

Public-Private Conservation Agreements and the Greater Sage-Grouse

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Public-Private Conservation Agreements and the Greater Sage-Grouse

Justin R. Pidot*

I. INTRODUCTION 165

II. FEDERAL WILDLIFE CONSERVATION UNDER THE ENDANGERED SPECIES ACT 169

III. THE ENDANGERED SPECIES ACT AND UNCERTAINTY 176

 A. ECOLOGICAL UNCERTAINTY 176

 B. ECONOMIC UNCERTAINTY..... 184

IV. THE OBAMA ADMINISTRATION’S FRAMEWORK FOR GREATER SAGE-GROUSE CONSERVATION..... 187

V. CONSERVATION AGREEMENTS WITH MINING COMPANIES 192

 A. FEATURES OF THE BARRICK AND NEWMONT AGREEMENTS .. 192

 B. LESSONS LEARNED 198

VI. CONCLUSION AND EPILOGUE..... 202

I. INTRODUCTION

In 2015, the Obama Administration announced its conservation plans for the greater sage-grouse, an iconic bird of the intermountain west.¹ Political leadership at the time described those plans as the “largest

* Associate Professor, University of Denver Sturm College of Law. This Article draws on work in which I engaged as the Deputy Solicitor for Land Resources at the U.S. Department of the Interior during the Obama Administration. During my time serving in that capacity, I played a role in negotiating and reviewing the Newmont Agreement discussed in this article. I would like to thank the many tremendous civil servants at the Department of the Interior with whom I had the privilege of working on this and other matters.

1. See *Fact Sheet: BLM, USFS Greater Sage-Grouse Conservation Effort*, U.S. BUREAU OF LAND MANAGEMENT, <https://www.blm.gov/sites/blm.gov/files/BLM%20USFS%20Greater%20Sage%20Grouse%20Conservation%20Effort%20Fact%20Sheet.pdf>.

landscape-level conservation effort in U.S. history,”² and they served as the foundation for a decision by the U.S. Fish and Wildlife Service (“FWS”) that a listing of the bird was not warranted under the Endangered Species Act (“ESA”).³

The Trump Administration appears poised to substantially amend the plans,⁴ although an array of interested parties have urged that the plans be left intact.⁵ Regardless of the outcome of this debate, conservation of the greater sage-grouse exemplifies persistent controversies about federal protections for declining species and the effects such protections may have on property owners and economic actors. The ESA has been a perennial *bête noire* for many western state republicans. Earlier this year, Congressman Rob Bishop, the chairman of the House Resources Committee, stated: “[T]he ESA doesn’t work We have to find a way to reform it so that it actually solves problems, not just continues on the process.”⁶ The specter of listing the greater sage-grouse in particular has been of concern; in 2004, Secretary of the Interior Gale Norton worried that the greater sage-grouse could become the “spotted owl of the

2. Christy Goldfuss et al., *Press Release, Unprecedented Collaboration to Save Sage-Grouse is the Largest Wildlife Conservation Effort in U.S.*, (Sept. 22, 2015), available at <https://obamawhitehouse.archives.gov/blog/2015/09/22/unprecedented-collaboration-save-sage-grouse-largest-wildlife-conservation-effort-us>.

3. *Id.*

4. See Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environmental Impact Statements or Environmental Assessments, 82 Fed. Reg. 47,248 (Oct. 11, 2017); *corrected by* 82 Fed. Reg. 50,666 (Nov. 1, 2017).

5. See Letter from Paul Ulrich et al., to Erica Husse Nov. 30, 2017 (expressing concerns of Wyoming ranching, mining, and conservation organizations), available at https://www.eenews.net/assets/2017/12/01/document_gw_03.pdf.

6. Timothy Cama & Devin Henry, *Overnight Energy: GOP moves to reform Endangered Species Act*, THE HILL (July 19, 2017, 06:06 PM EDT) <http://thehill.com/policy/energy-environment/overnights/342815-overnight-energy-gop-takes-on-endangered-species-reform>.

Intermountain West,”⁷ invoking the species whose listing is often blamed for the so-called “timber wars” in the northwestern United States.⁸

Notwithstanding the sustained assault on the ESA from some sectors, the FWS has engaged in numerous regulatory reforms over the years to minimize the disruption a listing may have to economic activities and to produce better outcomes for imperiled species.⁹ These efforts have facilitated collaboration among stakeholders, including states and local governments, developers, resource users, and conservation organizations, and have encouraged voluntary, affirmative conservation efforts in exchange for increased regulatory predictability.¹⁰

This article situates greater sage-grouse conservation within the context of ongoing efforts at the FWS, and Department of the Interior generally, to develop approaches to simultaneously enhance ecological certainty for species and economic certainty for businesses. As a recent illustration of these efforts, it focuses on two unique public-private conservation agreements signed shortly before the end of the Obama Administration between mining companies and the federal government. Under those agreements, the companies committed to engaging in greater sage-grouse conservation efforts in exchange for more certainty about their obligations to mitigate the negative environmental effects of activities they carry out on public lands to extract federal mineral

7. *Endangered Species II: Western officials blast ESA*, GREEN WIRE (June 24, 2004) available at <https://www.eenews.net/greenwire/stories/24605>; see Amanda R. Garcia, Note, *The Sage Grouse Debate: Cost-Benefit Analysis and the Discourse of the Endangered Species Act*, 14 N.Y.U. ENVTL. L.J. 572, 575–76 (2006).

8. See Laura J. Hendrickson, *Coverage of the Endangered Species Act in Four Major Newspapers*, 45 NAT. RESOURCES J. 135, 136 (2005); See also Sandra Beth Zellmer, *Sacrificing Legislative Integrity at the Altar of Appropriations Riders: A Constitutional Crisis*, 21 HARV. ENVTL. L. REV. 457, 478–79 (1997).

9. See J.B. Ruhl, *Past, Present, and Future Trends of the Endangered Species Act*, 25 PUB. LAND & RESOURCES L. REV. 15, 33–34 (2004).

10. See, e.g., Holly Doremus, *The Purposes, Effects, and Future of the Endangered Species Act’s Best Available Science Mandate*, 34 ENVTL. L. 397, 403 (2004) (noting the development of candidate conservation agreements to secure “specific conservation measures for the benefit of candidate species in return for assurances that [property owners] will not be subject to additional regulatory restrictions should the species be listed in the future”).

resources. Barrick Gold of North America (“Barrick”) entered into an agreement—titled the “Barrick Nevada Sage-Grouse Bank Enabling Agreement”—with the BLM and the FWS on March 25, 2015 (the “Barrick Agreement”).¹¹ Newmont Mining Corporation entered into an agreement—titled a “Conservation Framework Agreement”—with the BLM, the FWS, and the State of Nevada on August 30, 2016 (the “Newmont Agreement”).¹² While these agreements resemble other approaches to secure conservation commitments in exchange for regulatory certainty, they appear to be the first agreements under which federal land management agencies have relied on their land use planning authority to enter into agreements with private resource users that provide a framework for mitigating the impacts of future land use approvals to a sensitive but unlisted species.¹³ These agreements suggest potentially fruitful opportunities for future collaboration and experimentation among federal government agencies, state agencies, and resource users with the goal of enhancing economic and ecological certainty.

11. Barrick Nevada Sage-Grouse Bank Enabling Agreement, by and among the U.S. Dept’t of the Interior and Barrick Gold of North America (Mar. 25, 2015) (hereinafter Barrick Agreement), *available at* <http://www.eswr.com/docs/gsg/DOI-Barrick%20Sage%20Grouse%20Agreement%20March2015.pdf>.

12. Conservation Framework Agreement, by and among U.S. Dep’t of the Interior, State of Nevada, and Newmont Mining Corp. (Aug. 30, 2016) (hereinafter Newmont Agreement), *available at* <http://sagebrushheco.nv.gov/uploadedFiles/sagebrushheconvgov/content/Meetings/2016/160913-ConservationAgreement-Item6.pdf>.

13. These agreements most closely resemble candidate conservation agreements, through which a private party agrees to engage in affirmative conservation activities for a non-listed species in exchange for a promise that they will face no further obligations if the species is listed. *See Safe Harbor Agreements and Candidate Conservation Agreements with Assurances*, 64 Fed. Reg. 32,726, 32,727 (June 17, 1999). Those agreements, however, are designed to address the fact that:

Much of the land containing the nation’s existing and potential fish and wildlife habitat is owned by private citizens, States, local governments, Native American Tribal governments, businesses, organizations, and other non-Federal entities. The future of many declining species is dependent, wholly or in part, on conservation efforts on these non-Federal lands generally between FWS and private parties and do not involve a the land use approvals of a federal land management agency.

Id. The Newmont and Barrick Agreements, on the other hand, address private activities on federal land, and necessarily involve the federal land management agencies, rather than only FWS.

To explore the Agreements and their import, this Article proceeds in five parts. Part II provides an overview of the protections the ESA affords to imperiled species. While the greater sage-grouse remains unlisted, the potential for listing, and the regulatory consequences attendant to such an action, created a convergence of interests that led to the greater sage-grouse conservation plans and the Barrick and Newmont Agreements. Part III discusses the ecological and economic uncertainty that adheres to wildlife conservation under the ESA. Part IV provides a general overview of greater sage-grouse conservation efforts undertaken during the Obama Administration. And Part V addresses the Barrick and Newmont Agreements specifically, examining their features and offering thoughts about the lessons that can be gleaned for future conservation agreements between public and private actors. Finally, the conclusion and epilogue discusses the Trump Administration's current review of the greater sage-grouse plans, and the unlikely assortment of interests who have joined together to urge the Administration to avoid major changes that could create significant long-term regulatory uncertainty for resource users and lead to further declines in the population of greater sage-grouse.

II. FEDERAL WILDLIFE CONSERVATION UNDER THE ENDANGERED SPECIES ACT

This section describes the major provisions of the ESA that serve as the backdrop for conservation of the greater sage-grouse. While the bird remains unlisted, the regulatory and other conservation efforts of federal land management agencies, local and state governments, and private entities has occurred in part to avoid a listing, and a future decision to list the bird remains a significant concern for resource users across sagebrush country.

The management and conservation of fish and wildlife within the United States largely falls to the states.¹⁴ Such management and

14. *See Kleppe v. New Mexico*, 426 U.S. 529, 545 (1976) (“[T]he States have broad trustee and police powers over wild animals within their jurisdiction.”). While Congress may preempt state wildlife law on federal lands, it has generally not done so. *See Defenders of Wildlife v. Andrus*, 627 F.2d 1238, 1248 (D.C. Cir. 1980).

conservation occurs, however, in the shadow of the federal ESA, which imposes robust protections for species if listed as either threatened or endangered.¹⁵ This regulatory precipice can create fertile ground for collaboration among the many parties—businesses, non-profit organizations, tribes, state and federal agencies, and non-profit organizations—who would prefer that a species remain viable without the need for a listing decision.¹⁶ The Department of the Interior, through the FWS, generally implements the protections the ESA affords to terrestrial and freshwater aquatic species.¹⁷

The ESA stands out among modern federal environmental and natural resources laws. For one thing, it is remarkably short and clear.¹⁸ In just twenty-one pages, the sixteen original sections of the Act established “one of the world’s most powerful species preservation laws.”¹⁹ While a few subsequent amendments have added marginally to its length and complexity, the framework Congress created in 1973 to insure the survival of threatened and endangered species persists today. Another distinguishing feature of the Act is its uncompromising approach. Unlike other modern environmental laws that generally require some balancing of interests, the original provisions of the ESA brokered no compromise:²⁰ the federal government was absolutely barred from engaging in any action

15. See J. Peter Byrne, *Precipice Regulations and Perverse Incentives: Comparing Historic Preservation Designation and Endangered Species Listing*, 27 GEO. INT’L ENVTL. L. REV. 343, 345–46 (2015).

