Crafting a New Conservationism

Natalie Jacewicz*

Environmental law has an animal problem. It lacks an account of whether and how animals' interests matter. Case in point: The agencies tasked with protecting wild animals cannot stop killing them. The National Oceanic and Atmospheric Administration slays sea lions to reduce predation on endangered salmon. The Fish and Wildlife Service shoots barred owls to curb competition with northern spotted owls. These widespread "removals" reflect a tension between safeguarding ecological collectives, such as species and ecosystems, and protecting individual animals.

Wild animals' uncertain status destabilizes conservation law, the branch of environmental law aimed at protecting natural resources, land, and wildlife. Yet the topic has received little attention from environmental legal scholars. This Article steps into that gap. First, it traces the development of competing reasons to protect wildlife—preserving ecological collectives and safeguarding individual animals—and explains how marquee conservation statutes, such as the Marine Mammal Protection Act and the Wild Free-Roaming Horses and Burros Act, contain both intuitions. Such statutes, however, say little about what to do when the two goals conflict. Resolving this tension falls to administrative agencies' discretion.

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* Assistant Professor at University of San Diego School of Law. Many thanks to Nicholas Almendares, William Boyd, Adam Cox, Alex Erwin, Raffael Fasel, Sheila Foster, Robert Fischman, Barry Friedman, Michael Gerrard, Daniel Hemel, Piper Hoffman, Emma Kaufman, Adam Kern, Michael Livermore, Liam Murphy, Richard Revesz, Jeff Sebo, Catherine Sharkey, Peter Singer, Michael Vandenbergh, Daniel Waltz, Delcianna Winders, and Katrina Wyman. The Sabin Colloquium on Innovative Environmental Law Scholarship, Furman Academic Seminar, the Harvard/Yale/Standord Junior Faculty Forum, and my students in NYU's Natural Resources Law seminar also provided valuable feedback. I am also grateful to faculties at Charleston School of Law, Indiana University Maurer School of Law, the Southern Methodist University Dedman School of Law, the University of Connecticut School of Law, University of Houston Law Center, University of San Diego School of Law, University of South Carolina School of Law, Vermont Law and Graduate School, and William & Mary Law School.

The Article next offers the first account of how agencies navigate these competing commitments by using animal removals as a window into agency thinking. The investigation draws on a novel analysis of more than one hundred National Environmental Policy Act reviews compiled through database searches and Freedom of Information Act requests. What emerges from this research is a thicket of incoherent agency attempts to incorporate individual animals' inherent value into removals. Agencies may: (a) express no concern for individual animals; (b) recognize only negative duties toward animals (such as avoiding the infliction of suffering); or (c) observe positive duties toward animals (such as rescuing animals from harsh ecological conditions). Approaches vary across and within agencies, and even within individual agency decisions. Such variation is difficult to defend normatively and exposes agencies to litigation.

To address these problems, the Article begins to craft a new conservationism, offering a range of possible agency approaches to incorporate individual animals' inherent worth into wildlife management. The Article also recommends short-term changes to conservation-based removals that would improve the status quo under a variety of ethical frameworks. By excavating conservation-based removals, this Article contributes to an interdisciplinary reconceptualization of conservation law that treats animal interests seriously and systematically.

INTRODUCTION

Among the victims of climate change, deforestation, and other environmental crises are trillions of wild animals.[1] Yet the role of animal well-being in American environmental law remains in doubt. To those who equate safeguarding nature with protecting wildlife, this uncertainty may sound strange—like asking what role sandwiches should play in a deli. After all, actions that protect the environment frequently protect fauna and vice versa. But environmental goals are sometimes achieved at the expense of animals. Nowhere is this clearer than in conservationism, the branch of environmentalism that seeks to protect natural resources, wildlife, and land.

1. *See About – NYU Wild Animal Welfare Program*, NYU WILD ANIMAL WELFARE, https://sites.google.com/nyu.edu/wildanimalwelfare/home [https://perma.cc/7ZYX-8DUY] (referring to causes of suffering for "[t]rillions of wild animals"). Australia's bushfires in 2019 and 2020 alone killed over three billion animals. JEFF SEBO, SAVING ANIMALS, SAVING OURSELVES: WHY ANIMALS MATTER FOR PANDEMICS, CLIMATE CHANGE, AND OTHER CATASTROPHES 5 (2022). Humans, of course, are also animals, but for this Article's purposes, "animals" refers to "nonhuman animals."

Consider the U.S. Fish and Wildlife Service's (FWS) decision in 2013 to enter a war among owls.[2] The woods of Washington, Oregon, and California had long been home to a federally listed species threatened with extinction: the northern spotted owl, a brown blimp of a bird with white speckles and saucers for eyes.[3] In recent decades, a slightly larger raptor had moved in: the barred owl, a migrant from the eastern United States, that elbowed spotted owls out of their habitat.[4] Alarmed by the East Coast arrivistes, FWS resolved to halt the barred owl takeover—by shooting roughly 3,600 of them.[5] The slaughter proved effective at stabilizing northern spotted owl numbers.[6] So much so that in 2024, FWS announced plans to continue the job by killing roughly 450,000 more.[7]

Such "removal" decisions, the government term for capturing or killing wild animals en masse,[8] pervade federal conservation efforts and expose the tension between protecting species and ensuring individual animals' well-being. According to a traditional conservationist view, individual animals have value only to the extent they make up part of a greater whole that needs protection.[9] Humans, therefore, must avoid harming—and perhaps should affirmatively protect—members of endangered plant and animal species but need not worry about members of abundant species. Killing eastern gray squirrels, for example, poses no conservation problem, no matter how inhumane the method, because the supply of gray squirrels runs high. In fact, if eastern gray squirrels posed a threat to an endangered species, then conservationist principles might *require* killing them. Traditional conservationism thus entails indifference, if not animosity, toward individual animals in abundant populations. Flagship federal statutes, such as the National Park Service Organic Act, Marine Mammal Protection Act, and the Wild Free-Roaming Horses and Burros Act, expressly

2. *See generally* 2013 Barred Owl EIS (describing the FWS's war among owls). Because of the volume of environmental analyses cited, this Article uses short titles for documents in the analyzed NEPA set from 2002 to 2022, which can be found with bibliographic information in Appendix B.

3. *See id.* at 53, 77, 104, and 107 (describing study areas by state); *Northern Spotted Owl*, WASH. DEP'T OF FISH & WILDLIFE, https://wdfw.wa.gov/species-habitats/species/strix-occidentalis-caurina#desc-range [https://perma.cc/AZ8W-69YY] (describing spotted owls).

4. *See* 2013 Barred Owl EIS at 117 (discussing barred owl arrival to the western United States and Canada); *Northern Spotted Owl*, *supra* note 3 (comparing owl sizes and listing barred owl competition under "Conservation Threats and Actions Needed").

5. 2013 Barred Owl EIS at 124. Although the original EIS set a goal of 3,603 owls, for budget reasons, FWS has since lowered the target to 1,600 owls. Friends of Animals v. U.S. Fish & Wildlife Serv., 879 F.3d 1000, 1002 (9th Cir. 2018).

6. *See* U.S. FISH & WILDLIFE SERV., DRAFT ENVIRONMENTAL IMPACT STATEMENT FOR THE BARRED OWL MANAGEMENT STRATEGY 17 (2023) [hereinafter Draft EIS for the Barred Owl].

7. *See* U.S. FISH & WILDLIFE SERV., FINAL ENVIRONMENTAL IMPACT STATEMENT FOR THE BARRED OWL MANAGEMENT STRATEGY 78 tbl. 3-7 (2024).

8. *See, e.g.*, *id.* at 13 (referring to "lethal removal of barred owls").

9. *See infra* Part I.A. "Individual animal" in this Article signifies "a single animal" as distinct from a population. The term does not refer to particular animals as distinct from one another. Theoretically, government agencies could tailor management to particular animals' idiosyncratic preferences, but this Article analyzes the more fundamental question of whether agencies consider animals' experiences intrinsically significant.

permit agencies to harm abundant animals to aid threatened ecosystems or dwindling species.

Environmental legal scholars, for their part, have directed their energy toward protecting ecological collectives, such as species or ecosystems, rather than protecting individual animals for their own sakes.[10] To find discussion of individual animals' inherent worth, one must look to the field of animal law.[11]

According to animal law scholars and advocates, animals' sentience—their ability to feel pleasure and pain—requires that we avoid harming (and perhaps affirmatively protect) individual animals.[12] This view casts doubt on the conservationist practice of killing many animals from abundant populations to save relatively few members of endangered species. Killing animals to save plants seems even more dubious. Because animal law has prioritized domesticated and captive animals, however, the role of wild animals' inherent value in conservation law remains undertheorized.[13]

This Article bridges the scholarly divide between environmental law and animal law, using conservation-based removals as a focus. Several features make removals a good starting point to reconsider the relationship between conservation and animal well-being. First, across agencies and species, removals have a common fact pattern: Abundant, native wild animals threaten dwindling species or ecosystems.[14] Removals thus concretize the tension between

10. *See* KAREN BRADSHAW, WILDLIFE AS PROPERTY OWNERS: A NEW CONCEPTION OF ANIMAL RIGHTS 15 (2020) ("Although environmental and natural resources law scholars have long studied wildlife, they have only recently begun situating wildlife concerns in the animal law conversation."). This is not to say that legal scholars have neglected the tension between holism and individuals completely. *See, e.g.*, ERIC T. FREYFOGLE, JUSTICE AND THE EARTH: IMAGES FOR OUR PLANETARY SURVIVAL 80–84 (1993). This debate has deeper roots in non-legal disciplines. *See, e.g.*, DALE JAMIESON, ETHICS AND THE ENVIRONMENT: AN INTRODUCTION 169–80 (2008) (discussing tradeoffs between animal interests and conservation based interests); GARY E. VARNER, IN NATURE'S INTERESTS?: INTERESTS, ANIMAL RIGHTS, AND ENVIRONMENTAL ETHICS 98–120 (1998) (attempting to reconcile animal interests with conservation-based culling); *see also generally* Kristy M. Ferraro, Anthony L. Ferraro, A.Z. Andis Arietta & Nathalie R. Sommer, *Revisiting Two Dogmas of Conservation Science*, 37 CONSERVATION BIO. 1, (2023) (challenging the dogma that individuals are unimportant to conservation science); Holmes Rolston III, *Respect for Life: Counting What Singer Finds of No Account*, *in* SINGER AND HIS CRITICS (Dale Jamieson ed., 1999) (advocating for moral concern for nature beyond individual sentient beings).

11. *See, e.g.*, Joyce Tischler & Bruce Myers, *Animal Protection and Environmentalism: The Time Has Come to Be More Than Just Friends*, *in* WHAT CAN ANIMAL LAW LEARN FROM ENVIRONMENTAL LAW? 679, 680–82, 700–06 (Randall S. Abate ed., 2020) (explaining the different foci of animal law and environmental law, including the former's focus on individual animals); Kristen Stilt, *Rights of Nature, Rights of Animals*, 134 HARV. L. REV. F. 276, 267 (2021) (same).

12. *See* MARTHA C. NUSSBAUM, JUSTICE FOR ANIMALS: OUR COLLECTIVE RESPONSIBILITY 46 (2022) (describing utilitarianism's ideas, including its focus on suffering, as "crucial" for advances in animal law); *infra* Part I.B.

13. *See* BRADSHAW, *supra* note 10, at 11–12 ("[A]nimal law focus[es] on animals in captivity and [has] largely overlooked wildlife interests.").

14. *See infra* Part II. This Article considers removals of native rather than invasive species to keep this Article's scope manageable and illustrate that animal conflicts occur even in uninvaded

protecting individual animals and ecological collectives. Second, several federal agencies conduct removals and publish their rationales, facilitating comparisons between various agency approaches. Third, agencies have leeway in the removal context to incorporate new theories of conservation; such choices are precisely the type over which agencies enjoy discretion, even after the fall of *Chevron* deference.[15] This Article's in-depth analysis of removals and agency reasoning is the first of its kind.

Removals reveal legal and practical reasons to incorporate individual animals' inherent worth into conservation law. Intentionally or not, in multiple statutes, Congress commingles traditional conservationism with recognition of animals' inherent value. By doing so, Congress places discordant pressures on agencies. Understanding conservation law as conflicted about, rather than opposed to, inherent animal value challenges agencies and environmental scholars to consider the issue more deeply.

Practically speaking, removals illustrate how questions about individual animals' well-being frequently entangle agencies. Each year, FWS, the National Park Service, and Bureau of Land Management (BLM), among others, capture or kill thousands of native wild animals in service of conservation goals. To conserve saplings, shrubs, and salmon, agencies ambush deer by night, herd horses by helicopter, and lug away sea lions by barge.[16] At present, agencies use an ad hoc approach to incorporating individual animal well-being into decision-making. This variation is difficult to defend on normative grounds and creates vulnerability to litigation.[17] To replace the traditional conservationism that metes out protections only to animals in valued populations, agencies need a new conservationism that incorporates individual animals' inherent value in a coherent way.

This Article proceeds in four parts.

Part I sketches brief histories of traditional conservationism and the animal advocacy movement. This account explains how the two movements' goals overlap and diverge.

Part II contends that the intuitions animating both movements appear in conservation law. The Wild Free-Roaming Horses and Burros Act and the Marine Mammal Protection Act expressly allow removing overabundant animals but also protect them from mistreatment. The Endangered Species Act and the Migratory Bird Treaty Act protect individual animals, albeit only to the extent

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ecosystems. (Although barred owls were not so designated at the time of their removal, FWS now considers them "invasive.") *Compare* 2013 Barred Owl EIS at 321, *with* Draft EIS for the Barred Owl, *supra* note 6, at 10. Invasive species management raises similar challenges as native removals but differs enough to merit separate treatment.

15. This likely remains the case even after the elimination of the *Chevron* doctrine in *Loper Bright Enters. v. Raimondo*, 603 U.S. 369 (2024); *see infra* Part II.

16. *See* 2011 Rock Creek Park Deer EIS at 63; 2017 Antelope & Triple B EA at 19–21; 2020 Sea Lion EA at 20.

17. *See infra* Part III.B.

they belong to valued taxa. And the National Park Service Organic Act neither requires nor bars consideration of individual animals. Notwithstanding their traditional conservationist elements, these statutes either require or permit valuing individual animals' inherent worth. Navigating this hodgepodge of commitments falls to federal agencies, which face a wave of lawsuits from animal advocates.

Part III investigates for the first time how agencies are thinking through these competing values, revealing haphazard approaches that vary across and within agencies, and even within agency decisions. To evaluate agency reasoning, I compiled a unique set of removal-related documents through Freedom of Information Act (FOIA) requests and database searches. The set includes more than one hundred National Environmental Policy Act analyses conducted by agencies associated with removal decisions. What emerges from this investigation is a slew of agency approaches to animals' inherent worth, ranging from having no concern for individual animals to recognizing only negative duties towards animals (e.g., avoiding inflicting physical or psychological stress on animals) to owing positive duties towards animals (e.g., rescuing animals from difficult ecological conditions). Agencies seem to value individual animals for their own sake but have failed to develop a coherent theoretical framework for doing so.

Part IV lays the groundwork for a new conservationism that incorporates individual animals' inherent value more systematically. The haphazard agency approaches revealed in Part III thwart agency policy goals, exacerbate conflicts with animal advocates, undermine administrative legitimacy, and create legal vulnerabilities. Given the frequency with which animal well-being and conservation collide, agencies should not treat the former as a peripheral concern. Instead, agencies should view animal well-being as a core conservation issue that merits a systematic approach. To outline possible forms a new conservationism approach could take, I draw on ethical frameworks introduced in Part I and discuss how each framework would affect agencies' obligations to animals in the removal context.[18] My goal is not to discuss every conceivable normative lens that agencies might adopt but to inspire a cross-disciplinary discussion among agencies, legal scholars, scientists, and ethicists. The Article ends by offering broadly acceptable changes that agencies could implement to improve upon the status quo.

In one sense, this Article's focus is quite narrow: It analyzes how federal agencies manage abundant, native animals that pose a threat to endangered

18. To be sure, Congress could offer guidance by amending or replacing statutes. But agencies confronting difficult wildlife management dilemmas need tools now, and, in any event, statutory reform would almost certainly leave policy lacunae for agencies to fill. Allowing agencies to experiment with different frameworks could also inform hypothetical future legislation. After several years of implementation, some approaches may prove more practicable or popular than others, and Congress may benefit from those lessons.

species or ecosystems. Notwithstanding that focus, this Article has implications for conservation law more broadly. If animals' inherent value matters in the context of removals, then it should matter in other administrative and environmental dilemmas—from controlling wildfires to managing non-native species to mitigating climate change in urban environments. Developing a new conservationism in the context of removal decisions, where tensions between individual animals and populations are stark, could serve as crucial evidence for reforms in other areas.

The overwhelming breadth of these consequences makes it tempting to reject an individual-animal-based lens as unworkable, but the scale of environmental law's impact on individual wild animals is all the more reason to begin engaging with difficult trade-offs now. Agency reasoning in removal analyses reflects a powerful, if amorphous, intuition that individual wild animals have *some* moral standing, despite conservation's focus on protecting collectives. Ignoring that hunch would neglect a key reason that Americans and their government value nature in the first place.[19] When an agency protects a woodland, it not only protects a carbon sink or an arresting vista, but the ability of a thousand squirrels to wake up in the morning and savor a thousand nuts. There is something invigorating about that, and environmental law should account for it.

