at 653.

55. JARVIS TESTIMONY, *supra* note 1.

56. *See, e.g.*, INVASIVE SPECIES MANAGEMENT, NAT’L PARK SERV. (Oct. 3, 2015), <http://www.nature.nps.gov/biology/invasivespecies>; *Control Mechanisms*, USDA (Oct. 3, 2015), <http://www.invasive>

Adaptation options also include intensive management actions to protect remnant populations of at-risk species and their refugia.⁵⁷ For example, one study discusses “keeping an endangered plant population healthy by drip irrigation” as a climate change adaptation strategy that could help reduce environmental stress and facilitate restoration.⁵⁸ Despite its cost, managers have even discussed the possibility of watering giant sequoias in California’s southern Sierra Nevada.⁵⁹ If managing for species persistence proves ineffective, captive breeding or propagation and reintroduction of wildlife species may be suggested for climate change adaptation.⁶⁰

B. Adaptation Actions for the Long Term

Over the long term, climate change may push certain ecosystems and species beyond their capacity to recover. Where managing to support resilience becomes infeasible, adaptation may require “managing transitions to new ecosystem states.”⁶¹

Examples proposed for national parks include allowing the establishment of species that are not present locally, but managers believe would enhance biodiversity and regional ecosystem function.⁶² This may require changing Park Service policies, for example, by relaxing the definition of invasive species.⁶³

Similarly, national park managers may replant or introduce desired species after disturbances or in anticipation of the loss of some species.⁶⁴ For example, scientists are identifying salt-tolerant varieties of coastal bald cypress to help restore cypress forests now dying due to saltwater intrusion in estuaries along the Gulf and southern Atlantic coasts.⁶⁵ Where species are unable to migrate at a fast enough pace

speciesinfo.gov/toolkit/controlmech.shtml; Erica S. Zavaleta et al., *Viewing Invasive Species Removal in a Whole-Ecosystem Context*, 16 TRENDS IN ECOLOGY & EVOLUTION 454, 454 (2001); WIS. DEP’T OF NAT’L RES., INVASIVE SPECIES CONTROL METHODS, dnr.wi.gov/topic/invasives/control.html (last visited Mar. 8, 2015).

57. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 29.

58. Stephenson & Millar, PARK SCI., *supra* note 35, at 36.

59. Tracie Cone, *Should Giant Sequoias be Watered? Scientists Ponder Impacts of Climate Change Across Sierra*, ASSOC. PRESS (July 1, 2013), <http://news.yahoo.com/giant-sequoiaswatered-scientists-ponder-impacts-climate-change-152854760.html>.

60. Mawdsley et al., *supra* note 30, at 1084–85. The Park Service has a history of reintroducing certain species. For example, wolves were reintroduced to Yellowstone National Park beginning in the mid-1990s. See NAT’L PARK SERV., YELLOWSTONE NATIONAL PARK WOLF PROJECT ANNUAL REPORT 5 (2013). More recently, in 2007, a coalition of agencies initiated a fisher reintroduction project in Washington state. See Olympic Peninsula Audubon Society, *Olympic Fisher Reintroduction Project*, OLYMPIC PENINSULA AUDUBON SOCIETY, available at <http://olympicpeninsulaaudubon.org/conservation/olympic-fisher-reintroduction-project/> (last visited Dec. 18, 2015).

61. West et al., *U.S. Natural Resources and Climate Change: Concepts and Approaches for Management Adaptation*, 44 ENVTL. MGMT. 1001, 1001 (2009).

62. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 29 (“Allow the establishment of species that are non-native locally, but maintain native biodiversity or enhance ecosystem function in the overall region.”).

63. See Alejandro E. Camacho, *Assisted Migration: Redefining Nature and Natural Resource Law under Climate Change*, 27 YALE J. ON REG. 171, 252 (2010).

64. BARON ET AL., NATIONAL PARKS ADAPTATION OPTIONS, *supra* note 36, at 29.

65. *Unnatural Disaster: Global Warming and Our National Parks*, NAT’L PARKS CONSERVATION ASSN., <http://www.npca.org/protecting-our-parks/air-land-water/climate-change/unnatural-disaster.html>.

to keep up with shifts in suitable habitat, managers may prescribe assisted migration—the physical moving of species from native habitat to more suitable habitat.⁶⁶ Managers may “even consider conceding the loss of [a] species” where intensive management cannot guarantee the persistence of a species.⁶⁷

These long-term adaptation actions will likely generate significantly more controversy than near-term actions when proposed in national parks. The next section explores whether the Organic Act and individual park enabling legislation provide for the full range of climate change adaptation actions already mentioned here and elsewhere in the adaptation and management literature.

III. THE ORGANIC ACT AND PARK ENABLING ACTS PROVIDE SUBSTANTIAL LEEWAY FOR PARK SERVICE MANAGEMENT CHOICES

Given the wide range of management options that the Park Service could employ in order to address climate change, what kind of leeway does the Organic Act provide in making those choices? To answer that question, we begin with the language of the Organic Act itself. As our analysis clarifies, the statutory language provides little traction. The legislative history of the Organic Act (the debates surrounding its enactment in Congress and more broadly) offers little useful information. Next, we consider the history of the Park Service’s implementation of the Organic Act, perhaps in implementing the law, the Park Service might have identified fundamental constraints that the law imposes on management choices. However, the significant changes in the Park Service’s position over the years gives little basis to conclude that the Organic Act really does constrain management choices in a significant way. We also examine the possible constraints that park-specific enabling acts might impose on Park Service management choices; these are relatively minimal. Lastly, we examine the case law in which courts considering challenges to Park Service management decisions have interpreted the meaning of both the Organic Act and park-specific enabling acts. The courts have interpreted these laws to give wide discretion to the Park Service in making management decisions.

A. The Text of the Organic Act

The most important component of the Organic Act, in terms of providing guidance for Park Service management decisions, is the first section of the law:

The . . . Service . . . shall promote and regulate the use of the National Park by means and measures that conform to the fundamental purpose of the System units, which purpose is to conserve the scenery, natural and historic objects, and wild life in the System units and to provide for the enjoyment of the scenery,

66. Stephenson & Millar, *PARK SCI.*, *supra* note 35, at 36; BARON ET AL., *NATIONAL PARKS ADAPTATION OPTIONS*, *supra* note 36, at 24, 29; Frelich & Reich, *supra* note 45, at 391 (suggesting that assisted migration within and around the Boundary Waters Canoe Area Wilderness may be desirable for climate change adaptation).

67. BARON ET AL., *NATIONAL PARKS ADAPTATION OPTIONS*, *supra* note 36, at 32.

natural and historic objects, and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations.⁶⁸

As many commentators have noted, this language appears to set up two goals the Park Service is required to pursue: conserve park resources while providing for their enjoyment, and ensure that all park resources are left “unimpaired for the enjoyment of future generations.”⁶⁹

The dual goals of the Organic Act appear to be in tension—after all, providing for enjoyment may require actions (e.g., construction of trails, roads, or hotels) that are in conflict with conserving natural resources (e.g., destruction of natural habitat in the process of constructing trails, roads, or hotels). In resolving that tension, the Park Service has both emphasized the Organic Act’s non-impairment mandate and concluded that conservation trumps facilitating recreation where conflicts exist.⁷⁰

Framing the interpretive problem this way, however, just forces us to define the terms “conserve” and “unimpaired”—terms the statute itself does not define.⁷¹ Conserve and unimpaired cannot mean a complete prohibition on all human activity within the parks—at least, no scholar or manager has argued that position. Thus, there must be some level of development or human impact that is permissible within the parks that is consistent with leaving natural resources unimpaired. What, then, do the terms “conserve” and “unimpaired” require? Do they require maintenance of historic baseline conditions in park units, perhaps as they existed before European contact? Do they require protecting ecosystems and species to ensure their future survival?

Which resources are we supposed to be conserving and avoiding the impairment of? The statute speaks of “the scenery, natural and historic objects, and

68. 54 U.S.C. § 100101(a) (2014) (amending and replacing 16 U.S.C. § 1 (repealed 2014) (“The Service thus established shall promote and regulate the use of the Federal areas known as national parks, monuments, and reservations hereinafter specified . . . as provided by law, by such means and measures as conform 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.”)).

69. See, e.g., Federico Cheever, *The United States Forest Service and National Park Service: Paradoxical Mandates, Powerful Founders, and the Rise and Fall of Agency Discretion*, 74 DENV. U. L. REV. 625, 634, 638 (1997); Robin W. Winks, *The National Park Service Act of 1916: ‘A Contradictory Mandate’?* 74 DENV. U. L. REV. 575, 583–84, 610 (1997); John Copeland Nagle, *How National Park Law Really Works*, 86 UNIV. COLO. L. REV. 861 (2015).

70. See NAT’L PARK SERV., MANAGEMENT POLICIES 2006 [hereinafter NPS MANAGEMENT POLICIES]; see also Robert B. Keiter, *Preserving Nature in the National Parks: Law, Policy, and Science in a Dynamic Environment*, 74 DENV. U. L. REV. 649, 675–76 (1997) (stating that the Organic Act, together with 1978 amendments has been interpreted by courts to “clearly give . . . primacy to resource preservation over competing uses or interests”); Keiter, *Revisiting the Organic Act*, *supra* note 6, at 243 (same); Dennis J. Herman, *Loving Them to Death: Legal Controls on the Type and Scale of Development in the National Parks*, 11 STAN. ENVTL. L. J. 3, 18 (1992). *But see* Nagle, *supra* note 69, at 861 (while impairment does constrain NPS decision-making, conservation and recreation are equal goals under the Organic Act).

71. See Nagle, *supra* note 69, at n.36 (noting lack of definition of terms in the Act, and lack of any useful contemporary definitions of the terms).

wild life in the System units.”⁷² But the very breadth of those terms only adds to the ambiguity, especially when protecting one resource might involve damaging another. Are non-native species considered to be “wild life” that should be protected, even if they threaten the existence of native species? If the scenery of a pine forest is threatened by a disease that is hosted by a native plant species, is elimination of that plant species appropriate in order to protect scenery?

In addition to the opening language in Section 1 of the Organic Act, Congress enacted a series of specific management provisions in Section 3 of the Organic Act. Specifically, the Park Service may “sell or dispose of timber in cases where, in the judgment of the Secretary, the cutting of timber is required to control attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects in any System unit.”⁷³ It may also “provide for the destruction of such animals and plant life as may be detrimental to the use of any System unit.”⁷⁴ Finally, the Park Service may “grant the privilege to graze livestock within a System unit when in the Secretary’s judgment, the use is not detrimental to the primary purpose for which the System unit was created.”⁷⁵ Combined, these provisions in the Organic Act appear to give the Park Service broad leeway to actively manage park resources—at least so long as it can establish that active management would offset a threat to a park’s “scenery or the natural or historic objects” (in the case of logging) or even more broadly a threat to the “use” of a park (in the case of controlling animal or plant life).

In 1970 and 1978, Congress amended the Organic Act to state that all units are part of “one National Park System,” that all areas in the system are to be managed “consistent with and founded in the purpose” of Section 1 of the Organic Act, and that all activities in the park system “shall be conducted in light of the high public value and integrity of the System and shall not be exercised in derogation of the values and purposes for which the System units have been established, except as directed and specifically provided by Congress.”⁷⁶ As noted below, these provisions are generally understood to restate the basic principles of Section 1 of the Organic Act.⁷⁷

72. 54 U.S.C. § 100101(a) (2014) (amending and replacing 16 U.S.C. § 1 (repealed 2014) (discussing “the scenery and the natural and historic objects and the wild life therein”).

73. 54 U.S.C. § 100753 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014) (permitting the Park Service to “sell or dispose of timber in those cases where in [the Secretary’s] judgment the cutting of such timber is required in order to control the attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects”).

74. 54 U.S.C. § 100752 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014) (allowing it to “provide in [its] discretion for the destruction of such animals and of such plant life as may be detrimental to the use of any of said parks, monuments, or reservations”).

75. 54 U.S.C. § 102101(a)(2) (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014) (permitting the Park Service to “grant the privilege to graze livestock within any national park, monument, or reservation herein referred to when in his judgment such use is not detrimental to the primary purpose for which such park, monument, or reservation was created”).

76. 54 U.S.C. § 100101(b)(1), (2) (2014) (amending and replacing 16 U.S.C. § 1a-1 (repealed 2014) (as enacted by Pub. L. 91-383, § 1, Aug. 18, 1970, 84 Stat. 825 and amended by Pub. L. 95-250, title I, § 101(b), Mar. 27, 1978, 92 Stat. 166) (stating that all activities in the park system “shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established”).

77. See *infra* notes 170, 179, 241 and accompanying text.

In the context of management actions to respond to climate change, the statutory language does not appear to impose many constraints.⁷⁸ Even the most aggressive management choices could plausibly be framed within the scope of the broad tripartite framework of Section 1. If the management action can be framed as a response to the human impacts caused by climate change (e.g., an effort to offset those impacts), then the action might be characterized as an action to “conserve” a park’s natural resources in a way that ensures it remains “unimpaired” by climate change. Reciprocally, passive management allows park ecosystems to change in response to climate change; this management style could be framed as an appropriate choice to “conserve” the natural resources by avoiding the “impairment” that might result from active management.

The provisions in Section 3 appear to add to the Park Service’s discretion under the Organic Act.⁷⁹ Indeed, they seem to further facilitate the ability of the Park Service to pursue active management, if it opts to do so.⁸⁰ After all, climate change can be framed as a threat to the “scenery or the natural or historic objects” of the park system, and as a threat to the “use” of the park. For instance, climate change might facilitate the expansion of native pine beetles into new habitats; this would cause significant mortality in pine forests—threatening the “scenery” as well as the “natural objects” of the park system. Pine forest mortality could also be plausibly framed as a threat to the “use” of the park—for instance, because dead trees are less scenic, or because dead trees might fall onto visitors using roads or trails. Thus, logging or other removal of animal or plant life in response to climate change is plausibly justifiable under Section 3.

B. Legislative History of the Organic Act

When faced with unclear or ambiguous statutory language, a traditional tool of lawyers and judges to interpret that language is to examine the history of the law’s enactment, to determine whether the intent of the legislature can be further elucidated.⁸¹ However, there is little evidence from the enactment of the Organic Act that helps to interpret its extremely broad language.

Several scholars—including a leading historian—have attempted to parse the legislative history of the Organic Act to glean additional clarity from the language

78. Molly N. Ross, *The Requirement to Leave Park Resources and Values “Unimpaired”*, 30 GEORGE WRIGHT F. 67, 68 (2013) (noting that the terms in the statute are “not entirely plain and the words’ essential ambiguities provide fertile ground for evolution of meaning with increasing knowledge and changing circumstances”); Cheever, *supra* note 69, at 634, 638 (arguing that the Organic Act gives the agency wide discretion, even “carte blanche” to operate as it sees fit).

79. See 54 U.S.C. §§ 100752, 100753 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014)).

80. *Id.*

81. See JOHN F. MANNING & MATTHEW C. STEPHENSON, LEGISLATION AND REGULATION: CASES AND MATERIALS 127–28 (2d ed. 2013). This technique is not without controversy among lawyers and judges. For instance, U.S. Supreme Court Justice Antonin Scalia has repeatedly argued that legislative history is not an appropriate tool to use to interpret statutes. See, e.g., *Conroy v. Aniskoff*, 507 U.S. 511, 519 (1993) (Scalia, J., concurring in the judgment).

of Section 1. Those efforts have failed,⁸² even when the search extended beyond the traditional legislative history tools of congressional statements, or official reports by congressional committees, and extended into the personal papers of individuals (whether legislators or not) who were influential in drafting the Organic Act.⁸³ If any lesson can be drawn from the Organic Act's legislative history, it is probably that Congress intended the Park Service to have broad discretion to protect the scenic nature of its lands, and prioritize protection of scenery over other goals (such as commercial timber harvesting);⁸⁴ Congress did not envision tight controls over Park Service decision-making.⁸⁵

82. Ross, *supra* note 78, at 69–70 (stating that there is little information in legislative history on meaning of “unimpaired” in Organic Act); Keiter, *Revisiting the Organic Act*, *supra* note 6, at 241 (arguing there is little useful information about impairment language in the legislative history).

83. Historian Robin W. Winks conducted an exhaustive historical review of the papers of the leading figures who helped draft the Act. He concluded that “[p]arks were to be held to a higher standard of preservation because of their grandeur and (with monuments) scientific values than were other federally-administered lands . . . and while roads, accommodations, and other man-made intrusions were necessary in order to enhance the recreational purposes of the national parks, such physical objects were to be subordinate to the preservation of the ‘scenery.’ Never, however, was scenery defined, for clearly all believed they understood its meaning.” Winks, *supra* note 69, at 589 (providing an overview of the legislative history and finding little detailed information to guide interpretation of the law). He believed that there was little focus on the specific meaning of the conservation or non-impairment mandates in the Organic Act. *Id.* at 583–84. Winks ultimately argued that based on principles of rhetoric, conservation is first-mentioned in the statute and therefore the most important component of the Organic Act mandate. *Id.* at 610.