16. Peter Byrne has explored the perverse incentives that can be created by regulatory precipices such as listing under the ESA. *Id.* at 346. Regulatory precipice, at least in the context of a listing decision under the ESA, may also have the salutary effect of creating significant incentives for stakeholders to engage in affirmative, proactive conservation to improve the health of a declining species and avoid a listing. That incentive, however, will only materialize if stakeholders believe that their efforts can persuade the FWS that a listing is unnecessary.

17. 16 U.S.C. § 1532(15); see Federico Cheever, *The Road to Recovery: A New Way of Thinking about the Endangered Species Act*, 23 ECOL. L.Q. 1, 6 n.16 (1996). The Department of Commerce, through the National Marine Fisheries Service, generally implements the ESA for marine and anadromous species. *Id.*

18. See Cheever, *supra* note 15, at 5.

19. *Id.*; see Endangered Species Act of 1973, Pub. L. 93-205, 87 Stat. 884-904 (Dec. 28, 1973).

20. RICHARD LAZARUS, *THE MAKING OF ENVIRONMENTAL LAW* 73 (2004).

jeopardizing a listed species and everyone faced civil and even criminal penalties if they harmed an individual member of an endangered species.²¹

The ESA establishes its primary requirements in five sections. Section 4 governs the listing of a species as either endangered—meaning that it “is in danger of extinction throughout all or a significant portion of its range”—²²or threatened—meaning that it is “likely to become an endangered species within the foreseeable future.”²³ The FWS must determine whether a species qualifies as endangered or threatened based on the “best scientific and commercial data available.”²⁴ In making that determination, the FWS must account for direct and indirect threats to the species, including “the present or threatened destruction, modification, or curtailment of its habitat or range,” and “the inadequacy of existing regulatory mechanisms” that protect the species in the absence of a listing decision.²⁵ Listing a species occurs through notice and comment rulemaking under the Administrative Procedure Act,²⁶ with a few specialized modifications imposed by the ESA.²⁷ If the FWS lists a species as threatened or endangered, section 4 directs the agency to designate critical habitat, defined as that habitat “essential to the conservation of the species,”²⁸ although the FWS must consider the economic impact of designating habitat in making making this decision.²⁹

The FWS may initiate the regulatory process for listing a species on its own initiative, or in response to a petition filed by interested

21. See 16 U.S.C. §§ 1536(1)(2), 1538(a).

22. 16 U.S.C. § 1532(6) (2018).

23. *Id.* § 1532(20). The ESA broadly defines “species” as including subspecies and “distinct population segment,” *id.* § 1532(16), and implementing regulations explain that “[a]ny species or taxonomic group of species” may be listed. 50 C.F.R. § 424.11(a).

24. 16 U.S.C. §§ 1533(a)(1), (b)(1)(A).

25. *Id.* §§ 1533(a)(1)(A)-(E). In rendering a listing decision, the ESA also directs the FWS to “tak[e] account [of] those efforts, if any, being made by any State or foreign nation, or any political subdivision of a State or foreign nation, to protect such species.” *Id.* § 1533(b)(1)(A).

26. See 5 U.S.C. § 553.

27. *Id.* 16 U.S.C. § 1533(b)(5).

28. *Id.* § 1532(5)(A).

29. *Id.* § 1533(b)(6).

persons.³⁰ Interested persons can similarly petition the FWS to delist or down-list a species.³¹ When the FWS receives a listing petition, section 4 creates procedures for processing that request and imposes tight deadlines within which the agency must respond.³² Within ninety days, the FWS must make a finding as to whether a petition contains substantial information that a listing is warranted.³³ If the FWS makes an affirmative ninety-day finding, it must “promptly commence a review of the status of the species concerned.”³⁴ Within a year, the FWS must complete its status review of the species to determine whether listing the species is warranted.³⁵ The Act provides the FWS with a modicum of flexibility because it allows the agency to complete a status review by finding that the listing of a species is warranted but is precluded by the listing of other, higher priority species—in other words, the agency can defer listing a species because of constrained resources.³⁶ Section 4 does, however, render the decision that a listing is warranted but precluded subject to judicial review.³⁷ If the FWS makes a warranted but precluded finding, it must complete another status review, and issue a new twelve-month finding within a year.³⁸ This requirement for new twelve-month findings every year, each of which is subject to judicial review, limits the FWS’s ability to postpone a listing indefinitely.³⁹

30. *Id.* §§ 1533(a)(1), (3); 50 C.F.R. § 424.14(a). The ESA incorporates the mechanism that the Administrative Procedure Act provides for petitioning an agency for action. *See* 16 U.S.C. § 1533 (b)(3)(A) (cross-referencing 5 U.S.C. § 553(e)).

31. 50 C.F.R. §§ 424.10, 424.14(a).

32. *See* 16 U.S.C. § 1533(b)(3).

33. *Id.* § 1533(b)(3)(A). Regulations implementing the ESA explain that the substantial-information standard “refers to credible scientific or commercial information in support of the petition’s claims such that a reasonable person conducting an impartial review would conclude that the action proposed in the petition may be warranted.” 50 C.F.R. § 424.14(h)(1)(i).

34. 16 U.S.C. § 1533(b)(3)(A).

35. *Id.* § 1533(b)(3)(B); 50 C.F.R. § 424.14(h)(2).

36. 16 U.S.C. § 1533(b)(3)(B)(iii); 50 C.F.R. § 424.14(h)(2)(iii)(A).

37. 16 U.S.C. § 1533(b)(3)(C)(ii).

38. *Id.* § 1533(b)(3)(C)(i); 50 C.F.R. § 424.14 (h)(3).

39. Courts have held that “the circumstances under which [the FWS] may invoke the excuse of ‘warranted by precluded’ are ‘narrowly defined.’” *Center for Biological Diversity v. Kempthorne*, 466 F.3d 1098, 1102 (9th Cir. 2006) (quoting *Center for Biological Diversity v. Norton*, 254 F.3d 833, 838 (9th Cir. 2001)).

Section 7 of the ESA prohibits federal agencies from taking actions jeopardizing the survival of a listed species or adversely modifying critical habitat, a rule often referred to simply as the prohibition on jeopardy.⁴⁰ To implement that prohibition, federal agencies must formally consult the FWS if a proposed action could affect a listed species,⁴¹ and seek a “Biological Opinion,” through which the FWS assesses whether the proposed action will result in jeopardy.⁴² If the FWS believes that jeopardy

40. 16 U.S.C. § 1536(a)(2). Historically, the FWS “largely collapsed” inquiries into adverse modification and jeopardy. TODD AAGAARD, DAVE OWEN & JUSTIN PIDOT, *PRACTICING ENVIRONMENTAL LAW* 787 (2017). This occurred because regulations implementing the ESA interpreted adverse modification as requiring an appreciable increase in the likelihood of extinction. *See Interagency Cooperation—Endangered Species Act of 1973, as Amended; Definition of Destruction or Adverse Modification of Critical Habitat*, 81 Fed. Reg. 7214, 7215 (Feb. 11, 2016). In other words, a finding of adverse modification would occur only where impacts to critical habitat would result in jeopardy to the species. In 2004, the 9th Circuit rejected that interpretation because it “obligated [the FWS] to be indifferent to, if not to ignore, the recovery goal of critical habitat.” *Gifford Pinchot Task Force v. U.S. Fish & Wildlife Serv.*, 378 F.3d 1059, 1070 (9th Cir. 2004), *superseded by regulation as recognized in* *Defenders of Wildlife v. Zinke*, 856 F.3d 1248, 1260 (9th Cir. 2017). In 2016, the FWS issued a new regulation expanding the definition of adverse modification of critical habitat to encompass modification “that appreciably diminishes the value of critical habitat for the conservation of listed species,” 50 C.F.R. § 402.02, explaining that this new definition “addresses more than mere survival.” 81 Fed. Reg. at 7217. It remains to be seen whether this new definition will lead to a significant adjustment in the consultation process.

41. This obligation to consult will flow to the National Marine Fisheries Service if the species in question is marine or anadromous. *See supra* note 17.

42. *See* 16 U.S.C. § 1536(b). The agency proposing to take action is not formally bound by a Biological Opinion, and could disagree with its conclusions, although this rarely occurs. *See Bennett v. Spear*, 520 U.S. 154, 169–70 (1997). A process also exists by which an “endangered species committee,” referred to as the “God Squad,” can exempt a project from the jeopardy prohibition. 16 U.S.C. § 1536 (e)-(h); *see* Daniel A. Farber, *A Tale of Two Cases*, 20 VA. ENVTL. L.J. 33, 37 (2001); Jared des Rosiers, Note, *The Exemption Process under the Endangered Species Act: How the “God Squad” Works and Why*, 66 NOTRE DAME L. REV. 825, 833 n.55 (1991). That process has rarely been invoked, and the committee has never granted an

will occur, it may identify “reasonable and prudent alternatives” to the proposed action that will achieve the action’s purposes while avoiding jeopardy.⁴³ In the words of the Supreme Court, by enacting section 7, “Congress has spoken in the plainest of words, making it abundantly clear that the balance has been struck in favor of affording endangered species the highest priorities, thereby adopting a policy which it described as ‘institutionalized caution.’”⁴⁴

Where the FWS determines that a federal action will not result in jeopardy, or that reasonable and prudent alternatives exist to avoid jeopardy, section 7 requires the FWS to issue an incidental take statement authorizing a take of the listed species assessed in its Biological Opinion.⁴⁵ That statement will include “reasonable and prudent measures”—essentially mitigation requirements—to minimize the impact of the incidental take caused by the federal action.⁴⁶ So long as the required mitigation (and any reasonable and prudent alternatives) are implemented, the federal agency proposing to initiate action, and any other party whose activities are evaluated in the incidental take statement, may take individual members of listed species.⁴⁷

While the consultation provisions of section 7 trigger only when the federal government acts, the ESA also restricts non-federal actors. Section 9 bars anyone from engaging in activities that result in the “take” of an endangered wildlife species,⁴⁸ a prohibition that by regulation has generally been extended to threatened wildlife species, in the absence of a

exemption. *See* M. LYNNE CORN ET AL., CONGRESSIONAL RESEARCH FWS, ENDANGERED SPECIES ACT (ESA): THE EXEMPTION PROCESS 19 (2017).

43. 16 U.S.C. § 1536(b)(3)(A).

44. *Tenn. Valley Authority v. Hill*, 437 U.S. 153, 194 (1978).

45. 16 U.S.C. § 1536(b)(4).

46. *Id.* § 1536(b)(4)(C)(ii).

47. *See* 50 C.F.R. § 402.14(i)(1)(iv) (requiring incidental take statements to include “terms and conditions . . . that must be complied with by the Federal agency or any applicant”); *Ramsey v. Kantor*, 96 F.3d 434, 441 (9th Cir. 1996) (“[A] party that is neither a federal agency nor an applicant can take members of a listed species without violating the ESA, provided the actions in question are contemplated by an incidental take statement . . . and are conducted in compliance with the requirements of that statement.”).