I.
THE DEVELOPMENT OF THE CONSERVATION AND ANIMAL ADVOCACY MOVEMENTS

Americans love nature. More than 90 percent of likely voters believe "it is important to save at-risk wildlife, fish, and plants for future generations."[20] But people's reasons for valuing nature sometimes conflict with one another.

Two influential movements in the United States provide different reasons to care about wild animals, and this Part chronicles their influence on wildlife

19. In fact, since this Article's initial drafting, the controversy over barred owl removals has attracted significant attention in mainstream media, underlining widespread public fascination and anxiety over the tensions raised by harming some animals to help others. *See, e.g.*, Avram Hiller, Jay Odenbaugh & Yasha Rohwer, *A Dystopian Effort Is Underway in the Pacific Northwest to Pick Ecological Winners and Losers*, N.Y. TIMES (Aug. 8, 2024), https://www.nytimes.com/2024/08/08/opinion/owls-endangered-conservation-forests.html [https://perma.cc/KR4N-28SS]; Kyle Melnick, *Officials Plan to Kill 450K Invasive Owls that Are Endangering Native Owls*, WASH. POST (July 9, 2024), https://www.washingtonpost.com/climate-environment/2024/07/09/barred-spotted-owl-plan-kill/ [https://perma.cc/63FQ-STNG]; Elizabeth Kolbert, *Should We Kill Some Wild Creatures to Protect Others?*, NEW YORKER (June 10, 2024), https://www.newyorker.com/magazine/2024/06/17/cull-of-the-wild-hugh-warwick-book-review-hedgehogs-killing-and-kindness-laura-mclauchlan [https://perma.cc/NM2W-LN4L].

20. Dannielle Deiseroth, *Memo: Bipartisan Majorities Support Federal Conservation Initiatives*, DATA FOR PROGRESS (Dec. 14, 2021), https://www.dataforprogress.org/memos/2021/12/14/bipartisan-majorities-support-federal-conservation-initiatives [https://perma.cc/L53F-G7GD].

management. The conservation movement rose to prominence by stressing the protection of ecological collectives—that is, species and ecosystems. This commitment powerfully influenced federal statutes passed between the early twentieth century and the 1970s. The animal advocacy movement, on the other hand, came to prominence in the mid-to-late 1970s and strove to protect animals for their own sake, regardless of their conservation value. This movement, and the ethical frameworks it spawned, gained momentum only after the passage of flagship wildlife management laws. Yet, Congress apparently shared some of the intuitions that motivated animal advocates. The seeds of concern for individual animals' inherent value appear in the same statutes that enshrine conservationist principles. These dueling values lay the groundwork for agency discretion—and confusion.

What follows is a brief history of American wildlife management law. This Article refers to wildlife management statutes as "conservation statutes" because they codify many traditional conservationist values. But the term does not suggest that statutes exclusively enshrine traditional conservation concerns. To the contrary, I will argue in Part II that such statutes require or permit considering individual animals' inherent value.

A. Traditional Conservationism

Indigenous traditions have long recognized special status for individual animals. Tribal attitudes vary too much for generalizations, but some examples can help illustrate deep-rooted attitudes toward wildlife—many of which continue today.[21] Some Indigenous people viewed wild animals as "kin."[22] Others treated wild animals as supernatural beings who surrendered themselves to responsible hunters.[23] The Lakota viewed bison as part of the "Buffalo Nation," on equal footing with humans.[24] In *God Is Red: A Native View of Religion*, Vine Deloria Jr. contrasts Indigenous religious views, which require man to "act[] harmoniously with other creatures," with the biblical view set forth in Genesis, which places "nonhuman life systems in a polarity with [humans], tinged with evil and without hope of redemption . . . ."[25] Traditional Indigenous attitudes continue to influence tribal beliefs today.

Efforts to eradicate this way of life—through hunting bison to near extinction—provided an important catalyst to the conservationist movement in

21. *See* John D. Leshy, *Public Lands and Native Americans: A Guide to Current Issues*, 47 PUB. LAND & RES. L. REV. 1, 16 (2024) (acknowledging varying land management views across Indigenous Tribes).

22. Mackenzie Holden, Comment, *Nonhuman Personhood: Recognizing Liberty Interests for Highly Sentient Animals*, 55 ARIZ. ST. L.J. 1571, 1588 (2023).

23. *See* CALVIN MARTIN, KEEPERS OF THE GAME: INDIAN-ANIMAL RELATIONSHIPS AND THE FUR TRADE 115–16 (1978).

24. Daniel P. Modaff, Mitakuye Oyasin *(We Are All Related): Connecting Communication and Culture of the Lakota)*, 39 GREAT PLAINS Q. 341, 342 (2019).

25. VINE DELORIA JR., GOD IS RED: A NATIVE VIEW OF RELIGION 68–69 (4th ed. 2023).

the United States.[26] Concern sprang not from the injustice to Plains tribes; many conservationists aimed to protect nature as a space free of permanent human residency.[27] Instead, resistance sprang from two other burgeoning communities: sports hunters and nature enthusiasts influenced by Romanticism.[28] As western settlement spread across the United States in the 1800s, sports hunting arose as a means for gentlemen to reconnect with the virtue and fortitude of their pioneer ancestors.[29] Recreating their forebears' experience required a supply of America's big game animals, which were under threat from excessive hunting and development.[30] Through sports associations and outdoor magazines, recreational hunters championed policies to regulate hunting and conserve habitat.[31] Meanwhile, a different strand of conservation flourished in nature essays. Read and written by men and women alike, these essays portrayed wild animals—including those found in the backyard—as central characters with internal lives.[32] Implicitly or explicitly, these essays condemned indiscriminate killing of wild animals as morally wrong.[33]

Early conservationists doled out their concern for wildlife unevenly, however; whereas some animals, such as songbirds, were "good," others, particularly predators, were "bad."[34] This view laid the groundwork for an efficient wildlife management tool: helping one species by harming another. Animals and plants face risks not just from humans but from other flora and fauna. Trees compete for sunlight.[35] Sea snails battle limpets for rock crevices.[36] When a deer and a wolf cross paths, only one has a good day. At scale, these dramas amount to conflicts among species. Protecting an ecological community riven by divergent interests entails choosing winners and losers.

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26. THOMAS R. DUNLAP, SAVING AMERICA'S WILDLIFE 7 (1988).

27. *See* RICHARD WEST SELLARS, PRESERVING NATURE IN THE NATIONAL PARKS: A HISTORY 23 (1997) (referring to Native American exclusion to create national parks); Richard White, *"Are You an Environmentalist or Do You Work for a Living?": Work and Nature*, *in* UNCOMMON GROUND 171, 173 (William Cronon, ed., 1996) (describing environmentalists as "identifying nature with play and making it by definition a place where leisured humans come only to visit and not to work, stay, or live.").

28. *See* DUNLAP, *supra* note 26, at 6 (describing two strands of early conservationism).

29. *Id.* at 8–9.

30. *Id.* at 11.

31. *Id.* at 10–11; SELLARS, *supra* note 27, at 24.

32. DUNLAP, *supra* note 26, at 13–14.

33. *See id.* at 25–26 (discussing views of two prominent nature essayists, Ernest Thompson Seton and Charles G.D. Roberts); Mabel Osgood Wright & Elliott Coues, *Excerpts from "Citizen Bird: Scenes from Bird Life in English for Beginners"*, 15 ORG. & ENV'T 471, 473 (1897) (criticizing people's tendency to shoot or frighten birds).

34. DUNLAP, *supra* note 26, at 16.

35. *See* Charles D. Canham, Michael J. Papaik, María Uriarte, William H. McWilliams, Jennifer C. Jenkins & Mark J. Twery, *Neighborhood Analyses of Canopy Tree Competition Along Environmental Gradients in New England Forests*, 16 ECOLOGICAL APPLICATIONS 540, 541 (2006) (referring to "light extinction by tree canopies").

36. *See* Moisés A. Aguilera & Sergio A. Navarrete, *Interspecific Competition for Shelters in Territorial and Gregarious Intertidal Grazers: Consequences for Individual Behaviour*, 7 PLOS ONE 1, 1–2 (2012).

Conservationists, therefore, have often sacrificed wild animals to achieve desired states of nature. In the early twentieth century, federal conservation objectives included conserving game animals by eliminating predators.[37] By the 1930s, as range management developed into a discipline, the focus shifted to conserving soil and plants at "proper" densities, through culling herbivores if necessary.[38] In the second half of the twentieth century, conservation's lodestar became biodiversity, a term that can refer to species count, habitat variety, or genetic variability.[39] Under the banner of biodiversity, conservationists have supported harming abundant animals to protect those on the brink of extinction.[40]

The throughline in these conservationist approaches is an emphasis on protecting ecological collectives, such as species or ecosystems, instead of individual organisms. Because ecological collectives form the unit of concern, humans may kill animals, even inhumanely, to serve conservation goals. The ecologist Aldo Leopold summarized the conservationist position: "A thing is right when it tends to preserve the integrity, stability, and beauty of the biotic community. It is wrong when it tends otherwise."[41]

B. Animal Advocacy Movement

Traditional conservationism's focus on collectives contrasts with the priorities of the animal advocacy movement, which gained momentum after the philosopher Peter Singer published *Animal Liberation* in 1975.[42] According to Singer, "If a being suffers there can be no moral justification for refusing to take that suffering into consideration . . . . [s]o the limit of sentience . . . is the only defensible boundary of concern for the interests of others."[43] Put differently, many (perhaps most) animals are capable of experiencing pain and pleasure, and that places moral limits on how humans may treat them. Because a cougar is

37. *See* JOHN M. FRYXELL, ANTHONY R. E. SINCLAIR & GRAEME CAUGHLEY, WILDLIFE ECOLOGY, CONSERVATION, AND MANAGEMENT 318 (3d ed. 2014); June C. Edvenson, *Predator Control and Regulated Killing: A Biodiversity Analysis*, 13 UCLA J. ENV'T. L. & POL'Y 31 (1994); Victor H. Cahalane, *The Evolution of Predator Control Policy in the National Parks*, 3 J. WILDLIFE MGMT. 229, 229 (1939).

38. FRYXELL, SINCLAIR & CAUGHLEY, *supra* note 37, at 318–19.

39. *Id.*

40. *See* JONATHAN A. NEWMAN, GARY VARNER & STEFAN LINQUIST, DEFENDING BIODIVERSITY: ENVIRONMENTAL SCIENCE AND ETHICS 394 (2017) (describing "therapeutic hunting").

41. ALDO LEOPOLD, A SAND COUNTY ALMANAC: AND SKETCHES HERE AND THERE 211 (Oxford University Press 2020) (1949).

42. Of course, animal sympathizers have existed for millennia. The Hindu emperor Ashoka and Greek philosophers Plutarch and Porphyry expressed concern for animal well-being. *See* NUSSBAUM, *supra* note 12, at xi. Most famously, Jeremy Bentham contemplated that animals might deserve legal protections: "[T]he question is not, Can they *reason?* nor, Can they *talk?* but, Can they *suffer?*" JEREMY BENTHAM, AN INTRODUCTION TO THE PRINCIPLES OF MORALS AND LEGISLATION 311 n.1 (Dover Publications 2007) (1780).

43. PETER SINGER, ANIMAL LIBERATION: THE DEFINITIVE CLASSIC OF THE ANIMAL MOVEMENT 8–9 (Harper Perennial 2009) (1975).

sentient, it has inherent value, and humans should observe a presumption against harming it.

Animal Liberation's vivid prose and philosophical rigor invigorated a movement previously discounted as undisciplined and sentimental.[44] Animal advocacy organizations have since multiplied.[45] People for the Ethical Treatment of Animals, the Animal Legal Defense Fund, and other groups have attacked factory farming, animal testing, fur-wearing, and entertainment via an array of strategies ranging from publicity campaigns to litigation.[46] The Nonhuman Rights Project has pressed courts (thus far unsuccessfully) to grant legal personhood to captive animals that possess self-awareness and autonomy—great apes, cetaceans, and elephants.[47] Animal law courses and clinics have proliferated at law schools, and legal articles on the topic have mushroomed.[48]

Beyond the academy, Americans' concern with animal well-being, including that of wild predators, is on the rise.[49] In a 2015 Gallup poll, 62 percent of respondents said that humans should be permitted to use animals for human benefit, but that animals nevertheless deserve some legal protection.[50] An additional 32 percent responded that animals merit the same rights as humans, up from 25 percent only seven years earlier.[51]

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44. *See* Bernard Unti & Andrew N. Rowan, *A Social History of Postwar Animal Protection*, *in* THE STATE OF THE ANIMALS 21, 24 (Deborah J. Salem & Andrew N. Rowan eds., 2001) (discussing the effect of *Animal Liberation* on the animal advocacy movement); *see also* DIANE L. BEERS, FOR THE PREVENTION OF CRUELTY: THE HISTORY AND LEGACY OF ANIMAL RIGHTS ACTIVISM IN THE UNITED STATES 3–5, 197–202 (2006) (same).

45. *See* BEERS, *supra* note 44, at 3; Unti & Rowan, *supra* note 44, at 24.

46. *See, e.g.*, *PETA's History: Compassion in Action*, PETA, https://www.peta.org/about-peta/learn-about-peta/history/ [https://perma.cc/4R9F-9HYZ]; *About Us*, ANIMAL LEGAL DEF. FUND, https://aldf.org/about-us/ [https://perma.cc/B7U4-J8FA] (describing how the organization protects animals every day by "[f]iling groundbreaking lawsuits to stop animal abuse and expand the boundaries of animal law" among other things).

47. *See A Unique and Vital Mission: Who We Are and What We Do*, NONHUMAN RTS. PROJECT, https://www.nonhumanrights.org/who-we-are/ [https://perma.cc/8299-CA6J]; *see also* RAFFAEL N. FASEL & SEAN C. BUTLER, ANIMAL RIGHTS LAW 124–34 (2023) (summarizing habeas cases brought by the Nonhuman Rights Project).

48. *See generally* Fran Ortiz, *Animal Law in the Classroom*, 74 TEX. BAR J. 902 (2011) (describing this proliferation). Textbooks for the subject also exist. *See, e.g.*, BRUCE A. WAGMAN, SONIA S. WAISMAN & PAMELA D. FRASCH, ANIMAL LAW: CASES AND MATERIALS (6th ed. 2019). It is impossible to provide here a comprehensive list of animal law scholarship; suffice it to say, the field is booming. *See, e.g.*, JUSTIN MARCEAU, BEYOND CAGES: ANIMAL LAW AND CRIMINAL PUNISHMENT (2019); SHERRY F. COLB & MICHAEL C. DORF, BEATING HEARTS: ABORTION AND ANIMAL RIGHTS (2016); Delcianna Winders & Varu Chilakamarri, *Animal Welfare Act: Enforcement*, 25 ANIMAL L. 249 (2019); David S. Favre, *Integrating Animal Interests into Our Legal System*, 10 ANIMAL L. 87 (2004).

49. *See* Kelly A. George, Kristina M. Slagle, Robyn S. Wilson, Steven J. Moeller & Jeremy T. Bruskotter, *Changes in Attitudes Toward Animals in the United States from 1978 to 2014*, 201 BIOLOGICAL CONSERVATION 237, 239–41 (2016).

50. Rebecca Riffkin, *In U.S., More Say Animals Should Have Same Rights as People*, GALLUP (May 18, 2015), https://news.gallup.com/poll/183275/say-animals-rights-people.aspx [https://perma.cc/4B5N-4JPF].

51. *Id.*

In some ways, the animal advocacy movement strengthens the case for conservation because conserving species and protecting individual animals are often two sides of the same coin. Conserving a species necessarily entails protecting individual members of that species. And protecting individual animals requires ensuring their ability to eat, rest, and socialize, which necessitates protecting their ecosystem and species.

But ethicists soon surfaced tensions between the two movements. Recognizing individual animals' inherent value circumscribes when—if ever—humans may harm them or allow them to be harmed, for conservationist reasons or otherwise.[52] Moreover, to the extent animal advocates recognize duties to alleviate animal suffering, they may have duties to interfere with the very ecological functions conservationists seek to protect. As philosopher Mark Sagoff explained in his aptly named article, *Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce*, through predation and natural selection, "Nature ruthlessly limits animal populations by doing violence to virtually every individual before it reaches maturity."[53]

To sort out what we owe wild animals, philosophers have developed several ethical frameworks, three of which are particularly prominent. For present purposes, a simplified description of each suffices.

> *Utilitarian view*: under a non-anthropocentric utilitarian view, wild animals have moral standing to the extent they feel pleasure or pain. Humans may harm wild animals only if doing so creates a net increase in welfare. Crucially, welfare comprises not only aggregate human welfare, but animal welfare, and like interests are treated alike across sentient species.[54] Because what matters is aggregate welfare, humans have an obligation to intervene in nature to help wild animals if doing so increases well-being on net, even if some animals are harmed in the process.[55]
>
> *Rights view*: some philosophers have argued that wild animals' sentience entitles them to rights. Even if violating animal rights would increase net welfare, it is impermissible to do so. Formulations of wild animals' rights vary but usually include at least a right not to be killed or injured by humans (except in extenuating circumstances, such as self-

52. *See* NEWMAN, VARNER & LINQUIST, *supra* note 40, at 394–400 (describing the implications of animal sentience for culling).

53. Mark Sagoff, *Animal Liberation and Environmental Ethics: Bad Marriage, Quick Divorce*, 22 OSGOODE HALL L.J. 297, 299 (1984).