84. Testimony before Congress on various versions of the Organic Act between 1912 and 1916 emphasized how the Park Service was to be very different from the Forest Service, with the Park Service focused on protection of scenery and the Forest Service focused on timber production. For example, in a letter the Secretary of Agriculture, James Wilson, emphasized the difference between national forests and national parks, namely that national forests “should be managed with a view to their fullest possible development and use, in order that the industries dependent upon them may secure necessary supplies” while, on the other hand, “the national parks should be managed with a view to preserving their scenic interest and furnishing a recreation ground for the people, only allowing such use of their resources as may be necessary to improve and protect them.” *Establishment of a National Park Service: Hearing on H.R. 22995 Before the H. Comm. on the Public Lands*, 62nd Cong. 5 (1912); see also *National Park Service: Hearing on H.R. 434 and H.R. 8668 Before the H. Comm. on the Public Lands*, 64th Cong. 52–53 (1916) (statement of J. Horace McFarland, President of the American Civic Association) (stating that the parks were the “Nation’s pleasure grounds and the Nation’s restoring places” while the forests were “the nation’s wood lots” and that national parks needed to be “dignified by a separate handling” in order to be “freer from the assaults of selfishness”); *id.* at 43–44 (stating that because the parks were free of “public lumbering” and “protected by law from hunting of any kind,” they alone “had the seclusion and other conditions essential for the protection and propagation of wild animal life” and would become “great public nature schools”). There is one significant reference in the legislative history of the Organic Act that can be seen as identifying a historic baseline as the reference point for conservation. H.R. Rep. No. 64-700, at 3 (1916) (The House Report for the Act stated that “segregation of national park[s]” required “the preservation of nature as it exists.”).

85. Winks, *supra* note 69, at 646 (summarizing the relevant legislative history). See also RICHARD WEST SELLARS, *PRESERVING NATURE IN THE NATIONAL PARKS: A HISTORY* 29, 40–45 (2d ed. 2009) (“The legislative history of the Organic Act provides no evidence that either Congress or those who lobbied for the act sought a mandate for an exacting preservation of natural conditions. An examination of the motivations and perceptions of the Park Service’s founders reveals that their principal concerns were the preservation of scenery, the economic benefits of tourism, and efficient management of the parks.”); Nagle, *supra* note 69, at 890 (stating that the goals of conservation and recreation are equal under the Organic Act, and that this is evident in the enabling acts for parks created before the Organic Act, and

Thus, the Act's legislative history reinforces our initial analysis that the text of the statute allows for broad discretion by the Park Service to use a wide variety of management tools to respond to climate change.

C. Park Service Implementation of the Organic Act

Does the history of Park Service implementation of the Organic Act shed any light on the meaning of the statutory language? Note that here we are not directly interested in how the Park Service may or may not have constrained itself through its current policy documents interpreting the meaning of the Organic Act. Instead, we are interested in whether the Park Service's interpretation of the Organic Act is so consistent over time and reflects such a uniform understanding of the Organic Act, that this might be seen as relevant evidence as to a consensus—at least in practice—about the meaning of the Organic Act's language.

From a legal perspective, interpretations by agencies of the statutes they implement can have some bearing on a court's interpretation of the relevant statutory language. If Congress has (explicitly or implicitly) delegated to an agency the power to interpret statutory language, the relevant statutory language is ambiguous, and the agency's interpretation of that statutory language is embodied in an administrative decision that meets certain procedural requirements, then courts will ordinarily defer to a reasonable agency interpretation of the statutory language.⁸⁶ This is called "Chevron deference," after the Supreme Court case that articulated the rationale and standards for this form of deference.⁸⁷ However, it is important to remember that an agency's interpretation of ambiguous statutory language is not irreversible—in other words, the agency may later change its interpretation, and if appropriate procedural steps are again followed, the courts will defer to that alternate statutory interpretation as well, so long as it is reasonable.⁸⁸

However, there may be agency interpretations of a statute that identify clear, outer limits to the permissible range of interpretations of ambiguous statutory language. Occasionally, courts have drawn upon agency practice in interpreting ambiguous statutory language, even when that agency practice does not meet the procedural requirements necessary for *Chevron* deference.⁸⁹ In applying this alternative deferential standard, courts may consider the agency's history of statutory interpretation when they believe that the agency has expertise in interpreting the

this creates broad discretion for Park Service to balance those two goals); *but see* Herman, *supra* note 70, at 21 (arguing that early park enabling legislation prioritized conservation goal).

86. *See* *Chevron v. Nat. Res. Def. Council*, 467 U.S. 837, 843–44 (1984). For Supreme Court case law articulating the procedural requirements that agencies might need to fulfill such that their statutory interpretation would receive judicial deference, *see* *U. S. v. Mead Corp.*, 533 U.S. 218, 230–31 (2001) (stating that courts have consistently granted deference to agency decisions that have gone through public notice and comment).

87. *Chevron*, 467 U.S. at 843–44.

88. *See* *Smiley v. Citibank (S.D.), N.A.*, 517 U.S. 735, 742 (1996) (agencies can revise their interpretation of a statute and still receive deference, so long as the change in position is adequately explained); *see also* *Chevron*, 467 U.S. at 863–64.

89. *See* *Skidmore v. Swift & Co.*, 323 U.S. 134, 140 (1944).

statute and has been consistent over an extended period of time.⁹⁰ Note that in applying this alternative deferential standard (sometimes called “*Skidmore* deference”), courts defer much less to the agency interpretation than they would under *Chevron*. Rather, the courts weigh the agency interpretation as part of its overall, independent determination of the meaning of the statute.⁹¹ After applying *Skidmore* deference, it is possible that the court’s interpretation of the statute might be fixed—i.e., that other alternative interpretations of the statute would be foreclosed—if the court concludes that the meaning of the statute (as informed by prior administrative interpretations) is clear.⁹²

Thus, the question is whether the Park Service’s interpretation of the meaning of the relevant provisions of the Organic Act has been so clear and consistent over time that courts might take that interpretation as relevant to determining the fixed meaning of the statute. In other words, can that history resolve (some, maybe all) ambiguity over the meaning of the statute in a permanent way (at least unless Congress amends the statute)?⁹³

There is a long and rich history of Park Service implementation of the Organic Act with respect to the management of park resources, including wildlife and forest ecosystems. However, it is clear that Park Service implementation of the Organic Act is not sufficiently consistent over time to lead a court to conclude that the Organic Act’s ambiguous terms (“conserve” and “unimpaired”) should be fixed by particular meanings.

Although the Park Service generally defined its mission under the Organic Act as consistently protecting what is “natural” about the parks, its definition of “naturalness,” and how to appropriately achieve it, has not been consistent.⁹⁴ The

90. *See id.* (Courts will look to agency interpretations of statutes to assist in judicial interpretation of the statute to the extent that the agency interpretation shows “thoroughness evident in its consideration . . . validity in its reasoning . . . consistency with earlier and later pronouncements, and all those factors which give it power to persuade.”).

91. For a discussion of the extent to which the courts are deferring to agencies or reaching their own independent judgment about the statute in the context of *Skidmore* deference, *see* KRISTIN E. HICKMAN & RICHARD J. PIERCE, JR., *FEDERAL ADMINISTRATIVE LAW* 644–45 (2010).

92. However, if the court concludes that the relevant provision of the statute is ambiguous, and develops its own interpretation of the statute based on agency interpretations, the agency still has the possibility of interpreting the statute and receiving *Chevron* deference, so long as (again) the interpretation is reasonable and the agency interpretation meets minimum procedural requirements. *See Nat’l Cable & Telecom Ass’n v. Brand X Internet Services*, 545 U.S. 967, 986 (2005).

93. We take as given that courts would consider the Park Service to have sufficient expertise in the management areas covered by the Organic Act and that the agency’s interpretation should be given some weight under *Skidmore*. *See Skidmore*, 323 U.S. 134 (1944).

94. *See SELLARS, supra* note 85, at 27 (“Although extensive manipulation and intrusion took place in the parks, fundamentally the national park idea embraced the concept of nurturing and protecting nature.”); One of the earliest policy documents in the agency’s history, the Lane Letter, which is seen as one of the most important documents in setting the agency’s direction, explicitly calls for maintaining parks in their “natural state.” Letter from Secretary of the Interior Franklin K. Lane to Stephen T. Mather, Director of National Park Service (May 13, 1918), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM: THE CRITICAL DOCUMENTS 48, 48 (Lary M. Dilsaver ed., 1994) [hereinafter AMERICA’S NATIONAL PARK SYSTEM] (“Every activity of the Service is subordinate to the duties imposed upon it to faithfully preserve the parks for posterity in essentially their natural state.”); *see also* Memorandum from Hubert Work, Secretary of the Interior, for Director, National Park Service (March 11, 1925), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 62 (stating one key principle for NPS is “that the national

Park Service has taken neither a passive nor an active approach to management, consistently, nor has it consistently managed park ecosystems to achieve a particular historic baseline. Early in the Park Service's implementation of the Organic Act, under the leadership of its inaugural Director, Stephen Mather, the Park Service utilized significant active management steps to facilitate visitor enjoyment of the scenic elements of the park—both living and nonliving.⁹⁵ For instance, Park Service policy from the 1920s through the 1940s allowed logging and pesticides to control beetle and fungus infestations in scenic areas within the parks⁹⁶— including active fire suppression⁹⁷ and salvage logging in a protected research area in Great Smoky Mountains National Park.⁹⁸

parks and national monuments must be maintained untouched by the inroad of modern civilization in order that unspoiled bits of native America may be preserved by future generations as well as our own"); Newton B. Drury, *The National Parks in Wartime*, reprinted in AMERICA'S NATIONAL PARK SYSTEM, at 167, 173 (parks are places "where forests continue to evolve normally, where animal life remains in harmonious relationship to its environment, and where the ways of nature and its works may still be studied in the original design.").

95. See, e.g., SELLARS, *supra* note 85, at 88 (stating the goals of active management in the 1920s focused on utilitarian promotion of scenery); *id.* at 89 ("During Mather's time [the 1920s] the Service seemed to define an unimpaired national park as a *carefully and properly developed* park."); Lary M. Dilsaver, *The New Deal Years: 1933–1941*, in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 112 (in 1930s, NPS management focused on "visual and experiential scenes and the inspiration they provided as the highest preservation targets."); John R. White, *Atmosphere in the National Parks*, reprinted in AMERICA'S NATIONAL PARK SYSTEM., *supra* note 94, at 142 (In the 1930s, John R. White, who was superintendent of Sequoia National Park, wrote an influential document, *Atmosphere in the National Parks*, in which he said that most important problem for park management is "the preservation or the infusion of the right atmosphere.").

96. See, e.g., SELLARS, *supra* note 85, at 83–84, 130–31 (showing the National Park Service's policy and actions, in the 1920s and 1930s to actively manage the control of tree fungus and beetle infestations by logging and spraying in scenic areas, but not taking actions in remote areas); NAT'L PARK SERV., A FORESTRY POLICY FOR THE NATIONAL PARKS 89 (May 6, 1931), reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 93–94 (electing policy that insect control occur in "[a]reas of intensive use, such as camp grounds . . . [a]reas of important scenic or esthetic attraction . . . [a]reas within the national park threatening protected areas either within or outside the national park . . . [a]reas of unusual fire hazard . . . [and] [a]reas set aside for study or research (unless natural agencies are to be left undisturbed)"). Letter from Secretary of the Interior Franklin K. Lane to Stephen T. Mather, Director of National Park Service (May 13, 1918), reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 48–49 (The Lane Letter authorized the use of timber cutting "where the thinning of forests or cutting of vistas will improve the scenic features of the parks."). The Park Service also adopted a policy that allowed for the elimination of native bushes that served as host for a disease affecting white pines. See, e.g., NAT'L PARK SERV., A FORESTRY POLICY FOR THE NATIONAL PARKS (May 6, 1931), reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 89, 96 (to control tree diseases should consider removal of currant and gooseberry bushes to protect white pines); Horace M. Albright, *Research in the National Parks* (June 1933), reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 122, 129 (proposing elimination of host plants for white pine blister rust in parks).

97. See, e.g., SELLARS, *supra* note 85, at 82–83, 127 (beginning in the 1920s, the National Park Service actively started to suppress fires in the parks) (showing that the National Park Service's goal in 1930s was to completely protect forests from fire). Park Service policy in the 1920s and 1930s called for suppression of all fires if possible. See Jay H. Price, *Fire Prevention Plan for the National Parks 10th National Park Conference* (Feb. 15–21, 1928), reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 81, 83 (best outcome of fire policy is prevention of fire, and immediate suppression of fires is required).

98. See SELLARS, *supra* note 85, at 111–12 (discussing the need for salvage logging in Great Smoky National Park in 1930s led the National Park Service to eliminate protected research area; salvage logging

In the 1920s, the Park Service began creating zoo-like enclosures for some large mammals so that visitors could easily observe the scenic wildlife. The Park Service also employed active management to increase the populations of large ungulates such as elk, including winter feeding programs and elimination of predator species like wolves.⁹⁹ Similarly, the Park Service stocked non-native fish species in park waterways to facilitate recreational fishing.¹⁰⁰ All of these activities continued through the 1940s.¹⁰¹ Internal debate sparked within the Park Service about the propriety of these management choices. A group of Park Service biologists led by

seen as needed to reduce fire risk). Salvage logging also occurred in Olympic National Park in response to pressures for commercial timber production. *See id.* at 153–54. (stating the National Park Service in the 1940s and early 1950s allowed active salvage of windblown timber in Olympic National Park, but the contracts often included the cutting of healthy trees).

99. *See, e.g.,* SELLARS, *supra* note 85, at 79–80 (explaining that in the 1920s, feed programs made the bears in Yellowstone more accessible to visitors); *id.* at 75–76 (showing the active management of Yellowstone bison herd, including feeding, corralling, and exporting of “surplus” animals); *id.* at 70–73 (providing that the National Park Service managed predators and fires to maintain large ungulate populations and large forests as part of scenery, including actively killing predators in many parks through 1920s); *id.* at 158–60 (showing that wolf hunting in McKinley National Park occurred to protect sheep populations); Nat’l Park Serv., Policy on Predatory Mammals (1931), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 87 (needing the National Park Service to protect rare wildlife by having “fine herds of game [that] are furnished as a spectacle for the benefit of the public” and predator control will be required, but only when threatening game “needing special protection,” otherwise “[p]redatory animals are to be considered an integral part of the wildlife protected within national parks and no widespread campaigns of destruction are to be countenanced”); KEITER, TO CONSERVE UNIMPAIRED, *supra* note, 37, at 17, 175–76 (discussing examples of early NPS active management, such as wolf and other predator eradication and bear and bison feeding and corrals). Official public feeding of bears in Yellowstone did not end until the 1940s. *See* SELLARS, *supra* note 85, at 160–62.

100. *See* SELLARS, *supra* note 85, at 80–81 (showing the most extensive management was of fish populations, including stocking of non-native fish species in many national parks to facilitate recreational fishing throughout the 1920s). Non-native fish stocking by the Park Service gradually disappeared over a period of decades. So in the 1930s, the Service policies allowed for non-native fish stocking only in fishless lakes, although that policy was not always enforced. *See, e.g.,* Horace M. Albright, Research in the National Parks (June 1933), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 122, 126 (creating National Park Service policy for no exotic introductions into the parks “except for the occasional stocking of an otherwise barren body of water with some species of game fish for the enjoyment of lovers of the Waltonian sport.”); NAT’L PARK SERV., OFFICE ORDER NO. 323, FISH POLICY 149 (April 13, 1936), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 149 (discussing the National Park Service policy specifying no introduction of exotic fish species where there are only native species, allowing exotic fish stocking to continue where they are “best suited to the environment and have proven of higher value for fishing purposes than native species,” but stocking will not be continued where it “threatens extinction of native species” in a park). By the 1960s, fish stocking activities were, under Service policy, highly restricted. *See, e.g.,* NAT’L PARK SERV., WILDLIFE MANAGEMENT IN NATIONAL PARKS (1962), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 217 (stocking fish only where reproduction is not enough to “maintain an adequate fish population to meet the need of recreational angling”); *id.* at 217, 222 (allowing to only stock exotic fish “where exotic fishes are established and the restoration of native species is impracticable” or “[w]here adequate investigations have demonstrated that additional planting is desirable and necessary to supplement limited or non-existing natural reproduction”); *id.* at 217, 223 (“Lakes and streams which are barren of fish life shall remain in this virgin condition and shall not be stocked.”).

101. *See, e.g.,* SELLARS, *supra* note 85, at 116–17, 119–23, 124–26 (showing the active management of Yellowstone bison continuing in 1930s) (showing the predator control in parks continuing in 1930s, especially for coyotes) (explaining that fish stocking continued in 1930s, sometimes even where native fish species are present).