48. 16 U.S.C. § 1538(a). Listed plant species receive lesser protection under section 9, which only prohibits takes on federal lands or in contravention of state law. *Id.*

species-specific rule to the contrary.⁴⁹ The ESA defines the word “take” to include “harm” to a species, and under a longstanding regulatory interpretation, the take prohibition extends to “significant habitat modification or degradation” that interferes with the behavior of an individual member of a listed species.⁵⁰

Section 10 authorizes the FWS to issue permits to private parties authorizing the incidental take of a listed species,⁵¹ and such incidental take permits serve as a more limited private-party counterpart to the incidental take statements issued under section 7. The FWS may only issue incidental take permits after approving a habitat conservation plan for the species,⁵² and the FWS must find that the permit applicant will minimize and mitigate the effects of authorized incidental take “to the maximum extent practicable.”⁵³ In recent decades, private parties, states, and the FWS have increasingly relied on habitat conservation plans and incidental take permits, sometimes at a broad, landscape scale.⁵⁴ Some habitat conservation plans and incidental take statements even cover sensitive, but unlisted species.⁵⁵

Section 11 authorizes civil and criminal penalties for violations of the Act, reserving the steepest penalties for violations of section 9’s take

49. *Id.* at § 1533(d) (authorizing the FWS to extend take prohibition to threatened species); 50 C.F.R. § 17.31(a) (extending take prohibition to threatened wildlife species in the absence of a special rule to the contrary).

50. 50 C.F.R. § 17.3; *see* *Babbitt v. Sweet Home Chapter of Communities for a Greater Oregon*, 515 U.S. 687, 696 (1995) (upholding regulations).

51. 16 U.S.C. § 1539(a)(1)(B).

52. *Id.* § 1539(a)(2).

53. *Id.* § 1539(B)(ii).

54. *See* Alejandro E. Camacho et al., *Lessons from Areawide, Multiagency, Habitat Conservation Plans in California*, 46 ENVTL. L. REP. NEWS & ANALYSIS 10,222, 10,225 (2016) (hereinafter Camacho, *Lessons*); Alejandro E. Camacho, *Can Regulation Evolve? Lessons from a Study in Maladaptive Management*, 55 U.C.L.A. L. REV. 293, 299–308 (2007) (describing the evolution of the habitat conservation plans).

55. Frederico M. Cheever, *An Introduction to the Prohibition Against Takings in Section 9 of the Endangered Species Act of 1973: Learning to Live with a Powerful Species Preservation Law*, 62 U. COLO. L. REV. 109, 171 (1991) (describing FWS approach to including nonlisted species in habitat conservation plans and legislative history indicating Congress was supportive of that approach).

prohibition.⁵⁶ Section 11 also authorizes citizen suit enforcement against private parties and the federal government and the recovery of attorney's fees where such enforcement occurs.⁵⁷

III. THE ENDANGERED SPECIES ACT AND UNCERTAINTY

The relative simplicity of the ESA would appear to create specific and discernable obligations for the federal government and private parties: Thou shall not (private person) take individual members of listed wildlife species, nor (federal agency) imperil the survival of those species. The ecological imperative appears equally clear: species shall not go extinct. This section will explain the ecological and economic uncertainties that persist notwithstanding that apparent clarity.

A. *Ecological Uncertainty*

Ecological uncertainty involves questions about whether a declining species—whether listed under the ESA or not—will continue to decline, entirely disappear, or recover.

On the whole, the ESA has worked fairly well at preventing the final demise of species, at least those that have been listed under its provisions. The FWS website provides a “boxscore” for the Act, which indicates that there are currently 714 domestic fish and wildlife species listed as either threatened or endangered, and an additional 942 plant species.⁵⁸ Over the life of the ESA, the FWS has identified only ten listed species that have gone extinct.⁵⁹ The Act has fared less-well, however, in species' recovery.⁶⁰ The FWS has delisted only 23 species because they were recovered.⁶¹ Of that already small number, fewer species have been

56. 16 U.S.C. § 1540(a)-(b) (2018).

57. *Id.* § 1540(g).

58. *Listed Species Summary (Boxscore)*, U.S. FISH & WILDLIFE SERV., <https://ecos.fws.gov/ecp0/reports/box-score-report> (last visited Sept. 24, 2017).

59. *See Delisted Species*, U.S. FISH & WILDLIFE SERV., <https://ecos.fws.gov/ecp0/reports/delisting-report> (last visited Sept. 24, 2017); *see also* Cheever, *supra* note 17, at 11.

60. *See* Cheever, *supra* note 15, at 4.

61. *See Delisted Species*, U.S. FISH & WILDLIFE SERV., <https://ecos.fws.gov/ecp0/reports/delisting-report> (spreadsheet saved on 10/21/2017 and on file with author). This number includes only species that are found within the

delisted because habitat has been restored or protected.⁶² Moreover, a number of species have gone extinct in the United States without ever being listed. The Center for Biological Diversity, an environmental organization heavily involved in seeking protections for declining species, pegs the number at 83.⁶³

The ecological uncertainty faced by fish and wildlife species has both scientific and legal dimensions. Many features of the natural world remain mysterious and unknown.⁶⁴ The best scientific information about a little-seen and little-studied species may amount to little more than guesswork and inference.⁶⁵ Indeed, we may not even learn of the existence

United States. Five additional species found in domestic waters and whose protections falls to the National Marine Fisheries Service have been delisted due to recovery.

62. See John Copeland Nagle, *The Effectiveness of Biodiversity Law*, 24 J. LAND USE & ENVTL. L. 203, 206–07 (2009). John Nagle explains: “In 2008, the West Virginia northern flying squirrel became the first species to be removed from the ESA’s list of protected species based upon the restoration of the species’ habitat. Previous delistings resulted from the elimination of hunting, commercial exploitation, pesticides, or other threats.” *Id.*

63. KIERAN SUCKLING ET AL., EXTINCTION AND THE ENDANGERED SPECIES ACT 1 (2004). That report also identifies the number of listed species gone extinct as twenty-three, rather than ten. *Id.* The report may slightly overcount the number of un-listed species gone extinct, for example, it identifies at lists at least one bird as extinct that may not be a biologically distinct species. See Ryan P. Kelly et al., *Science, Policy, and Data-Driven Decisions in a Data Vacuum*, 44 ECOLOGY L.Q. 7, 26 n.104 (2017).

64. See, e.g., Joshua J. Lawler et al., *The Scope and Treatment of Threats in Endangered Species Recovery Plans*, 12 ECOL. APPLICATIONS 663, 663 (2002) (“Species facing numerous or poorly understood threats . . . are likely to present the greater challenge.”). Because a party petitioning to have a species listed bears the burden of demonstrating that such a listing is warranted, some species about which little information exists may not receive protections precisely because of scientific uncertainty. See 50 C.F.R. § 424.14(h)(1)(i) (“Conclusions drawn in [a] petition without the support of credible scientific or commercial information will not be considered ‘substantial information.’”); Kelly, *supra* note 63, at 25 (“Section 4 of the ESA is written to avoid Type I error by placing the evidentiary burden on the party wishing to list a species as threatened or endangered.”).

65. See Holly Doremus, *Listing Decisions under the Endangered Species Act: Why Better Science Isn’t Always Better Policy*, 75 WASH. U. L.Q. 1029,

of a species on the precipice of extinction, perhaps precisely because of its rarity. For example, a scientist discovered the snail darter, the small species of fish that occasioned the ESA's first trip to the Supreme Court, only shortly before completion of the Tellico Dam threatened to destroy the species' only known habitat.⁶⁶ And earlier this year, scientists announced discovery of a new species of toad living in northern Nevada.⁶⁷

Knowledge gaps exist even for heavily studied species. Scientists may understand a dwindling species's primary threats.⁶⁸ For the greater sage-grouse, for example, scientific evidence indicates that the population is experiencing a long-term declining trend.⁶⁹ The FWS determined that "the greatest threat" faced by the greater sage-grouse is "habitat loss and fragmentation . . . due to a variety of causes, including, but not limited to, energy development, infrastructure, invasive species, and wildfire."⁷⁰ Even the noise caused by roads and oil and gas drilling rigs significantly

1035–36 (1997) ("Because so little is known about so many disappearing species, the best available scientific evidence is often highly uncertain.").

66. See *Tenn. Valley Authority v. Hill*, 437 U.S. 153, 158-59 (1978). Later, scientists discovered another small populations of snail darter in an area unaffected by the Tellico Dam. See ZYGMUNT J.B. PLATER, *THE SNAIL DARTER AND THE DAM: HOW PORK-BARREL POLITICS ENDANGERED A LITTLE FISH AND KILLED A RIVER* 346 (2013).

67. Michelle R. Gordon et al., *A Diamond in the Rough Desert Shrublands of the Great Basin in the Western United States: A New Cryptic Toad Species (Amphibia: Bufonidae: Bufo (Anaxyrus) discovered in Northern Nevada*, 4290 *ZOOTAXA* 123 (2017).

68. For example, a 2011 decision declining to list the giant Palouse earthworm as threatened or endangered explained "there is very little information available, and the best available scientific information does not indicate the present or threatened destruction, modification, or curtailment of the [giant Palouse earthworm]'s habitat or range from any of the above [human] activities constitutes a threat to the species such that listing under the Act is warranted." 12-Month Finding on a Petition to List the Giant Palouse Earthworm (*Drilolerius americanus*) as Threatened or Endangered, 76 Fed. Reg. 44,559 (July 26, 2011); see Kelly, *supra* note 56, at 21-22.

69. Endangered and Threatened Wildlife and Plants; 12-Month Finding on a Petition To List Greater Sage-Grouse (*Centrocercus urophasianus*) as an Endangered or Threatened Species, 80 Fed. Reg. 59,858, 59,870–71 (Oct. 2, 2015) (hereinafter 2015 12-month Finding).

70. *Id.* at 59,888. These are common threats faced by listed species. See Lawler, *supra* note 57, at 664.

affects mating behavior.⁷¹ Much remains unknown, however, about the magnitude of these threats, how they interact, and how best to minimize them. Indeed, scientists do not fully understand the population dynamics of the species in the absence of anthropogenic influences.⁷² Nor can scientists confidently predict the extent to which climate change will affect the greater sage-grouse and the habitat upon which it depends, although climate change will likely magnify some existing threats like the spread of invasive species and increased incidents of wildfire.⁷³

The limitations of our scientific understanding create ecological uncertainty because new, currently unrecognized threats may emerge and the severity of known threats may be underappreciated.⁷⁴ Even foreseeable cataclysmic events, like wildfires, may imperil listed species if they occur in the wrong location or at the wrong time.⁷⁵ Moreover, scientific uncertainty can itself feedback into legal uncertainty, because the FWS has declined to list species because inadequate information exists. In other words, a rare, little understood species may remain unprotected precisely because its population is too small or too well concealed.⁷⁶ All of these gaps in our knowledge and ability to predict future events means that the results of conservation efforts cannot be entirely known, even if perfectly tuned to existing scientific understanding.

Conservation efforts are, of course, themselves flawed; scientific uncertainty is compounded by imperfections in federal legal protections afforded to wildlife. The obligations imposed by the ESA trigger only after

71. Jessica L. Blickley et al., *Experimental Evidence for the Effects of Chronic Anthropogenic Noise on Abundance of Greater Sage-Grouse at Leks*, 26 CONSERVATION BIOLOGY 461, 467 (2011).

72. See, e.g., 2015 12-month Finding, *supra* note 62, at 59,868 (explaining that the “drivers of” sage grouse population cycles “are unknown”).

73. *Id.* at 59,898.