54. *See* SINGER, *supra* note 43, at 8–9 (aligning himself with Bentham's emphasis on pain and pleasure, as opposed to a rights-based approach); *see also* FASEL & BUTLER, *supra* note 47, at 59 ("[U]tilitarian theories . . . require us to calculate the sum total of good achieved across all sentient beings.").

55. *See* SINGER, *supra* note 43, at 226 (noting that if human interference improves wild animals' lives, it may be justifiable).

defense) and to live as free from human interference as possible.[56] Proponents of this view typically endorse leaving wild animals alone or at least avoiding large-scale intervention, such as large-scale culling or feeding starving animals.[57]

Capabilities view: under this view, sentient animals possess core entitlements called "capabilities," which provide them the chance to flourish.[58] Building off her work with Amartya Sen in the human rights context, Martha Nussbaum has developed a list of ten animal capabilities that deserve protection, ranging from the ability to "enjoy good health" to the ability to play and affiliate with other animals.[59] The conditions that promote these capabilities vary depending on species.[60] Nussbaum urges not only protecting habitat and halting human practices that "directly violate wild animal life, health, and bodily integrity," but also intervening to reduce suffering and promote animal flourishing.[61] Nussbaum does not attempt a comprehensive list of permissible interventions, but she expresses openness to creating sanctuaries for prey species and supplanting predation with lab grown meat and toys that stimulate predators.[62]

The duties these frameworks recognize vary in strength and kind. Under a utilitarian regime, humans have no absolute duties to wild animals, only obligations to consider these animals' interests. All three frameworks suggest that humans should avoid harming sentient animals. That is, humans have negative duties to avoid causing animal suffering (with the caveat that in the utilitarian context, these duties are not absolute and can be overridden by the demands of net welfare). Beyond negative duties, the utilitarian and capabilities approaches are also open to large-scale positive interventions that increase net welfare or promote flourishing, respectively. Sharp disagreements exist among proponents of each of these views, but all three frameworks view individual animals, rather than collectives, as the morally relevant unit of consideration.[63]

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56. *See* SUE DONALDSON & WILL KYMLICKA, ZOOPOLIS: A POLITICAL THEORY OF ANIMAL RIGHTS 158–59 (2011). For other deontological accounts, see generally CHRISTINE M. KORSGAARD, FELLOW CREATURES: OUR OBLIGATIONS TO THE OTHER ANIMALS (2018); TOM REGAN, THE CASE FOR ANIMAL RIGHTS (1983); Gary L. Francione, *Animal Rights and Animal Welfare*, 48 RUTGERS L. REV. 397 (1996).

57. DONALDSON & KYMLICKA, *supra* note 56, at 158–59. Ethicists Donaldson and Kymlicka propose viewing wild animals as sovereigns, which "restricts the terms on which we can visit sovereign wild animal territory . . . [while] establish[ing] terms for wild animals entering sovereign human societies." *Id.* at 167. This paradigm allows small-scale interventions but rejects most largescale ones. *See id.* at 179–87.

58. NUSSBAUM, *supra* note 12, at 80–81.

59. *Id.* at 81.

60. *See id.* at 101.

61. *Id.* at 234–36.

62. *See id.* at 247–52.

63. *See* Francione, *supra* note 56, at 468 (arguing that the welfarism approach facilitates animal exploitation).

A few philosophers and biologists have defended conservationism's focus on collectives. According to the ethicist J. Baird Callicott, "[S]pecies are valuable and we ought to save them simply because we have an affection for them."[64] By biologist Michael Soulé's telling, collectives have inherent value "springing from a species' long evolutionary heritage and potential or even from the mere fact of its existence."[65] Recently, a line of scientific literature has endorsed "compassionate conservation," which seeks to balance valuing species and individual animals.[66] Adherents, however, differ about how to strike that balance, recapitulating disagreements surfaced in the philosophical frameworks discussed above.[67]

Conservation law scholars, and environmental law scholars generally, have been largely absent from the debate.[68] This silence may reflect the assumption that conservation statutes preclude considering individual animals' inherent worth. But as Part II will show, that is not the case.

II.
CONSERVATION STATUTES' STANCE TOWARD INDIVIDUAL ANIMALS

From the turn of the twentieth century through the 1970s, Congress enacted several statutes to protect nature. In keeping with conservationist principles, these laws protect species and landscapes. But some of these statutes also reflect legislators' intuition that how we treat individual animals matters, regardless of their abundance. No statute bars agencies from considering individual animals' inherent value.

To illustrate conservation statutes' stance toward individual animals, I divide statutes into three categories: (1) those that contain express protections for individual animals, regardless of rarity, (2) those that protect ecological collectives through protecting individual animals, and (3) those that protect dwindling ecological collectives without requiring consideration of individuals. Taken together, this body of law puts agencies in the business of considering

64. J. BAIRD CALLICOTT, IN DEFENSE OF THE LAND ETHIC: ESSAYS IN ENVIRONMENTAL PHILOSOPHY 153 (1989). Similarly, philosopher Bryan Norton has suggested valuing natural collectives for "weakly anthropocentric" reasons. Bryan G. Norton, *Environmental Ethics and Weak Anthropocentrism*, 6 ENV'T ETHICS 131, 136 (1984).

65. Michael E. Soulé, *What Is Conservation Biology?*, 35 BIOLOGICAL DIVERSITY CRISIS 727, 731 (1985).

66. Simon Coghlan & Adam P. A. Cardilini, *A Critical Review of the Compassionate Conservation Debate*, 36 CONSERVATION BIOLOGY 1, at e13760 (2021); *see, e.g.*, IGNORING NATURE NO MORE: THE CASE FOR COMPASSIONATE CONSERVATION, at xxi (Marc Bekoff ed., 2013).

67. Coghlan & Cardilini, *supra* note 66, at 10. Recently, Michael Livermore offered an intriguing argument for developing a "heteric welfarism" that recognizes the value of diverse subjective experiences and, thus, certain kinds of biodiversity. Michael A. Livermore, *Valuing Diversity*, 28 J. ETHICS & SOC. PHIL. 264, 266 (2024).

68. For articles discussing how to use specific environmental laws to advance individual animal well-being, see generally David N. Cassuto & Tala DiBenedetto, *Suffering Matters: NEPA, Animals, and the Duty to Disclose*, 42 U. HAW. L. REV. 41 (2020); Danny Waltz, *The "Embarrassing" Endangered Species Act: Beyond Collective Rights for Species*, 45 COLUM. J. ENV'T L. 1 (2020).

both species and individual animals. Yet the law provides little guidance about how to balance the two concerns.[69]

A. Statutes with Protections for Abundant Animals' Well-Being

Some conservation statutes extend express protections to abundant animals. Such provisions are instructive because abundant animals pose no conservation concern: They face no risk of extinction and may pose threats to dwindling populations. These protections, therefore, cannot be explained by a traditional conservationist focus on collectives. Instead, taking the form of humaneness mandates, these provisions require agencies to consider various actions from animals' perspectives. Although the laws clearly value ecological collectives, the implication is that individual animals' experiences also matter for their own sake.[70]

1. Wild Free-Roaming Horses and Burros Act

Congress passed the Wild Free-Roaming Horses and Burros Act of 1971 (WHA) to protect wild horses and burros as "living symbols of the historic and pioneer spirit of the West."[71] For decades, Americans had whittled down the equid population, killing horses and burros for petfood, fertilizer, and target practice.[72] In response, Congress forbade the "capture, branding, harassment, or death" of wild equids on public rangelands.[73] The Bureau of Land Management (BLM) and the Forest Service implement the statute as part of managing public lands and forests.[74]

Too much "pioneer spirit" can change landscapes. As non-ruminating grazers, horses munch shrubs with abandon, unburdened by the need to regurgitate and rechew.[75] With formidable front teeth and lips flexible enough to

69. What follows is not an exhaustive catalog of conservation statutes. Instead, the goal is to examine several flagship laws that influence federal agencies' decisions to remove animals from nature.

70. For a discussion of the way in which concern about individual animals motivated the passage of several conservation statutes, see Jonathan Lovvorn, *Climate Change Beyond Environmentalism Part I: Intersectional Threats and the Case for Collective Action*, 29 GEO. ENV'T L. REV. 1, 57–62 (2016).

71. 92 Pub. L. No. 195 § 1, 85 Stat. 649 (1971) (codified at 16 U.S.C. § 1331). Many biologists consider wild horses non-native. *See* Kathryn A. Schoenecker, Sarah R. B. King & Terry A. Messmer, *The Wildlife Profession's Duty in Achieving Science-Based Sustainable Management of Free-Roaming Equids*, 85 J. WILDLIFE MGMT. 1057, 1057 (describing introduction of horses to North America); Monica Gokey, *Feral vs. Wild Horses*, HIGH COUNTRY NEWS (Apr. 11, 2013), https://www.hcn.org/blogs/range/feral-vs-wild-horses [https://perma.cc/S8KD-KHVG] (same). Regardless, wild equids enjoy federal protection pursuant to the WHA rather than management as invasive animals and are thus included in this Article.

72. S. REP. NO. 92-242, at 1–2 (1971).

73. *Id.*

74. 16 U.S.C. § 1332(a).

75. *See* 2021 Calico Complex EA at 44–45.

make a flutist blush, horses can clip vegetation down to barren ground.[76] Their hooves trample and compact soil; their manure leaches into water.[77]

Anticipating such difficulties, Congress codified instructions in the WHA. If BLM or the Forest Service determines that "an overpopulation exists on a given area of the public lands" and that "action is necessary to remove excess animals," the agency "shall immediately remove excess animals . . . from the range so as to achieve appropriate management levels," continuing "until all excess animals have been removed so as to restore a thriving natural ecological balance to the range."[78]

The statutory elements discussed thus far embody traditional conservationist principles. Congress identified a dwindling population of animals and protected it. If horses or burros cease to be rare, those protections give way to another collective—the range landscape—and agencies must sacrifice equids to maintain "a thriving natural ecological balance."

True to this focus, the WHA has succeeded in conserving horse and burro populations. Since the law's passage, equids on BLM and Forest Service managed lands have increased almost tenfold, numbering roughly eighty-three thousand wild horses and burros in Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, and Wyoming.[79] Also in keeping with traditional conservationism, agencies remove thousands of now abundant equids annually. In 2022, BLM relocated almost seventeen thousand horses and more than three thousand burros from the range, usually herding them with low-flying helicopters into catch pens.[80]

Yet the WHA departs from traditional conservationism in a notable way: The statute limits how agencies may treat "excess" horses and burros. Rather than allowing agencies to proceed as they see fit, the WHA sets forth an order of operations for managing removals. Agencies "shall" first "order old, sick, or lame animals to be destroyed in the most humane manner possible."[81] If excess equids remain, then "additional excess wild free-roaming horses and burros [must] be humanely captured and removed for" adoption by "qualified individuals" who will provide "humane treatment and care."[82] Remaining excess horses "for which an adoption demand . . . does not exist" shall be "destroyed in the most humane and cost-efficient manner possible."[83]

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76. *See* 2022 Jackson Mountains EA at 49.

77. *See* 2020 Lake Mead EA at 25 (trampling); 2021 Desatoya EA at 37 (compacting); 2017 East Pershing EA at 47–48 (manure).

78. 16 U.S.C. § 1333(b)(2).

79. *Compare* S. REP. NO. 92-242, at 2 (1971) (estimating 9,500 horses), *with Program Data*, BUREAU OF LAND MGMT., https://www.blm.gov/programs/wild-horse-and-burro/about-the-program/program-data [https://perma.cc/KG5S-NSKQ] ("Population Estimates").

80. *Program Data*, *supra* note 79 ("Removals"); *see also* 2022 Spring Mountains EA at 37; 2022 Jackson Mountains EA at 53–54 (helicopters).

81. *See* 16 U.S.C. § 1333(b)(2). The statute does not define "humane."

82. *Id.*

83. *Id.*

The result is a somewhat garbled stance toward individual animals. On the one hand, the WHA treats horses like timber or any other natural commodity. The goal is not individual horses' well-being but maintaining their supply: neither too many nor too few. On the other hand, some agency obligations to equids remain even when the supply of horses runs high. By requiring humaneness, the statute implicitly recognizes horse sentience and curtails how agencies may treat horses. The statute enacts this concern in perplexing ways. An old, sick, or lame horse has the right to be killed in "the most humane manner possible," whereas BLM must take cost efficiency into account when selecting means to kill healthy horses. Agencies must consider individual horses' well-being, but Congress offers nothing close to a full theoretical framework for doing so.

Given its competing values, the WHA is neither a traditional conservation statute nor an animal welfare statute. It is a mix of intuitions about animals through which agencies must sift.

2. Marine Mammal Protection Act

In 1972, observing that marine mammals faced "extinction or depletion as a result of man's activities," Congress passed the Marine Mammal Protection Act (MMPA) to maintain species at their "optimum sustainable population" through a ban on importing, harassing, hunting, capturing, or killing marine mammals.[84]

Congressional reports reveal myriad intuitions about why marine mammals matter. The Senate approached this issue through a utilitarian, anthropocentric perspective. Humans had overhunted a "precious natural resource," thus necessitating action to ensure "future generations [will] be able to enjoy a world populated by all species of marine mammals."[85]

The House's language, by contrast, depicts marine mammals as sentient beings with intrinsic value. Humans had committed "virtual genocide" on marine mammals, which had "been shot, blown up, clubbed to death, run down by boats, poisoned, and exposed to a multitude of other indignities."[86] The House expressly rejected the view that marine mammals' "principal significance . . . lies in their usefulness to men."[87] Nor would a hands-off approach suffice. Humaneness necessitated intervention, because animals could "exceed[] the carrying capacity of their environment and thus destroy[] it and

84. Pub. L. No. 92-522 § 2, 86 Stat. 1027 (1972) (to be codified at 16 U.S.C. § 1361) (quotations); *id.* § 3(13), 86 Stat. 1029 (defining "take"); *id.* § 4, 86 Stat. 1029 (barring "taking and importation").

85. S. REP. NO. 92-863, at 1–2 (first quote) (1972); *id.* at 11 (second quote).

86. H.R. REP. NO. 92-707, at 11–12 (1971).

87. *Id.* at 12.

themselves in the process. 'Nature's way' of regulating animal populations is very often less humane than man's way."[88]

Consistent with this legislative history, the MMPA, like the WHA, mixes traditional conservationism with a recognition of animals' inherent value. The treatment of sea lions provides a clear example. The statute places most pinnipeds—flipper-footed mammals such as seals, sea lions, and walruses—under the protection of National Oceanic and Atmospheric Administration (NOAA) Fisheries.[89] In keeping with traditional conservationist values, the MMPA loosens its protections if protected animals—here, sea lions—grow plentiful. For populous sea lion species, Section 120 of the MMPA allows states to seek NOAA Fisheries' authorization to kill pinnipeds that cause "a significant negative impact on the decline or recovery of salmonid fishery stocks" listed as threatened or endangered under the Endangered Species Act.[90] NOAA Fisheries has authorized removal repeatedly in the Columbia River Basin, where sea lions feast on threatened salmon and other fish species bottlenecked by a series of hydropower dams.[91] Between 2008 and 2020, 238 sea lions were removed: fifteen placed in captivity with zoos and aquariums, 216 killed purposefully, and seven killed by accident.[92]

Notwithstanding these hallmarks of traditional conservationism, however, the MMPA also incorporates concern for abundant sea lions. Before any sea lions die, a "Pinniped-Fishery Interaction Task Force" must consider "past efforts to nonlethally deter" sea lions from eating endangered fishes and also whether "feasible and prudent alternatives exist" to reduce fish predation.[93] If NOAA Fisheries decides to pursue lethal removals, the law requires that "qualified individuals," generally federal, state, or Tribal employees or contractors, do the killing.[94] A 2018 amendment requires that sea lions in the Columbia River Basin be killed "humane[ly]"—a term the statute defines as involving "the least possible degree of pain and suffering practicable"—and further specifies that the primary method be "humane chemical methods."[95] NOAA Fisheries

88. *Id.* at 19.

89. *Learn More About Pinnipeds*, MARINE MAMMAL CTR., https://www.marinemammalcenter.org/animal-care/learn-about-marine-mammals/pinnipeds [https://perma.cc/F4VV-E9ZH] (defining a "pinniped"); Pub. L. 92-522 § 3(12)(A), 86 Stat. 1029 (1972) (assigning jurisdiction over all pinnipedia, other than walruses, to NOAA). Thanks to the statute's prohibitions on harming marine mammals, sea lion numbers have surged in the MMPA's wake. Today, more than 257,000 California sea lions live off the West Coast, almost three times greater than their 1970s population. *See* 2020 Sea Lion EA at 37, 38 fig.3-1.

90. Pub. L. No. 103-238 § 23, 108 Stat. 532, 562 (1994) (to be codified at 16 U.S.C. § 1389(b)(1)).

91. *See* 2008 Sea Lion EA at 1-2 to 1-6. In fact, the current iteration of the MMPA streamlines removing sea lions from the Columbia River and its tributaries. *See* 16 U.S.C. § 1389(f).

92. 2020 Sea Lion EA at 85.

93. 16 U.S.C. § 1389(d)(2).

94. *Id.* § 1389(f)(4).