George Wright called for management that focused on protecting pre-European contact ecosystems and species, and a general preference for hands-off management.¹⁰² However, even Wright acknowledged the need for occasional hands-on management to achieve his goals: for instance, to restore native species that had been harmed by human actions or to prevent overpopulation by native grazing species that might harm native ecosystems.¹⁰³ Although Wright was somewhat successful in changing the Park Service's goals and management directions in the 1930s, many of those changes were reversed after his untimely death.¹⁰⁴

102. SELLARS, *supra* note 85, at 99–100 (noting conflict between new biologists in NPS in 1930s and traditional wildlife management and forestry activities like predator control and insect control). Wright produced an internal document, entitled Fauna No. 1, that laid out his vision for a Park Service that focused on protecting healthy species and ecosystems through the use of hands-off management, where possible. GEORGE M. WRIGHT ET AL., NAT'L PARK SERVICE, *Fauna of the National Parks of the United States: A Preliminary Survey of Faunal Relations in National Parks, Contribution of Wildlife Survey Fauna Series No. 1, May 1932*, reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 104 [hereinafter WRIGHT, *Fauna No. 1*]; *id.* at 105 (goal of NPS is “preserving characteristic examples of primitive America”); *id.* at 110 (“any native species which has been exterminated from the park area shall be brought back if this can be done . . . [and] any exotic species which has already become established in a park shall be either eliminated or held to a minimum provided complete eradication is not feasible.”); *id.* at 109 (“every species shall be left to carry on its struggle for existence unaided, as being to its greatest ultimate good, unless there is real cause to believe that it will perish if unassisted.”); *id.* (any intervention should be calculated such that “every effort shall be made to place that species on a self-sustaining basis once more.”); *id.* (predator control should only occur if a prey species “is in immediate danger of extermination, and then only if the predator is not itself a vanishing form.”); FREDERIC H. WAGNER, ET AL., WILDLIFE POLICIES IN THE U.S. NATIONAL PARKS 23–24 (1995) (Wright's Fauna No. 1 report in 1933 called for hands-off management and protection of predators and restriction or elimination of non-native species).

103. SELLARS, *supra* note 85, at 96–98; WRIGHT, *Fauna No. 1*, *supra* note 102, at 104, 106 (wildlife management goal for parks is to “restore and perpetuate the fauna in its pristine state by combating the harmful effects of human influence.”); *id.* at 109–110 (“the numbers of native ungulates occupying a deteriorated range shall not be permitted to exceed its reduced carrying capacity and, preferably, shall be kept below the carrying capacity at every step until the range can be brought back to original productiveness.”). Wright also emphasized the need for management to facilitate public viewing of wildlife. *Id.* at 109 (“one function of the national parks shall be to preserve the flora and fauna in the primitive state and, at the same time, to provide the people with maximum opportunity for the observation thereof.”). Some foresters at the time also argued that active management was required to maintain “natural” forest conditions. See SELLARS, *supra* note 85, at 129 (NPS forester argues in 1930s that NPS “must modify conditions to retain as nearly a natural forest condition as possible for the enjoyment of future generations.”). A fuller quote makes clear how strongly the speaker advocated for active management: “The parks have long since passed the time when nature can be left to itself to take care of the area. Man has already and will continue to affect the natural conditions of the areas, and it is just as much a part of the Service Policy to provide for their enjoyment as it is to preserve the natural conditions. There is no longer any such thing as a balance of nature in our parks – man has modified it. We must carry on a policy of compensatory management of the areas.” *Id.*

104. SELLARS, *supra* note 85, at 145. In the 1930s, the Park Service began to explicitly consider active management to restore native species to parks where they were no longer present. HORACE M. ALBRIGHT, NAT'L PARK SERVICE, *supra* note 96, at 126 (NPS policy providing for restocking of native species “which has become depleted because of some unnatural condition or series of conditions” and pointing to examples of reintroduction of bison and antelope in national parks). It is also important to recognize that the Park Service as a matter of policy also adopted hands-off management for areas of the parks that were remote. See, e.g., NAT'L PARK SERVICE, SUPERINTENDENTS' RESOLUTION ON OVERDEVELOPMENT, reprinted in AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 57 (“Certain areas should be reserved

The success of the Park Service's efforts to increase large ungulate populations eventually forced a major change in the Park Service's overall management strategies. Wildlife managers believed elk populations in Yellowstone National Park were well over carrying capacity, causing significant damage to the forest ecosystem. In response, the Park Service had been culling elk populations in large numbers in the Park for many years. Congress eventually became interested in the topic, with some Western legislators demanding that if culling was to occur, it should be done by the public through open hunting. The Park Service sought to avoid this outcome—partly because of its strong philosophical objection to public hunting in the parks. The Park Service therefore convened a panel of leading scientists and managers to evaluate the management of the Yellowstone elk herd.¹⁰⁵

That expert panel produced perhaps the most important management policy document in the Park Service's history: the 1963 Leopold Report.¹⁰⁶ While the Leopold Report is often seen as groundbreaking, in many ways it simply recapitulated the management goals and strategies that George Wright advanced three decades earlier: the goal of management should be the restoration and maintenance of ecological conditions present at the time of European contact.¹⁰⁷ Hands-off management is preferred if possible to achieve that goal.¹⁰⁸ However, the Park Service should use active management when necessary, and frequently active management will be needed to achieve that goal.¹⁰⁹ Indeed, the Leopold Report

in each park, with a minimum amount of development, in order that animals, forest, flowers, and all native life shall be preserved under natural conditions.”).

105. SELLARS, *supra* note 85, at 196–201.

106. A.S. LEOPOLD ET AL., NAT'L PARK SERVICE, ADVISORY BD. ON WILDLIFE MGMT. APPOINTED BY SEC'Y OF THE INTERIOR UDALL, *Wildlife Management in the National Parks*, March 4, 1963, *reprinted in AMERICA'S NATIONAL PARK SYSTEM*, *supra* note 94, at 237 [hereinafter LEOPOLD REPORT].

107. *Id.* at 239 (goal of management is to maintain or recreate “as nearly as possible . . . the condition that prevailed when the area was first visited by the white man. A national park should represent a vignette of primitive America.”). The Leopold Report recognized that although full restoration to historic baselines may be impossible; nonetheless, those historic baselines might nevertheless serve as useful goals. *Id.* at 237 (conceding that restoring “primitive America” is not feasible in many cases, but “if the goal cannot be fully achieved it can be approached” and a “reasonable illusion of primitive America could be recreated” and that this “should be the objective of every national park and monument.”). A subsequent National Academy of Sciences report reached similar conclusions. *See* NAT'L ACAD. OF SCIENCES-NAT'L RESEARCH COUNCIL, *A Report by the Advisory Committee to the National Park Service on Research, 1963*, *reprinted in AMERICA'S NATIONAL PARK SYSTEM*, *supra* note 94, at 253 (goal of NPS is the “preservation of nature in the national parks, the maintenance of natural conditions, and the avoidance of artificiality.”).

108. LEOPOLD REPORT, *supra* note 106, at 239 (“There is no need for active modification to maintain large examples of the relatively stable ‘climax’ communities which under protection perpetuate themselves indefinitely.”). For instance the Leopold Report questioned the use of insecticides in parks and called for allowing greater use of fire in the parks. *Id.* at 244–45. *See also* NAT'L PARK SERVICE, *Wildlife Management in National Parks*, *reprinted in AMERICA'S NATIONAL PARK SYSTEM*, *supra* note 94, at 217, 219 (only intervene with indigenous animals when “essential to the maintenance of populations and their natural environments in a healthy condition.”).

109. “[M]ost biotic communities are in a constant state of change due to natural or man-caused processes of ecological succession. In these ‘successional’ communities it is necessary to manage the habitat to achieve or stabilize it at a desired stage.” LEOPOLD REPORT, *supra* note 106, at 239; *see also* SELLARS, *supra* note 85, at 243–46 (Leopold Report calls for active management in service of restoring natural conditions, allows for large mammal culling and fishing); *see* LEOPOLD REPORT, *supra* note 106, at 237 (stating that “protection, though it is important, is not of itself a substitute for habitat,” that habitat

indicated that culling of the Yellowstone elk herd might be necessary on an ongoing basis because “the national parks were ‘too small in area to be relegated to the forces of nature that shaped a continent.’”¹¹⁰ Nonetheless, primarily in response to political pressure, the Park Service ended culling of the elk herd in 1967, justifying its decision on the grounds that “natural regulation” could maintain the elk herd numbers within appropriate limits.¹¹¹

After the Leopold Report, the Park Service generally moved to a different paradigm from its first fifty years of management: for ecological management questions, the Park Service would seek to achieve pre-Columbian ecosystem characteristics¹¹²—preferring hands-off management¹¹³—but using active management when necessary to offset human impacts on parks, and to maintain and restore native species and ecosystems in parks that have become “islands” surrounded by human development.¹¹⁴ Current Park Service policy is more or less

and biotic communities change, and that “purposeful management of plant and animal communities” is “an essential step in preserving wildlife resources”); *id.* at 240 (noting that many national parks had major human interventions or impacts and that active intervention will be needed to undo those impacts); *id.* at 241–42 (active management will be required to maintain “successional communities that were maintained by fires, floods, hurricanes and other natural forces.”); *see also* NAT’L PARK SERV., WILDLIFE MANAGEMENT IN NATIONAL PARKS (1962), *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 219–20 (restating Fauna No. 1 prescriptions on exotics, predators, intervention with native species, and keeping ungulates below carrying capacity); NAT’L ACAD. OF SCIENCES-NAT’L RESEARCH COUNCIL, *A Report by the Advisory Committee to the National Park Service on Research*, 1963, *reprinted in* AMERICA’S NATIONAL PARK SYSTEM, *supra* note 94, at 253–54 (“control and guidance” of “evolutionary processes” in parks may be necessary to preserve the “unique features” of parks); KEITER, TO CONSERVE UNIMPAIRED, *supra* note 37, at 179–80 (noting importance of Leopold Report, which called for active management focused on restoring pre-Columbian status of ecosystems, and its adoption by NPS shortly thereafter).

110. SELLARS, *supra* note 85, at 248–49; *see also* LEOPOLD REPORT, *supra* note 106, at 246–49 (noting need for artificial control of ungulate populations to maintain carrying capacity, including elk herd in Yellowstone).

111. SELLARS, *supra* note 85, at 246–47.

112. *See, e.g.*, U.S. NAT’L PARK SERV., NATIONAL PARKS FOR THE 21st CENTURY: THE VAIL AGENDA: REPORT AND RECOMMENDATIONS TO THE DIRECTOR OF THE NATIONAL PARK SERVICE FROM THE STEERING COMMITTEE OF THE 75th ANNIVERSARY SYMPOSIUM 104 (1992) (NPS management “requires the maintenance or restoration of native ecosystems and resistance to the establishment of alien organisms. Where possible, ecosystem management should attempt to preserve natural processes, operating at a scale consistent with the evolution of the ecosystem being managed.”); WAGNER ET AL., *supra* note 102, at 16–17 (current NPS policy goal is to preserve “‘intact’ or ‘healthy’ ecosystems in some degree similar to the pre-Columbian state,” and a secondary goal has to been to protect endangered species and historic landscapes).

113. WAGNER ET AL., *supra* note 102, at 36 (1988 NPS policy calls for hands-off management except for ecosystem restoration, at the direction of Congress, or in emergencies threatening human life and property).

114. For instance, Park Service policies adopted shortly after the Leopold Report called for the use of active management, where necessary, to maintain historic ecosystems:

In earlier times, the establishment of a park and the protection of its forests and wildlife from careless disturbance were sufficient to insure its preservation as a natural area. The impact of man on the natural scene was negligible since the parks were surrounded by vast undeveloped lands, and there were comparatively few visitors. This condition prevails no more, for the parks are fast becoming *islands* of primitive America, increasingly influenced by resource use practices around their borders, and by the impact of increasing millions of visitors. Passive protection is not enough. Active

consonant with the Leopold Report. Its goal is to maintain and restore natural conditions in the parks wherever possible,¹¹⁵ using hands-off management to achieve those goals as much as possible, while recognizing the necessity of active management to achieve the Park Service's goals.¹¹⁶

It is this current paradigm that is the basis for critiques of Park Service policy as untenable in the face of climate change. Critics argue that hands-off management will not maintain historic ecosystem baseline conditions in many cases. Rather, critics suggest that to maintain those conditions, active management will frequently require heroic efforts that are unrealistically expensive, fundamentally undermine the natural appearance of national parks, and potentially have counterproductive impacts that harm other species and ecosystem components.¹¹⁷ Given this tension, these critics have called for the Park Service to reconsider historic

management of the natural environment, plus a sensitive application of discipline in park planning, use, and development are requirements for today.

NAT'L PARK SERV., ADMINISTRATIVE POLICIES FOR NATURAL AREAS, 1968, *reprinted in AMERICA'S NATIONAL PARK SYSTEM*, *supra* note 94, at 354; *see also id.* (calling for the "application of ecological management techniques to neutralize the unnatural influences of man, thus permitting the natural environment to be maintained essentially by nature"); WAGNER ET AL., *supra* note 102, at 26–27, 32–33 (Leopold Report allows for and called for active management based on a goal of historic conditions, NPS policy in 1968 quickly changed to adopt Leopold Report proposals). This policy included the use of native species reintroductions, logging to control insects and disease, and natural and prescribed fire. NAT'L PARK SERV., ADMINISTRATIVE POLICIES FOR NATURAL AREAS, 1968, *reprinted in AMERICA'S NATIONAL PARK SYSTEM*, *supra* note 94, at 354–55. The transition took time. The agency continued both fire suppression and active insect control using spraying into the early 1970s. By the end of the decade, the agency had moved to integrated pest management (relying much less on spraying) and adopted prescribed burns and allowing wild fires to burn in certain circumstances. SELLARS, *supra* note 85, at 254–57.

115. *See* NPS MANAGEMENT POLICIES, *supra* note 70, at § 4 (NPS "will strive to understand, maintain, restore, and protect the inherent integrity of the natural resources, processes, systems, and values of the parks."); *id.* at § 4.1 (stating that agency is to "preserv[e] [park] components and processes in their natural condition"); *id.* at § 4.1.5 (NPS "will reestablish natural functions and processes in parks unless otherwise directed by Congress," will not conduct restoration in response to natural disturbances, but will respond to impacts "resulting from human disturbances."); *id.* at § 4.4.2.4 (same); *id.* at § 4.4.1 (NPS "will maintain as parts of the natural ecosystems of parks all plants and animals native to park ecosystems" including restoring extirpated populations); *id.* at §§ 4.4.1.1, 4.4.1.2 (agency will maintain natural wildlife population dynamics and genetic diversity); *id.* at § 4.4.4.2 (agency will remove non-native species where feasible); *id.* at § 4.4.5.1 (agency will generally not control native pests); *id.* at § 4 (defining "natural condition" as "the condition of resources that would occur in the absence of human dominance over the landscape").

116. *See id.* at § 4.1 (agency "will not intervene in natural biological or physical processes" unless legally mandated to do so, to respond to emergencies threatening "human life and property" and "to restore natural ecosystem functioning that has been disrupted by past or ongoing human activities") (agency will limit its management "to the minimum necessary to achieve the stated management objectives," but recognizes that active management may often be needed to restore resources); *see also id.* at § 4.4.2 ("Whenever possible, natural processes will be relied upon to maintain native plant and animal species.") (stating that any intervention must not cause unacceptable impacts and will be undertaken either to protect human lives, property, safety, or to offset human impacts on a species, or to protect an endangered species).

117. *See, e.g.,* Gregory H. Aplet & David N. Cole, *The Trouble With Naturalness: Rethinking Park and Wilderness Goals*, in *BEYOND NATURALNESS: PARK AND WILDERNESS STEWARDSHIP IN AN ERA OF RAPID CHANGE* 12 (David N. Cole & Laurie Yung eds., 2010); Cole & Yung, *supra* note 24, at 8; Tweed, *An Idea In Trouble*, *supra* note 5, at 6, 8; Joly, *supra* note 10, at 45; TWEED, *UNCERTAIN PATH*, *supra* note 4, at 201.

baselines as a goal and hands-off management as a primary management tool,¹¹⁸ as part of a broader reexamination of what it means to be natural in the context of protected area management.¹¹⁹

As this brief history makes clear, the Park Service's own policies have not consistently adopted this particular paradigm as a necessary implication of the Organic Act's language. There has been consistency in the questions with which the Park Service has wrestled: how much to rely on active versus passive management; should the goals of conservation and non-impairment focus on maintaining or recreating historic baselines of species and ecosystem conditions; or should it instead facilitate human observation and enjoyment of spectacular natural scenery. Although Park Service policy has trended toward managing for historic baselines¹²⁰ (although even here there is variation over time),¹²¹ the Park Service has always adopted a mix of hands-on and hands-off management approaches, seeing both as consistent with its statutory mandate. Of course, which specific management approaches are seen as consistent with the statutory mandate has varied substantially over time. For example, non-native fish stocking was once a well-accepted management tool; now it is strongly discouraged in national parks.¹²²

If a court fully considered this history of Park Service implementation of the Organic Act, it would not and could not conclude that the Park Service

118. Joly, *supra* note 10, at 45 (calling for "major regulatory reinterpretation at the agency level" to move away from focus on historical conditions); TWEED, *UNCERTAIN PATH*, *supra* note 4, at 34 (stating that "NPS policies explicitly state that park ecosystems will be preserved through the protection and perpetuation of natural processes" but questioning whether this is feasible in a future of climate change). Some of the calls for more NPS use of active management precede the recent debates over the implications of climate change. WAGNER ET AL., *supra* note 102, at 168–69, 178 (arguing for need for active management to maintain healthy ecosystems and calling for revision of NPS policies and implementation accordingly). *But see* Keiter, *Preserving Nature*, *supra* note 70, at 666–74 (arguing that current NPS policies are consistent with responding to widespread human impacts on natural systems).