74. See Justin R. Pidot, *Governance and Uncertainty*, 37 CARDOZO L. REV. 113, 177-180 (2015) (discussing varieties of uncertainty relevant for policymaking).

75. See Livia Alberck-Ripka, *For an Endangered Animal, a Fire or Hurricane Can Mean the End*, N.Y. TIMES (Oct. 25, 2017) <https://www.nytimes.com/2017/10/25/climate/fires-hurricanes-endangered-animals.html>.

76. See Kelly, *supra* note 56, at 21–22.

a species is listed as threatened or endangered.⁷⁷ While FWS's decision whether to list a species is supposed to be based solely on scientific information, policymakers at times have substituted their political preferences for the scientific analysis of career staff.⁷⁸ Moreover, even where the FWS considers unadulterated scientific information, decisions about whether a species qualifies as threatened or endangered involve a degree of discretion, which can be exercised in diverging fashion for different species at different times.⁷⁹ Even where this does not occur, politics invariably influences the speed and timing of decisions, and species have gone extinct while awaiting a decision by the FWS on a listing petition.⁸⁰

The policy tool embodied in the ESA also creates uncertainty. The ESA attempts to safeguard species primarily by restraining harmful human activities. The obligations placed on private individuals are entirely negative in nature—section 9 prohibits take of individual members of listed species—⁸¹ although private individuals must assume affirmative

77. See Byrne, *supra* note 13, at 345–46.

78. See Juliet Eilperin, *Bush Appointee Said to Reject Advice on Endangered Species*, WASHINGTON POST (Oct. 30, 2006) <http://www.washingtonpost.com/wp-dyn/content/article/2006/10/29/AR2006102900776.html>.

79. See Kalyani Robbins, *Strength in Numbers: Setting Quantitative Criteria for Listing Species under the Endangered Species Act*, 27 U.C.L.A. J. ENVTL. L. & POL'Y 1, 13–14 (2009) (arguing that the listing process vests the FWS with “a [l]ot of [d]iscretion”); Holy Doremus, *Listing Decisions under the Endangered Species Act: Why Better Science Isn't Always Better Policy*, 75 WASH. U. L.Q. 1029, 1124 (1997) (“Not only do the [wildlife] agencies refuse to formulate explicit listing standards [to guide listing decision], they offer no apology for the apparent inconsistency of their decisions.”).

80. See Byrne, *supra* note 13, at 345 (“Th[e] [listing] process is notoriously slow and fraught with analytic and political obstacles.”). In 2016, the FWS issued a new methodology to prioritize listing decisions, but the methodology is a guidance document and not a binding regulation, and even according to its terms, it allows the FWS to reprioritize consideration of species based on “any special circumstances.” Methodology for Prioritizing Status Reviews and Accompanying 12-Month Findings on Petitions for Listing Under the Endangered Species Act, 81 Fed. Reg. 49,248, 49,250 (July 27, 2016).

81. 16 U.S.C. § 1532(19) (defining “take”), *id.* § 1538(a) (prohibiting “take”).

conservation obligations to receive incidental take permits exempting their activities from that negative constraint.⁸²

While section 7(a)(1) includes a provision requiring federal agencies to use their existing authority to promote the recovery of listed species,⁸³ the FWS has not promulgated regulations to implement that provision.⁸⁴ A few courts have ruled that federal agencies have some ill-defined affirmative obligation under section 7(a)(1),⁸⁵ but those decisions have yet to translate into specific enforceable obligations.⁸⁶ The ESA also directs the FWS to develop recovery plans for each listed species, but such plans do not impose enforceable obligations.⁸⁷ Those recovery plans may also be insulated from judicial review; at least one district court ruled that they do not constitute a final agency action that can serve as the basis for a lawsuit under the Administrative Procedure Act.⁸⁸

82. *Id.* § 1539.

83. *See* 16 U.S.C. § 1533(a)(1).

84. While the affirmative conservation obligations imposed by § 7(a)(1) essentially remain dormant because the FWS has not implemented them and courts have ruled that they cannot be enforced in citizen suits, a future administration could attempt to rely on them to impose additional, affirmative obligations on federal agencies. *See* Kalyani Robbins, *The Biodiversity Paradigm Shift: Adapting the Endangered Species Act to Climate Change*, 27 *FORDHAM ENVTL. L. REV.* 57, 94 (2015).

85. *See* Fla. Key Deer v. Paulison, 522 F.3d 1133, 1146 (11th Cir. 2008) (“[S]ection 7(a)(1) imposes a judicially reviewable obligation upon all agencies to carry out programs for the conservation of endangered and threatened species.”); *Sierra Club v. Glickman*, 156 F.3d 606, 616 (5th Cir. 1998) (“[W]e conclude that Congress intended to impose an affirmative duty on each federal agency to conserve each of the species listed pursuant to § 1533.”).

86. The regulation updating the interpretation of the adverse modification of critical habitat provisions of section 7 to account for recovery, and not just jeopardy, is of too new a vintage to assess its impact. *See* Interagency Cooperation—Endangered Species Act of 1973, as Amended; Definition of Destruction or Adverse Modification of Critical Habitat, 81 *Fed. Reg.* 7214, 7215 (Feb. 11, 2016).

87. *See* Conservation Congress v. Finley, 774 F.3d 611, 614 (9th Cir. 2014).

88. *See* Friends of the Wild Swan, Inc. v. Thorson, 260 F. Supp. 3d 1338 (D. Oregon, June 1, 2017).

Preventing human activity that directly and immediately harms or kills a listed species may offer sufficient protection for species imperiled by hunting, trapping, or other human use. The problem for many listed species today, however, is that restraining harmful anthropogenic actions may be inadequate to reverse their decline. For example, the ESA's negative constraints do not effectively address the spread of invasive species, a leading risk for more than forty percent of listed species.⁸⁹ Once an invasive species has taken hold, active management efforts may be required to ameliorate that threat, and those efforts often lie beyond the coercive force of the ESA.⁹⁰ Similarly, the prohibitions on take and jeopardy seem ill-fitted to address the risks posed by climate change; uncertainty exists about the localized effects of climate change, which will significantly alter habitat without any specific and direct causal activity that can be targeted by sections 7 and 9.⁹¹ Even if the climate risk faced by a particular species is clear—for example, the threat to the Polar Bear is largely from climate change—it is hard to translate the take and jeopardy prohibitions into a context where every human and a huge swath of human

89. David Pimentel et al., *Update on the Environmental and Economic Costs Associated with Alien-Invasive Species in the United States*, 15 *ECOLOGICAL ECON.* 273 (2005).

90. See Bradley C. Karkkainen, *Adaptive Management and Regulatory Penalty Defaults: Toward a Bounded Pragmatism*, 87 *MINN. L. REV.* 943, 977 (2003) (“[T]he ESA section 9 “no-take” standard does not mandate affirmative conservation measures designed to confer positive benefits on protected species or biological communities, such as native vegetation restoration, invasive species removal, and prescribed burns to mimic the natural fire disturbance regime.”). Affirmative conservation obligations, however, can be imposed as conditions of incidental take permits. *Id.*

91. Whether the ESA in its current form can continue to effectively stave off extinction as climate change reshapes habitat is an open question. See J.B. Ruhl, *Climate Change and the Endangered Species Act: Building Bridges to the No-Analog Future*, 88 *B.U. L. REV.* 1, 7 (2008) (“[G]iven the reasonably anticipated trajectory of global climate change and its effects on ecosystems, there soon may be no practical way to administer the ESA in its present form for those species [imperiled by climate change].”). In a recent article, Kalyani Robbins considers the interplay of climate change and the ESA and suggests a range of modifications that would reorient the ESA to facilitate affirmative conservation, rather than simply prohibiting take. See Robbins, *supra* note 78 at 62.

activities contribute.⁹² Conserving species as the Earth's climate increasingly shifts will likely require active conservation efforts.

Moreover, the binary nature of the listing process creates further ecological uncertainty because it can lead to perverse incentives for even the law abiding private property owner.⁹³ Prior to a species becoming listed, the ESA does not restrict harm to that species or destruction of its habitat. As Peter Byrne has recognized, preservation statutes with this structure "create incentives toward destroying the resources they seek to protect."⁹⁴ A land owner interested in eventually developing her property may do so sooner for fear that species who use it may become listed. And a land owner whose property includes suitable but unoccupied habitat for a listed species may destroy or degrade that habitat to avoid attracting the species. Anecdotal evidence also suggests that some property owners may illegally kill listed species on their property before they are detected by authorities.⁹⁵ And even when evidence of take comes to light, federal officials may be reluctant to enforce except in egregious circumstances.⁹⁶

92. See Ruhl, *supra* note 91, at 41 (noting that if contributing to climate change counts as "take" of climate-sensitive species, "if anyone is taking the species, everyone is taking the species.")

93. See Byrne, *supra* note 15, at 345–46 (2015); Patrick Parenteau, *Rearranging the Deck Chairs: Endangered Species Act Reforms in an Era of Mass Extinction*, 22 WM. & ENVTL. L. & POL'Y REV. 227, 281–82 (1998).

94. Byrne, *supra* note 13, at 346.

95. See Jeffrey J. Rachlinski, Book Review, *Noah by the Numbers: An Empirical Evaluation of the Endangered Species Act*, CORNELL L.REV. 364-65. These perverse incentives are consistent with empirical evidence indicating that those listed species who face pressure from economic development fare more poorly than those that do not. *Id.* at 381-82.

96. See Cheever, *supra* note 55, at 111-12. As Fred Cheever explained many years ago: "The unwillingness to enforce the section 9 taking prohibition fully has distorted the law of endangered species, creating a system of unequal justice in which some groups and individuals are taken to court for acts that would go unquestioned if committed by others." *Id.*

B. Economic Uncertainty

Economic uncertainty is a related phenomenon, and is often entwined with aspects of ecological uncertainty. Economic uncertainty involves questions about shifting regulatory obligations, and whether investments tied to particular land uses may be impeded or entirely destroyed by the protections afforded to a listed species. This economic uncertainty is distinct from the costs associated with the ESA; I am interested here in lack of predictability, rather than the magnitude of costs.⁹⁷

One reason the ESA creates uncertainty is that, unlike many other environmental laws,⁹⁸ it does not differentiate between new and existing activities. No statutory provision exempts land uses or other activities occurring at the time a species is listed from the prohibition on take. Federal agencies also have an obligation to reinstate section 7 consultation with the FWS if new information—including the listing of a new species—arises about the impact of the federal action, and the FWS may add new mitigation requirements to an incidental take statement at that time.⁹⁹

As a consequence, changing scientific understandings and biological facts may translate into new legal obligations and regulatory restrictions. This creates one source of economic uncertainty.

97. It is the unquantifiable nature of uncertainty that distinguishes it from risk. See Pidot, *supra* note 74, at 178–79 (distinguishing among risk, foreseeable uncertainty, and unforeseeable uncertainty).

98. Many components of the Clean Air Act, for example, impose pollution abatement requirements on new and modified sources, but leave the regulation of existing sources largely to the states. See, e.g., 42 U.S.C. § 165(a) (requiring preconstruction permit for new major sources); Robert N. Stavins, *Vintage-Differentiated Environmental Regulation*, 25 STAN. ENVTL. L.J. 29, 31 (2006) (explaining that vintage-differentiated regulations are “prominent features of a diverse set of federal environmental statutes and regulations, state and local environmental laws, as well as a host of non-environmental regulations”).