95. *Id.* § 1362(4) (first and second quotes); *id.* § 1389(f)(4)(B) (third quote); *see also* Pub. L. No. 115-329, § 3, 132 Stat. 4475, 4476 (2018) (amending language).

subsequently transitioned from shooting sea lions to trapping them in remotely controlled floating cages, transporting them by barge, hauling them on land with cranes, and euthanizing them via lethal injection or captive bolt.[96]

3. Dueling Perspectives in the WHA and MMPA

The MMPA and the WHA introduce dueling perspectives on animals' value without explaining how to reconcile the two. One point of uncertainty is how to set thresholds for intervention. If individual animals have inherent value greater than zero, then agencies must balance threats to rangeland and endangered fish species against harms to individual animals that are abundant. On the other hand, agencies could reasonably determine that even the slightest risk to ecological collectives justifies harming hordes of individual animals. Alternatively, agencies could decide that risks must be certain and substantial before capturing or killing animals en masse. Moreover, agencies' obligations to animals may extend beyond negative duties to avoid inflicting suffering. Taking the statutes' concerns with humaneness seriously could entail a positive duty to rescue animals in distress.

The WHA and MMPA clarify that individual animals matter but leave numerous questions for agencies to resolve. The next statutes I discuss lack express consideration of individual animals' value. But they also protect collectives by protecting individual animals, creating opportunities for slippage between traditional conservationist values and animal well-being.

B. Statutes Conserving Ecological Collectives Through Protections for Individual Animals

Some statutes conserve ecological collectives, specifically dwindling species, through stringent protection of individual animals. These protections vary in ambition. The Migratory Bird Treaty Act (MBTA), passed in 1918 to conserve vanishing bird species, makes it illegal to "pursue, hunt, take, capture, kill" or transport "any migratory bird."[97] The Endangered Species Act (ESA), first enacted in 1973, goes further.[98] Similar to the MBTA, people may not attempt or in fact "harass, harm, pursue, hunt, shoot, wound, kill, trap, capture, or collect" any endangered animal, a group of activities that the Act collectively calls a "take."[99] However, the statute also imposes positive duties. For example,

96. *See* 2020 Sea Lion EA at 19–23.

97. 16 U.S.C. § 703(a); CONG. RSCH. SERV., THE MIGRATORY BIRD TREATY ACT (MBTA): SELECTED LEGAL ISSUES 2 (2022).

98. Pub. L. No. 93-205, 87 Stat. 884 (1973) (to be codified at 16 U.S.C. § 1531).

99. 16 U.S.C. § 1532(19) (definition); *id.* § 1538(a)(1)(B)–(C) (prohibiting the taking of endangered species).

it charges the Fish and Wildlife Service and NOAA Fisheries[100] with "conserv[ing]" endangered and threatened plants and animals, using "all methods and procedures which are necessary to bring any endangered species or threatened species to the point at which the measures provided . . . are no longer necessary."[101] Such action is required even if the threats facing a species come from wildlife or ecological conditions.[102]

Both statutes dilute or revoke protections once species become abundant. The MBTA allows FWS to permit killing migratory birds after considering their "distribution" and "abundance."[103] This authority enables FWS to kill barred owls that threaten northern spotted owls.[104] And since 2015, FWS has granted the Army Corps of Engineers (Corps) a permit to kill hundreds of thousands of migratory double-crested cormorants to decrease predation on endangered salmon.[105] The ESA, for its part, contains no protections for animals removed from threatened and endangered lists.[106] Neither the MBTA nor the ESA contains humaneness requirements.

The MBTA and ESA's individual-based approach to protecting species is relevant insofar as it forces agencies to think in terms of what harms or helps individual animals.[107] Agencies must ponder, for example, what constitutes

100. *Id.* § 1533 (requiring the "Secretary" to promulgate regulations listing species as threatened or endangered); *see also id.* § 1532(15) (defining "Secretary" as the Secretary of the Interior or Commerce). The Secretaries have delegated the implementation of the ESA to FWS and NOAA Fisheries, respectively. *Endangered Species Act Policies and Regulations*, U.S. FISH & WILDLIFE SERV., https://www.fws.gov/library/collections/endangered-species-act-policies-and-regulations [https://perma.cc/5L6P-ZJHD] ("The U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service share responsibility for administration of the Endangered Species Act.").

101. 16 U.S.C. § 1532(3) (defining "conserve"); *id.* § 1531(b)–(c). The ESA defines "endangered species" as any species "in danger of extinction throughout all or a significant portion of its range," and defines "threatened species" as species "likely to become . . . endangered . . . within the foreseeable future." *Id.* § 1532(6), (20). The statute requires listing species besieged, not only by human threats such as habitat destruction and "overutilization," but also by "disease or predation" or "other natural . . . factors." *Id.* § 1533(a).

102. *See id.* § 1533(a).

103. *Id.* § 704(a).

104. *See* Friends of Animals v. U.S. Fish & Wildlife Serv., 879 F.3d 1000, 1002 (9th Cir. 2018) (describing this delegation of authority).

105. Audubon Soc'y of Portland v. U.S. Army Corps of Eng'rs, No. 15-cv-665, 2016 WL 4577009, at *3 (D. Or. Aug. 31, 2016), *appeal denied*, No. 16-35889, 2017 WL 5125727 (9th Cir. Feb. 6, 2017). Today, the Fish & Wildlife Service permits killing up to 121,504 cormorants annually. U.S. FISH & WILDLIFE SERV., U.S. FISH AND WILDLIFE SERVICE FINAL REPORT: RECOMMENDATIONS FOR IMPLEMENTING A MONITORING STRATEGY FOR DOUBLE-CRESTED CORMORANT SUBPOPULATIONS IN THE UNITED STATES 1 (2022).

106. *See* 16 U.S.C. § 1533(a)–(c).

107. The statutes have created reams of research into animal welfare, ranging from how to avoid inadvertently poisoning birds to raising endangered condors with puppets. *See* Michael G. Anderson, Ray T. Alisauskas, Bruce D. J. Batt, Robert J. Blohm, Kenneth F. Higgins, Matthew C. Perry, James K. Ringelman, James S. Sedinger, Jerome R. Serie, David E. Sharp, David L. Trauger & Christopher K. Williams, *The Migratory Bird Treaty Act and a Century of Waterfowl Conservation*, 82 J. WILDLIFE

harassment to individual listed animals.[108] Theoretically, learning to attend to animals in this individualized way could influence how wildlife managers relate to and manage animals generally.[109]

These statutes are also illuminating for another reason: Assigning zero value to unprotected animals creates headaches for agencies implementing the ESA. Because the statute assigns great significance to endangered species and none to abundant animals, even a minimal threat posed by the latter to the former could necessitate expansive intervention.[110]

Crucially, although nothing in the MBTA or ESA requires agencies to value individual animals for their own sake, nothing bars agencies from considering animals' inherent worth. As with other conservation statutes, agencies retain discretion to navigate the opposing currents of protecting species and protecting individual animals for their own sake.

C. Statutes Conserving Ecological Collectives Without Protecting Individual Animals

A final category of conservation statutes mandates the protection of ecological collectives without codifying specific protections for animals.

Park management falls to the National Park Service (NPS) pursuant to the National Park Service Organic Act and enabling legislation—the statutes that separately establish each park.[111] The Organic Act instructs NPS "to conserve the [parks'] scenery, natural and historic objects, . . . and wild life in such manner and by such means as will leave them unimpaired for the enjoyment of future generations."[112] The statute also empowers the NPS to "provide for the destruction of such animals and plant life as may be detrimental to the use of any" park.[113]

One such detrimental animal, according to NPS, is the white-tailed deer. Unregulated hunting and logging made deer scarce in all areas settled by Europeans by 1790, but deer's circumstances improved in the twentieth century when, like other Americans, they moved to the suburbs.[114] Stocked with mouth-

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MGMT. 247, 253 (2018); John R. Platt, *Saving California Condors with a Chisel and Hand Puppets*, SCI. AM. (July 4, 2018), https://blogs.scientificamerican.com/extinction-countdown/saving-california-condors-with-a-chisel-and-hand-puppets/ [https://perma.cc/FNH8-7RKM].

108. 16 U.S.C. § 1532(19).

109. For example, the Alaska population of one pinniped species, the Steller sea lion, is listed under the ESA, but the California population is not. *Steller Sea Lion*, NOAA FISHERIES (Sept. 18, 2023), https://www.fisheries.noaa.gov/species/steller-sea-lion [https://perma.cc/A7RS-JC4G]. Query the ease with which NOAA Fisheries can treat a Steller sea lion in one place as invaluable while treating it as a nuisance elsewhere.

110. *See* 16 U.S.C. § 1532(3) (defining "conserve" capaciously without reference to cost).

111. 54 U.S.C. § 100101 (Organic Act). For an example of an establishing statute, see 16 U.S.C. § 430g (establishing Gettysburg National Military Park).

112. 54 U.S.C. § 100101(a).

113. *Id.* § 100752.

114. 2014 Antietam Deer EIS at 13.

watering gardens free of predators or hunters, suburbia offers all-you-can-eat buffets to deer willing to tolerate traffic and Labradors.[115] Deer numbers have boomed, including in national parks in the eastern United States, where deer reshape forest habitat.[116] By eating seedlings and saplings, deer prevent new tree growth and clear the way for ferns and unpalatable invasive plants.[117]

Thus, since the 1990s, the Park Service has endorsed professional sharpshooters' killing hundreds of deer annually in parks, ranging from Maryland's Catoctin Mountain Park to New York's Fire Island to Pennsylvania's Valley Forge.[118] Federal employees and contractors descend on the parks at night with high-power, small-caliber rifles to shoot deer as they congregate around bait stations heaped with apples and hay.[119] As deer shootings have increased, so has seedling growth.[120]

Under the National Park Service Organic Act, the NPS has leeway to set animal conservation goals and units of protection as it sees fit, subject to specific statutory guidance for particular parks. NPS also has freedom to incorporate concern for animals' inherent value. As with other conservation statutes, balancing conservation and animal well-being falls to federal agency officials.

* * *

The discussion in this Part has two takeaways. First, key conservation statutes either require or permit agencies to consider individual animals' inherent value in wildlife management. It simply is not the case that such concerns are beyond the remit of federal agencies tasked with conservation mandates. The issue merits more attention from scholars of conservation law.

Second, the mix of statutory attitudes toward individual animals leaves agencies without a developed theoretical framework to consider animals'

115. *See* ANTHONY J. DENICOLA, KURT C. VERCAUTEREN, PAUL D. CURTIS & SCOTT E. HYGNSTROM, MANAGING WHITE-TAILED DEER IN SUBURBAN ENVIRONMENTS: A TECHNICAL GUIDE 3 (2000) (suburb effect).

116. *See, e.g.*, 2009 Catoctin Mountain Deer EIS at 15; Valley Forge Deer EIS at 1-13; Brice B. Hanberry & Phillip Hanberry, *Regaining the History of Deer Populations and Densities in the Southeastern United States*, 44 WILDLIFE SOC'Y BULL. 512, 512 (2020) (discussing the growth in deer populations).

117. Donald M. Waller & William S. Alverson, *The White-Tailed Deer: A Keystone Herbivore*, 25 WILDLIFE SOC'Y BULL. 217, 218–19 (1997); William J. McShea, *Ecology and Management of White-Tailed Deer in a Changing World*, 1249 ANNALS N.Y. ACAD. SCI. 45, 46 (2012).

118. 2009 Catoctin Mountain Deer EIS at 20 (1990s date); 2009 Valley Forge Deer EIS at 2-38 (five hundred and then three hundred deer removed annually); *White-Tailed Deer Management Plan*, NAT'L PARK SERV. (Feb. 15, 2023), https://www.nps.gov/fiis/learn/management/deer-management-plan.htm [https://perma.cc/W596-LL4X] (reporting dozens or hundreds of deer removed annually under "What will be done with the meat?"); *Deer Management Frequently Asked Questions*, NAT'L PARK SERV., https://web.archive.org/web/20230324073534/https://www.nps.gov/cato/learn/nature/deer-management-frequently-asked-questions.htm#collapseCollapsible1674062633974 [http://perma.cc/2YM7-Z5N4] (describing ongoing culling and explaining that between 2010 and 2016, culling reduced the deer population from 123 to no more than twenty per square mile).

119. 2011 Rock Creek Park Deer EIS at 63.

120. *See Deer Management Frequently Asked Questions*, *supra* note 118 (reporting a 19-fold increase in seedling density in Catoctin under "Is deer management working?").

interests in removal decisions. Yet to comply with procedural statutes, agencies must provide rationales for their decisions that the public and judges can understand. The Administrative Procedure Act (APA) requires courts to set aside agency decisions that are "arbitrary, capricious, an abuse of discretion, or otherwise not in accordance with law."[121] And the National Environmental Policy Act (NEPA) instructs agencies to create "detailed statement[s]" for major federal actions "significantly affecting" the environment.[122] These analyses must discuss "reasonably foreseeable environmental effects of the proposed agency action," "any reasonably foreseeable adverse environmental effects which cannot be avoided should the proposal be implemented," "a reasonable range of alternatives to the proposed agency action," "the relationship between local short-term [environmental] uses [and] . . . long-term productivity," and "any irreversible and irretrievable commitments of Federal resources" involved in the action.[123]

Using the APA and NEPA as statutory hooks, animal advocates have increasingly haled agencies into court to challenge their removal decisions. Between 2000 and 2022, sixty-six such lawsuits occurred across the country.[124] Of all God's creatures, horses are the most litigious, accounting for fifty-five cases.[125]

These cases have not resolved how agencies should view individual animals because animal advocates tend to frame their challenges in more traditional APA terms, such as failure to comply with notice and comment requirements.[126] Accordingly, a favorable outcome for plaintiffs does not amount to a vindication of the role of individual animal well-being in agency decision-making. Still, agencies must often respond to animal advocates' concerns. Twenty lawsuits have ended in an opinion in animal advocates'

121. 5 U.S.C. § 706; *see also id.* § 702 (establishing judicial review); Arnold W. Reitze, Jr., *The Role of NEPA in Fossil Fuel Resource Development and Use in the Western United States*, 39 B.C. ENV'T AFF. L. REV. 283, 289–90 (2012) (explaining that plaintiffs may challenge NEPA violations pursuant to the APA).

122. 42 U.S.C. § 4332.

123. *Id.* § 4332(C). This language reflects amendments from the Fiscal Responsibility Act of 2023, which postdated the decisions in the NEPA set compiled for this Article. Pub. L. No. 118-5 § 321, 137 Stat. 10 (2023). "[M]ost of the changes codify longstanding agency practice and are expected to have only modest effects on environmental reviews." Jayni Hein, *Amendments to the National Environmental Policy Act (NEPA): Permitting Reform in Context*, COVINGTON (June 7, 2023), https://www.insideenergyandenvironment.com/2023/06/amendments-to-the-national-environmental-policy-act-nepa-permitting-reform-in-context/ [https://perma.cc/X7UY-3WDK]. I do not expect the amendments to change how agencies approach individual animal well-being in NEPA analyses.

124. For a description of how I located the cases and a list of cases, see Appendix A.

125. *See* Appendix A's equid cases.

126. *See, e.g.*, Friends of Animals v. Pendley, 523 F. Supp. 3d 39, 52 (D.D.C. 2021).

favor—often resulting in voluntary remand, voluntary rescission of the removal decision, or voluntary dismissal pursuant to a settlement agreement.[127]

Absent an overarching normative framework, agencies must sort out how to balance individual animals' inherent value with conservation goals in removal decisions. Agencies' discretion to weigh these concerns likely persists despite the Supreme Court's recent elimination of *Chevron* deference for agency statutory interpretations.[128] In *Seven County Infrastructure Coalition v. Eagle County, Colorado*, a case postdating *Chevron*'s demise, the Court affirmed that "[c]ourts should afford substantial deference" to the manner in which agencies consider environmental effects in NEPA analyses "so long as they fall within a broad zone of reasonableness."[129] Agencies thus have discretion to consider effects to individual wild animals but must do so coherently. For another, agencies continue to enjoy discretion in "'fill[ing] up the details' of a statutory

127. Of the equid cases, I found eighteen that ended favorably for plaintiffs, including decisions in which plaintiffs prevailed on at least one claim and cases that ended in voluntary remand, rescinded decisions, or settlements (which I counted as victories for plaintiffs, though the terms are not public). For voluntary remand, see *Am. Wild Horse Pres. Campaign v. Salazar*, 115 F. Supp. 3d 1, 3–4 (D.D.C. 2012). For decisions rescinded in whole or part, see Joint Stipulation of Dismissal, *Am. Wild Horse Campaign v. Bernhardt*, No. 20-cv-03598 (D.D.C. June 25, 2021); Joint Stipulation of Dismissal, *Return to Freedom v. Bernhardt*, No. 1:21-cv-546-CJN (D.D.C. June 25, 2021); *Am. Wild Horse Pres. Campaign v. Salazar,* 800 F. Supp. 2d 270, 272 (D.D.C. 2011). In *Kathrens v. Zinke*, 323 F. Supp. 3d 1142 (D. Mont. 2018) and *Friends of Animals v. U.S. Bureau of Land Mgmt.*, No. 3:15-cv-0057-LRH-WGC, 2015 WL 555980 (D. Nev. Feb. 11, 2015), courts granted plaintiffs' motions for a temporary restraining order and preliminary injunction, respectively, and the Bureau of Land Management subsequently rescinded the decisions. *See* Joint Motion for Voluntary Dismissal, Kathrens v. Zinke, No. 18-CV-00125 (D. Mont. Dec. 21, 2018); Conditional Joint Stipulation of Voluntary Dismissal Without Prejudice Pursuant to Fed. R. Civ. P. 41(a)(1)(A)(ii), Friends of Animals v. U.S. Bureau of Land Mgmt., No. 15-cv-0057 (D. Nev. Mar. 24, 2015). For decisions deciding at least one claim in animal advocates' favor, see *Am. Wild Horse Pres. Campaign v. Jewell*, 847 F.3d 1174 (10th Cir. 2016); *Friends of Animals v. Culver*, 610 F. Supp. 3d 157 (D.D.C. 2022); *Friends of Animals v. U.S. Bureau of Land Mgmt.*, No. 2:16–cv–1670–SI, 2018 WL 1612836 (D. Or. Apr. 2, 2018); *Am. Wild Horse Pres. Campaign v. Zinke*, No. 16-cv-00001, 2017 WL 4349012 (D. Idaho Sept. 29, 2017); *Friends of Animals v. U.S. Bureau of Land Mgmt.*, No. 16-cv-0199, 2017 WL 5247929 (D. Wyo. Mar. 20, 2017); *Friends of Animals v. Sparks*, 200 F. Supp. 3d 1114 (D. Mont. 2016); *Colo. Wild Horse & Burro Coal. v. Salazar*, 639 F. Supp. 2d 87 (D.D.C. 2009); *In Defense of Animals v. U.S. Dep't of Agric.*, No. 05 CV 2754 PHX FJM, 2005 WL 3413681 (D. Ariz. Dec. 13, 2005). For voluntary dismissals in which plaintiffs stipulated that they had reached settlements with agencies, see Judgment, *Kathrens v. Zinke*, No. 18-cv-01691 (D. Or. Mar. 20, 2020); *Salt River Wild Horse Mgmt. Grp. v. U.S. Dep't of Agric.*, No. 15-cv-01511 (D. Ariz. Dec. 15, 2015); Unopposed Motion to Voluntarily Dismiss Case, *Leigh v. Salazar*, No. 10-cv-00597 (D. Nev. July 25, 2014); Stipulation of Dismissal of Action with Prejudice, *Downer v. U.S. Dep't of Interior*, No. 11-cv-00816 (D. Or. Jul. 6, 2011).