119. Daniel N. Cole, et al., *Naturalness and Beyond: Protected Area Stewardship in an Era of Global Environmental Change*, 25 *GEORGE WRIGHT F.* 36, 41 (2008) ("In making decisions about whether or not to intervene, the concept of naturalness offers little guidance. Since naturalness implies both a lack of human effect and a lack of human control, one of the meanings of naturalness will be violated whatever is done – or not done. Decisions must be made using some other guidance, most often a choice between the values of preserving biodiversity and respecting nature's autonomy.").

120. *See, e.g.*, NPS MANAGEMENT POLICIES, *supra* note 70, at § 4.1 (stating that Park Service "will try to maintain all the components and processes of naturally evolving park ecosystems, including the natural abundance, diversity, and genetic and ecological integrity of the plant and animal species native to those ecosystems"). However, the agency has noted the importance of "natural change" as "an integral part of the functioning of natural systems" and will manage to provide for natural change. *Id.*

121. On one hand, in the 1930s George Wright implicitly called for the use of historic baselines as a management goal by calling for the management of parks to protect native species. *See* WRIGHT, *Fauna No. 1*, *supra* note 102, at 108–10. On the other hand, even the Leopold Report stated that the Park Service should ensure that its active management efforts to restore historic conditions should not interfere with the appearance of the scenery and naturalness of the parks. LEOPOLD REPORT, *supra* note 106, at 242 (in active management, "observable artificiality in any form must be minimized and obscured in every possible way"); *see also* NATIONAL PARK SYSTEM, *Administrative Policies for Natural Areas*, 1968, *reprinted in* AMERICA'S NATIONAL PARK SYSTEM, *supra* note 94, at 354 ("natural areas shall be managed so as to conserve, perpetuate, and portray as a composite whole the indigenous aquatic and terrestrial fauna and flora and the scenic landscape.") (emphasis added).

122. *See* NPS MANAGEMENT POLICIES, *supra* note 70, at § 4.4.3 (allowing non-native fish stocking in "some special situations").

interpretation has been so consistent that it would fix the meaning of the Organic Act to mandate a goal of maintaining historic pre-Columbian ecological conditions and a strong preference for hands-off management.¹²³ Thus, even if critics are right that the current paradigm is not well adapted to deal with climate change, changing the paradigm would not require a change to the underlying statutory language.

D. Park-Specific Enabling Acts

In general, individual national parks and other units of the National Park System are created by acts of Congress,¹²⁴ and most of the units of the National Park System were established by a park-specific enabling act. Those enabling acts may impose specific management guidance or mandates. Under generally accepted principles of statutory interpretation, where there is a conflict between the specific guidance or mandate in the enabling act and the general principles for the entire National Park System in the Organic Act, the enabling act language trumps the Organic Act language.¹²⁵ Prior scholarship has noted the potential for enabling act language to constrain Park Service discretion, and the substantial amount of specific management guidance or mandates in those acts.¹²⁶ However, an analysis of park enabling acts indicates that they would not significantly constrain Park Service discretion in the context of active management to facilitate climate change adaptation.

Many park-specific enabling acts require the Park Service to use its management authority to protect park resources. For instance, the original enabling act for the first national park, Yellowstone, requires the Park Service to “make regulations providing for the preservation, from injury or spoliation, of all timber, mineral deposits, natural curiosities, or wonders, within the park, and their retention in their natural condition.”¹²⁷ Similar language referring to “natural conditions” is present in a number of other enabling acts.¹²⁸ This language might be interpreted as

123. See also Joly, *supra* note 10, at 47 (noting that preserving historic conditions “is not a necessary interpretation of the statutory language” and instead could be interpreted to mean allowing natural systems to respond to climate change without major human interventions).

124. One exception is that the President can create National Monuments, managed by the National Park Service, through unilateral executive action pursuant to the Antiquities Act. See CHRISTINE A. KLEIN ET AL., NATURAL RESOURCES LAW: A PLACE-BASED BOOK OF PROBLEMS AND CASES 530–44 (3d ed. 2013).

125. See also 54 U.S.C. § 100755 (2014) (amending and replacing 16 U.S.C. § 1c(b) (repealed 2014)) (statement that unit-specific legislation trumps general provisions of the Organic Act).

126. See Fischman, *supra* note 13.

127. 16 U.S.C. § 22 (2012).

128. For similar use of “natural condition” language, see enabling acts for Sequoia and Yosemite National Parks, 16 U.S.C. §§ 43, 45b (2012); Mount Rainier National Park, 16 U.S.C. § 92 (2012); Petrified Forest, 16 U.S.C. § 119 (2012); Hawaii National Park, 16 U.S.C. § 394 (2012); Virgin Islands National Park, 16 U.S.C. § 398 (2012). See also Glacier National Park, 16 U.S.C. § 162 (2012) (preserving park in a “state of nature”); Lassen National Park, 16 U.S.C. § 202 (2012) (preserving park in a “state of nature”); Everglades National Park, 16 U.S.C. § 410c (2012) (preserving park in “primitive, natural conditions”); Cumberland Island National Seashore, 16 U.S.C. § 459i-5(b) (2012) (preserving “primitive conditions”). For examples of explicit adoption of a historic baseline standard, see 16 U.S.C. § 341 (2012) (a provision for Acadia National Park that regulates management decisions on a component of the park on Isle au Haut, which states that “no development or plan for the convenience of park visitors shall be undertaken therein which would be incompatible with the preservation of the flora and fauna or the

requiring the Park Service to maintain historic baselines. However, Yellowstone's enabling act focused on protecting the park from human exploitation and development ("injury or spoliation"), rather than restricting the Park Service's discretion to take management steps to conserve or protect park resources.¹²⁹ Many enabling acts with similar language also appear to focus on requiring the Park Service to protect the park from exploitation and development, whether in general or focused on recreational uses.¹³⁰ Other enabling acts with similar language also qualify the mandatory language, restricting the duty to achieving natural conditions "as far as practicable,"¹³¹ or as consistent with the conservation goals of the enabling act.¹³² As discussed below, given these caveats and the absence of a definition for "natural conditions," it is not surprising that courts often give the Park Service broad discretion in interpreting this language.¹³³

A few enabling acts impose specific requirements to maintain natural conditions or wildlife populations.¹³⁴ The most specific is for Cape Lookout National Seashore, which requires the Park Service to maintain a wild horse population of a specific size.¹³⁵ This example is unique among the enabling acts that we reviewed. A significant number of enabling acts constrain the Park Service's ability to either permit or alternatively regulate hunting by the public.¹³⁶ However, as discussed

physiographic conditions now prevailing or with the preservation of such historic sites and structures as the Secretary may designate"); *see also* 16 USC § 459b-6 (2012) (the enabling act for Cape Cod National Seashore) (stating that "no development or plan for the convenience of visitors shall be undertaken therein which would be incompatible with the preservation of the unique flora and fauna or the physiographic conditions now prevailing").

129. *See* 16 U.S.C. § 22 (2012).

130. *See* enabling acts for Sequoia and Yosemite National Parks, 16 U.S.C. §§ 43, 45b (2012); Lassen National Park, 16 U.S.C. § 202 (2012); Acadia National Park, 16 U.S.C. § 341 note (2012) (provision focused on recreational uses); Everglades National Park 16 U.S.C. § 410c (2012) (provision focused on recreational uses); Cape Cod National Seashore, 16 U.S.C. § 459b-2(b) (2012) (provision focused on recreational uses); Cumberland Island, 16 U.S.C. § 459i-5(b) (provision focused on recreational uses); *see also* enabling acts for Shenandoah and Great Smoky Mountains National Parks, 16 U.S.C. § 403c-3 (2012); Mammoth Cave National Park, 16 U.S.C. § 404c-3 (2012); Isle Royale National Park, 16 U.S.C. § 408k (2012).

131. *See* enabling act for Sequoia and Yosemite National Parks, 16 U.S.C. § 45b (2012).

132. *See* enabling act for Mount Rainier National Park, 16 U.S.C. § 92 (2012); Glacier National Park, 16 U.S.C. § 162 (2012); Lassen National Park, 16 U.S.C. § 202 (2012); Hawaii National Park, 16 U.S.C. § 394 (2012).

133. *See infra* notes 140–142.

134. *See* enabling act for Crater Lake National Park, 16 U.S.C. § 122a (2012) (maintenance of water quality); Everglades National Park, 16 U.S.C. § 410r-7b ("The Secretary shall manage the park in order to maintain the natural abundance, diversity, and ecological integrity of native plants and animals, as well as the behavior of native animals, as a part of their ecosystem.").

135. Cape Lookout National Park, 16 U.S.C. § 459g-4(b) (2012) (agency "shall allow a herd of not less than 110 free roaming horses, with a target population of between 120 and 130 free roaming horses" and horse removal only permitted "as part of a plan to maintain the viability of the herd" or "in the case of an emergency, or to protect public health and safety").

136. For prohibitions on hunting, *see, e.g.*, enabling acts for Yellowstone National Park, 16 U.S.C. § 26 (2012) (stating that "[a]ll hunting, or the killing, wounding, or capturing at any time of any bird or wild animal, except dangerous animals, when it is necessary to prevent them from destroying human life or inflicting an injury, is prohibited within the limits of said park"); Sequoia and Yosemite National Park, 16 U.S.C. § 60 (2012) (using similar language); Mesa Verde National Park, 16 U.S.C. § 117c (2012) (using similar language); Rocky Mountain National Park, 16 U.S.C. § 198c (2012) (using similar

below, courts have not interpreted enabling act prohibitions on hunting to prevent the Park Service from taking its own steps to cull or manage wildlife populations.¹³⁷ Finally, there are some enabling acts that require the Park Service to allow certain development or exploitation activities, such as livestock grazing, usually grandfathering in existing uses for a specified period of time.¹³⁸

language); Lassen Volcanic National Park, 16 U.S.C. § 204c (2012) (using similar language); Olympic National Park, 16 U.S.C. § 256b (2012) (using similar language); Hawaii National Park, 16 U.S.C. § 395c (2012) (using similar language); Shenandoah National Park and Great Smoky Mountains National Park, 16 U.S.C. §§ 403c-3, 403h-3 (2012) (using similar language); Mammoth Cave National Park, 16 U.S.C. § 404c-3 (2012) (using similar language); Isle Royale National Park, 16 U.S.C. § 408k (2012) (using similar language); Denali National Park, 16 U.S.C. § 352 (2012) (stating “[t]he said park shall be, and is hereby, established as a game refuge, and no person shall kill any game in said park except under an order from the Secretary of the Interior for the protection of persons or to protect or prevent the extermination of other animals or birds”). *But see, e.g.*, enabling acts requiring the agency to permit hunting, fishing, or trapping: Voyageurs National Park, 16 U.S.C. § 160g (2012) (permitting recreational fishing); Virgin Islands National Park, 16 U.S.C. § 398e (2012) (permitting bathing and fishing); Biscayne National Park, 16 U.S.C. § 410gg-2(a) (2012) (permitting fishing, except where regulation needed “in the interest of sound conservation to achieve the purposes for which the park is established”); Great Basin National Park, 16 U.S.C. § 410mm-1(b) (2012) (permitting fishing except for “public safety” reasons); Mojave National Preserve, 16 U.S.C. § 410aaa-46(b) (2012) (permitting hunting, fishing, and trapping except “for reasons of public safety, administration, or compliance with provisions of applicable law”); Black Canyon of the Gunnison National Park, 16 U.S.C. § 410fff-5(d)(2) (2012) (permitting hunting, fishing, and trapping in Black Canyon of the Gunnison except “for reasons concerning public safety, administration, or public use and enjoyment”); Alaskan National Parks, 16 U.S.C. § 410hh-2 (2012) (permitting hunting and subsistence uses in national preserves and specified national monuments and parks); Congaree National Park, 16 U.S.C. § 410jjj-2(b) (2012) (permitting sport fishing in Congaree National Park but may regulate “for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment”); Fire Island National Seashore, 16 U.S.C. § 459e-4 (2012) (permitting fishing, trapping, and hunting in Padre Island, but may restrict hunting “for reasons of public safety, administration, or public use and enjoyment”); Assateague Island National Seashore, 16 U.S.C. § 459f-4 (2012) (permitting hunting and fishing, except may regulate hunting or fishing for “for reasons of public safety, administration, fish or wildlife management or public use and enjoyment”); Cape Lookout National Seashore, 16 U.S.C. § 459g-3 (2012) (using similar language); Gulf Islands National Seashore, 16 U.S.C. § 459h-2(a) (permitting hunting and fishing, except may regulate hunting or fishing “for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment”); Cumberland Island Parkway, 16 U.S.C. § 459i-4 (2012) (using similar language for Cumberland Island, including trapping); Canaveral National Seashore, 16 U.S.C. § 459j-3 (2012) (permitting hunting, fishing or trapping, except may regulate “for reasons of public safety, administration, fish and wildlife management, public use and enjoyment, protection of the resource, or competing public use”); Pictured Rocks National Lakeshore, 16 U.S.C. § 460s-4 (2012) (permitting hunting and fishing, but may regulate hunting “for reasons of public safety, administration, or public use and enjoyment”); Apostle Islands National Lakeshore, 16 U.S.C. § 460w-4 (2012) (permitting hunting, fishing or trapping, but may regulate “for reasons of public safety, administration, fish or wildlife management, or public use and enjoyment”); Sleeping Bear Dunes Lakeshore, 16 U.S.C. § 460x-4 (2012) (permitting hunting and fishing, but may regulate hunting “for reasons of public safety, administration, or public use and enjoyment”).

137. *See infra* Part IV.C Implications of Broad Discretion Under the Organic Act.

138. *See, e.g.*, enabling acts for, Arches National Park, 16 U.S.C. § 272b(b)(1) (2012) (requiring renewal of grazing permits in acquired lands for lifetime of current occupant plus any living direct descendants); Grand Teton National Park, 16 U.S.C. § 406d-2 (2012) (grandfathering existing grazing permits and rights-of-way in Grand Teton National Park, for lifetime of holder plus lifetime of heirs); Everglades National Park, 16 U.S.C. § 410n (2012) (authorizing drainage projects by state government in Everglades: “[u]nless the Secretary, after notice and opportunity for hearing, shall find that the same is seriously detrimental to the preservation and propagation of the flora or fauna of Everglades National Park . . . [and] only after a master plan for the drainage of said lands has been approved by the State of

Combined, these restrictions are not serious obstacles to implementing management actions for climate change adaptation. The generic requirements of protecting natural conditions—focused on development activities and with qualifying language, while not defining what “natural” entails—leave significant discretion to the Park Service.¹³⁹ The more specific prohibitions focus on hunting and fishing. It might be problematic that some units may require the Park Service to maintain hunting or fishing over time, although the number of caveats probably gives the Park Service significant discretion. Prohibitions on hunting in enabling acts appear even less troublesome, given their focus on private actors rather than the Park Service. Few enabling statutes contain any more specific mandates.

E. Case Law

A survey of forty-three cases found that in only eight cases did a court conclude that the Park Service violated the Organic Act.¹⁴⁰ Thus, courts defer to Park Service implementation of the Organic Act in the majority of cases.¹⁴¹

Judicial deference to Park Service management choices under the Organic Act stems from three main sources. First, the Organic Act itself (as noted above) appears to imply a balancing among multiple goals, specifically, conservation of park resources versus facilitating public enjoyment of those park resources. In balancing these goals, many courts have explicitly deferred to the Park Service.¹⁴²

Florida and after finding that the approved plan has engineering feasibility and is so designed as to minimize disruptions of the natural state of the park.”); Alaskan National Parks, 16 U.S.C. § 410hh(2), (4)(b), (6), & (10) (2012); (requiring rights-of-way for motorized use or aircraft landing rights across specified routes or in specified locations); Alaskan National Park, 16 U.S.C. § 410hh-4 (2012) (permitting commercial fishing in specified Alaskan National Parks, including associated motorized uses and aircraft landing); Black Canyon of the Gunnison, 16 U.S.C. §§ 410fff-2(e), 410fff-5(e) (2012) (requiring continuation of grazing permits and off-road vehicle (ORV) use consistent with existing plan); Cape Cod National Seashore, 16 U.S.C. § 459b-6(c) (2012) (no regulation of shellfishing or navigation); Sequoia National Park, 16 U.S.C. § 45a-1 note (2012) (permitting power project permits); Petrified Forest National Park, 16 U.S.C. § 119 note (2012) (permitting grazing on certain lands); Capitol Reef National Park, 16 U.S.C. § 273b note (2012) (requiring renewal of grazing permits for lifetime of holder plus direct descendants alive at time of enactment).