99. See 50 C.F.R. § 402.16. The obligation to reinstate consultation, unlike the obligation to supplement an environmental impact statement, does not necessarily end simply because the federal action is complete. In *Cottonwood Envtl. Law Ctr. v. U.S. Forest Serv.*, 789 F.3d 1076, 1086–87 (9th Cir. 2015), the Ninth Circuit found reinstatement required for a forest plan amendment that had already gone into effect because the Forest Service could again amend the plan.

Species also move around, filling new habitats in new locations.¹⁰⁰ This trend is likely to increase as climate change leads to an unprecedented degree of migration for species no longer able to find hospitable conditions within their traditional ranges.¹⁰¹ And new populations of species (and even entirely new species) may be discovered; the Tennessee Valley Authority was likely surprised to learn that the Tellico Dam threatened extinction to a species of which no one had previously heard.¹⁰² Such movements and discoveries may impose new and unforeseen legal obligations on economic actors.

Legal uncertainty also leads to economic uncertainty. Just as the malleability of the listing process creates uncertainty for species, it creates uncertainty for economic actors. Most listing processes take years,¹⁰³ providing substantial forewarning, although the ESA does authorize emergency listing of species facing imminent dangers.¹⁰⁴ For long-term business decisions, a few years of notice may be insufficient to fully accommodate the needs of species, injecting a degree of unpredictability into investment decisions in areas that contain sensitive, although unlisted, species. Whether and when a listing for a particular species will occur can also be difficult to predict.¹⁰⁵ The precise timing of a listing decision may

100. See Holly Doremus, *Restoring Endangered Species: The Importance of Being Wild*, 23 HARV. L. REV. 1, 32 (1999) (“Many animals are highly mobile and difficult to control, making it virtually impossible to guarantee that they will remain at a reintroduction site.”).

101. See Alejandro E. Camacho, *Assisted Migration: Redefining Nature and Natural Resource Law Under Climate Change*, 27 YALE J. ON REG. 171, 181 (2010) (“[M]any species will need to shift their geographic distributions markedly or go extinct, as the locations they currently occupy will become unsuitable for them.”); Chris D. Thomas, et al., *Extinction Risk from Climate Change*, 427 NATURE 145, 145 (2004) (estimating proportion of species threatened with extinction under various estimates of climate change).

102. See *Tenn. Valley Authority v. Hill*, 437 U.S. 153, 158–59 (1978).

103. See Daniel J. Rohlf, *Section 4 of the Endangered Species Act: Top Ten Issues for the Next Thirty Years*, 34 ENVTL. L. 483, 500 (2004).

104. 16 U.S.C. § 1533(b)(7).

105. See Bruce Babbitt, *The Endangered Species Act and “Takings”: A Call for Innovation Within the Terms of the Act*, 24 ENVTL. L. 355, 366 (1994) (“When a species is listed under the terms of the ESA, there is an effective freeze across the habitat occupied by that species.”).

have significant consequences for shorter term investments because activities entirely legal the day before a species is listed may violate the take prohibition the day afterward. Moreover, if a species is listed as threatened, rather than endangered, the FWS has discretion to exempt some or all categories of activities that impact that species from the take prohibition.¹⁰⁶ Whether the FWS will choose to exercise such discretion may be uncertain, and such rules can themselves create legal controversy. For example, the FWS recently unsuccessfully sought to utilize this authority to create federal enforcement of voluntary and state wildlife conservation efforts, by issuing a rule that immunized actions taken by those participating in such efforts from the take prohibition as it applied to the lesser prairie chicken.¹⁰⁷ A district court struck down that rule after oil and gas interests filed a lawsuit.¹⁰⁸

Under the leadership of Secretary of the Interior Bruce Babbitt, the FWS developed a number of regulatory initiatives to reduce uncertainty for private actors.¹⁰⁹ These initiatives included development of habitat conservation plans, including at a regional level,¹¹⁰ safe harbor agreements,¹¹¹ candidate conservation agreements,¹¹² and a “no surprises”

106. See 16 U.S.C. § 1533(d); 50 C.F.R. § 17.31(a).

107. See *Permian Basin Petroleum Ass’n v. Dep’t of the Interior*, 127 F. Supp. 3d 700, 704 (W.D. Tx. 2015) (vacating listing decision of the lesser prairie chicken that had included a rule to exempt participants in state conservation program from take prohibition).

108. *Id.*

109. See Ruhl, *supra* note 9, at 33–34; Babbitt, *supra* note 105, at 366 (“The problem is that the people who have been charged with administering the ESA have not explored imaginative and creative ways to arrange possibilities to give effect to a wonderful, expansive Act.”).

110. See, e.g., Camacho, *Lessons, supra* note 54, at 10,222 (describing and evaluating multiagency, areawide HCPs in California).

111. See *Safe Harbor Agreements and Candidate Conservation Agreements with Assurances*, 64 Fed. Reg. 32,726 (June 17, 1999). Safe harbor agreements provide property owners who engage in conservation measures for listed species with a guarantee that they “will not be subjected to increased property-use restrictions if their efforts attract listed species to their property or increase the number or distribution of listed species already present.” *Id.* at 32,707.

112. See *Id.* at 32,716. Property owners who enter candidate conservation agreements with Assurances undertake voluntary conservation efforts for a candidate species (i.e. one that has been identified for potential listing) in

policy.¹¹³ The FWS has subsequently pursued other approaches to increase regulatory certainty,¹¹⁴ including the conservation plan for the greater sage-grouse to which this Article will now turn.

IV. THE OBAMA ADMINISTRATION'S FRAMEWORK FOR GREATER SAGE-GROUSE CONSERVATION

More than 460,000 square miles of sagebrush steppe once occupied portions of thirteen western states and three Canadian provinces.¹¹⁵ Large numbers of greater sage-grouse thrived across this ecosystem. The first western documentation of the distribution and abundance of the bird appeared in the journals of Merriweather Lewis and William Clark: “The Heath Cock or cock of the Plains,” as they referred to the bird, “is found in the Plains of Columbia and are in great abundance from the ent[er]ance of Lewis’s river to the mountains which pass the Columbia between the Great Falls and Rapids of that river.”¹¹⁶ By 2000, more than eighty percent of the sagebrush steppe ecosystem was degraded

exchange for an assurance that no further obligations will be imposed on them if the species covered by the agreement is listed. *Id.* at 32,726.

113. See Habitat Conservation Plan Assurances (“No Surprises”) Rule, 63 Fed. Reg. 8,859 (Feb. 23, 1998). Under the “no surprises” policy, a party that has secured an incidental take permit pursuant to a habitat conservation plan will not be subjected to additional obligations with respect to covered species. *Id.* at 8,859.

114. For example, the FWS issued a policy to govern its consideration of existing conservation efforts in making listing decisions in part to “provide[] information to the groups interested in developing agreements or plans that would contribute to making it unnecessary for the FWS to list.” Policy for Evaluation of Conservation Efforts While Making Listing Decision, 68 Fed. Reg. 15,100, 15,100 (Mar. 28, 2003).

115. 2015 12-month Finding, *supra* note 69, at 59,864; see Neil E. West, *Managing for Biodiversity of Rangelands*, 101, 104 in BIODIVERSITY IN AGROECOSYSTEMS (Wanda W. Collins & Calvin O. Qualset eds., 1999); Endangered and Threatened Wildlife and Plants; 90-day Finding for Petitions to List the Greater Sage-Grouse as Threatened or Endangered, 69 Fed. Reg. 21,484, 21,486 (Apr. 21, 2004) (hereinafter “2004 90-day Finding”).

116. See *Journal of William Clark, Sunday, March 2nd, 1806*, Journals of the Lewis & Clark Expedition, available at <https://lewisandclarkjournals.unl.edu/item/lc.jrn.1806-03-02#lc.jrn.1806-03-02.02>.

by a range of factors, including agriculture, urbanization, invasive species, and oil and gas development.¹¹⁷ Today greater sage-grouse occupy about half of their historic range and have experienced a marked long-term decline in population.¹¹⁸

The bird's dwindling numbers and loss of habitat has led to significant controversy. In 1999, wildlife advocates filed the first listing petition with the FWS to list the greater sage-grouse as threatened or endangered throughout some or all of its range, and more petitions followed.¹¹⁹ In response, the FWS initiated a status review of the species in 2004.¹²⁰ In 2005, the FWS concluded the status review and issued a twelve-month finding determining that a listing was not warranted.¹²¹

Shortly thereafter, the Western Watersheds Project, an environmental organization active in the intermountain west that had filed earlier listing petitions for the bird, challenged the validity of the FWS's 12-month finding in the federal district court of Idaho.¹²² In 2007, the district court vacated the FWS's decision, finding that it had failed to rely on the best available science in making its decision and that the decision-making process had been infected by politically motivated interference from a deputy assistant secretary charged with overseeing the FWS.¹²³

117. See Miles A Hemstrom, et al., *Sagebrush-Steppe Vegetation Dynamics and Restoration Potential in the Interior Columbia Basin, U.S.A.*, 16 CONSERVATION BIOLOGY 1243, 1244 (2002).

118. 2015 12-month Finding, *supra* note 69, at 59,864–59,871.

119. *Id.* at 59,869.

120. 2004 90-day Finding, *supra* note 115, at 21,494.

121. Endangered and Threatened Wildlife and Plants; 12-Month Finding for Petitions To List the Greater Sage-Grouse as Threatened or Endangered, 70 Fed. Reg. 2244, 2279 (Jan. 12, 2005).

122. *W. Watersheds Project v. Fish & Wildlife Serv.*, 535 F. Supp. 2d 1173 (D. Idaho 2007).

123. *Id.* at 1185, 1188–89. The inappropriate political meddling identified by the court was part of a broader scandal involving Julie MacDonald, a deputy assistant secretary at the Department of the Interior, who repeatedly interfered with the FWS's scientific conclusions about a range of species. See DEPARTMENT OF THE INTERIOR, OFFICE OF THE INSPECTOR GENERAL, INVESTIGATIVE REPORT: THE ENDANGERED SPECIES ACT AND THE CONFLICT BETWEEN SCIENCE AND POLICY (2008); Eilperin, *supra* note 78. The court explained: "MacDonald had extensive involvement in the sage-grouse listing decision, used her intimidation tactics in this case, and altered the 'best science' to fit a not-warranted decision." 535 F.Supp.2d at 1188.

In 2010, the FWS completed another status review of the greater sage-grouse, this time issuing a warranted but precluded finding. In other words, the FWS found the bird warranted listing as threatened or endangered, but other priority listing work prevented it from pursuing a listing at that time.¹²⁴ This finding, along with similar warranted but precluded findings for an array of other species, became part of a constellation of lawsuits brought by environmental groups, which were consolidated for pre-trial motions before the multi-district litigation panel.¹²⁵ Two multi-species settlements terminated those lawsuits, one with WildEarth Guardians and a second with the Center for Biological Diversity.¹²⁶ Pursuant to those settlements, the FWS agreed to a timetable for reviewing the status of more than 250 species, including the greater sage-grouse.¹²⁷ The FWS promised that rather than rely on a warranted but precluded finding to further postpone the listing process, it would conclude those status reviews either by finding that a listing was warranted or not warranted, and then proceed accordingly.¹²⁸

Under the settlement, the FWS promised to complete its status review for greater sage-grouse by 2015. This created an opportunity—and significant incentive—for federal and state government agencies, industry groups, and non-profit organizations to attempt to develop conservation plans for the greater sage-grouse of sufficient rigor and strength to enable the FWS to find that a listing was not warranted because existing regulatory measures sufficiently reduced the risk of extinction.¹²⁹

124. 12-Month Findings for Petitions to List the Greater Sage-Grouse (*Centrocercus urophasianus*) as Threatened or Endangered, 75 Fed. Reg. 13,910, 13,910 (Mar. 23, 2010).