To the equid victories, add *Humane Soc'y of U.S. v. Locke*, 626 F.3d 1040 (9th Cir. 2010) (sea lions); *Audubon Soc'y of Portland v. U.S. Army Corps of Eng'rs*, No. 15-cv-665, 2016 WL 4577009 (D. Or. Aug. 31, 2016) (cormorants).

128. *See generally* Loper Bright Enters. v. Raimondo, 603 U.S. 369 (2024) (overturning Chevron U.S.A., Inc. v. Nat. Res. Def. Council, 467 U.S. 837 (1984)).

129. S. Ct., 2025 WL 1520964, at *8 (2025).

scheme."[130] In any event, assuming for the sake of argument that agencies no longer enjoy discretion in implementing conservation statutes, the presence or absence of a reasoned approach to individual animals is relevant, because it implicates whether agencies have hit upon the "correct" statutory meaning. Part III turns to agencies' efforts to balance individual animals' inherent value against conservation goals.

III.
AGENCIES' STANCE TOWARD INDIVIDUAL ANIMALS IN REMOVAL DECISIONS

Agencies must spackle the gaps left by Congress with respect to wild animals. The Bureau of Land Management and the Forest Service have authority to define "a thriving natural ecological balance" under the Wild Free-Roaming Horses and Burros Act and to decide whether removing "excess" equids is "necessary" to preserve the range.[131] The National Park Service has freedom to determine which, if any, animals are "detrimental to the use of" parks.[132] The Fish and Wildlife Service possesses discretion under the Migratory Bird Treaty Act to deny take permits, even for abundant birds, and NOAA Fisheries enjoy similar authority to reject take permits for sea lions.[133] The ESA grants agencies discretion to determine when abundant animals pose unacceptable risks to listed species and flexibility to pursue solutions other than removal.[134] All statutes leave open the question of what obligations agencies owe to which individual animals.

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130. *See Loper Bright*, 144 S. Ct. at 2263; *see also* Adrian Vermeule, *Chevron by Any Other Name*, NEW DIGEST (June 28, 2024) https://thenewdigest.substack.com/p/chevron-by-any-other-name [https://perma.cc/43Z7-66CQ] (predicting that *Chevron* step two analyses will be converted into "*Loper Bright* delegation" cases).

131. 16 U.S.C. § 1333(b)(2). Even if the agency detects excess equids, "a determination that an overpopulation exists . . . is not sufficient, standing alone, to trigger any duty on the part of" agencies to remove horses. Wyoming v. U.S. Dep't of Interior, 839 F.3d 938, 944 (10th Cir. 2016). The agency must also determine that "action is necessary to remove excess animals," as opposed to "other options (such as sterilization, or natural controls on population levels)." 16 U.S.C. § 1333(b).

132. 54 U.S.C. § 100752. Even upon such a determination, NPS merely "may" rather than must "provide for the destruction of such animals." *Id.* NPS's mandate to "conserve [parks'] scenery, natural and historic objects, and wildlife" also leaves NPS leeway to decide which scenery and wildlife is worth conserving, subject to more specific guidance from individual parks' enabling acts. *Id.* § 100101.

133. Under the MBTA, FWS is not obligated to permit taking migratory birds, even if abundant. The statute requires the Secretary to decide "when, to what extent, if at all, and by what means" taking is compatible with governing treaties and to promulgate regulations accordingly. 16 U.S.C. § 704(a). "The MBTA thus . . . delegates to the Secretary of the Interior broad discretion to implement the Act." Friends of Animals v. U.S. Fish & Wildlife Serv., 879 F.3d 1000, 1004 (9th Cir. 2018). The MMPA sets forth a timeline and procedures for considering whether to remove sea lions eating threatened fishes in the Columbia River but allows the Secretary to "approve or deny" permit applications. 16 U.S.C. § 1389(c)(4), (f)(2)(B); *see also id.* § 1389(f)(1) ("the Secretary *may* issue a permit") (emphasis added).

134. The ESA requires agencies to use "all methods and procedures . . . necessary to bring any endangered species or threatened species to the point" of recovery but leaves agencies free to determine whether removals, as opposed to other management strategies, are "necessary." *Id.* § 1532(3) (defining "conserve"); *id.* § 1533(d),(f) (requiring agencies to promulgate regulations and recovery plans to conserve species).

This Part investigates how agencies exercise their discretion to consider individual animals' well-being. Part III.A explains how I set about answering this question through National Environmental Policy Act analyses. Because NEPA analyses must include detailed statements of removals' environmental effects, these documents provide a rich account of agencies' consideration of effects to individual animals. I assembled and investigated a unique set of more than one hundred NEPA analyses completed by agencies contemplating removal decisions. In particular, I investigated agencies' treatment of abundant animals because their treatment implicates concern for animals' intrinsic value, as discussed in Part II.

In Part III.B, I explain my findings: Agencies widely recognize negative duties to avoid inflicting certain kinds of harm on individual abundant animals, but decisions vary in identifying unacceptable harms and ranking their relative importance. These differences appear both across and within agencies and decisions. Additionally, some agencies go so far as to recognize affirmative duties to rescue abundant animals from difficult ecological conditions.

A. Assembling the NEPA Set

No governmental body tracks which agencies conduct conservation-based removals or how many removals take place nationally. To my knowledge, no nongovernmental organization monitors this information either. I therefore had to compile NEPA analyses using a multi-pronged approach.

1. Defining the Search's Scope

The first challenge was determining which agency decisions would qualify as conservation-based "removal decisions" and what kinds of NEPA documents to review.

For the purposes of my search, I defined "removal" as permanent removal of animals from the wild, either via killing or perpetual captivity. A "removal decision" is any decision in which the agency considered a removal alternative in depth, regardless of whether the agency ultimately decided to remove animals. That said, all but two analyses in the set elected to remove animals.[135] To qualify as "conservation-based," a removal decision must have framed animal abundance as a threat primarily to ecosystems or other wild species.[136] I included

135. For the two decisions that reject removal, see 2005 Caspian Tern EIS at 2-3 to 2-7 (preferring nonlethal redistribution alternative to the lethal alternative), and 2002 Cedar Mountain EA at 8–11 (raising appropriate management level of horses, instead of removing them).

136. This limitation teases out decisions that best illustrate the tension motivating this Article: protecting collectives in nature versus individual animals. To be sure, decisions to remove abundant animals for other reasons, such as risks to human health, also implicate individual animal well-being. But such decisions pit animals against direct human interests and thus involve well-worn tradeoffs between protecting nature and promoting unrelated human benefits. To the extent agencies consider non-conservation-based concerns in removal decisions, drilling down on the conservation aspect of agencies' thinking can enrich understanding of multifaceted agency decisions.

analyses mentioning other considerations—deer-borne tick diseases, for example—so long as the analysis centered land or species concerns as motivating removal.[137]

Next, I had to decide which kinds of NEPA documents to review. NEPA analyses come in two forms. "Environmental assessments" (EAs) examine whether contemplated agency actions will have significant environmental impacts.[138] Typically less than seventy-five pages long, these (relatively) pithy documents satisfy agencies' NEPA obligations, so long as the analyses conclude that environmental impacts will be minimal.[139] For projects expected to cause significant environmental impacts, by contrast, agencies must complete "environmental impact statements" (EISs) running several hundred pages or more.[140] Whether agencies rely on EAs or EISs in the removal context varies across species. For sea lions and wild horses and burros, agencies favor EAs.[141] For owls, deer, and cormorants, agencies have generally completed EISs prior to conservation-based removal. I searched for both kinds of documents.[142]

137. Drawing this distinction is not an exact science. For borderline cases, I relied on NEPA analyses' purpose statements and assessments of public health and safety consequences. For example, I excluded NPS's NAT'L PARK SERV., PEA RIDGE NATIONAL MILITARY PARK DEER MANAGEMENT PLAN AND ENVIRONMENTAL ASSESSMENT (2021), which describes the plan's purpose as "improv[ing] health and safety by managing the deer population to reduce the spread of deer-related disease and the number of vehicle collisions with deer, as well as to protect vegetation." *Id.* at 5. The assessment analyzes human health and safety first, before environmental consequences, and predicts that effects to tick-borne disease and collisions will be "beneficial and long-term." *Id.* at 15–16. By contrast, I included NPS's NAT'L PARK SERV., FIRE ISLAND NATIONAL SEASHORE FINAL WHITE-TAILED DEER MANAGEMENT PLAN AND ENVIRONMENTAL IMPACT STATEMENT (2015), which describes its purpose as "support[ing] protection, preservation, regeneration, and restoration of native vegetation and other natural and cultural resources." *Id.* at 1. The purpose statement subsequently references "reduc[ing] undesirable human-deer interactions" and public education about tick-borne diseases. *Id.* However, the EIS begins its analysis of environmental effects by investigating vegetation impacts, considers effects to public health and safety only toward the end of a long list of consequences, and predicts that these benefits will "not be significant because the Seashore already takes many steps to provide a safe and healthful environment . . . by removing known hazards and applying appropriate measures." *Id.* at 190–95 (quoting "Conclusion" sections). The purpose's wording and the modest expectations for public health and safety suggest that vegetation-based concerns (i.e., ecosystem or land-based concerns) animate the removal decision.

138. 40 C.F.R. § 1501.3; *id.* § 1501.5.

139. *Id.* § 1501.5. Amendments in 2023 codified this page limit. Pub. L. No. 118-5 § 321, 137 Stat. 42.

140. The 2023 NEPA amendments stipulate that EISs should not exceed one hundred and fifty pages, excluding citations and appendices, unless they are of "extraordinary complexity," in which case, they may be up to three hundred pages long, excluding citations and appendices. Pub. L. No. 118-5 § 321, 137 Stat. 41.

141. The equid EAs draw upon EISs for Land Use Plans or Resource Management Plans that set general management approaches for public lands, including appropriate management levels for horses.

142. Where possible, I also sought "records of decision" (ROD)—short documents that constitute agencies' final decisions released after or concurrently with their NEPA analyses. Because records of decision are less detailed than EAs and EISs, I reviewed RODs less for their reasoning but to confirm that agencies generally select the management alternatives proposed in NEPA analyses.

2. Online Database Search

Within these parameters, I sought NEPA analyses regarding the species discussed in Part II—barred owls, equids, sea lions, double-crested cormorants, and white-tailed deer—as well as other species removed for conservation reasons, to the extent that I could find such examples. I first assembled documents from online NEPA databases. BLM's National NEPA Register provides an extensive database of NEPA documents, which I searched in November 2022.[143] My search yielded hundreds of results, eighty-five of which I identified as EAs related to conservation-based equid removals between 2002 and 2022.[144] This set is not comprehensive. Nonetheless, I considered this sample sufficient to create a robust analysis of horse and burro removals in recent years. The eighty-five analyses include three EAs conducted by or in cooperation with the Forest Service. My search did not discover BLM removals of other species.[145]

For other agencies implicated in Part II, I turned to three additional databases. I searched the National Park Service's Planning, Environment, and Public Comment database both for removals in general and for deer removals in particular.[146] I next searched the Environmental Protection Agency's environmental impact statement database for mentions of deer, sea lions, barred owls, and double-crested cormorants, as well as for removals in general.[147] Because EPA's database contains only EISs dating back to 2012, I searched the same terms in NEPAccess, a database developed by the University of Arizona that uses artificial intelligence to comb the internet for NEPA analyses.[148]

These searches located several NEPA analyses for species from Part II, as well as two other removed species.

> *Bison*: In 2017, the Park Service produced an EA to relocate or kill bison on the North Rim of Grand Canyon National Park to protect "park resources, such as water, vegetation, [and] soils," as well as

143. Available at *BLM National NEPA Register – Find a Project*, BUREAU OF LAND MGMT., https://eplanning.blm.gov/eplanning-ui/home [https://perma.cc/A2L8-DRWW].

144. I selected final EAs except for pending decisions in which drafts were the only available analyses. I excluded "Determination of NEPA Adequacy" documents and categorical exclusions.

145. In addition to searching for "horse," "burro," and "herd," I searched the terms "cull," "harvest," and "lethal" to uncover removals of other species.

146. Available at *(PEPC) Planning, Environment & Public Comment*, NAT'L PARK SERV., https://parkplanning.nps.gov [https://perma.cc/BC2A-QDS7]. To search for removals in general, I searched terms such as "cull," "harvest," and "lethal," which produced dozens of results, including a relevant bison EA. Other bison management documents either do not concern conservation-based removals or are unavailable online.

147. Available at *Environmental Impact Statement (EIS) Database*, U.S. ENV'T PROT. AGENCY, https://cdxapps.epa.gov/cdx-enepa-II/public/action/eis/search [https://perma.cc/Y9U6-Y3F3].

148. Available at *About the NEPAccess Project*, NEPACCESS, https://www.nepaccess.org/about-nepaccess [https://perma.cc/FC58-9HA9]. The combined results for "cull," "harvest," and "lethal" across the EPA and NEPAccess databases produce thousands of documents ("harvest" in particular drives results). Rather than sort through many unresponsive results for relevant documents, I supplemented my search with FOIA requests.

archaeological sites.[149]

Cougars: In 2021, FWS completed an EIS to lethally remove cougars from Oregon's Hart Mountain National Antelope Refuge to protect the refuge's dwindling population of California bighorn sheep (a subspecies that, despite its name, exists outside the Golden State).[150]

Though productive, database searches revealed the shortcomings of Internet-based research. Some NEPA analyses exist in databases in name only—that is, without the documents themselves. In some cases, I was able to independently locate documents online, but, in other instances, no publicly available digital records exist.

3. Freedom of Information Act Requests

To expand my research beyond documents available online, I submitted Freedom of Information Act (FOIA) requests to agencies that conduct conservation-based removals: the Forest Service; the National Park Service (NPS); NOAA Fisheries; FWS; and the Corps.[151] I omitted BLM, for which I already had a robust collection of analyses. The requests sought NEPA documents related to any conservation-based removals of native species since 2002, as well as any reports aggregating removal efforts.

Agency responsiveness varied. No agencies I queried track conservation-based removals. Only NOAA Fisheries agreed to conduct a full search as requested. Because of the difficulty of searching for documents scattered across offices, other agencies explained that it would be impossible to respond to the request in a timely fashion without further narrowing the request to particular species, to a shorter timespan (FWS and the Corps), or to particular regions (Forest Service, NPS, and the Corps). Table 1 depicts the searches and results.

149. 2017 Bison EA at 1.

150. 2021 Hart Mountain Cougar EIS at ES-1 to ES-2.

151. The agencies queried exclude Wildlife Services, a component of the Animal and Plant Health Inspection Service (APHIS) within USDA, that killed more than 1.85 million animals in 2022. *2022 Program Data Reports*, ANIMAL & PLANT HEALTH INSPECTION SERV., U.S. DEP'T OF AGRIC., https://www.aphis.usda.gov/wildlife-services/publications/pdr/2022 [https://perma.cc/6U23-VBZR] (last modified July 3, 2024) (select "PDR-G"). With a mission to allow people and wildlife to "coexist," Wildlife Services removes animals posing direct threats to humans, agriculture, and industry rather than to protect nature and does so at the request of other federal agencies, states, or individuals. *About Wildlife Services*, ANIMAL & PLANT HEALTH INSPECTION SERV., U.S. DEP'T OF AGRIC., https://www.aphis.usda.gov/aphis/ourfocus/wildlifedamage/sa_program_overview [https://perma.cc/848K-HJEV] (last modified Mar. 9, 2024); W. Watersheds Proj. v. U.S. Dep't Agric. Animal and Plant Health Inspection Serv. Wildlife Serv., 320 F. Supp. 3d 1137, 1139 (D. Idaho 2018). In keeping with this Article's focus on agency reasoning for conservation-based removals—and to manage scope—I excluded Wildlife Services documents from the analysis. Nonetheless, it merits mention that Wildlife Services has proposed removing animals for conservation reasons. In 2018, a federal district court struck down the agency's proposal to expand activities in Idaho to "encompass killing predators to protect game animals and protected species." *W. Watersheds Proj.*, 320 F. Supp. 3d at 1140. The court granted summary judgment against Wildlife Services because the agency's EA received criticism from "federal agencies with long experience and expertise in managing game animals and protected species," including BLM, the Forest Service, and FWS. *Id.* at 1147, 1150.