139. As noted below, the lack of definition in the relevant terms in the Organic Act gives broad discretion to the Park Service. *See* notes 143–145, *infra*.

140. *See* Table 1. This is a win rate of 81% for the government, about the same as or higher than the win rates for the government in court cases challenging administrative agency decision making. Our review only included cases in which the court specifically ruled on a plaintiff’s challenge to a Park Service decision based on the Organic Act. We excluded concession cases, quiet title cases, criminal cases, Federal Tort Claims Act cases, and constitutional challenges to Park Service decisions. We also excluded cases where a decision on the merits at the trial court level was vacated by the appeals court for jurisdictional or procedural reasons. Some of the cases that we discuss in the analysis that follows are excluded from this table, but are nonetheless helpful because courts either discuss the Organic Act in dicta, or are analyzing provisions of park-specific enabling acts. *See also*, Richard J. Pierce & Joshua Weiss, *An Empirical Study of Judicial Review of Agency Interpretations of Agency Rules*, 63 ADMIN. L. REV. 515, 519 (2011) (finding a government win rate in cases reviewing agency interpretations of statutes at about 76%); *id.* at 520 (summarizing other studies finding government win rates of between 55% to 80%).

141. *See* Antolini, *supra* note 19, at 891–95 (offering similar conclusions by other scholars reviewing the case law).

142. *See, e.g.*, *City of Sausalito v. O’Neill*, 386 F.3d 1186, 1227 (9th Cir. 2004) (deferring to agency balancing among development and conservation goals in reviewing development plan for old military

Second, the Organic Act's main terms—conservation, enjoyment, and impairment—are not defined in the statute.¹⁴³ Courts generally defer to agency interpretations and applications of undefined terms.¹⁴⁴ For instance, courts have applied *Chevron* deference to Park Service interpretations of the Organic Act, and to balancing between the Organic Act's goals.¹⁴⁵ Third, both in reviewing Park Service interpretations of the relevant law and implementation of the statute, courts have emphasized the Park Service's expertise (particularly relative to courts), and have relied on that expertise to defer to Park Service decision-making.¹⁴⁶ That includes Park Service identification of whether and to what extent harms to park resources exist that require Park Service intervention, or the extent to which management decisions will cause harm to park resources.¹⁴⁷

Section 3 of the Organic Act authorizes the Park Service to destroy “such animals and plant life as may be detrimental to the use” of any system unit. This provision gives even greater discretion to the Park Service deference in the context

base); *Isle Royale Boaters Ass'n v. Norton*, 330 F.3d 777, 782 (6th Cir. 2003) (broad discretion for NPS to decide where to locate docks for motorized boat access in a park, as part of agency discretion to balance conservation and recreation goals); *S. Utah Wilderness Alliance v. Dabney*, 222 F.3d 819 (10th Cir. 2000) (“[W]e read the Act as permitting the NPS to balance the sometimes conflicting policies of resource conservation and visitor enjoyment in determining what activities should be permitted or prohibited.”); *Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1454 (9th Cir. 1996) (“[T]he Park Service is empowered with the authority to determine what uses of park resources are proper and what proportion of the park's resources are available for each use.”); *Mich. United Conservation Clubs v. Lujan*, 949 F.2d 202, 207 (6th Cir. 1991) (upholding NPS ban on trapping in two parks because “NPS may rationally conclude, in light of the Organic Act . . . that its primary management function with respect to wildlife is preservation unless Congress has declared otherwise”); *Sierra Club v. Babbitt*, 69 F. Supp. 2d 1202, 1246–48 (E.D. Cal. 1999) (in considering challenge to NPS road reconstruction project, stating that plaintiffs cannot seek judicial review of agency decision to balance among goals because of agency discretion); *Nat'l Wildlife Fed'n v. Nat'l Park Serv.*, 669 F. Supp. 384, 391 (D. Wyo. 1987) (“[T]he Park Service is empowered with the authority to determine what uses of park resources are proper and what proportion of the park's resources are available for such use.”).

143. See *S. Utah Wilderness Alliance v. Dabney*, 222 F.3d 819, 826 (10th Cir. 2000) (“Neither the word ‘unimpaired’ nor the phrase ‘unimpaired for the enjoyment of future generations’ is defined in the Act.”).

144. See, e.g., *Davis v. Latschar*, 202 F.3d 359, 365 (D.C. Cir. 2000) and *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 100 (D.D.C. 2006) (“[B]ecause the Organic Act is silent as to the specifics of park management, the Secretary has especially broad discretion as to how to implement his statutory mandate.”).

145. See, e.g., *S. Utah Wilderness Alliance v. Nat'l Park Serv.*, 387 F. Supp. 2d 1178, 1186, 1187–91 (D. Utah 2005) (applying *Chevron* deference to NPS Management Policies defining “impairment”). However, courts have also frequently concluded that there are no agency interpretations of the law that are formal enough to warrant *Chevron* deference. See, e.g., *S. Utah Wilderness Alliance v. Dabney*, 222 F.3d 819, 826; *Wildearth Guardians v. Nat'l Park Serv.*, 703 F.3d 1178, 1188 (10th Cir. 2013).

146. *Greater Yellowstone Coal. v. Babbitt*, 952 F. Supp. 1435, 1441 (D. Montana 1996) (stating that NPS expertise is a primary basis for deferring to NPS decisions).

147. See, e.g., *Sierra Club v. Andrus*, 487 F. Supp. 443, 448 (D.D.C. 1980) (stating that, in deferring to agency decision not to assert water rights in a national park, “defendants have broad discretion in determining what actions are best calculated to protect Park resources”); *Babbitt*, 952 F. Supp. at 1441 (in upholding NPS plan to cull bison in park, stating that the “statutory purpose language obviously gives park managers broad discretion in determining how best to conserve wildlife and to leave them unimpaired for future generations”); *Intertribal Bison Coop. v. Babbitt*, 25 F. Supp. 2d 1135, 1138 (D. Montana 1998) (deferring to agency determination as to “whether selective removal of individual bison protects and conserves [the park] bison herd.”).

of ecosystem management decisions.¹⁴⁸ Courts have cited this provision in endorsing a range of Park Service decisions to manage wildlife populations, including culling of large mammals like elk, so long as the Park Service makes the requisite finding that the wildlife is causing “detriment” to the park.¹⁴⁹

Judicial deference is probably strongest where the Park Service frames a decision as required to protect park resources—whether it is closing areas of a park to off-road vehicles¹⁵⁰ or culling wildlife that are harming park resources.¹⁵¹ However, courts have even extended deference to Park Service decision-making in development projects—such as keeping a campground open in essential habitat for a federally-listed population of grizzly bears,¹⁵² opening up a national recreation area to mineral prospecting,¹⁵³ or allowing commercial fishing.¹⁵⁴

Nonetheless, courts do emphasize that the Organic Act imposes some constraints on Park Service discretion. A number of courts have concluded that, between the competing goals of conservation of park resources and facilitating enjoyment by the public of park resources, conservation of park resources is the primary goal, and in the face of substantial conflict between the goals, the Park

148. 54 U.S.C. § 100752 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014) (authorizing the Park Service to destroy “such animals and . . . such plant life as may be detrimental to the use of any . . . parks”).

149. *Latschar*, 202 F.3d at 366–67; *Grunewald v. Jarvis*, 930 F. Supp. 2d 73, 84–86 (D.D.C. 2013); *New Mexico State Game Comm’n v. Udall*, 410 F.2d 1197, 1201 (10th Cir. 1989) (noting that Section 3 gives agency power “in addition to [the] broad authority” under Section 1). Some courts have even concluded that a formal finding of detriment is not required, at least for the destruction of individual animals as opposed to a broader culling program. *See Intertribal Bison Coop.*, 25 F. Supp. 2d at 1138–39; *Wilkins v. Sec’y of Interior*, 995 F.2d 850 (8th Cir. 1993). Courts have also concluded that the agency need not wait until detriment has occurred, but can act proactively under Section 3 to destroy wildlife that might cause detriment in the future. *See Udall*, 410 F.2d 1197, 1201 (10th Cir. 1989) (agency “need not wait until the damage through over browsing has taken its toll on the park plant life and deer herd before taking preventive action.”); *Wilkins*, 995 F.2d at 853. Another court has relied upon Section 3 to give NPS discretion in whether to allow wildlife control efforts by state or local governments within parks. *See U.S. v. Moore*, 640 F. Supp. 164 (S.D.W.Va. 1986) (stating that Section 3 gives NPS “much discretion” in deciding whether to allow wildlife control efforts, and upholding NPS decision to require permits for state insect spraying program in national park).

150. *S. Utah Wilderness Alliance*, 387 F. Supp. 2d at 1186, 1187–91 (upholding NPS decision to close area of park to ORVs).

151. *See supra* note 149 (discussing cases upholding agency decision to cull park wildlife).

152. *See Nat’l Wildlife Fed’n v. Nat’l Park Serv.*, 669 F. Supp. 384, 391 (D. Wyo. 1987).

153. *See Sierra Club v. Watt*, 566 F. Supp. 380 (D. Utah 1983).

154. *Alaska Wildlife Alliance v. Jensen*, 108 F.3d 1065 (9th Cir. 1997).

Service must favor conservation over public enjoyment.¹⁵⁵ Courts have cited the Park Service's own policy documents in developing this hierarchy of uses.¹⁵⁶

This distinction has been most frequently applied by courts in reviewing Park Service decisions concerning so-called "consumptive uses"—uses in which private parties would extract or exploit park resources for private gain in ways that would diminish or harm those park resources.¹⁵⁷ For instance, in upholding Park Service prohibitions on hunting and trapping activities within national recreation areas, courts have characterized hunting and trapping as "consumptive uses."¹⁵⁸ According to these courts, the Park Service has the power to prohibit these activities because the Organic Act makes "preservation" of park resources the highest goal for the Park Service, and accordingly gives the Park Service the broadest possible authority in this area.¹⁵⁹

In contrast, courts have upheld Park Service decisions to cull wildlife from parks where the Park Service concludes that the wildlife is harming park resources, drawing on the Park Service's authority under both Sections 1 and 3 of the Organic Act.¹⁶⁰ Courts have upheld this authority even where park-specific enabling acts

155. See, e.g., *Nat'l Rifle Ass'n v. Potter*, 628 F. Supp. 903, 905 (D.D.C. 1986) ("[T]he paramount objective of the park system with respect to its indigenous wildlife . . . was . . . one of protectionism."); *id.* at 909 (stating that the Organic Act has "but a single purpose, namely, conservation" and that based on that purpose NPS can ban hunting and trapping in parks unless park enabling acts specifically permit hunting and trapping); *Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 105 (D.D.C. 2003) ("NPS is bound by a conservation mandate, and that mandate trumps all other considerations."); *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 191–93 (D.D.C. 2008) ("conservation is to be predominant"); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 21 (D.D.C. 2010) ("There can be no doubt . . . that the overriding aim of the Organic Act . . . is to conserve the natural wonders of our nation's parks."). Not all courts have established such a hierarchy. See *supra* note 143, for cases in which courts emphasized the agency's discretion to balance between these two goals. See also Nagle, *supra* note 69 (arguing that conservation and recreation are equal goals under the Organic Act).

156. See *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 191–93 (D.D.C. 2008); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 21 (D.D.C. 2010).

157. See *Edmonds Institute v. Babbitt*, 93 F. Supp. 2d 63 (D.D.C. 2000) (concluding that the Organic Act prohibits "consumptive use" in parks, but that a cooperative agreement with a bioprospecting corporation was not a consumptive use because it did not authorize collection of biological samples, but instead simply provided for division of any proceeds from successful research).

158. *Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 207 (6th Cir. 1991) (hunting and trapping clearly involve a use of exploiting a park resource (wildlife) for private gain in ways that diminish or harm that resource (by killing and removing the wildlife from the park)).

159. See *id.* (upholding NPS ban on trapping in parks because "Congress did not regard the National Park System to be compatible with consumptive uses."); see also *Potter*, 628 F. Supp. at 910 (upholding NPS prohibition on hunting and trapping in entire national park system except where specifically contemplated by Congress because "Congress did contemplate any so-called 'consumptive' uses of the new park system it was creating"). Even here, however, courts recognize agency discretion in the absence of statutory language requiring the agency to prohibit hunting. See *id.* at 912 (adopting agency's interpretation of Organic Act requiring ban on hunting and trapping as "at least a reasonable one").

160. See, e.g., *Davis v. Latschar*, 202 F.3d 359 (D.C. Cir. 2000) (upholding culling of deer); *Greater Yellowstone Coal. v. Babbitt*, 952 F. Supp. 1435 (D. Mont. 1996) (upholding NPS plan to manage Yellowstone bison, including allowing capture or killing of bison by state officials); *Grunewald v. Jarvis*, 930 F. Supp. 2d 73, 84–86 (D.D.C. 2013) (upholding agency culling of deer); *Intertribal Bison Coop. v. Babbitt*, 26 F. Supp. 2d 1135 (D. Mont. 1998) (upholding NPS plan to manage Yellowstone bison, including allowing capture or killing of bison by state officials); *New Mexico State Game Comm'n v. Udall*, 410 F.2d 1197, 1201 (10th Cir. 1989) (upholding NPS plan to cull deer in park); *Wildearth*

prohibit hunting in the park.¹⁶¹ The distinction appears to be that culls further a conservation goal, while hunting furthers a recreational goal.

Some courts have characterized the Organic Act as setting a conservation mandate.¹⁶² One court, again drawing on Park Service policies, stated that the conservation mandate means that if a Park Service management decision presents a conflict between recreation and conservation, it must make a finding that the decision is necessary to achieve the recreational goals and imposes the least impacts on conservation goals.¹⁶³ This standard applies even if the management decision that advances recreation would not cause impairment to park resources.¹⁶⁴

The second major constraint on Park Service discretion draws on the requirement in the Organic Act that the Park Service must maintain park resources “unimpaired for the enjoyment of future generations.”¹⁶⁵ Courts interpreting the Organic Act cite this restriction almost uniformly,¹⁶⁶ and have relied upon it to strike down a number of Park Service management decisions, including those involving off-road vehicle (ORV) use,¹⁶⁷ oil and gas drilling,¹⁶⁸ and a failure to assert water rights in parks.¹⁶⁹ Courts have identified additional sources for the non-impairment mandate in the 1970 and 1978 amendments to the Organic Act.¹⁷⁰ Occasionally,

Guardians v. Nat’l Park Serv., 703 F.3d 1178, 1190 (10th Cir. 2013) (upholding NPS plan to cull elk in park); Wilkins v. Sec’y of Interior, 995 F.2d 850 (8th Cir. 1993) (upholding NPS plan to remove wild horses from park); Friends of Animals v. Caldwell, No. 2:09-CV-5349, 2010 WL 4259753 (E.D. Pa. Oct. 27, 2010) (upholding NPS plan to remove deer from park).

161. *Greater Yellowstone Coal.*, 952 F. Supp. at 1442–43 (distinguishing between Park Service culling of animals, which is permitted, and private hunting of animals, which is prohibited under Yellowstone enabling act provision that prohibits “all hunting” in the park); *Intertribal Bison Coop.*, 26 F. Supp. 2d at 1139 (observing that, although “all hunting” is prohibited under Yellowstone Act, statute does not limit the authority of Park Service to cull wildlife); *Wildearth Guardians*, 703 F.3d at 1190 (distinguishing between Park Service culling of animals, permitted where a finding of detriment is made, and hunting of animals, prohibited under Rocky Mountain National Park enabling act).

162. *See, e.g.*, *Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 105–06 (D.D.C. 2003) (applying the conservation mandate in the context of a challenge to NPS decision to allow snowmobiles in Yellowstone National Park); *Cape Hatteras Access Preservation Alliance v. Jewell*, 28 F. Supp. 3d 537, 545 (E.D.N.C. 2014) (stating that “conservation is the predominant facet of the Organic Act”).

163. *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 191–93 (D.D.C. 2008).

164. *Id.*

165. 54 U.S.C. § 100101(a) (2014) (amending and replacing 16 U.S.C. § 1 (repealed 2014)).

166. *See, e.g.*, *Nat’l Parks Conservation Ass’n v. Jewell*, 965 F. Supp. 2d 67, 84 (D.D.C. 2013); *S. Utah Wilderness Alliance v. Dabney*, 222 F.3d 819, 826–29 (10th Cir. 2000) (stating that “permitting ‘significant, permanent impairment’ would violate the Act’s mandate”); *Conservation Law Found. v. Clark*, 590 F. Supp. 1467, 1479 (D. Mass. 1984) (seashore enabling act combined with Organic Act both “allow for a balancing of preservation and development only to the extent that such development does not derogate from the overriding preservation mandate.”); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 21 (D.D.C. 2010) (in contrast, fewer courts have concluded that the Organic Act imposes a conservation mandate on the agency).

167. *See S. Utah Wilderness Alliance v. Nat’l Park Serv.*, 387 F. Supp. 2d 1178, 1186, 1187–91 (D. Utah 2005).

168. *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 103 (D.D.C. 2006).

169. *High Country Citizens’ Alliance v. Norton*, 448 F. Supp. 2d 1235, 1252–53 (D. Colo. 2006).