125. See Andrew C. Mergen & Sommer Engels, *MDL Litigation and Environmental Law—An Emerging Trend*, 42 No. 4 ABA TRENDS 6, 7 (2011) (discussing use of multi district litigation panel to address listing lawsuits).

126. See Courtney R. McVean & Justin R. Pidot, *Environmental Settlements and Administrative Law*, 39 HARV. L. REV. 191, 224–26 (2015).

127. *Id.* at 225.

128. *Id.* In exchange, the environmental plaintiffs agreed to limit the number of new listing petitions they filed. *Id.*

129. See 16 U.S.C. § 1533(a)(1)(D) (identifying “the inadequacy of existing regulation mechanisms” as a factor in listing a species); 2015 12-month Finding, *supra* note 69, at 98,871 (“The 2010 finding has galvanized a rangewide

What emerged was a comprehensive plan for the conservation of greater sage-grouse on federal lands throughout the western United States, which the BLM and the Forest Service implemented through ninety-eight amendments to federal land use plans.¹³⁰ The agencies published draft plan amendments in 2013 and finalized those amendments in 2015.¹³¹ The plan amendments committed the agencies to authorizing surface disturbing activities within most habitat of the greater sage-grouse only if mitigation efforts would more than fully offset those impacts. In other words, project approvals would need to result in a “net conservation gain to the sage grouse.”¹³² The agencies also initiated a withdrawal of approximately ten million acres of high-value sagebrush habitat on public lands, so that those lands would no longer be available for mining claims or mineral leasing.¹³³ Ten of the eleven states with sagebrush habitat also updated their own conservation plans.¹³⁴ On October 2, 2015, the FWS found that listing the greater sage-grouse was not warranted because federal and state conservation efforts had sufficiently addressed threats to the species.¹³⁵

This approach to conserving the greater sage-grouse attempted to address elements of the ecological and economic uncertainty identified in Part III by recognizing linkages between the two. The federal government

conservation effort that includes new management plans developed by Federal and State agencies to establish regulatory mechanisms adequate to address identified threats.”).

130. See U.S. Forest Service, *Common Questions & Answers: BLM-USFS Greater Sage-Grouse Conservation Plans*, <https://www.fs.fed.us/sites/default/files/common-qa-greater-sage-grouse.pdf>; Scott Streater, *Interior proposes banning new mining on 10M sage grouse acres*, WYOFILE (Sept. 29, 2015) <http://www.wyofile.com/interior-proposes-banning-new-mining-10m-sage-grouse-acres/>.

131. Notice of Availability of the Record of Decision and Approved Resource Management Plan Amendments for the Great Basin Region Greater Sage Grouse Sub-Regions of Idaho and Southwestern Montana; Nevada and Northeastern California; Oregon; and Utah, 80 Fed. Reg. 57,633 (Sept. 24, 2015); Notice of Availability of the Nevada and Northeastern California Greater Sage-Grouse Draft Land Use Plan Amendments and Draft Environmental Impact Statement, 78 Fed. Reg. 65,701 (Nov. 1, 2013).

132. 2015 12-month Finding, *supra* note 69, at 59,881 (“All of the Federal Plans require that impacts to sage-grouse habitat are mitigated and that compensatory mitigation provides a net conservation gain to the species.”).

133. *Id.* at 59,878.

134. *Id.* at 59,873.

135. *Id.* at 59,858.

engaged broadly with the states and other stakeholders in developing the conservation plans and took into account state-specific issues.¹³⁶ Moreover, the FWS began to enter into candidate conservation agreements prior to the conclusion of its status review to encourage voluntary conservation efforts and provide assurances to parties that if they engaged in adequate conservation, no more would be required of them.¹³⁷

The provisions of the BLM and the Forest Service land use plan amendments also allow for flexibility. Resource users on federal lands will bear some increased costs as they implement mitigation measures to achieve a net conservation gain for the species, but meeting that standard will reduce the likelihood that a listing will be needed in the future. The plans also do not dictate how resource users must achieve a net conservation gain, allowing for collaboration and innovation among stakeholders, including private parties and states. That effort has already resulted in at least one agreement between a state and the federal government. In April 2016, the Obama Administration entered into an agreement with the State of Nevada to authorize use of a compensatory mitigation tradable credits system developed by Nevada to enable federal resource users to offset impacts on public lands by engaging in

136. This collaboration occurred, in part, through a state-federal sage-grouse task force formed by western governors and the Dep't of the Interior. See *Sage-Grouse Inventory: 2014 Conservation Initiatives*, at 9, W. Governors' Ass'n (Mar. 2015), http://westgov.org/images/editor/2014_WGA_Sage_Grouse_Inventory_Final_lo_res.pdf; Goldfuss, *supra* note 1. For a discussion of the collaboration between the federal government and other stakeholders by Jim Lyons, a former Deputy Assistant Secretary for Lands and Minerals during the Obama Administration who was personally involved, see Jim Lyons, *Lessons Learned from the State-Federal Effort to Conserve the Greater Sage-Grouse*, Blog of the Center for American Progress (July 24, 2017, 12:01 AM), <https://www.americanprogress.org/issues/green/reports/2017/07/24/436367/lessons-learned-state-federal-effort- conserve-greater-sage-grouse/>.

137. See Ann Haas, *Farmers and Ranchers in Eastern Oregon Sign on as Partners to Conserve the Sage-Grouse, a Candidate Species*, https://www.fws.gov/endangered/map/ESA_success_stories/OR/OR_story4/index.html (last visited Nov. 19, 2017); *Press Release: Secretary Jewell, Governor Brown, Deputy Under Secretary Mills Celebrate Landmark Agreement to Conserve up to 2.3 Million Acres of Sagebrush Habitat in Oregon*, U.S. Dep't of Agriculture (Mar. 27, 2015); available at <https://www.usda.gov/media/press-releases/2015/03/27/secretary-jewell-governor-brown-deputy-under-secretary-mills>.

conservation actions elsewhere.¹³⁸ The collaborative spirit that resulted in the agreement with Nevada also led to the two public-private agreements discussed in Part V.

V. CONSERVATION AGREEMENTS WITH MINING COMPANIES

Part IV provides a cursory overview of the Obama Administration's prolonged, complex, and multifaceted greater sage-grouse planning effort. This Part discusses a narrow facet of that effort in greater detail: two public-private conservation agreements. These agreements were designed to increase economic certainty for the two companies that negotiated and entered into them—Barrick Gold of North America and Newmont Mining Corporation—under the BLM's land use plan amendments, while also increasing ecological certainty for the greater sage-grouse by obtaining earlier, less piecemeal conservation of habitat on both public and private lands. While the FWS has a history of using candidate conservation agreements as a means of encouraging conservation of declining species prior to a listing, the Barrick Agreement and Newmont Agreement are unique because they integrate private conservation efforts with the BLM's public lands conservation plans, all of which were engineered to conserve the greater sage-grouse in the absence of a listing.

A. Features of the Barrick and Newmont Agreements

The Department of the Interior, through the BLM and the FWS, and Barrick signed the "Barrick Nevada Sage-Grouse Bank Enabling Agreement" on March 25, 2015.¹³⁹ The Barrick Agreement preceded by several months the completion of the FWS's 2015 status review for greater sage-grouse and the BLM's adoption of final land use plan amendments, and was based on a draft land use plan amendment for Nevada and

138. See Press Release: State of Nevada and Federal Agencies Sign Conservation Credit System Agreement (Apr. 29, 2016), available at <http://clearinghouse.nv.gov/public/Notice/2016/E2016-137.pdf>.

139. Barrick Agreement, *supra* note 11, at 33. The Barrick Agreement was signed by the Nevada state director of the BLM and the regional director of the FWS. *Id.* at 33.

northeastern California.¹⁴⁰ The same federal parties, Newmont, and the State of Nevada—through its Department of Conservation & Natural Resources and Department of Wildlife—signed a “Conservation Framework Agreement” on August 30, 2016.¹⁴¹ Both Agreements envision use of a mitigation credit system by which the companies can generate credits through conservation activities that could then be used to offset surface-disturbing activities on federal lands.

Despite the differences in their timing, the two Agreements contain several similar features. First, the Agreements identify that the respective companies have mining and grazing operations on private and public lands in sagebrush habitat.¹⁴² The Barrick Agreement is the more detailed of the two, explaining that

Barrick conducts extensive mining operations on lands in Nevada that are under BLM’s jurisdiction, and on lands owned by Barrick. Barrick also holds Allotments of approximately 80,000 animal unit months for cattle operation on public lands in Nevada administered by the BLM, and also owns approximately 250,000 acres of private lands in Nevada that are used for livestock ranching purposes.¹⁴³

The Newmont Agreement provides simply that “Newmont conducts mineral exploration and mining operations on both private and public lands in Nevada and owns or manages significant tracts of land in the State” and that “[t]hrough its wholly owned subsidiary, Elko Land &

140. See Barrick Agreement, *supra* note 11, at 10; *Notice of Availability of the Nevada and Northeastern California Greater Sage-Grouse Draft Land Use Plan Amendments and Draft Environmental Impact Statement*, 78 Fed. Reg. 65,701 (Nov. 1, 2013).

141. Newmont Agreement, *supra* note 12, at 18-19. Like the Barrick Agreement, the Newmont Agreement was signed by federal officials in regional offices, specifically the Nevada state director of BLM and the supervisor of the Reno Fish and Wildlife Office, *id.* at 18, but unlike the Barrick Agreement the Assistant Secretary of Land and Minerals Management was also a signatory. *Id.* at 19.

142. Barrick Agreement, *supra* note 11, at 1; Newmont Agreement, *supra* note 12, at 3.

143. Barrick Agreement, *supra* note 11, at 1.

Livestock Company, Newmont manages several ranches in northern Nevada.”¹⁴⁴ The size of Newmont’s interests are not enumerated.

Second, the Agreements include commitments by the companies to engage in conservation projects for greater sage-grouse. The Barrick Agreement states that Barrick will engage in projects to achieve “the preservation, restoration, and/or enhancement of sagebrush ecosystems by implementation of Projects to be agreed upon among the Parties.”¹⁴⁵ The Newmont Agreement states that Newmont will engage in projects through which “Newmont will voluntarily manage certain of the company’s privately operated Nevada ranchlands in a manner that promotes conservation of sagebrush species,” and that Newmont “may propose sagebrush ecosystem enhancement measures on lands managed by BLM.”¹⁴⁶

Third, the Agreements provide the federal government with a role in approving, within discrete timeframes, project plans for the conservation efforts of the mining companies. Project plans would include information about the location, baseline conditions, project components, goals and objectives, performance measures, monitoring and reporting protocols, and anticipated mitigation credits generated.¹⁴⁷ Plans would be submitted to the government agencies, and a meeting to discuss the projects would follow, within fifteen days under the Newmont Agreement and sixty days under the Barrick Agreement.¹⁴⁸ Under the Barrick Agreement, “[o]nce the Parties approve the Projects and associated Project Plans . . . Barrick agrees to implement the approved Projects.”¹⁴⁹ The Newmont Agreement does not expressly require approval of project plans by the federal government, but rather envisions a process by which the

144. Newmont Agreement, *supra* note 12, at 3.

145. Barrick Agreement, *supra* note 11, at 1; *id.* at 13 (“[T]he Parties will identify and agree upon Project Plans and Conservation Actions that Barrick will implement on the Bank Property and public lands.”)