FOIA responses yielded more than a dozen pertinent documents, five of which were NEPA analyses identifying new species removed.

> *Galapagos Sharks*: In 2009, NOAA Fisheries approved a plan to remove Galapagos sharks from islands in the French Frigate Shoals to decrease predation on endangered Hawaiian monk seal pups.[152]
>
> *Caspian Terns*: In 2005, to mitigate predation on threatened salmon, FWS—together with NOAA Fisheries and the Corps—decided to relocate at least twelve thousand Caspian terns from the Columbia River Estuary to alternative habitats in the Pacific Northwest.[153] Notably, the agencies considered but rejected lethal removal.[154]
>
> *Glaucous-winged and Western Gulls*: After agencies began relocating Caspian terns, fledglings plummeted beyond expectations.[155] So in 2013, the Corps began killing glaucous-winged and western gulls to decrease predation on tern eggs.[156]

The following table summarizes the NEPA set I compiled; Appendix B catalogs the documents by name. The skew toward wild equids reflects not only the online availability of BLM data but also the multitude of removal decisions associated with wild equids. The set almost certainly excludes some conservation-based removals conducted by federal agencies. My aim, however, is to highlight convergences and divergences in how different agencies approach similar dilemmas, and, for that, the set of NEPA analyses must be crosscutting, not comprehensive.

Table 1: Description of FOIA Searches and NEPA Documents in Set

Lead Agency	FOIA Search	NEPA Documents in Set
BLM	No FOIA request; used agency's online database.	84 EAs (horse & burro[157])

152. 2009 Shark EA at 5. NOAA Fisheries decided to remove forty sharks. *See id.* at 8–11, 42.

153. *See* 2005 Caspian Tern EIS at 2-3 to 2-5.

154. *See id.* at 2-6 to 2-7. As explained in a later EA, the agencies declined to consider adult lethal take because of "the availability of less obtrusive measures," such as egg removal. Moreover, lethal removals "could potentially have a significant impact on [tern] metapopulations," and terns "would likely continue to colonize the site and prey upon ESA-listed salmonids." 2014 Caspian Tern EA at 47. Of the NEPA set, this EA is unique because it involves removing only eggs and therefore does not implicate typical concerns about animal suffering. But I decided to include the EA because egg removal affects sentient animals, including nesting terns, co-nesting birds, and fishes.

155. *See* 2013 Gull EA at 14–15.

156. *See id.* at 11–18 (describing history and the effects of tern management); *id.* at 20–21 (describing a proposed alternative to killing gulls).

157. Two EAs were completed in cooperation with the Forest Service. To avoid double-counting, I list them only for BLM in the table.

Forest Service	Unfulfilled. Located 3 EAs, two of which were conducted with BLM, on BLM's database.	1 EA (horse & burro)
NPS	Narrowed request to include Indiana Dunes National Lakeshore and Cuyahoga Valley National Park. Independently located analyses for Rock Creek Park, Valley Forge National Historic Park, Catoctin Mountain Park, and Fire Island National Seashore, Grand Canyon, and Chesapeake and Ohio Canal/Harper's Ferry National Parks.[158]	2 EAs (1 deer; 1 bison) 7 EISs (deer)
NOAA Fisheries	Conservation-based removals since 2002.	3 EAs (sea lion) 1 EIS (Galapagos shark)
FWS	Completed; narrowed to conservation-based double-crested cormorant removals from 2018-2023.	4 EISs (1 double-crested cormorant; 1 Caspian tern; 1 barred owl; 1 cougar[159])
Corps	Narrowed to conservation-based removals in the Snake & Columbia Rivers from 2012 to 2023.	2 EAs (1 glaucous-winged & western gulls; 1 Caspian tern[160]) 1 EIS (double-crested cormorant[161])
Total	Conservation-based removals since 2002	105 unique EAs and EISs

4. Reviewing NEPA Analyses

Environmental impact statements and environmental assessments share a common structure that facilitates cross-comparisons. All NEPA analyses discuss: the purpose and need for the proposed action (as relevant here, the asserted need to curb an overabundant population); usually three or more alternative approaches, including a "no-action" alternative and the agency's "preferred" alternative; relevant environmental factors, such as water, vegetation, and wildlife; and each alternative's effects on those factors.

In general, I focused my review on background and purpose statements, descriptions of alternatives, and discussions of anticipated effects on wildlife. I

158. I also located an EIS for deer removal in Gettysburg National Park. Because it dates to 1995, outside the approximately twenty-year analysis, I excluded it from the set. Nonetheless, I reviewed the EIS for comparison's sake.

159. Double-crested cormorant and cougar EISs were completed in cooperation with APHIS. The Caspian tern EIS was completed in cooperation with the Corps and NOAA Fisheries.

160. The Corps completed the Caspian tern EA in cooperation with the Bureau of Land Reclamation.

161. Completed in cooperation with NOAA Fisheries, FWS, and APHIS.

also reviewed appendices that contained guidance for removal and reproductive controls or responses to public comments.

At the most basic level, I wanted to learn whether agencies have expanded their recognition of individual animals' inherent value beyond the two statutory injunctions in the Wild Free-Roaming Horses and Burros Act and the Marine Mammal Protection Act. I thus sought to identify any consideration of individual abundant animals' well-being through (1) discussions of possible effects on "individual" animals; (2) detailed accounts of effects on animals at the individual level (e.g., effects to body health and behavior); and (3) references to "humane" or "inhumane" treatment, cruelty, pain, stress, or suffering.

I also wanted to determine how agencies answer the second-order question of what we owe individual wild animals. As the prominent philosophical frameworks in Part I show, even if agencies agree that individual animals have inherent value, they may disagree about whether animals' moral standing gives rise to negative or positive obligations.[162] To answer these questions, the following discussion distinguishes between the negative and positive duties that agencies recognize toward abundant animals.

B. Abundant Animals' Well-Being in NEPA Analyses

As a threshold matter, NEPA analyses reveal that agencies regularly consider abundant animals' well-being in conservation-based removal decisions. In other words, agencies' widespread reliance on removals is not the result of blanket indifference to individual animals' inherent value. A number of factors may underlie agencies' valuing individual animals for their own sake: (1) the explicit mention of inherent value in conservation statutes, (2) agency officials' own intuitions, (3) litigation pressure, or (4) public pressure more generally.[163]

Agencies primarily recognize individual animals' interests as constraining whether and how they conduct removals. That is, individual animals' inherent value operates as a limit on how many animals agencies remove and what methods agencies deploy to capture or kill them.[164]

Yet agencies sometimes cite abundant animals' interests as supporting or even requiring removals. Asserting that overabundant animals lead difficult lives in the wild, agencies claim that humaneness requires capturing or killing abundant animals to alleviate their suffering.[165]

Inconsistencies within and across agency decisions make it difficult to identify a theoretical framework underlying removal decisions; instead, agencies' treatment of animals seems haphazard. These regulatory approaches exacerbate, rather than resolve, the confusion sewn into conservation statutes.

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162. *See supra* Part I.B.
163. In future work, I hope to parse through these causes.
164. *See infra* Part III.B.1.
165. *See infra* Part III.B.2.

1. Negative Duties to Abundant Animals

In general, NEPA analyses focus more on negative duties than positive ones. These obligations comprise efforts to (1) minimize animal removal, (2) avoid nonlethal actions that stress animals, and (3) avoid inhumane removal methods. Agencies disagree about which harms are most important to avoid.

a. Minimizing Animal Removal

Despite statutory permission to remove wild animals, several agencies seek to minimize the number of animals they remove. Agencies' alternate methods include hazing animals, reproductive control, and, at the most extreme, refusing to carry out statutory mandates to perform removals. However, agencies, and even individual analyses, are often internally inconsistent as to the benefits of leaving animals in the wild.

To decrease necessary removals, some NEPA analyses require or encourage "hazing" animals—that is, employing techniques to "scare animals away and instill in them a fear of humans."[166] The Corps' 2015 EIS adopts a management plan for double-crested cormorants that includes chasing birds with boats bearing cracker shells and pyrotechnics.[167] Doing so is necessary, the Corps explains, to comply with depredation permits issued by FWS, "which typically specif[y] use and integration of non-lethal techniques."[168] Similarly, NOAA Fisheries' 2008 EA recommends hazing sea lions to supplement removals. Boat-borne government workers chase sea lions downstream, pursuing them with rubber projectiles and "seal bombs"—underwater explosives—while cracker shells and pyrotechnics fill the air with blasts and flashes.[169] NOAA Fisheries proposed to use 2,500 vessel chases,[170] 14,000 cracker shells,[171] and 10,000 pyrotechnics in one season.[172]

Agencies have also sought to avoid lethal removals through reproductive control. For example, the Park Service has committed to reduce deer killings by choosing management alternatives that combine sharpshooting with vaccinating 90 percent of does with contraceptives, once such contraceptives become

166. *California Outdoors Q&A*, CAL. DEP'T. OF FISH & WILDLIFE, https://wildlife.ca.gov/language/en%20US/COQA/tag/hazing#:~:text=Urban%20coyotes&text=A%3A%20Hazing%20is%20a%20process,well%2Dbeing%20of%20the%20animal [https://perma.cc/B27U-UGW4].

167. 2015 Cormorant EIS at ES-14 to ES-15 (describing hazing as part of Plan C-1); *id.* at 2-18 to 2-19 (describing hazing techniques); *id.* at ES-28 (selecting Alternative C-1 as a preferred alternative).

168. *Id.* at 2-49. FWS's 2020 EIS approved a standing depredation permit that also allowed lethal take "only in conjunction with an established nonlethal harassment program." 2020 Cormorant EIS at 12.

169. 2008 Sea Lion EA at 2-7 to 2-11.

170. *Id.* at 2-8.

171. *Id.* at 2-9.

172. *Id.* The 2020 EA does not require hazing, but it "[e]ncourage[s] staff to consider using non-lethal measures." 2020 Sea Lion EA at 24.

available.[173] In its Fire Island EIS, the NPS explained that this contraceptive strategy, rather than the "environmentally prefer[red]" approach of lethal removal, has "gained more attention as the public has become more interested in wildlife management decisions."[174] In all but one deer NEPA analysis, the agency selected an alternative involving contraception, subject to the development of technology that meets a list of criteria (multiple-year efficacy, delivery by darting, and so on).[175]

BLM offers the most extreme version of resistance to animal removal, contravening congressional directives. Despite the Wild Free-Roaming Horses and Burros Act's injunction to kill excess horses if necessary, for decades, Congress forbade the use of appropriated funds to kill healthy equids.[176] This changed in 2004, when Congress granted funding to BLM without any prohibition on killing healthy horses.[177] BLM refused to comply with its

173. 2014 Antietam Deer EIS at 86–87; 2014 Cuyahoga Deer EIS at 2-2, 2-18 to 2-19; 2011 Rock Creek Park Deer EIS at 68; 2009 Valley Forge Deer EIS 2-58 to 2-59 (selecting Alternative D, combining contraception with shooting, as the NPS preferred alternative). *But see* 2009 Catoctin Mountain Deer EIS at 61 (preferring an alternative that includes only lethal removal).

174. 2015 Fire Island Deer EIS at 63 (first quote); *id.* at 39–40 (second quote); *see also* 2009 Valley Forge Deer EIS at 2-58 to 2-59 (deeming the lethal removal alternative "environmentally preferred" because it would "best protect the biological and physical environment by ensuring immediate reduction in deer population numbers" but ultimately selecting an alternative that also used reproductive control as the "NPS Preferred Alternative").

175. 2009 Valley Forge Deer EIS at 2-29 to 2-31; 2011 Rock Creek Park Deer EIS at 57; 2012 Indiana Dunes Deer EIS at 51; 2014 Antietam Deer EIS at 69; 2014 Cuyahoga Deer EIS at 2-16; 2015 Fire Island Deer EIS at 40; 2017 Chesapeake Deer EA at 37. *But see* 2009 Catoctin Mountain Deer EIS at 42 (selecting lethal alternative only). One should not overstate the NPS's commitment to deer contraception. Because of technological limitations, none of the NPS's NEPA analyses rely on contraception in the near term. Progress has been slow: As early as 1995, NPS highlighted contraception as a promising means of curbing deer in Gettysburg National Park, yet no analysis in the set identifies a workable contraceptive option. NAT'L PARK SERV., WHITE-TAILED DEER MANAGEMENT PLAN, FINAL ENVIRONMENTAL IMPACT STATEMENT 36–38 (1995) [hereinafter 1995 Gettysburg Deer EIS]. *But see* 2015 Fire Island Deer EIS at D-1 to D-2 (discussing a research study of reproductive control on Fire Island National Seashore's deer population from 1993 to 2009). Some argue that agencies are slow-peddling research and acceptance of deer contraceptives for political reasons. *See* Allen T. Rutberg, *Managing Wildlife with Contraception: Why Is It Taking So Long?*, 44 J. ZOO & WILDLIFE MED. S38, S40–41 (2013).

176. *See* U.S. GOV'T ACCOUNTABILITY OFF., GAO-09-77, EFFECTIVE LONG-TERM OPTIONS NEEDED TO MANAGE UNADOPTABLE WILD HORSES 9–10 (2008); 2020 Moriah EA at 49–50. Congress's longtime restriction of BLM funds for killing healthy horses effectively applied to the Forest Service, which transferred gathered horses to BLM. When the Forest Service contemplated changing this arrangement, Congress likewise restricted the Forest Service's funds. *See* Scott Sonner, *Forest Service's Corral for Wild Horses Seen as Step to Slaughter*, LAS VEGAS REV.-J. (Jan. 15, 2019), https://www.reviewjournal.com/local/local-nevada/forest-services-corral-for-wild-horses-seen-as-step-to-slaughter-1574110/ [https://perma.cc/89CX-X5A4] (describing the Forest Service plan); Press Release, Cong. Ted Lieu, Rep Lieu Calls for Increased Protections for Wild Horses at Devil's Garden Wild Horse Territory (July 14, 2022), https://lieu.house.gov/media-center/press-releases/rep-lieu-calls-increased-protections-wild-horses-devil-s-garden-wild [https://perma.cc/B4X8-GQC4] (describing Congress's response).

177. GOV'T ACCOUNTABILITY OFF., *supra* note 176, at 9–10; *see Overview: The BLM Budget Debate*, AM. WILD HORSE CAMPAIGN, https://americanwildhorsecampaign.org/media/overview-blm-

statutory mandate all the same. Citing "concerns about public and congressional reaction to the large-scale slaughter of thousands of healthy horses,"[178] BLM declined to kill healthy equids, even though its position was "not in compliance with" the Wild Free-Roaming Horses and Burros Act.[179] Instead, BLM pays for unadopted horses to go to long-term holding facilities, typically privately-managed pastures in the Great Plains.[180] More than sixty thousand formerly wild horses live in such off-range facilities.[181] Since 2010, Congress has ceased to appropriate funds to kill healthy excess horses.[182]

BLM also aims to limit the number of horses it removes through widescale fertility control, vaccinating females annually or every few years.[183] Less commonly, NEPA analyses elect to geld or spay animals or fit mares with IUDs before returning them to the range.[184]

BLM goes to great lengths to explain why its interventions for equids are minimally stressful and only slightly behaviorally disruptive.[185] A mare treated

budget-debate [https://perma.cc/2G8R-G5ZM] (last visited Sept. 20, 2024). *Compare* Consolidated Appropriations Resolution, 2003, Pub. L. No. 108-7, 117 Stat. 11, 217 (2003) (prohibiting BLM funds from being used to destroy healthy horses), *with* Consolidated Appropriations Act, 2005, Pub. L. No. 108-447, 118 Stat. 2809, 3039 (2004) (without any such prohibition).

178. GOV'T ACCOUNTABILITY OFF., *supra* note 176, at 10.

179. *Id.*

180. *See Program Data*, *supra* note 79 (Compare "Adoptions," "Sales," and "Transfers" to "Removals" for each year); CAROL HARDY VINCENT, CONG. RSCH. SERV., WILD HORSES AND BURROS: ISSUES AND PROPOSALS 9 (2011) ("Burros have a higher adoption rate because they have strong popular appeal, there are fewer of them than horses, they are less expensive to care for than horses, and they are good guard animals."); 2022 North Lander at 30 (describing transfer to long-term holding facilities).

181. *Program Data*, U.S. BUREAU OF LAND MGMT., https://www.blm.gov/programs/wild-horse-and-burro/about-the-program/program-data [https://perma.cc/AY64-GB5B] (last updated Sept. 2024) (under the "Off-Range Holding" tab).