170. *See, e.g.*, *S. Utah Wilderness Alliance v. Nat’l Park Serv.*, 387 F. Supp. 2d 1178, 1186 (D. Utah 2005) (stating that 1978 amendment “prohibits the authorization of activities that derogate park values”); *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 80 (D.D.C. 2006) (stating that NPS has interpreted the 1970 amendments as restating the non-impairment standard).

courts have identified the non-impairment mandate as not just a constraint on affirmative Park Service management decisions, but also as imposing a duty on the Park Service to take steps to prevent harm.¹⁷¹

Courts rarely apply the non-impairment mandate in a way that creates a specific, substantive standard for the Park Service. For example, no court has held that non-impairment absolutely prohibits particular Park Service actions, such as construction of a road.¹⁷² Instead, courts have generally implemented the non-impairment mandate as a procedural test. Courts require the Park Service to provide a thorough, specific analysis of why the pursued actions will not cause impairment.¹⁷³ Courts have struck down Park Service decisions that lack specific or coherent analysis,¹⁷⁴ inadequately explain reversals in Park Service positions on “impairment,”¹⁷⁵ or fail to articulate a specific standard for impairment.¹⁷⁶ This

171. See *Sierra Club v. Dep’t of Interior*, 398 F. Supp. 284 (N.D. Cal. 1975) (concluding that Organic Act, 1978 amendments, and park enabling act imposed duty on NPS to take additional steps to protect the resources in Redwood National Park from harm from logging on neighboring lands); *High Country Citizens’ Alliance v. Norton*, 448 F. Supp. 2d 1235, 1250 (D. Colo. 2006) (overturning agency decision to relinquish water rights for a park because the agency had a duty to fight for additional rights given earlier conclusions by the agency that water rights were necessary to protect park resources). However, this is a duty with limits. See *Sierra Club v. Dep’t of Interior*, 424 F. Supp. 172 (N.D. Cal. 1976) (in follow-up case, court concluded that NPS had done all that was possible by requesting additional appropriations to buy easements on neighboring lands, and that remaining responsibility to protect park resources rested with Congress).

172. The best examples are cases in which courts have concluded that the agency has a duty to act because resource conditions are imperiled and impaired. See cases cited in *supra* note 171 (judicial findings implicitly concluding that impairment exists as a substantive standard and is violated by the relevant conditions on the ground. However, even in the cases where courts have found such a duty to act, they have relied upon NPS findings of impairment and unexplained or inadequately explained failures by the agency to respond).

173. See also NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.7 (“Before approving a proposed action that could lead to an impairment of park resources and values, an NPS decision maker must consider the impacts of the proposed action and determine, in writing, that the activity will not lead to an impairment of park resources and values.”).

174. See *Sierra Club v. Mainella*, 459 F. Supp. 2d 76, 100 (D.D.C. 2006) (“Merely describing an impact and stating a conclusion of non-impairment is insufficient.”) (The court in *Mainella* drew on NPS management policies about what factors should be analyzed to determine impairment, such as “the particular resources and values that would be affected, the severity, duration, and timing of the impact, the direct and indirect effects of the impact, and the cumulative effects of the impact in question and other impacts.”). See also *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 26 (D.D.C. 2010) (failure to consistently analyze impact of motorized watercraft).

175. See *Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 108 (D.D.C. 2003) (overturning agency decision to allow snowmobiles into Yellowstone National Park because agency had not explained reversal of earlier conclusion that snowmobile use was impairing park resources); *Defenders of Wildlife v. Salazar*, 877 F. Supp. 2d 1271, 1301 (M.D. Fla. 2012) (remanding agency decision to increase ORV use because of failure to explain change in position as to adverse impacts of that use). For an example of NPS adequately explaining its change in position to a court, see *Fund for Animals v. Norton*, 512 F. Supp. 2d 49, 54–55 (D.D.C. 2007) (also explaining that agency has articulated a satisfactory explanation regarding the use of snowmobiles in Yellowstone).

176. See *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 209–10 (D.D.C. 2008) (overturning agency decision to allow snowmobiles into Yellowstone National Park because agency never set specific standards for determining when impacts from snowmobiles were unacceptable or produced impairment of park resources); *Mainella*, 459 F. Supp. 2d at 100 (same conclusion in the context of agency decision to allow oil and gas drilling beneath national park); *Bluewater Network*, 721 F. Supp. 2d at 38–

procedural form of review makes sense, given judicial deference to agency expertise—rather than challenging Park Service expertise as to what constitutes impairment, the courts require a rational, coherent explanation by the Park Service for determining whether a resource is impaired.¹⁷⁷ When such an explanation is given, courts have been quite deferential to Park Service management decisions, including ones with substantial impacts on park resources.¹⁷⁸

A final significant constraint on Park Service discretion in managing the park system is found in the 1970 and 1978 amendments to the Organic Act.¹⁷⁹ The Park Service has interpreted those amendments as requiring it to impose a uniform management standard on all units within the National Park System. For instance, the Park Service cannot apply a weaker impairment standard in National Recreation Areas, or give a higher priority to recreation over conservation in those areas.¹⁸⁰

Park-specific enabling acts can provide some additional specific constraints on Park Service discretion. However, as noted above, few of the specific constraints in those acts appear to implicate management decisions related to climate change adaptation. Indeed, when courts have been confronted with a challenge to Park Service decisions under the Organic Act and park-specific enabling acts, courts have tended to emphasize Park Service discretion under both statutes.¹⁸¹

39 (same conclusion in context of agency decision to allow motorized watercraft in parks). *Compare id.* at 37 (impact of motorized watercrafts on endangered species was adequately analyzed because it was “guided by the Endangered Species Act” and relied on specific standards set by that Act).

177. This is consistent with the general practice of courts in reviewing administrative agency decisions.

178. *See, e.g., Nat’l Parks Conservation Ass’n v. Jewell*, 965 F. Supp. 2d 67, 84–87 (D.D.C. 2013) (upholding agency decision to authorize expansion of electricity transmission line through a park, based on thorough agency analysis concluding that no impairment occurred). Thorough discussion of how potential harms will be mitigated also appears to lead to more deference from the courts. *See id.* at 85–86 (discussing ways in which NPS would mitigate the visual impacts of a large transmission line on a park); *City of Sausalito v. O’Neill*, 386 F.3d 1186, 1212–13 (9th Cir. 2004) (deferring to development plan for old military base).

179. 16 U.S.C. § 1a-1 (as enacted by Pub. L. 91-383, § 1, Aug. 18, 1970, 84 Stat. 825 and amended by Pub. L. 95-250, title I, § 101(b), Mar. 27, 1978, 92 Stat. 166).

180. *Cf. Michigan United Conservation Clubs v. Lujan*, 949 F.2d 202, 205 (6th Cir. 1991) (in light of these amendments, “the Park Service concluded that Congress conceived of the park system as an integrated whole,” requiring trapping to be banned in all park units, not just some of them); *Bicycle Trails Council of Marin v. Babbitt*, 82 F.3d 1445, 1453 (9th Cir. 1996) (purpose of 1978 amendments was in part to ensure uniform standards in all units, prompting NPS decision to close areas of park to bicycles).

181. *See, e.g., S. Utah Wilderness Alliance v. Dabney*, 222 F.3d 819, 826–30 (10th Cir. 2000) (subsuming analysis of Canyonlands National Park Enabling Act into court’s analysis of Organic Act); *Bicycle Trails Council of Marin*, 82 F.3d at 1453, 1461–62 (in reviewing challenge to NPS decision to close areas of Golden Gate National Recreation Area to bicycles, court stated that the park enabling act “in no way mandates that any particular type of recreation be given primacy over other types”); *City of Sausalito*, 386 F.3d at 1227 (in deferring to agency development plan for old military base, combining analysis and deference for Organic Act with park-specific enabling act); *Grunewald v. Jarvis*, 930 F. Supp. 2d 73, 84–86 (D.D.C. 2013) (in rejecting challenge to agency plan to cull deer in Rock Creek Park in Washington, D.C., court noted that park enabling act did not speak to the issue of deer management, and that the broad language in the enabling act, “when viewed in conjunction with the agency’s Organic Act,” allowed for broad agency discretion); *Cape Hatteras Access Preservation Alliance v. Jewell*, 28 F. Supp. 3d 537, 545 (E.D.N.C. 2014) (refusing to find that enabling act constrained agency discretion under the Organic Act). Sometimes the increased discretion under the park-specific enabling acts includes allowing exploitation of resources within the park. *See Sierra Club v. Watt*, 566 F. Supp. 380, 382–85 (D. Utah

Courts have frequently relied upon the Park Service's own policy documents when interpreting the nature and scope of Park Service discretion and duties under the Organic Act.¹⁸² Sometimes courts have directly relied upon Park Service policy documents to interpret the many ambiguous terms in the Organic Act—on occasion, courts have given those policy documents *Chevron* deference.¹⁸³ More often, courts rely upon Park Service policy documents in reviewing whether particular Park Service decisions are consistent with the law.¹⁸⁴ A few opinions appear to equate interpretations of the Organic Act in Park Service policy documents as definitive statements about the meaning of the Organic Act.¹⁸⁵ However, these opinions are probably better understood as shorthand expressions of what the court is actually doing—either deferring to a reasonable Park Service interpretation of the Organic Act or reaching its own independent judicial interpretation of the law by drawing on Park Service policy documents. In the first group of cases, the Park

1983) (upholding NPS decision to allow mineral prospecting and mining to occur in national recreation area because enabling act specifically gives agency the power to allow that activity, overriding any possible constraints in the Organic Act). Courts have stated that if an enabling act does not specifically constrain agency discretion, NPS can use its broad authority under the Organic Act to make decisions. *See Organized Fishermen of Florida v. Watt*, 590 F. Supp. 805, 812–13 (S.D. Fla. 1984) (upholding NPS decision to ban commercial fishing in a park, in part, because “[a]t no time has Congress directed the [agency] to take any particular actions with regard to commercial fishing within the Park” and therefore agency has “broad administrative authority” to make decisions). The most common specific language in various park enabling acts that is relevant for our analysis is bans on hunting. *See Greater Yellowstone Coal. v. Babbitt*, 952 F. Supp. 1435, 1442–43 (D. Mont. 1996) (ban on hunting in Yellowstone enabling act); *Intertribal Bison Coop. v. Babbitt*, 25 F. Supp. 2d 1135, 1139 (D. Mont. 1998) (same); *Wildearth Guardians v. Nat’l Park Serv.*, 703 F.3d 1178, 1189 (10th Cir. 2013) (same). As noted above, these provisions have not been interpreted to prevent the agency from doing its own culling of wildlife populations. *See supra* note 150. Another example of enabling acts that could constrain agency decision-making is the Cape Cod National Seashore Act, which requires the agency to preserve “the unique flora and fauna or the physiographic conditions now prevailing” at the time of enactment. 16 U.S.C. § 459b-6(b)(1) (2012). *Conservation Law Found. of New England v. Clark*, 590 F. Supp. 1467, 1478, 1484–88 (D. Mass. 1984) (interpreting this to give “primacy to preservation of the Seashore as it existed in 1961) (relying upon language in the enabling act that required any uses to be “appropriate” to conclude that the agency had inadequately considered the impacts of ORV use on non-motorized users). *But see Conservation Law Found. of New England v. Sec’y of the Interior*, 864 F. 2d 954, 959 (1st Cir. 1989) (appellate court upholding revised park plan for national seashore based on agency discretion, and that rejects an interpretation of the enabling act that the agency “cannot authorize any development of the Seashore that would alter the scenery from its condition at the time the Seashore Act was enacted.”).

182. *See, e.g., S. Utah Wilderness Alliance v. Nat’l Park Serv.*, 387 F. Supp. 2d 1178, 1180–90 (D. Utah 2005); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 20 (D.D.C. 2010); *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 190, 196 (D.D.C. 2008).

183. *See S. Utah Wilderness Alliance*, 387 F. Supp. 2d at 1187–89.

184. Courts have generally held that the NPS policy documents do not create binding enforceable duties that the agency must comply with. Instead, courts will examine NPS policy documents to the extent the agency itself relied upon them in explaining or justifying its decision; courts might rely upon the NPS policy documents to strike down an agency decision to the extent that the agency decision is inconsistent with the policy statements the agency relied upon, or to the extent the agency inconsistently uses or relies upon the policy statements in the decision. *See, e.g., River Runners for Wilderness v. Martin*, 593 F.3d 1064, 1072 (9th Cir. 2010); *Wilderness Soc’y v. Norton*, 434 F.3d 584, 595 (D.C. Cir. 2006); *Bluewater Network v. Salazar*, 721 F. Supp. 2d 7, 20, n.13 (D.D.C. 2010); *Greater Yellowstone Coal. v. Kempthorne*, 577 F. Supp. 2d 183, 206 (D.D.C. 2008).

185. *See Bluewater Network*, 721 F. Supp. 2d at 20–21 (drawing on policy documents to reach conclusions about Organic Act’s balancing between conservation and recreation).

Service should be able to rewrite the policy documents to reach a new reasonable interpretation of the Organic Act; in the second group of cases, the relevant interpretation of the law is fixed, but usually at a level of generality that would not seriously constrain Park Service flexibility in implementation.

The general deference towards Park Service decision-making, combined with the limited constraints on agency discretion that courts have gleaned from the statutes, leads to case law that is generally more deferential to Park Service decisions to protect park resources. In other words, courts favor management actions that are framed as advancing protection or conservation of park resources, rather than advancing consumptive or recreational uses. For instance, Park Service decisions to allow ORV use in parks have been overturned by the courts on multiple occasions.¹⁸⁶ In these cases, the courts have emphasized the Park Service's obligation to protect and preserve park resources.¹⁸⁷ On the other hand, courts have upheld Park Service decisions that could also have substantial impacts on the natural environment—for instance, decisions to cull populations of wildlife.¹⁸⁸ In those cases, the courts have emphasized the Park Service's power to take affirmative management steps to protect park resources, and its discretion to determine what threats or harms to park resources exist and how to address them.¹⁸⁹

Thus, the case law is consistent with the rest of the analysis of the legal landscape for Park Service management authority to adapt to climate change. It supports broad Park Service discretion to take management steps, so long as those management steps can be framed as management for the sake of conservation, not for the sake of promoting recreation or consumptive use.

F. Overall Agency Discretion and Agency Policy Documents

The Park Service has very broad management discretion under the statute. However, it is possible that the Park Service has limited its own discretion. The primary vehicle for the Park Service to implement the Organic Act is through its Management Policies: documents intended to guide Park Service employees in

186. See *Greater Yellowstone Coal.*, 577 F. Supp. 2d at 194–09, and *Fund for Animals v. Norton*, 294 F. Supp. 2d 92, 105–06 (D.D.C. 2003) (overturning agency decision to allow snowmobiles into Yellowstone National Park); *Conservation Law Found. v. Clark*, 590 F. Supp. 1467 (D. Mass. 1984) (remanding agency decision to allow ORV use in national seashore because of failure to consider impacts on non-motorized users); *Bluewater Network*, 721 F. Supp. at 43 (overturning NPS decision to allow motorized watercraft into certain national parks); *Defenders of Wildlife v. Salazar*, 877 F. Supp. 2d 1271 (M.D. Fla. 2012) (remanding agency decision to increase ORV use). *But see River Runners for Wilderness*, 593 F.3d at 1084 (upholding Park Service decision to continue to allow motorized rafting in Grand Canyon National Park, after careful review of administrative record).

187. See *Greater Yellowstone Coal.*, 577 F. Supp. 2d at 194–09, and *Fund for Animals*, 294 F. Supp. at 105–06 (overturning agency decision to allow snowmobiles into Yellowstone National Park); *Clark*, 590 F. Supp. at 1490 (remanding agency decision to allow ORV use in national seashore because of failure to consider impacts on non-motorized users); *Bluewater Network*, 721 F. Supp. at 43 (overturning NPS decision to allow motorized watercraft into certain national parks); *Salazar*, 877 F. Supp. 2d at 1309 (remanding agency decision to increase ORV use). *But see River Runners for Wilderness*, 593 F.3d at 1084 (upholding Park Service decision to continue to allow motorized rafting in Grand Canyon National Park, after careful review of administrative record).

188. See case examples in *supra* note 150.

189. *Id.*

making management decisions. There are three ways in which these Policies might constrain Park Service discretion.

First, the Park Service has interpreted the Organic Act as only permitting it to pursue appropriate uses in the parks.¹⁹⁰ The Management Policies give relatively little specific guidance as to what is an appropriate use in the park, beyond indicating that visitor enjoyment is generally an appropriate use and that other uses may be appropriate depending on the particular context of specific parks, including congressional language specifically mandating or authorizing a use in a park-specific enabling act.¹⁹¹ The Park Service has identified a limited number of uses that are unacceptable and therefore not permitted in parks, including new downhill ski areas and dams.¹⁹²

Second, the Park Service has interpreted the Organic Act as imposing a conservation mandate pursuant to which “managers must always seek ways to avoid, or to minimize to the greatest extent practicable, adverse impacts on park resources and values,” even if those impacts would not rise to the level of impairing park resources.¹⁹³ However, the Park Service may allow adverse impacts “when necessary and appropriate to fulfill the purposes of a park”—presumably in allowing an appropriate use.¹⁹⁴ A commonly appropriate use, specifically identified in the Organic Act, is visitor enjoyment, such as hiking or backpacking. The Management Policies make clear that “when there is a conflict between conserving resources and values and providing for enjoyment of them, conservation is to be predominant.”¹⁹⁵

Third, and most importantly, the Park Service states that it can never allow impairment of park resources.¹⁹⁶ This mandate trumps even the policy of providing for public safety.¹⁹⁷ The Park Service states that an “impact would be less likely to constitute an impairment if it is an unavoidable result of an action necessary to preserve or restore the integrity of park resources or values and it cannot be further mitigated,”¹⁹⁸ implying that the nature of the goal of the management action affects the impairment analysis.