146. Newmont Agreement, *supra* note 12, at 1; *id.* at 9 (“Newmont will propose project plans that identify the conservation practices Newmont will undertake on the subject property and identify a proposed schedule for implementation . . .”).

147. Barrick Agreement, *supra* note 11, at 14-15; Newmont Agreement, *supra* note 12, at 9-10.

148. Barrick Agreement, *supra* note 11, at 14; Newmont Agreement, *supra* note 12, at 10.

149. Barrick Agreement, *supra* note 11, at 14.

agencies will “review and resolve project plans.”¹⁵⁰ Further, the Agreement does not include an express and specific commitment requiring implementation by Newmont of project plans that have completed the review process. The Newmont Agreement, unlike the Barrick Agreement, also includes a process for the proposal and review of pilot projects.¹⁵¹

Fourth, the Agreements include provisions for calculating credits. The Barrick Agreement adopts a credit and debit methodology for sage-grouse conservation developed by the Nature Conservancy.¹⁵² The Newmont Agreement, by contrast, adopts the Nevada Conservation Credit System (CCS) as the primary evaluation tool, but allows Newmont to propose alternative measuring techniques, such as that developed by the Nature Conservancy, if “CCS is not available, implementable, or appropriate, in whole or in part, at the time of project proposal or implementation.”¹⁵³ The Agreements take different approaches to the companies’ use of the credits they generate from conservation projects. The Barrick Agreement provides that credits “may be used in connection with Barrick’s proposed future mining operations, including expansions to existing operations, new greenfield projects, or other projects that require DOI approval,”¹⁵⁴ and that “[a]ny transfer . . . of Credits by Barrick to a third party will require an amendment” to the Agreement.¹⁵⁵ The Newmont Agreement, on the other hand, expressly authorizes Newmont to use or sell credits at its discretion.¹⁵⁶

Fifth, the Agreements provide that the use of credits cannot offset reasonably avoidable impacts.¹⁵⁷ The Agreements, therefore, comport with

150. Newmont Agreement, *supra* note 12, at 10.

151. *Id.* at 8–9.

152. Barrick Agreement, *supra* note 11, at 1.

153. Newmont Agreement, *supra* note 12, at 8.

154. Barrick Agreement, *supra* note 11, at 3.

155. *Id.* at 19.

156. Newmont Agreement, *supra* note 12, at 8.

157. Barrick Agreement, *supra* note 11, at 3 (explaining that projects undertaken “will achieve a Net Conservation Gain for sage-grouse that BLM and the FWS can measure against the impacts of certain of the company’s future proposals for operations in Nevada that cannot be reasonably avoided.”); *Id.* at 11 (“Credits and Debits will be applied only to impacts that will remain after implementation of practicable avoidance and minimization measures.”); Newmont Agreement, *supra*

the long-established “mitigation hierarchy,” which requires efforts to avoid and minimize impacts before compensatory mitigation can be used to offset residual impacts.¹⁵⁸

Sixth, the Agreements identify “net conservation gain” as the goal for measuring whether credits generated from conservation projects adequately mitigate for new surface disturbing activities occurring in sage-grouse habitat.¹⁵⁹

Seventh, the Agreements include commitments on the part of the BLM related to the use of credits when the agency approves projects on public lands, although the Agreements are careful to retain the agency’s discretion in future decision-making processes. The language used to accomplish that is somewhat different, and of the two, the Barrick Agreement uses stronger and more definite language. The BLM appears to provide a firm commitment to use the Nature Conservancy methodology to calculate both credits earned by Barrick’s conservation efforts and the debits attributable to mining operations in the absence of mutual agreement to a different methodology by the BLM and Barrick.¹⁶⁰ The Agreement does include specific limitations clauses, indicating that the commitments made by the BLM are methodological, rather than substantive. Additionally, the Agreement indicates that it does not “[c]haracterize, define, quantify, or otherwise pre-judge” the BLM’s environmental analysis and decisions related to future mining and “any avoidance, minimization or Compensatory Mitigation activities that may be required to be undertaken by Barrick as a condition of approval of proposed future mining operations.”¹⁶¹ Rather, the approach adopted by

note 12, at 8 (“Debits will apply only to impact(s) that will remain after implementation of practicable avoidance and minimization measures, as determined by BLM.”).

158. See Michael Burger, *A Carbon Fee as Mitigation for Fossil Fuel Extraction on Federal Lands*, 42 COLUM. J. ENVTL. L. 295, 335–36 (2017). Regulations implementing the National Environmental Policy Act establish this hierarchy, 40 C.F.R. § 1508.20, but it has been imported into other mitigation regimes.

159. Barrick Agreement, *supra* note 11, at 1 (reciting purpose of agreement as allowing for a “Bank to compensate for impacts to the greater sage-grouse and sagebrush ecosystems with actions that produce a Net Conservation Gain”); Newmont Agreement, *supra* note 12, at 5 (“The Parties agree to work together to . . . pursue measurable net conservation gain(s) for sagebrush species.”).

160. Barrick Agreement, *supra* note 11, at 11.

161. *Id.* at 4.

the Agreement “is intended to define a methodology supported by the best-available science” to quantify the positive and negative effects Barrick’s various activities have on greater sage-grouse. The Newmont Agreement includes similar limitations clauses, but also describes the BLM’s commitments using less binding language. Rather than committing to either the Nevada or the Nature Conservancy methodologies for assessing credits and debits, the Agreement provides that if the “BLM determines that existing credits are sufficient to achieve a net conservation gain, then it is anticipated that the BLM . . . will not require additional compensatory mitigation measures for that species and habitat when reviewing a proposed plan of operations or amendment.”¹⁶² The Agreement does further include a procedural commitment under which the BLM agrees to evaluate the use of credits generated by Newmont as an alternative in applicable NEPA analyses.¹⁶³

Eighth, both Agreements include provisions to address the potential of a listing of the greater sage-grouse in the future. Both Agreements envision the use of credits in the section 7 consultation process, although the terms of the Newmont Agreement, specify that credits may be used in that context only if FWS deems them to be appropriate.¹⁶⁴ If credits are used, under both Agreements, the FWS agrees that if the agency “determines that . . . credits are sufficient to achieve a net conservation gain,” it will require no additional conservation measures through the section 7 consultation process.¹⁶⁵ Moreover, the Agreements provide that the companies may rely on credits to satisfy mitigation obligations should they choose to seek incidental take permits under section 10.¹⁶⁶

162. Newmont Agreement, *supra* note 12, at 7; Barrick Agreement, *supra* note 11, at 4.

163. Newmont Agreement, *supra* note 12, at 7.

164. *Id.* at 6. The Barrick Agreement is more unconditional in stating the FWS’s obligation to allow the use of credits in section 7 consultations. Barrick Agreement, *supra* note 11, at 22.

165. Newmont Agreement, *supra* note 12, at 6; Barrick Agreement, *supra* note 11, at 22.

166. Newmont Agreement, *supra* note 12, at 7; Barrick Agreement, *supra* note 11, at 22.

B. Lessons Learned

The Barrick and Newmont Agreements are instructive for future public-private conservation agreements, even if the Trump Administration abandons the greater sage-grouse conservation plans that form the predicate upon which the Agreements were based. The context from which the Agreements were born also suggests conditions that may be likely to foster public-private collaborations of this type.

Perhaps the most hopeful lesson of these Agreements is that collaboration and compromise aimed at achieving both increased economic and ecological certainty is possible. In 1995, Secretary of the Interior Bruce Babbitt called for “innovation within the terms of the ESA,”¹⁶⁷ and the Department of the Interior under his leadership took up that call and developed tools, such as the “no surprises” policy, and candidate conservation agreements.¹⁶⁸ The Barrick and Newmont Agreements represent a new approach in that same spirit, and they underscore that more room for innovation and experimentation exists. Federal and state governments and private parties can develop new, effective models for conserving species in decline, while blunting economic impacts and enhancing regulatory certainty. Public-private conservation agreements that enable systemized, mitigation credit banking and trading, such as those envisioned by the Barrick and Newmont Agreements, and that bring together the FWS, federal land managers, states, and private parties are a new frontier in wildlife conservation that can secure early, voluntary, and proactive efforts to avoid the need to list a species.

These Agreements also evidence that the threat of a listing, and the attendant regulatory uncertainty that such a threat produces, can provide fertile ground for collaboration. To many, mining companies may seem unlikely allies in the enterprise of species preservation, but companies like Barrick and Newmont may welcome the opportunity to make early investments in wildlife conservation if those investments translate into increased regulatory certainty over the long run. The specter of a listing, in other words, can align the profit motive of industry with the public goal of avoiding the decline or extinction of species. The regulatory

167. Babbitt, *supra* note 105, at 366.

168. See *supra* notes 109-114 & accompany text.

precipice of a listing decision can, therefore, create positive incentives for private actors to engage in wildlife conservation, where such conservation efforts can realistically be viewed as avoiding a listing.¹⁶⁹

The Agreements' provisions addressing the FWS's commitments, should the greater sage-grouse be listed as threatened or endangered, also highlight the salutary effects of the net-conservation gain standard, articulated in the greater sage-grouse conservation plans and incorporated into the Agreements.¹⁷⁰ ESA sections 7 and 10 allow the FWS to authorize the incidental take of listed species in certain circumstances and both provisions require mitigation to minimize the impacts of such take.¹⁷¹ Because achieving a net-conservation gain for a species would by definition meet the requirement that impacts be minimized, the FWS could appropriately commit, assuming it found that standard had been achieved, to allowing the mining companies to rely on credits to meet potential regulatory obligations even following a listing. Moreover, a commitment to this standard would also seem to sidestep the requirement under section 10 that a project applicant minimize and mitigate impacts "to the maximum extent practicable,"¹⁷² because the project would lead to a net benefit for the species. In other words, from the perspective of species conservation, adherence to the net-conservation gain standard transforms land use decisions that would traditionally be viewed as harming a species, into decisions that promote and enhance conservation.¹⁷³

169. The pro-conservation incentive of a potential listing would not exist if private actors do not believe that conservation efforts can realistically avoid a listing. Cf. Byrne, *supra* note 1, at 346 (discussing perverse incentives created by the binary nature of listing decisions).

170. See 2015 12-month Finding, *supra* note 69, at 59,881 Barrick Agreement, *supra* note 11, at 1; Newmont Agreement, *supra* note 12, at 5.

171. See 16 U.S.C. § 1536(b)(4)(C)(ii); *id.* §§ 1539 (a)(2)(A)(ii), (B)(ii).

172. See *id.* § 1539(B)(ii); Nat'l Wildlife Fed'n v. Babbitt, 128 F. Supp. 2d 1274, 1293 (E.D. Cal. 2000) (ruling that an HCP provision tied to the biological needs of the species did not satisfy the requirement that mitigation occur to the maximum extent practicable).

173. That a project proponent can demonstrate a net conservation gain for a proposed project does not, of course, mean that the project is environmentally beneficial across all dimensions. Mining, like other resources uses, may threaten a range of environmental values other than species' health.