182. *See Congress Again Opposes Killing Wild Horses or Selling Them to Slaughter*, RETURN TO FREEDOM (Feb. 14, 2019), https://returntofreedom.org/congress-again-opposes-killing-wild-horses-or-selling-them-to-slaughter/ [https://perma.cc/H7RZ-LJTJ] (referring to Congress's inclusion of appropriations language forbidding the killing of healthy horses every year since 2010); In Defense of Animals v. Salazar, 675 F. Supp. 2d 89, 101 (D.D.C. 2009) ("For the 2010 fiscal year, Congress has provided that appropriations for the Department of the Interior 'shall not be available for the destruction of healthy, unadopted, wild horses and burros in the care of the Bureau of Land Management or its contractors or for the sale of wild horses and burros that results in their destruction for processing into commercial products.'").

183. *See, e.g.*, 2012 Challis EA at 15 (embracing solution involving fertility vaccines); 2019 Range Creek EA at 13–14 (same); *see also* BUREAU OF LAND MGMT., REPORT TO CONGRESS: AN ANALYSIS OF ACHIEVING A SUSTAINABLE WILD HORSE AND BURRO PROGRAM 10 (2020) (discussing the necessary frequency of fertility vaccines).

184. *See, e.g.*, 2011 Three Fingers EA at 4 (gelding); 2021 Calico Complex EA at 58–59 (spaying). *But see* 2016 Conger EA at 49 ("Wild horses are rarely gelded and released back into the wild."); BUREAU OF LAND MGMT., REPORT TO CONGRESS, *supra* note 183, at 22 ("BLM's attempts to study the outcomes of mare sterilization via spaying have consistently been slowed by litigation."). For IUDs, *see, e.g.*, 2020 Swasey HMA EA at 12–13; 2020 Nev. Wild Horse Range EA at 29; 2020 Confusion HMA EA at 8–10.

185. *See, e.g.*, 2021 Pancake Complex EA at 126–53; 2018 Beaty Butte EA at 35–43; 2012 Challis EA at 37–40.

with one type of contraceptive vaccine, BLM notes, might exhibit "higher infidelity to [her] band stallion during the non-breeding season."[186] But "even if subtle alterations in behavior may occur, this is still far better than the alternative . . . being eliminated permanently from the range."[187]As for geldings, social rank is "directly correlated to the age at which the horse was castrated, suggesting that social experiences prior to sterilization may influence behavior afterward."[188] Replying to commenters' objections that gelded stallions might "lose much of their masculine behavior," BLM explains that it "fully expects that geldings would remain feisty and unruly."[189] "There is absolutely no evidence that" a gelded horse "would become docile or obedient," although it "could have a different set of behavioral priorities than an intact stallion."[190]

BLM goes so far as to argue that contraception would improve individual horses' lives. "The potential multi-year reprieve from foaling would greatly increase overall health and fitness of" mares.[191] If these mares later reproduced after the contraceptive's effects expired, their "future foals would be expected to be healthier overall and would benefit from improved nutritional quality in the mares' milk."[192] And castration, BLM suggests, may "increase survival as males are released from the cost of reproduction."[193]

Underlying these efforts to limit removals is the implication that animals' lives in the wild have value. Agencies often strive to leave animals in the wild, even if doing so requires imposing psychological or physical harm. Better to be stressed in the wild than to be dead or in captivity, the reasoning seems to run.

That proposition seems reasonable enough, but agencies' analyses are often internally inconsistent about whether animals' remaining in the wild matters. As discussed in Part III.A, NEPA analyses always include a "no-action" alternative in the range of policy choices considered.[194] Yet discussions of no-action alternatives usually say little to nothing about how avoiding removals may benefit overabundant animals.[195] This inconsistency reaches full expression in

186. 2012 Challis EA at 39.

187. *Id.*; 2022 Bordo Atravesado EA at 104; 2020 Four Mile HMA EA at 53.

188. 2021 Pancake Complex EA at 128.

189. 2016 Conger EA at 51; *see also* 2021 Pancake Complex EA at 129–30 (Gelded horses would retain their "rebellious and feisty nature, [and] their defiance of man.").

190. 2016 Conger EA at 51; 2021 Pancake Complex EA at 129.

191. 2012 Challis EA at 39.

192. 2022 Sinbad EA at App'x I at 114.

193. 2017 Antelope & Triple B EA at 142. The National Park Service, for its part, also aims to avoid distorting deer social dynamics. NPS's criteria for approving contraceptives include "minimal impact on deer behavior," including "reproductive behaviors [and] social behaviors." *See, e.g.*, 2015 Fire Island Deer EIS at 41.

194. *See supra* Part III.A.4.

195. For examples of no-action discussions that omit the benefits of allowing abundant animals to continue living in the wild, see 2022 Little Fish Lake EA at 39–41; 2022 Stone Cabin Complex EA at 44–45; 2022 Spring Mountains EA at 41; 2015 Cormorant EIS at 4-7; 2010 Stinkingwater EA at 15; 2009 Shark EA at 34; 2005 Caspian Tern EIS at 4-4 to 4-6. That said, some analyses acknowledge

analyses by the Park Service, which claims that killing deer is "not necessarily [an] adverse impact[]" to deer.[196] In other words, within a single analysis, deer's value morphs; their well-being counts for nothing when NPS decides whether to kill them but counts for something when NPS determines how many deer to remove.[197] The same variation in status applies to barred owls, bison, cougars, and other abundant animals that agencies remove.[198]

By declining to recognize the benefits of non-removal to individual animals, agencies systematically understate the upsides of refraining from removal. And they also create inconsistency within decisions. If agencies seek to apply hazing or birth control to allow animals to stay on the range, it makes no sense to ignore the upside of animals' staying on the range in no-action alternatives. This logic applies even if the no-action alternative also has downsides. A coherent analysis would note the benefits and harms of each alternative consistently.

In sum, agencies take steps to decrease the number of individual animals removed. That commitment varies in strength; BLM is the only agency that refuses to kill healthy overabundant animals in the context of removal decisions. Nonetheless, agencies apparently accept that wild animal lives are worth living and that animals should remain in the wild when possible. Agencies' common failure to discuss the upsides of no-action alternatives creates incoherence within individual NEPA analyses.

b. Minimizing Stress

Whereas some NEPA analyses prioritize keeping animals alive in the wild, others emphasize keeping them stress-free. This priority creates tension with the goal to minimize removals through stressful, nonlethal methods.

Consider FWS's approach to barred owl removal. To decide whether to intervene to protect northern spotted owls, FWS took the novel step of convening a "Barred Owl Stakeholders" group run by a professional ethicist.[199] The group

upsides of non-removal to equids. *See, e.g.*, 2021 Piceance-East Douglas EA at 37 ("The No Action Alternative would have no direct effects on wild horses in regard to physical and/or emotional stresses due to wild horse gather operations or the fertility control treatments that would not be utilized in order to reduce the wild horse population recruitment rate."); 2017 Stinkingwater EA at 46 ("[R]isks to horses due to gathering, handling, and transport would be avoided.").

196. 2017 Chesapeake Deer EA at 110; 2014 Antietam Deer EIS at 229; 2014 Cuyahoga Deer EIS at 4-20; 2011 Rock Creek Park Deer EIS at 192.

197. *See* 2017 Chesapeake Deer EA at 110; *see also, e.g.*, 2014 Antietam Deer EIS at 230–32 (discussing no-action and nonlethal alternatives only in terms of potential downsides to deer, without acknowledging the benefits of continued life); 2014 Cuyahoga Deer EIS at 4-21 to 4-25 (same).

198. *See* 2013 Barred Owl EIS at 120 (failing to consider the benefits to animals allowed to remain in the wild under the no-action alternative); 2017 Bison EA at 72–74 (same); 2021 Hart Mountain Cougar EIS at 4-6 (same). The Park Service's EA for bison removal predicts that "hunting . . . [is] likely to have beneficial effects" on bison, driving home its focus on population effects. 2017 Bison EA at 74.

199. *See* 2013 Barred Owl EIS at 188–91.

set out to examine the barred owl debacle, aiming to do "everything possible to prevent owls from [experiencing] physical or other suffering," incorporating "the values of compassion and avoidance of suffering, a focus on the well-being of owls themselves, [and] resisting management solutions that would too easily support lethal removal without sufficient reason and reflection."[200] As the barred owl EIS explains, "most participants believed that, whether or not humans were the cause of the barred owl's range expansion, society is responsible for protecting the well-being of both barred and spotted owls."[201] Ultimately, most stakeholders coalesced around killing barred owls to save northern spotted owls, although "[n]o one was enthusiastic about this alternative."[202]

For the stakeholders, killing owls quickly was kinder than stressing owls out. "Removing nestlings and sterilizing adults were also considered but would result in high levels of stress and mortality from the capture and handling," the EIS explains.[203] It continues: "The participants determined this to be arguably no better than lethal removal in many cases, and [the method] was likely to be inhumane as well due to pain and suffering."[204]

Adopting this reasoning, FWS rejected relocating barred owls, observing that "[t]ranslocated birds are often at a disadvantage, as they do not know the local habitat and food as well as local owls."[205] Concern about "stress on the birds" shaped FWS's approach enough that it eliminated alternatives solely reliant on capturing barred owls.[206]

Opting for lethal removal over stressful nonlethal management is a defensible position. Moreover, the approach can cohere with other decisions that use hazing and birth control if the idea is to use nonlethal methods only when they pose insignificant risk of death. But under that guiding principle, one would expect agencies to discuss in more detail what level of fatality risk is unacceptable and at least to acknowledge stress as a downside in decisions that call for hazing.

The Park Service likewise cites stress as a reason to kill deer rather than surgically sterilize them. The NPS explains: "In addition to the stress of the capture, individual animals would also be stressed by tranquilizers/anesthesia,

200. *Id.* at 189–90; *see generally* William S. Lynn, *Bringing Ethics to Wild Lives: Shaping Public Policy for Barred and Northern Spotted Owls*, 26 SOC'Y & ANIMALS 217 (2018) (describing process of leading stakeholder committee in ethics discussions).

201. 2013 Barred Owl EIS at 189.

202. *Id.* at 190.

203. *Id.*

204. *Id.*

205. *Id.* at 21.

206. *Id.* at 22. The EIS also mentions the lack of interest in receiving captured barred owls from states in the birds' pre-1900 historical range. *Id.* at 21. This limitation no doubt played a role in FWS's decision, but, for present purposes, what matters is that FWS currently defends lethal removal as the more humane option. The EIS proposes to trap a few birds but only as many as may be relocated to suitable housing facilities. *Id.* at 22 (describing the "combined" approach); *id.* at 45–46 (choosing the combined approach as the preferred alternative).

surgical procedures, and recovery, which could increase the mortality rates of sterilized individuals."[207] Because of "stress to the animals," as well as feasibility concerns, NPS dismissed this alternative.[208]

Agencies' aversion to causing psychological suffering is further evidence of caring about individual abundant animals. But the posture toward stress also reveals ambiguity, if not confusion, about agency obligations to wildlife. Some NEPA analyses treat inflicting stress as a harm worse than death, whereas others embrace intentionally stressful means of animal control, eliding such measures' downsides.[209]

c. Minimizing Inhumane Killing Methods

Across almost all NEPA analyses, agencies observe a duty to avoid causing physical or psychological suffering to animals removed.

It may seem obvious that an agency should remove animals humanely, but the federal government has not always taken this approach. At the turn of the twentieth century, federal officials cooperated with state agencies and trappers to catch and kill predators with steel traps and carcasses salted with strychnine.[210] As recently as 1992, the U.S. Department of Agriculture killed more than four thousand coyote pups by "denning," a process that involves either dragging animals from their dens to strangle, shoot, or club them, or, more gruesome still, trapping inhabitants inside dens set aflame.[211]

By contrast, the modern NEPA analyses in the dataset reveal a preoccupation with removal methods' effects on individual animals. Take FWS's discussion of cougar removal, which proposes relying on gun-toting professional trackers with hounds as a primary means of killing cougars, along with secondary methods of trapping and euthanasia in more inaccessible terrain.[212] In reaching this proposal, FWS's analysis recognizes cougars as sentient individuals, whose suffering matters:

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207. 2012 Indiana Dunes Deer EIS at 86; *see also, e.g.*, 2017 Chesapeake Deer EA at 68 (highlighting the same quote); 2014 Antietam Deer EIS at 125 (same).

208. 2012 Indiana Dunes Deer EIS at 86.

209. *Compare* 2012 Indiana Dunes Deer EIS at 86 (rejecting nonlethal techniques that would stress deer), *with* 2022 Bordo Atravesado EA at 104 (suggesting that even invasive interventions are preferable to removing horses from the wild).

210. *See* K.A. Fagerstone, J.J. Johnston & P.J. Savarie, *Predacides for Canid Predation Management*, 19 SHEEP & GOAT RES. J. 76, 76 (2004) (detailing the use of traps and poisons); Donald W. Hawthorne, *The History of Federal and Cooperative Animal Damage Control*, 19 SHEEP & GOAT RES. J. 13, 13 (2004) (illustrating the use of traps, poison, and den hunting).

211. David Hoch & Will Carrington Heath, *Tracking the ADC: Ranchers' Boon, Taxpayers' Burden, Wildlife's Bane*, 3 ANIMAL L. 163, 170 (1997); *see also* Cassuto & DiBenedetto, *supra* note 68, at 57–59 (detailing Wildlife Services' modern day controversial methods to control wild animals). The USDA still practices denning today, but the practice now involves luring adults out with a distressed coyote pup call, shooting them, and then fumigating the den to kill pups. RISK TISCHAEFER, U.S. DEP'T OF AGRIC., COYOTES: WILDLIFE DAMAGE MANAGEMENT TECHNICAL SERIES 7 (2020).

212. 2021 Hart Mountain Cougar EIS at 2-10.

> [I]ndividual cougars would be directly affected by the process of lethal removal . . . . If they were tracked and chased by hounds, they would undergo stress from fear during the chase and subsequent cornering . . . . If they were captured in a box trap, they would also be stressed at least during the initial hours of capture as they attempted to escape. If they were captured by a foothold trap . . . they would experience stress from fear, pain from the trap, and possible injury from attempts to escape. In all these cases, they would likely experience additional stress as the human approached them before being dispatched by a carefully aimed lethal gunshot . . . .[213]

After further discussing physical pain associated with removal methods, FWS concludes that "[t]here is no practical field method of lethal removal that would . . . [avoid] some degree of stress and pain experienced by the targeted cougar."[214] But FWS seeks to minimize both by deploying only "experienced personnel committed to ethical and humane practices" and by "prioritiz[ing] methods that minimize cougar pain and suffering."[215]

Similar commitments to humaneness abound in other NEPA analyses. In some cases, these considerations reflect statutory requirements discussed in Part II. But NEPA analyses value humaneness above and beyond statutory mandates. As early as 2008—before the MMPA required humaneness in sea lion removal—NOAA Fisheries prioritized "humane measures" for killing sea lions, even though "Section 120 [did] not require that . . . lethal removal be humane."[216] The Park Service likewise vows to avoid inflicting suffering, although its Organic Act makes no mention of humaneness. "Every effort [is] made to make [deer] shootings as humane as possible," and teams shooting bison must "consider the caliber of ammunition, shot placement, and other factors to ensure the humaneness of the action."[217]

Notwithstanding agencies' widespread commitment to humaneness, the commitment wavers across decisions. For example, FWS sets granular conditions on barred owl killing, regulating the gun used and maximum distance for a kill to ensure "a quick and humane death."[218] In the case of cougars, however, FWS merely "prioritizes" more humane methods over others.[219] If remote terrain requires using traps that entail significant stress and pain, so be it. As for cormorants, FWS endorses a slew of "humane" methods including shooting, cervical dislocation, carbon dioxide asphyxiation, or "other methods

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213. *Id.* at 4-6.

214. *Id.*

215. *Id.*

216. *See* 2008 Sea Lion EA at 2-2 (first quote); Decision Memorandum from D. Robert Lohn, Regional Administrator, U.S. Dep't of Com., to James W. Balsiger, Acting Assistant Administrator for NOAA Fisheries 14 (Mar. 12, 2008) (second quote) (on file with author).

217. *See, e.g.*, 2014 Antietam Deer EIS at 77 (first quote); 2017 Bison EA at 24 (second quote).

218. 2013 Barred Owl EIS at xxix (quote); *see id.* at 364–65 (detailing the gun usage and distance restrictions).

219. 2021 Hart Mountain Cougar EIS at 4-6.

recommended by the American Veterinary Medical Association."[220] It seems unlikely that all of these measures are equally humane, but FWS declines to differentiate among them.[221]

In two analyses, agencies fail to discuss humaneness at all. NOAA Fisheries' removal of Galapagos sharks from islands in the French Frigate Shoals contains the most glaring omission.[222] Published only one year after the agency voluntarily prioritized humaneness in sea lion removal, the shark EA never mentions humaneness.[223] Instead, it greenlights harpooning sharks with barbed shafts and dragging them to shore for euthanasia.[224] Although the euthanasia itself might prove painless, the path to get there sounds markedly unpleasant. Likewise, the Corps nowhere discusses humaneness in its decision to shoot gulls preying upon Caspian tern eggs and chicks.[225]

Despite some variation in agency recommendations, however, the majority of NEPA analyses explicitly consider the humaneness of their removal methods. On the whole, agencies attempt to minimize inhumane killing of animals.

* * *

Agencies' efforts to decrease removals, avoid stressful removal alternatives, and select humane removal methods demonstrate that agencies view individual animals as beings that can suffer and whose suffering matters. Agencies recognize a duty to avoid causing suffering, albeit in ways that are sometimes inconsistent across and within agencies, and incoherent within decisions.