The Park Service also sets a “buffer zone” to ensure that it will not cause impairment with its management actions. The Management Policies prevent the Park Service from causing “unacceptable impacts,” which are defined as “impacts that fall

190. See NPS MANAGEMENT POLICIES, *supra* note 70, at §§ 1.5, 8.1.1. The conservation of park resources is, as we shall see shortly, interpreted by NPS to be its primary duty, and therefore to the extent that conservation is a form of use, it is also an appropriate use.

191. *Id.*

192. NPS MANAGEMENT POLICIES, *supra* note 70, at §§ 9.3.4.3, 9.5.

193. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.3.

194. *Id.*

195. *Id.* Interestingly, the agency justifies this conclusion by stating that this “is how courts have consistently interpreted the Organic Act.” But that is not accurate as a statement of the case law. Moreover, a number of the cases that found a conservation mandate relied on NPS policies in reaching that conclusion!

196. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.4.

197. NPS MANAGEMENT POLICIES, *supra* note 70, at § 8.2.5.1.

198. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.5 (The agency defines impairment as depending “on the particular resources or values that would be affected; the severity, duration, and timing of the impact; the direct and indirect effects of the impact; and the cumulative effects of the impact in question and other impacts.”).

short of impairment, but are still not acceptable within a particular park's environment."¹⁹⁹ Impacts are more likely to constitute impairment or be unacceptable to the extent that they impact park resources "necessary to fulfill specific purposes"²⁰⁰ or are "inconsistent with a park's purposes or values."²⁰¹

These three constraints interact with each other. Goals that the Park Service perceives as less-preferred by the Organic Act often face higher standards, either to satisfy the conservation mandate or the non-impairment/unacceptable impact mandate.²⁰² As noted above, restoration projects are less likely to cause impairment, and impairment or unacceptable impacts are more likely to be found if the impact affects the purposes or goals of the park. The Management Policies cite similar variations that apply to particular uses or facilities. For instance, although motorized recreation can be allowed if it is "necessary and appropriate" (as long as impacts are minimized), ORV use can only be permitted if there "will be no adverse impacts."²⁰³ In general, rights-of-way across parks can only be granted if there are no alternatives²⁰⁴ and roads must advance the mission of the park and minimize impacts on park resources.²⁰⁵ Grazing and mining activities are particularly disfavored: the former is only allowed if it will advance the mission of the park and there are no adverse effects;²⁰⁶ the latter is only allowed if a park-specific enabling act has authorized mining and there are no adverse effects.²⁰⁷

The Management Policies also evince a suspicion of commercial uses in national parks. Public areas of parks cannot be used for events "primarily for the material or financial benefit of a for-profit entity;"²⁰⁸ collection or consumption of natural resources is only allowed for personal use;²⁰⁹ and commercial use authorizations are only permitted if they will have "minimal impact" on park resources, and provide an appropriate use that is consistent with the purposes of the park.²¹⁰

199. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.7.1.

200. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.5.

201. NPS MANAGEMENT POLICIES, *supra* note 70, at § 1.4.7.1.

202. *See supra* notes 196–199.

203. NPS MANAGEMENT POLICIES, *supra* note 70, at §§ 8.2.3, 8.2.3.1.

204. NPS MANAGEMENT POLICIES, *supra* note 70, at § 8.6.4.1 (cannot issue rights-of-way unless there is "no practicable alternative to such use of NPS lands.").

205. NPS MANAGEMENT POLICIES, *supra* note 70, at § 8.6.4.4 ("The Service will generally object to proposals for the use of park lands for highway purposes that do not directly benefit a park" (referring to road proposals that are from outside the agency)); *id.* at § 9.2.1.2.2 (agency will only initiate construction and expansion projects for roads if there are no "feasible and prudent alternative[s]" and if the project will "minimize and mitigate harm to the park").

206. NPS MANAGEMENT POLICIES, *supra* note 70, § 8.6.8.2; *see also* 36 C.F.R. § 2.60(a)(3) (2015) (grazing will only be authorized by the agency if required by law or existing rights, or as "a necessary and integral part of a recreational activity or required in order to maintain a historic scene.").

207. NPS MANAGEMENT POLICIES, *supra* note 70, §§ 8.7.2, 8.7.3.

208. NPS MANAGEMENT POLICIES, *supra* note 70, § 8.6.2.1.

209. NPS MANAGEMENT POLICIES, *supra* note 70, §§ 8.8, 8.9; *see also* 36 C.F.R. § 2.1(c).

210. NPS MANAGEMENT POLICIES, *supra* note 70, § 10.3. However, park concession activities can be authorized if they will not cause unacceptable impacts, a laxer standard that presumably allows some adverse impacts. *See id.* § 10.2.2.

Overall, the Management Policies set a framework that substantially constrains Park Service discretion in ways that promote conservation over other goals or uses of the parks that seek to minimize adverse effects on the parks. They also appear to place particular constraints on commercial or consumptive uses of the parks.

However, there is a major limitation on the extent to which the Management Policies curtail Park Service discretion: courts will not enforce the Policies against the Park Service. According to the case law, although the Policies may be internally binding (i.e., agency leadership may discipline employees for not complying with the Policies), they are not externally binding, in that third parties suing the Park Service may not ask the courts to require the agency to comply with the Policies.²¹¹

IV. IMPLICATIONS FOR FUTURE MANAGEMENT ACTIONS TO RESPOND TO CLIMATE CHANGE

Under the Organic Act, the Park Service has broad discretion in making management choices. As long as the Park Service can frame its decision-making as avoiding impairment and (at least for consistency with its own Management Policies and some of the case law) prioritizing conservation over other uses, when terms are vague and undefined, courts will defer to the Park Service's expertise and implementation of the statute. Neither the legislative history nor the Park Service's own history of implementation set any significant constraints on the Park Service's interpretation of those vague and undefined terms. Indeed, the future of climate change may well increase the Park Service's discretion in implementing the Organic Act's conservation and non-impairment mandates. Both action and inaction in responding to the impacts of climate change can be framed as consistent with both mandates.

A. Active Management Under the Organic Act

First, consider active management in responding to climate change: even action so aggressive as facilitating the long-term watering of giant sequoias, assisted migration of species not historically present in the park, or the use of chemicals or mechanized equipment to remove non-native species whose entry into the park is facilitated by a changing climate. All of these activities can be framed as efforts to conserve park resources and to reduce the harms caused by climate change.

Active management is most easily understood as conservation for the activities described in Part II.A, which can be framed as advancing resistance or resilience in the near-term by off-setting the negative impacts of human-induced climate change. Both irrigation of giant sequoias and removal of non-native species are efforts to protect the park's existing natural resources from the negative impacts of climate change. These kinds of actions can be easily understood as conserving park resources (consistent with the conservation mandate). They can also be understood as efforts to either prevent impairment (by preventing future harm), or to restore park resources from a state of impairment (by eliminating threats or current harms). As such, these kinds of actions are consistent with current Park Service

211. See cases cited in *supra* note 185.

Management Policies, including references in those Policies to a Park Service mandate to restore resources threatened by impairment.²¹²

Much more radical in terms of breaking from current Management Policies are active management efforts to facilitate adaptation efforts for the long-term that seek to manage transitions to new ecosystems, as described in Part II.B. However, these activities could also be considered consistent with the Organic Act conservation and non-impairment mandates.

Again, the key to understanding how these actions can be considered as consistent with the Organic Act is to recognize that they are all efforts to manage the impacts caused by anthropogenic climate change. Consider a species that, due to climate change, has moved 100 miles north of its existing range into a national park, where it was not historically present. The migration corridor for that species from its existing habitat into the national park has been obstructed by human development activities, preventing the species from migrating on its own. Assisted migration can be framed as an effort to mitigate the harm on the species caused by humans, through the combined effects of climate change and development. Without assisted migration, the harm to species and ecosystems would be more serious. Active intervention can then be framed as conserving resources or reducing impairment of those resources.

But what about the fact that the species never existed in the park in the first place? How can assisted migration of the species into the park be considered conservation of *park* resources, restoration of impaired *park* resources, or prevention of impairment to *park* resources? After all, the Organic Act mandates the Park Service to “conserve the scenery, natural and historic objects, and wild life *in the System units*.”²¹³

One answer to this question is to consider the alternative of not intervening to facilitate assisted migration. The park would become a suitable habitat for a species, but that species would go extinct. Human intervention has necessarily changed the park’s resources already—through the impacts of climate change.²¹⁴ The only issue is the level of harm that will result from that human intervention. Park managers currently make difficult decisions about whether to remove non-native species—in part, based on concerns about whether removal efforts will do more harm than good, given the changes that non-native species may have already caused to natural processes and ecosystems. Park managers sometimes allow those species to remain, even though those non-native species might not be considered park resources.²¹⁵ Likewise, park managers will make difficult decisions about whether to

212. And note that framed as restoration efforts, they are also less likely to be considered to cause impairment based on impacts on other resources. See NPS MANAGEMENT POLICIES, *supra* note 70, § 1.4.5.

213. See 54 U.S.C. § 100101 (2014) (amending and replacing 16 U.S.C. § 1 (repealed 2014) (mandating the Park Service to “conserve the scenery and the natural historic objects and the wildlife *therein*”) (emphasis added)).

214. See *supra* Part III, The Organic Act and Park Enabling Acts Provide Substantial Leeway for Park Service Management Choices (describing existing and potential impacts of climate change on park resources).

215. See, e.g., NPS MANAGEMENT POLICIES, *supra* note 70, § 4.4.4.1 (“In rare situations, an exotic species may be introduced or maintained to meet specific, identified management needs when all feasible and prudent measures to minimize the risk have been taken . . .”).

facilitate migration of species to a park, with the hope that they will not do more harm than good by intervening.

Ultimately, the answers to these and similar questions turn on how broadly park managers define a “park resource.” Managers might take a very narrow view of what a resource is, excluding any species that has never been present in the park. This would foreclose assisted migration, and indeed might cause managers to actively resist even the unassisted migration of native species into parks due to climate change. However, this is far from the only definition of park resources that the Organic Act allows, given the absence of a definition in the statute, the broad discretion afforded the Park Service by the courts, and the varying historical implementation of the statute by the Park Service. It surely is a reasonable—and therefore, legal—interpretation of the Organic Act for the Park Service to consider the species that were not historically present in the park, but are moving into the park, or would move into the park due to climate change but for other human intervention in park resources. Once that is conceded, it becomes easy to justify intervention based on conservation or non-impairment.²¹⁶ Of course, the Organic Act does not appear to mandate any of these interpretations of “park resources.” The key point, here, is that these interpretations appear to be permissible under the Organic Act.²¹⁷

Similar analyses would apply to other park resources that may require human intervention to facilitate a transition to a new ecosystem state. For instance, consider a forest stressed by changes in temperature and precipitation, and that will over time change to a different state (e.g., to a relatively open woodland with a different fire regime and species composition). Again, it seems reasonable—and therefore, permissible—for the Park Service to conclude that there would be less harm to park resources if it were to facilitate the transition through prescribed burns, planting different tree species, etc.²¹⁸ Again, the reduction in harms by facilitating the transition can be framed as both consistent with a conservation mandate and as minimizing or reducing impairment.

Park Service discretion for active management is particularly broad where it undertakes actions specifically authorized under Section 3: logging to “control attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects in any System unit” and the control of “animals and plant life as may be detrimental to the use of any System unit.”²¹⁹ These provisions are important for

216. The harder case is posed by a species whose suitable habitat shifts from another location into a national park, but for which no plausible natural migration path exists, even without any additional human impacts on the species. Even here, however, assisted migration might be justified on the grounds that the new park resource should be conserved by assisting with its movement into the newly suitable park habitat.

217. Efforts to introduce new species to a park might well be inconsistent with NPS Management Policies. See NPS MANAGEMENT POLICIES, *supra* note 70, § 4.4.4.1; see also Camacho, *Transforming the Means*, *supra* note 4, at 197–98 (“the NPS Management Policies would only allow the NPS to engage in assisted migration in very narrow situations involving species closely related to native species and when the effect of the introduction on the native ecosystem is minimized.”). This is an example of a broader complexity about whether active management efforts might be consistent with the Agency’s own policies.

218. The harms might be fewer because, for instance, an unmediated transition might produce very hot fires that cause significant soil erosion.

219. 54 U.S.C. §§ 100752, 100753 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014)).

two reasons. First, logging, or “mechanical thinning” treatment, is often recommended as a tool to address climate change impacts on forests.²²⁰ Likewise, the control of non-native species may be an important aspect of management for climate change adaptation.²²¹ Second, the permissible reasons for invoking the Section 3 exemptions are very broad (conserving natural or historic objects in parks or preventing harm to the use of the parks), and many of them (specifically, insects and disease threats) are a major impact of climate change.²²²

B. Passive Management Under the Organic Act

As shown in the above analysis, there are reasonable arguments on both sides of whether active management efforts are appropriate under the Organic Act as a response to address climate change. Therefore, Park Service decisions *not* to intervene would be equally permissible under the Organic Act. Decisions not to undertake active management for the short-term may be justified because active management might do more harm than good to park resources.²²³ Potential harms include uncertainties about its efficacy, collateral damage to other park resources, and the expense of interventions that might foreclose other, more valuable management efforts. Non-intervention in the short-term could also be justified because the resources being supported by ongoing intervention (e.g., watering giant sequoias that would otherwise die) would mean those resources are no longer natural, and therefore, would no longer fall within the scope of either the conservation or impairment mandates.²²⁴

Decisions not to undertake active management for the long-term²²⁵ might be justified for the same reasons as well: active management could prove unsuccessful, and the resulting condition of the resources might not be “natural” (considering the transition was facilitated by humans and the new resources only exist because of anthropogenic climate change). Non-intervention in this context might also be justifiable for the reasons articulated in the prior discussion: because the new species or ecosystems that managers seek to hasten the transition towards are not park resources, given that the species existed elsewhere historically.

C. Implications of Broad Discretion Under the Organic Act

Again, the Park Service has broad discretion to respond to climate change under the Organic Act. That discretion appears to be significantly broader than currently recognized under the Park Service’s Management Policies, which make only a short, passing mention of climate change without addressing the possibility of Park Service intervention as a response.²²⁶ We believe the Park Service should

220. See note 43–46, 50, *supra*, and accompanying text.

221. See note 53–56, *supra*, and accompanying text.

222. See Part II, Management Options, *supra*.

223. See Part II.A., Adaptation Actions for the Near-Term, *supra*.

224. They could, however, qualify as scenery or historic objects and therefore still worthy of protection under the Act.

225. See Part II.B., Adaptation Actions for the Long-Term, *supra*.

226. NPS MANAGEMENT POLICIES, *supra* note 70, § 4.7.2 (“Earth’s climate has changed throughout history. Although national parks are intended to be naturally evolving places that conserve our natural and

prioritize working through the issues addressed in this article, including the role that active management should play in the Park Service's response to climate change. The Park Service should try to define the relevant terms in this context (e.g., what "impairment" means in a world of changing climate) and then make fundamental ethical and policy decisions about the resources that count in its conservation or impairment analyses. In so doing, the Park Service will have significant leeway to shape its response.

However, the Park Service's broad leeway under the Organic Act to respond to climate change may be problematic. Two concerns come to mind. First, there is a risk that active management for climate change will be used as a cover for goals not permitted under the Organic Act—the risk of "duplicity."²²⁷ Second, there is a risk that active management for climate change will be pursued for the right reasons, but will be inefficacious or even counterproductive—the risk of "unintended consequences."

With respect to the first concern, duplicity, one example might be the Park Service justifying commercial green-tree or salvage logging as a necessary response to the fire risks caused by climate change.²²⁸ Here, the language of the Organic Act and case law interpreting it are both tools to prevent the misuse of active management.

Courts have already closely examined Park Service management decisions to determine whether those management decisions are permissible ones intended to conserve park resources, or prohibited ones intended to facilitate consumptive use of park resources. This distinction can be seen in cases upholding Park Service decisions to cull wildlife in parks, despite park-specific enabling acts that prohibit hunting. Both hunting and culling involve the killing of animals. However, the Park Service has drawn a distinction between culling activities (which it states are consistent with Section 3 of the Organic Act) and hunting activities (which are generally prohibited in parks, even if no enabling act prohibits hunting).

cultural heritage for generations to come, accelerated climate change may significantly alter park ecosystems. Thus, parks containing significant natural resources will gather and maintain baseline climatological data for reference.") As the example of assisted migration makes clear, there may be a substantial number of active management techniques that are effectively prohibited by the Agency's management policies, particularly those focused on long-term facilitation of changes to novel ecosystems or situations. It seems more likely that active management efforts focused on short-term resistance and resilience more easily fit within the Agency's policies as restoration efforts.