The Agreements also highlight a complexity likely to emerge in negotiations. The BLM has not issued a regulation that specifically authorizes agreements of this sort, and as a result the agency has limited ability to bind itself in a contract to obligations that will determine the outcome of future administrative decisions, such as the approval of a plan of operations for mining activities on federal lands. As a result, the commitments in both the Barrick Agreement and Newmont Agreement are carefully circumscribed, and the BLM retains discretion to evaluate the use of credits in the future.¹⁷⁴ Such a soft commitment could be a hard pill to swallow for a private party negotiating a public-private agreement; the company agrees to a framework for undertaking specific, affirmative conservation projects, and the federal agencies agree to consider—but not automatically accept—credits generated by those projects in future decision-making processes. Insisting on firmer, more binding commitments on the part of federal agencies is not, however, in any party's interest. An agreement purporting to tie the agencies' hands in future administrative decision-making processes could generate substantial legal risk for those future decisions. This is because a project's opponents could argue that the federal agencies had precommitted to an outcome, and that precommitment infected the agency's environmental analysis and ultimate decision.¹⁷⁵ Both federal agencies, and the private parties with whom they negotiate, should pay careful attention to this dynamic and ensure that public-private conservation agreements do not inadvertently create new sources of legal uncertainty by rendering future agency decisions vulnerable to legal challenges.

At the same time, any private party agreeing to undertake voluntary conservation measures will understandably want as much assurance as possible that they will reap some benefit from those voluntary actions and that federal agencies will incorporate them into future

174. See Newmont Agreement, *supra* note 12, at 7; Barrick Agreement, *supra* note 11, at 4.

175. See *Sierra Club v. Peterson*, 717 F.2d 1409, 1415 (D.C. Cir. 1983) (requiring compliance with the National Environmental Policy Act at the "point of commitment"). Cf. *Morgan v. U.S.*, 298 U.S. 468, 481 (1936) ("The one who decides must hear."); *Am. Mining Cong. v. Mine Safety & Health Admin.*, 995 F.2d 1106, 1111 (D.C. Cir. 1993) ("[A]s failure to provide notice-and-comment rulemaking will usually mean that affected parties have had no prior formal opportunity to present their contentions, judicial review for want of reasoned decisionmaking is likely, in effect, to take place in review of specific agency actions implementing the rule.").

decision-making processes. In my view, the Newmont Agreement took the better course in striking this balance. The Agreement states that if Newmont proffers credits as mitigation for its mining activities, “it is anticipated that the BLM, to the extent consistent with applicable law and regulations, will not require additional compensatory mitigation measures.”¹⁷⁶ The BLM also commits to considering the use of credits as an alternative in any required NEPA analysis, a procedural commitment that does not create the same degree of legal vulnerability for subsequent decisions of a substantive commitment.¹⁷⁷ The Barrick Agreement includes a general disclaimer that it does not limit the agency’s discretion, and therefore, also likely insulates future decisions relying on credits generated under it, but it is less precise.¹⁷⁸

In my judgment, there were two necessary ingredients that enabled these Agreements to be successfully negotiated, and as result, additional innovation may be necessary to negotiate public-private conservation agreements in other contexts. First, Barrick and Newmont engage in long-term projects on public lands that require significant and prolonged investments on the part of the companies. Constructing, operating, and reclaiming a mine takes decades. The cost of regulatory uncertainty in such a context exceeds the potential economic gains the companies would be likely to achieve from looser standards in the short term. These two companies were willing to agree to increased conservation obligations if they could secure increased regulatory certainty and stability. This certainty takes two forms. First, the companies wanted to enter agreements that will enable them to better predict their obligations under the applicable land use plans governing the public lands in which they operate both today and in the future. Second, the companies wanted to avoid deterioration of the greater sage-grouse population and the risk that the FWS will reconsider its decision that a listing was not warranted and list the bird as threatened or endangered, and as much as possible create predictable obligations should a listing occur. Resource

176. Newmont Agreement, *supra* note 12, at 7.

177. *Cf.* McVean & Pidot, *supra* note 126, at 233-238 (explaining that settlements through which the United States commits to procedural obligations are more consistent with administrative law than those involving substantive commitments).

178. *See* Barrick Agreement, *supra* note 11, at 4.

users who engage in short-duration, less capital-intensive activities, or who are not repeat players on public lands, may have less incentive to trade higher up-front costs for increased long-term regulatory predictability.

A second ingredient that enabled these Agreements was the breadth of activities and interests of the private parties. Newmont and Barrick engage in a number of uses of public lands, including mining and grazing, and have private land holdings as well. The variety and quantity of these interests laid the groundwork for the companies to engage in voluntary conservation measures with respect to a portion of their portfolio that would accrue significant benefits to the greater sage-grouse and more than offset impacts from the companies' mining operations. Scaling these Agreements to smaller companies with fewer property and business interests may present different challenges. That said, the Agreements do identify a potential avenue for similar efforts with smaller private partners, because they contemplate the companies enhancing habitat on public lands, with the appropriate regulatory permissions, an approach that could work for other resource users who lack opportunities for purely private conservation projects. Moreover, that the Newmont Agreement contemplates sale or transfer of conservation credits could provide an avenue for smaller companies to both participate in and profit from similar agreements.¹⁷⁹

VI. CONCLUSION AND EPILOGUE

The Obama Administration undertook an unprecedented effort to create a federal conservation strategy for the greater sage-grouse sufficient to stave off a listing of the species under the ESA and enabling it to enter into agreements with states and private parties to increase certainty about the obligations those plans would impose on economic actors. As the Trump Administration took office, I hoped that these efforts would translate into conservation durability. After all, rolling back the greater sage-grouse plans would eliminate the basis for the FWS's not warranted finding, and the increased likelihood of a future listing would create substantial economic uncertainty. So far, it appears I was overly optimistic, although the plans themselves have not yet formally been abandoned.

179. See Newmont Agreement, *supra* note 12, at 8.

The unravelling of the greater sage-grouse conservation plans began when President Trump issued an Executive Order on March 28, 2017, directing a review of all policies “that potentially burden the development or use of domestically produced energy resources, with particular attention to oil, natural gas, coal, and nuclear energy resources.”¹⁸⁰ Purporting to implement that Executive Order, and notwithstanding the fact that the greater sage-grouse conservation plans significantly enhance long-term certainty and predictability for companies seeking to develop energy resources on federal lands, Secretary Ryan Zinke signed a Secretarial Order on June 7, 2017, requiring a comprehensive review of the greater sage-grouse conservation plans.¹⁸¹ In October, the Department published a notice of intent to consider amending all of the BLM land use plans implementing the greater sage-grouse conservation plans,¹⁸² and the BLM cancelled the proposed withdrawal of 10 million acres of key sage-grouse habitat.¹⁸³

180. Promoting Energy Independence and Economic Growth, Exec. Order No. 13,783, 82 Fed. Reg. 16,093 (Mar. 28, 2017).

181. *Greater Sage-Grouse Conservation and Cooperation with Western States*, Secretarial Order 3353 (June 7, 2017), available at https://www.doi.gov/sites/doi.gov/files/uploads/so_3353.pdf. The order also directs the department to “develop . . . memorandums of understanding and other agreements with states and other partners regarding implementation of the 2015 Sage-Grouse Plans,” an approach that was already well-underway.

182. Notice of Intent to Amend Land Use Plans Regarding Greater Sage-Grouse Conservation and Prepare Associated Environmental Impact Statements or Environmental Assessments, 82 Fed. Reg. 47,248 (Oct. 11, 2017); *corrected by* 82 Fed. Reg. 50,666 (Nov. 1, 2017). The Notice of Intent justifies reconsideration, in part, on a Nevada district court ruling that the Dep’t of the Interior should have prepared a supplemental environmental impact statement prior to amending a resource management plan in Nevada and Northeastern California, *W. Exploration, LLC v. U.S. Dep’t of Interior*, 250 F. Supp. 3d 718 (D. Nev. 2017), but the notice extends reconsideration to the substance of all of the land use plan amendments, rather than limiting itself to compliance with the National Environmental Policy Act for one of them. 82 Fed. Reg. at 47,248.

183. Notice of Cancellation of Withdrawal Application and Withdrawal Proposal and Notice of Termination of Environmental Impact Statement for the Sagebrush Focal Area Withdrawal in Idaho, Montana, Nevada, Oregon, Utah and Wyoming, 82 Fed. Reg. 47,248 (Oct. 11, 2017).

Some resources user groups have supported these steps,¹⁸⁴ but many have expressed hesitation. The republican governors of Wyoming and Nevada have both objected to major revisions to the plans.¹⁸⁵ Wyoming Governor Matt Meade specifically described his concerns in the language of economic and ecological certainty. When the Department of the Interior initiated its review of the plans, he explained, “Mineral companies need long-term predictability as they decide where to put capital. On top of that the bird needs a long-term plan.”¹⁸⁶

On November 30, 2017, a diverse coalition of Wyoming groups, representing the oil and gas, mining, ranching, farming, business, and environmental interests, joined the fray and sent a letter to the Department of the Interior opposing fundamental shifts in greater sage-grouse conservation and “recommend[ing] that BLM look for opportunities to make any revisions deemed necessary through means other than the full RMP amendment process, wherever possible, including through Instructional memoranda policy clarification.”¹⁸⁷ A bipartisan group of former officials in federal and state wildlife agencies also sent a letter to Secretary Zinke expressing “hope [that] you will maintain this

184. See Letter from Western Energy Alliance to Greater Sage Grouse Review Team (July 19, 2017) available at <https://cdn.westernenergyalliance.org/sites/default/files/Western%20Energy%20Alliance%20Letter%20to%20Interior%20re%20GrSG%20Economic%20Impact.pdf>.

185. See Dan Elliott, *Colorado's Hickenlooper, Wyoming governor warn Trump against big changes in sage grouse plan*, DENVER POST (Oct. 31, 2017) available at <http://www.denverpost.com/2017/10/31/donald-trump-john-hickenlooper-warns-against-greater-sage-grouse-plan-changes/>; Scott Streater, *Sage Grouse: 2nd Republic governor questions Zinke plan revisions*, E&E NEWS PM (Aug. 23, 2017) <https://www.eenews.net/eenewspm/stories/1060059125>.

186. Heather Richards, *Wyoming governor concerned by anticipated sage grouse changes*, CASPER STAR TRIBUNE (Oct. 2, 2017) available at http://trib.com/business/energy/wyoming-governor-concerned-by-anticipated-sage-grouse-changes/article_794ed2b4-1414-5ca3-a207-bb32fd5241f7.html.

187. Letter from Paul Ulrich, et al., to Erica Husse, E&E NEWS PM, (Nov. 30, 2017) available at https://www.eenews.net/assets/2017/12/01/document_gw_03.pdf; see Scot Streaer, *Sage Grouse: Wyo. industry, conservation groups see hop in federal plans*, E&E NEWS PM (Dec. 1, 2017) available at <https://www.eenews.net/greenwire/stories/1060067863>.

extraordinary conservation effort with minor adjustments as deemed necessary and based on science.”¹⁸⁸

It remains to be seen what changes the Trump Administration ultimately makes to the Obama Administration’s greater sage-grouse conservation plans. Litigation will surely ensue, whatever the outcome, and if wholesale changes occur, both the bird and economic actors across sagebrush country will face significant new uncertainty. Regardless, the Obama Administration’s efforts, including the public-private conservation agreements entered between the Department of the Interior and two mining companies, may provide a blue print for future wildlife conservation efforts designed to forestall the listing of a declining species, and secure additional predictability for economic actors.

188. Letter from William A. Molini, et al., to Secretary Ryan Zinke (Nov. 17, 2017), *available at* <http://www.trcp.org/wp-content/uploads/2017/11/Wildlife-Professional-letter-on-Fed-Sage-grouse-Plan-Amendments-11-30-2017.pdf>.