227. The risk of duplicity is similar to what Holly Doremus calls the "slippery slope argument" that "if commercial use is allowed at all, it may prove impossible to restrict it" because it will "inevitably produce focused political pressures for expansion." Holly Doremus, *Nature, Knowledge, and Profit: The Yellowstone Bioprospecting Controversy and the Core Purposes of America's National Parks*, 26 *ECOLOGY L. Q.* 401, 472 (1999); see also Long & Biber, *supra* note 22, at 663–65 (noting concerns about how political pressures may warp active management for climate change).

228. Given the exemption for tree harvesting in Section 3 of the Organic Act, this is a plausible future scenario. Arguments that commercial tree harvesting is necessary to respond to wildfire impacts produced by climate change already widely made in the political arena with respect to the Forest Service. See *Litigation and Increased Planning's Impact on Our Nation's Overgrown, Fire-Prone National Forests*, Hearing before the H. Subcomm. on Federal Lands of the Natural Resources Comm., 114th Congress 1–5 (2015), http://naturalresources.house.gov/UploadedFiles/HearingMemoFL_5_14_15.pdf (arguing that decreased commercial timber harvesting on National Forest lands has led to increased wildfire risk).

The decision in *Wildearth Guardians v. Nat'l Park Serv.* is an excellent example of this distinction.²²⁹ The United States Court of Appeals for the Tenth Circuit upheld a Park Service program in which authorized, private parties killed elk within the borders of the park—even though the park enabling act prohibited all forms of hunting—by distinguishing hunting from culling.²³⁰ According to the Court (drawing on the Park Service's own analysis), the key distinction is that hunting “is the recreational pursuit of game for meat and sport, with incidental management effects on game populations, while [culling] is the closely supervised killing of game to control its population.”²³¹ Thus, even private parties authorized and supervised by the Park Service could kill elk in the park—not just the Park Service personnel.

Note how this distinction draws upon the differences of the goals of the activity. The United States District Court opinion emphasized this distinction and connected it to the distinction between consumptive use and conservation of resources:

Culling occurs when animals are destroyed primarily for conservation purposes, while hunting occurs when the destruction is primarily for recreational purposes. Culling is conducted under controlled circumstances under the direction and supervision of Park Service personnel, while hunting is performed at the hunter's discretion (subject to the terms of any applicable license conditions and regulations) and with elements of ‘fair chase’ present. Culling does not allow the person who killed the animal to keep the meat, hunting does. Put simply, culling services the public purpose, while hunting serves both public and private purposes.²³²

This distinction, based on the goals of the management action, is not unique to the hunting versus culling context in parks. In *Edmonds Institute v. Babbitt*,²³³ the Court considered a challenge to an agreement between the Park Service and a private entity about the method of sharing proceeds from scientific discoveries developed from biological research in Yellowstone National Park.²³⁴ The agreement was challenged as an impermissible consumptive use, but the Court disagreed. It held that research in which biological samples are removed from the park cannot be deemed impermissible consumptive use because that would “necessarily imply that every other scientific research permit issued over the past century was equally invalid.”²³⁵ The Court upheld the agency's distinction between making money from the direct sale of specimens collected in the park, which would be prohibited, and “profiting from a future development based on scientific discoveries resulting from research on

229. *Wildearth Guardians v. Nat'l Park Serv.*, 703 F.3d 1178, 1191–92 (10th Cir. 2013).

230. *Id.* at 1182, 1187–88, 1192.

231. *Id.* at 1191.

232. *Wildearth Guardians v. Nat'l Park Serv.*, 804 F. Supp. 2d 1150, 1159 (D. Colo. 2011).

233. *Edmonds Institute v. Babbitt*, 93 F. Supp. 2d 63 (D.D.C. 2000).

234. *Id.* at 64–65.

235. *Id.* at 71.

those resources, which is permitted.”²³⁶ Again, the purpose of the direct activities in the park—research—made the activity permissible, even if there could eventually be commercial gain as well.

This kind of close judicial review of Park Service management efforts to ensure that the Park Service seeks to fulfill the appropriate and permissible goal of conservation and does not cross the line into impermissible consumptive use provides a useful check on the abuse of active management for purposes of climate change adaptation. A Park Service effort to open a park to public hunting based on claims that hunting would help control wildlife would likely (and appropriately) receive careful scrutiny from the courts.

This kind of close judicial review should and would apply to Park Service efforts to rely on the provisions in Section 3 of the Organic Act.²³⁷ The first provision is limited to specific purposes—“to control attacks of insects or diseases or otherwise conserve the scenery or the natural or historic objects in any” park.²³⁸ Broadening this provision to give the Park Service *carte blanche* to pursue a wide range of development and consumptive activities would fundamentally undermine the purposes of Section 1 of the Organic Act.²³⁹ Indeed, the provision appears to require that all timber activities advance the conservation of park resources articulated in Section 1, since the text requires that the goal be to “control attacks of insects or diseases or *otherwise* conserve” park resources, implying that controlling insects and diseases is a specific form of conservation.²⁴⁰

The second provision in Section 3 is limited to control of wildlife or plants that interfere with the “use” of the park. In the context of the Organic Act as a whole, this provision would mean interference with the two primary purposes laid out in Section 1: conservation of park resources and visitor enjoyment. Again, the purposes of wildlife control are strictly limited, and do not include advancing private interests.

Finally, the amendments to the Organic Act in 1970 and 1978 clarified that all actions within the National Park System must be consistent with the purposes of Section 1.²⁴¹ Congress required that all “regulation of the various areas of the National Park System . . . shall be consistent with and founded in the purpose established by Section 1 of this title.”²⁴² Further, Congress mandated that all:

236. *Id.* at 72. For a thoughtful discussion of the underlying bioprospecting agreement, and an argument that these kinds of agreements are inconsistent with the purposes of National Parks, see Doremus, *supra* note 228, at 451–87.

237. All of the hunting and culling cases depend on interpretations of the scope of Section 3 of the Organic Act, for instance. See *supra* notes 149–150.

238. 54 U.S.C. § 100753 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014)).

239. For the legislative history indicating that commercial exploitation of park resources, especially timber harvesting, are contrary to the purposes of the Organic Act, see *supra* note 84.

240. 54 U.S.C. § 100752 (2014) (amending and replacing 16 U.S.C. § 3 (repealed 2014) (“The Secretary may provide for the destruction of such animals and plant life as may be detrimental to the use of any System unit.”)).

241. See 54 U.S.C. 100101(b) (2014) (amending and replacing 16 U.S.C. § 1a-1 (repealed 2014)) (as enacted by Pub. L. 91-383, § 1, Aug. 18, 1970, 84 Stat. 825 and amended by Pub. L. 95-250, title I, § 101(b), Mar. 27, 1978, 92 Stat. 166)).

242. 54 U.S.C. § 100101 (2014) (amending and replacing 16 U.S.C. § 1a-1 (repealed 2014)). As a later amendment to the Organic Act, this would supersede any contrary language in Section 3 that might allow management that is contrary to the purposes of Section 1 of the Organic Act.

authorization of activities shall be construed and the protection, management, and administration of these areas shall be conducted in light of the high public value and integrity of the National Park System and shall not be exercised in derogation of the values and purposes for which these various areas have been established,

presumably including Section 1's overall mandate to the Park Service.²⁴³

Thus, a Park Service decision to allow commercial logging to facilitate climate change adaptation would rightfully come under close scrutiny and would probably (like hunting) be considered a prohibited use.²⁴⁴ In contrast, a Park Service decision to allow non-commercial thinning to facilitate adaptation would more likely survive scrutiny, and, like culling, could be considered a permissible non-consumptive use.

Courts have closely reviewed land management decision-making this way. A careful examination of Park Service decision-making to ensure that neither its purpose nor effect advances prohibited commercial uses is a standard that courts have long applied in reviewing Park Service management decision-making on wilderness areas, particularly where the Wilderness Act explicitly prohibits commercial uses.²⁴⁵ Although the Organic Act does not specifically prohibit commercial uses, it does explicitly permit only two goals: conservation and visitor enjoyment. Neither of these would include commercial consumptive uses.²⁴⁶

What about reducing the risk of unintended consequences? Here, we believe that establishing a thoughtful, deliberative process to consider these kinds of active management interventions is essential. NEPA, the ESA, and other laws already require this process. However, the Park Service would benefit from establishing an explicit process requiring a close analysis of whether and when particular active management interventions advance climate change adaptation and fulfill the Park Service's mandates under the Organic Act.²⁴⁷ Such a process would reduce the risk of ill-advised active management steps that do more harm than good. It could also prompt more deferential judicial review of Park Service decisions.

To the extent that the burdens of such a thoughtful, deliberative process could create an incentive for the Park Service to prefer passive to active management in responding to climate change, this is generally a good thing. As noted elsewhere,

243. *Id.* This last provision does conclude with the language: "except as may have been or shall be directly and specifically provided by Congress." However, given the broad language of Section 3 and how it can be interpreted consistent with Section 1 of the Organic Act, this provision can best be read as referring to specific management direction in park enabling acts.

244. While the provision does allow for the sale of timber, this is best read as allowing the agency to reduce the costs of an action that it would otherwise already take by selling usable timber products. It should not be interpreted to allow for commercial timber harvesting or general revenue raising activities by the agency.

245. Long & Biber, *supra* note 22, 678–80.

246. See Doremus, *supra* note 228, at 469–76 (arguing that commercial uses in National Parks should be strictly limited). Other agency procedures may also help minimize the risk of improper motives guiding agency decisions. For instance, thorough NEPA review can help highlight inconsistencies between the purported motive for an agency decision and its actual implementation.

247. To minimize administrative burdens, such a process could be incorporated into the agency's existing decision-making procedures, such as the requirement that park managers make findings as to impairment, and the agency's NEPA review processes.

active management creates challenges and risks that passive management does not.²⁴⁸ This does not mean that active management is an inappropriate response for many challenges; rather, it means that the Park Service should not rush to wholeheartedly embrace active management as its primary response to climate change.

248. Long & Biber, *supra* note 22, at 658–64.

CASE NAME	CITATION	RULING FOR NPS?	NOTES
Alaska Wildlife Alliance v. Jensen	108 F.3d 1065 (9th Cir. 1997)	Yes	
Bicycle Trails Council of Marin v. Babbitt	82 F.3d 1445 (9th Cir. 1996)	Yes	
Bluewater Network v. Salazar	721 F.Supp.2d 7, 30 (D.D.C. 2010)	No	
City of Sausalito v. O'Neill	386 F.3d 1186 (9th Cir. 2004)	Yes	
Conservation Law Found. of New England, Inc. v. Clark	590 F. Supp. 1467 (D. Mass. 1984)	Yes	Appeal affirming NPS decision after remand: Conservation Law Found. of New England, Inc. v. Sec'y of the Interior, 864 F.2d 954 (1st Cir. 1989).
Daingerfield Island Protective Soc'y v. Babbitt	40 F.3d 442 (D.C. Cir. 1994)	Yes	
Davis v. Latschar	202 F.3d 359 (D.C. Cir. 2000)	Yes	
Defenders of Wildlife v. Salazar	877 F. Supp. 2d 1271 (M.D. Fla. 2012)	No	
Edmonds Institute v. Babbitt	93 F. Supp. 2d 63 (D.D.C. 2000)	Yes	

CASE NAME	CITATION	RULING FOR NPS?	NOTES
Friends of Animals v. Caldwell	No. 2:09-CV-5349, 2010 WL 4259753, (E.D. Pa. Oct. 27, 2010)	Yes	Affirmed, 434 F. App'x 72 (3d Cir. 2011) (affirming case only addresses the NEPA claims).
Fund for Animals v. Mainella	294 F. Supp. 2d 46 (D.D.C. 2003)	Yes	
Fund for Animals v. Norton	294 F. Supp. 2d 92 (D.D.C. 2003)	No	
Greater Yellowstone Coal. v. Babbitt	952 F. Supp. 1435 (D. Mont. 1996)	Yes	Denial of request for preliminary injunction because plaintiff unlikely to succeed on merits of Organic Act claim, affirmed, Greater Yellowstone Coal. v. Babbitt, 108 F.3d 1385 (9th Cir. 1997).
Greater Yellowstone Coal. v. Kempthorne	577 F. Supp. 2d 183 (D.D.C. 2008)	No	
High Country Citizens' Alliance v. Norton	448 F.Supp.2d 1235 (D. Colo. 2006)	No	
Int'l Snowmobile Mfrs. Ass'n v. Norton	340 F. Supp. 2d 1249 (D. Wyo. 2004)	No	
Intertribal Bison Coop. v. Babbitt	25 F. Supp. 2d 1135 (D. Mont. 1998)	Yes	Affirmed at 175 F.3d 1149 (9th Cir. 1999).

CASE NAME	CITATION	RULING FOR NPS?	NOTES
Mausolf v. Babbitt	125 F.3d 661 (8th Cir. 1997)	Yes	
Mich. United Conservation Clubs v. Lujan	949 F.2d 202 (6th Cir. 1991)	Yes	
Nat'l Parks Conservation Ass'n v. U.S. Dep't of Interior	No. 2:11-CV-578-FTM-29CM, 2015 WL 476163 (M.D. Fla. Feb. 5, 2015)	Yes	Currently being appealed.
Nat'l Parks Conservation Ass'n v. Jewell	965 F.Supp.2d 67 (D.D.C. 2013)	Yes	
Nat'l Riffle Ass'n v. Potter	628 F. Supp. 903 (D.D.C. 1986)	Yes	
Nat'l Wildlife Fed'n v. Nat'l Park Serv.	669 F. Supp. 384 (D. Wyo. 1987)	Yes	
New Mexico State Game Comm'n v. Udall	410 F.2d 1197 (10th Cir. 1969)	Yes	
Organized Fishermen of Florida v. Watt	590 F. Supp. 805 (S.D. Fla. 1984)	Yes	Affirmed by 775 F.2d 1544 (11th Cir. 1985) (no discussion of Organic Act).
River Runners for Wilderness v. Martin	593 F.3d 1064 (9th Cir. 2010)	Yes	
Sierra Club v. Andrus	487 F. Supp. 443 (D.D.C. 1980)	Yes	Affirmed at 659 F.2d 203 (D.C. Cir. 1981).

CASE NAME	CITATION	RULING FOR NPS?	NOTES
Sierra Club v. Babbitt	69 F. Supp. 2d 1202 (E.D. Cal. 1999)	Yes	
Sierra Club v. Dep't of Interior	398 F. Supp. 284 (N.D. Cal. 1975)	No	Order modified by 424 F. Supp. 172 (1976).
Sierra Club v. Mainella	459 F.Supp.2d 76 (D.D.C. 2006)	No	Appeal dismissed 2007 WL 1125716 (D.C. Cir. 2007).
Sierra Club v. Watt	566 F. Supp. 380 (D. Utah 1983)	Yes	
Southern Forest Watch, Inc. v. Jewell	No. 3:13-CV-116, 2015 WL 1457978 (E.D. Tenn. Mar. 30, 2015)	Yes	On appeal at time of publication.
Southern Utah Wilderness Alliance v. Nat'l Park Serv.	387 F Supp. 2d 1178 (D. Utah 2005)	Yes	
The Fund for Animals v. Norton	512 F. Supp. 2d 49 (D.D.C. 2007)	Yes	
U.S. v. Moore	640 F. Supp. 164 (S.D. W. Va. 1986)	Yes	Affirmed by 552 F.2d 817 (8th Cir. 1977) (no Organic Act holding).
Udall v. Washington, Va. & Md. Coach Co.	398 F.2d 765 (D.C. Cir. 1968)	Yes	
W. Watersheds Project v. Salazar	494 F. App'x 740 (9th Cir. 2012)	Yes	

CASE NAME	CITATION	RULING FOR NPS?	NOTES
WildEarth Guardians v. Nat'l Park Serv. II	703 F.3d 1178 (10th Cir. 2013)	Yes	Affirming 804 F. Supp. 2d 1150 (D. Colo. 2011).
Wilderness Soc'y v. Norton	434 F.3d 584 (D.C. Cir. 2006)	Yes	
Wilkins v. Sec'y of Interior	995 F.2d 850 (8th Cir. 1993)	Yes	Reversing 798 F. Supp. 557 (E.D. Mo. 1992).
Fund for Animals v. Norton	512 F.Supp.2d 49 (D.D.C. 2007)	Yes	
Save Sandy Hook Corp. v. U.S. Dep't of Interior	No. 04-5908 (MC), 2007 WL 2704813 (D.N.J. Sept. 13, 2007)	Yes	Affirmed 293 Fed. Appx. 896 (3d Cir. 2008).
Isle Royale Boaters Ass'n v. Norton	330 F.3d 777 (6th Cir. 2003)	Yes	

Table 1.