2. Positive Duties to Abundant Animals

Agencies recognize positive duties to members of a handful of overabundant species. Horses and burros, agencies claim, should be removed for their own good. Deer and bison earn no such commitments from the Park Service, but NEPA analyses nonetheless suggest that these grazers' well-being supports removal decisions.

Starting with horses and burros, BLM and the Forest Service are unique among agencies in my analysis in that they recognize a duty to rescue overabundant animals. Although their primary justification for removal is the

220. 2020 Cormorant EIS at 161.

221. *See id.* at 108–09 (refusing commenters' request to ban cervical dislocation and high pressure hoses to destroy active nests).

222. *See* 2009 Shark EA at 5 (summarizing effects).

223. *See* 2008 Sea Lion EA at 2-2.

224. *See* 2009 Shark EA at 22–24. Despite its indifference to shark suffering, NOAA Fisheries apparently recognizes that members of the public might care and, for that reason, selects smaller-scale culling: "[A] highly focused, selective removal of targeted individual predators tends to be less controversial but [could] still be effective." *Id.* at 25.

225. *See* 2013 Gull EA at 20–21 (prescribing the kill method); *id.* at 30 (describing the effects on gulls in terms of the population, not individuals).

need to protect land, the agencies' NEPA analyses invoke another rationale as well: the duty to save horses and burros from their own success.[226]

By BLM's telling, when an animal population reaches an environment's carrying capacity, resources become scarce, creating intolerable suffering for abundant creatures. Twenty of BLM's NEPA analyses state that humaneness necessitates intervention: "While some members of the public have advocated 'letting nature take its course', allowing horses to die of dehydration and starvation would be inhumane treatment . . . ."[227]

Still more analyses describe in detail the harms of pursuing a no-action alternative:

> As the vegetative and water resources are over utilized and degraded to the point of no recovery as a result of the wild horse overpopulation, wild horses would start showing signs of malnutrition and starvation. The weaker animals, generally the older animals, and the mares and foals, would be the first to be impacted. It is likely that a majority of these animals would die from starvation and dehydration . . . .[228]

Such suffering, BLM claims, would trigger a duty to intervene. "Emergency removals could be expected in order to prevent individual animals from suffering or death."[229]

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226. *See infra* note 232 and accompanying text.

227. 2022 Little Fish Lake EA at 23; 2023 Roberts Mountain EA at 26; 2023 Stone Cabin Complex EA at 24; 2021 Pancake Complex EA at 21; 2020 Lake Mead EA at 8; 2017 Antelope & Triple B EA at 29; 2014 Fish Creek EA at 30; 2016 Blue Wing Complex EA App'x J at 19; 2012 Diamond Complex EA at 26; 2012 Challis EA at 22–23; 2010 Twin Peaks EA at 97. For analogous language, see 2008 McCullough Peaks EA at 32; 2022 Bible Spring EA at 45; 2022 Canyonlands EA at 38; 2020 Nev. Wild Horse Range EA at 33; 2017 Pine Nut Mountains EA at 35; 2016 Sulphur EA at 36; 2014 Bible Spring EA at 46; 2012 Wassuk EA at 17, 43; 2012 Bullfrog Herd Management Area EA at 14.

228. 2022 Little Fish Lake EA at 23; 2023 Roberts Mountain EA at 26; 2022 Stone Cabin Complex EA at 25; 2021 Pancake Complex EA at 21; For analogous language, see 2021 Desatoya EA at 25; 2021 Surprise Complex EA at 22; 2020 Lake Mead EA at 8; 2019 Twin Peaks EA at 16; 2017 Smoke Creek EA at 107; 2014 Fish Creek EA at 30; 2013 Humboldt EA at 42–43; 2012 Owyhee Complex EA at 93; 2012 Challis EA at 23. For similar, detailed discussions of effects to individual equids, including starvation, see 2022 Bible Spring EA at 45; 2022 Bordo Atravesado EA at 17–18; 2022 Canyonlands EA at 38; 2022 Jackson Mountains EA at 74; 2022 Marietta EA at 30; 2022 North Lander EA at 17–18; 2022 Sinbad EA at 38–39; 2021 Centennial EA at 60; 2021 Piceance-East Douglas EA at 37; 2021 Sand Wash Basin EA at 37–38; 2020 Black Mountain EA at 29, 42; 2020 Confusion HMA EA at 41–44; 2020 Four Mile HMA EA at 13–14; 2020 Moriah EA at 34–35; 2019 Range Creek EA at 32; 2019 Saylor Creek EA at 9–10; 2018 Eagle Complex EA at 61–62; 2018 Muddy Creek EA at 40–41; 2018 North Hills EA at 64–65; 2018 Spring Creek EA at 15; 2018 Warm Springs EA at 57–59; 2017 Adobe Town EA at 56–57; 2017 Antelope & Triple B EA 176–77; 2017 East Pershing EA at 126–27; 2017 Hog Creek EA at 56; 2021 Piceance-East Douglas EA at 23; 2017 Pine Nut Mountains EA at 35; 2017 Red Desert EA at 35–36; 2017 Stinkingwater EA at 46–47; 2016 Blue Wing Complex EA at 117–18; 2014 Bible Spring EA at 45–46; 2012 Bullfrog Herd Management Area EA at 14; 2012 Diamond Complex EA at 58–59; 2012 Jackson Mountains EA at 84–86; 2012 Murderer's Creek EA at 29; 2012 Wassuk EA at 43; 2011 Flanigan EA at 33; 2011 Garfield Flat EA at 30–31; 2008 McCullough Peaks EA at 32–33.

229. 2010 Twin Peaks EA at 96; 2021 Surprise Complex EA at 68. For analogous language, see 2011 Three Fingers EA at 23.

The Forest Service's NEPA analysis features equally stark descriptions of the no-action alternative:

> As the horses compete for the available resources, social stress would increase. Fighting and injuries to all age classes would increase as stallions protect their position at scarce water sources. Horses would spread further from the territory as they strive to find the needed cover and space. Ultimately, horses would be at risk of death due to a lack of forage and water . . . .[230]

The National Park Service describes similar harms to overpopulous grazers but stops short of professing a duty to rescue them. Several environmental impact statements, for example, state that booming deer populations could "result in increased nutritional stress and ultimately, decreased physical condition within the deer herd," but NPS nowhere suggests that allowing deer to endure such conditions would be inhumane or necessitate emergency intervention.[231] The same goes for NPS's description of increasing bison numbers: "[R]eductions in water availability . . . could cause increases in physiological stress," and "violent interactions between prime-age bulls would increase," but NPS does not suggest that those harms necessitate rescue.[232]

Other agencies are unconcerned by the putative inhumaneness of animals living in abundant numbers. NOAA Fisheries nowhere claims that California sea lions are suffering, though the agency says the species has "reached carrying capacity for present ocean and breeding site conditions."[233] Similarly, FWS predicts that cormorants "would likely increase to the carrying capacity" under a no-action alternative but expresses no qualms about the humaneness of that eventuality.[234]

This inconsistent approach across agencies cannot be explained by statutory mandates. BLM claims in NEPA analyses that letting horses starve on the range "would be contrary to" the Wild Free-Roaming Horses and Burros Act, "which mandates removal of excess wild horses."[235] But this claim reflects the agency's discretionary interpretation. Nothing in the Act characterizes a "thriving natural ecological balance" as inconsistent with animals existing at carrying capacity. In fact, some BLM analyses decline to endorse a duty to rescue. A 2015 EA for the West Douglas Herd Area in Colorado, for example,

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230. 2021 Heber EA at 36.

231. 2009 Valley Forge Deer EIS at 4-29; *see also* 2009 Catoctin Mountain Deer EIS at 203 (discussing effects on deer of no action alternatives); 2011 Rock Creek Park Deer EIS at 194 (same).

232. 2017 Bison EA at 73.

233. 2008 Sea Lion EA at 3-9. Similarly, the Corps observed in 2013 that Caspian terns on East Sand Island had reached the "highest nesting density ever observed" and worried that the terns would leave the island for a more hospitable habitat yet nowhere suggested that such conditions were inhumane. *See* 2013 Gull EA at 14 (quote); *id.* at 18 (justifying gull removal as a means to prevent tern colony abandonment).

234. 2020 Cormorant EIS at 22.

235. *See, e.g.*, 2017 Antelope & Triple B EA at 29; 2014 Fish Creek EA at 30.

cautioned that failure to remove horses could cause "death losses," but it did not assert that BLM would be duty bound to intervene.[236]

Given some agencies' willingness to recognize positive duties to abundant animals, one might assume that agencies marshal similar justifications on behalf of nonabundant wildlife. Yet, agencies rarely frame removals in terms of the welfare of nonabundant animals. Consider, for example, FWS's decision to kill cougars to reduce predation on dwindling bighorn sheep. Removing cougars would almost certainly improve the lives of the bighorn sheep that cougars prey upon, but relevant EIS had nothing to say about such effects. On the contrary, FWS's 2021 EIS discussed the effects of sheep predation as beneficial to the sheep themselves because predation facilitates "natural selection of healthy or sick individuals."[237] Removing sea lions and cormorants could spare millions of salmon stress and suffering, but agencies fail to mention so.

Agencies' silence about the well-being of nonabundant individual animals likely reflects the agency position that population-based concerns suffice to justify removals. If protecting salmon populations entails removing sea lions, agencies may see no reason to discuss fish suffering. But limiting animals' suffering is a benefit distinct from boosting population numbers. Part IV will argue that agencies should supplement conservationist justifications with animal welfare ones.

Though statutes contain few clear mandates to rescue wildlife from suffering, some agencies recognize a duty to do so. However, agencies have not deployed this duty consistently across species.

3. Takeaways from NEPA Analyses

Taken together, NEPA analyses surface areas of general agency consensus, as well as disagreement and confusion. To wit:

- The vast majority of removal decisions, regardless of the agency or species involved, observe a negative duty to avoid causing removed animals suffering. Agencies eschew inhumane methods and prescribe humane ones with varying levels of specificity.[238] In so doing, agencies incorporate recognition of individual animals' inherent value into conservation decisions.
- *NEPA analyses are internally inconsistent in their treatment of negative duties.* Despite considering suffering in *how* to remove animals, NEPA analyses frequently neglect animals' interests

236. 2015 West Douglas EA at 37; *see also* 2021 Adobe Town EA at 19–20 (discussing effects to horses without mentioning inhumaneness); 2009 Beaty Butte EA at 16-17 (referring to horses as "[n]oncritical [e]lements" and listing effects in population and range health terms without discussing inhumaneness or a duty to rescue).

237. 2021 Hart Mountain Cougar EIS at 3-26.

238. *See supra* Part III.B.1.c.

in considering *whether* to remove them. Discussions of no-action alternatives fail to mention upsides for animal well-being. For example, NPS expressly disclaims considering adverse effects to individual deer, notwithstanding its commitment to humane removal methods.[239]

- *Agencies are internally inconsistent in their treatment of negative duties.* For example, NOAA Fisheries insisted on humanely removing sea lions in 2008 but ignored humaneness for sharks in 2009.[240] Likewise, FWS's dedication to using the most humane removal method available varies across species.[241]
- *Agencies differ from one another with regards to the negative and positive duties they observe*. Some agencies favor quick death over stressful interventions. Other agencies favor the opposite without discussing the effects of stressful interventions as downsides.[242] Attitudes toward carrying capacity vary widely. BLM and the Forest Service consider it inhumane to allow equids to exist at carrying capacity, whereas NOAA Fisheries, the Corps, and FWS give no indication that they consider existence at carrying capacity inhumane.[243]

Two possible defenses of agencies' incoherent approaches merit discussing and discarding. First, it may seem unreasonable to expect agencies to develop a logically consistent framework for wild animals when American society has not done so. If humans prefer sea lions to sharks—for rational reasons or otherwise—we can hardly expect agencies to treat such animals consistently.

Accepting for the sake of argument that agencies have no greater obligation to act rationally than Americans writ large do, it is far from clear that agencies' inconsistencies track public preferences. Humans value horses, sea lions, and owls, yet these animals receive different treatment in the removal context.

The second defense is that agencies cannot help but bungle their duties to animals, because conservation statutes meld conflicting values in undertheorized ways. As Part II demonstrates, some statutes vary in their commitments from one provision to the next.

Notwithstanding the conflicting values woven through conservation statutes, Part II also explains that agencies largely retain discretion to incorporate individual animal well-being as they see fit. Although conservation statutes create opportunities for confusion, agencies have room to make their implementation more reasonable rather than less. Part IV turns to that task.

239. *See supra* notes 195–197 and accompanying text.
240. *See supra* notes 216–224 and accompanying text.
241. *See supra* notes 222–225 and accompanying text.
242. *See supra* Part III.B.1.b.
243. *See supra* Part III.B.2.

IV.
TOWARD A NEW CONSERVATIONISM

Incoherence in agency removal decisions calls for a new approach. This Part begins by making that case. Agencies' current practices block policy goals, exacerbate conflicts with animal advocates, undermine administrative legitimacy, and invite legal challenges.

To resolve these difficulties, agencies should craft a new conservationism that incorporates individual animals' inherent value. For possibilities of what this conservationism could look like, this Part turns to the prominent philosophical frameworks introduced in Part I. This discussion focuses on regulatory changes, rather than legislative ones, because agencies face immediate pressure to develop more coherent approaches. Nonetheless, because agencies must operate within statutory bounds, the discussion notes instances in which statutes must change to enable certain regulatory responses. Finally, this Part recommends near-term steps that agencies could take to increase coherence within and across removal decisions. Such steps would improve upon the status quo under multiple normative frameworks.

A. Problems with the Current Approach

Agencies' uneven accounting for individual animal well-being poses at least four types of problems.

1. Thwarting Policy Goals

If agencies value individual animal well-being—as NEPA analyses suggest they do—ignoring some animals or harms inevitably stymies their efforts to protect individual animals. Assessing removals' effects on animal well-being means accounting for all reasonably foreseeable effects on individual animals. Yet agencies routinely fail to discuss harms or benefits to some members of the wildlife community.

Without explanation, agencies' recognition of positive and negative duties varies from one species to the next. BLM asserts that carrying capacity constitutes intolerable inhumaneness in equids, but NOAA Fisheries makes no such assertion for sea lions. Double-crested cormorants must abide ongoing human interference, in the form of hazing, on the premise that a stressful life is better than no life at all.[244] Barred owls, by contrast, suffer death on the theory that such a fate beats stressful relocation or contraceptive programs.[245] Given the incongruity of these positions, it seems likely that some animals are getting the short end of an already short stick.

The assertion that agencies should strive for a clearer approach to individual animals does not require that individual animals' interests be

244. *See supra* notes 167–168 and accompanying text.
245. *See supra* notes 199–206 and accompanying text.

determinative in decision-making. Agencies have limited budgets and varying policy priorities; the considerations underlying their removal decisions, like any regulations, are multifaceted. But multifaceted decisions are coherent only to the extent that agencies consider each factor coherently. To assess how much time and money alternative solutions merit, agencies must account accurately for removals' effects on wild animals.

By neglecting removals' harms to individual animals, agencies may give short shrift to alternative solutions. Occasional bursts of agency creativity prove such alternatives exist. In 2005, the Corps declined to kill Caspian terns that were preying on endangered salmonids and instead elected to create a new nesting habitat for the birds, farther away from threatened fishes.[246] Similarly, in a 2014 recovery plan for endangered monk seals, NOAA Fisheries declined to kill sharks that preyed upon seal pups, instead electing to relocate pups to more hospitable areas farther away from predation.[247]

Even in situations in which alternatives to removals are unavailable, alternatives might arise in the future with adequate research and congressional funding. But making the case for further scientific and congressional investment requires acknowledging how present approaches harm individual animals. As previous scholarship has argued, agencies should "expressly recognize the loss of life as irredeemable and . . . accept the need to constantly find ways of doing better by those [animals] who depend on [humans]."[248]

2. Exacerbating Conflicts with Animal Advocates

Neglecting individual animal well-being also exacerbates conflicts with animal advocates and increases litigation risks. Agencies forgo opportunities for common ground with animal advocates when they understate or ignore removals' benefits to individual animals. By harming some animals, removals benefit others: those whose ecosystems are protected and for whom the risks of predation or competition decrease. In some cases, removals may benefit the removed animals themselves by rescuing them from harsh conditions.

Comprehensively explaining the benefits of removals to individual animals could soften resistance to removals. For example, if the Park Service takes the position that overabundant deer lead difficult lives and, on net, make life harder for other animals,[249] rigorously accounting for such effects may reveal that removals improve animal welfare on net as well. So portrayed, removals arguably serve the interests of both individual animals and ecosystems.

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246. *See* 2005 Caspian Tern EIS at 2-2 to 2-7.

247. U.S. DEP'T OF COM., NAT'L OCEANIC & ATMOSPHERIC ADMIN. & NAT'L MARINE FISHERIES SERV., PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT EXECUTIVE SUMMARY: HAWAIIAN MONK SEAL RECOVERY ACTIONS 2-11 (2014).

248. DOUGLAS A. KYSAR, REGULATING FROM NOWHERE: ENVIRONMENTAL LAW AND THE SEARCH FOR OBJECTIVITY 233 (2010).

249. *See supra* note 116–117, 131 and accompanying text.

Moreover, inconsistency within and between removal decisions undercuts their rationality and makes them more difficult to defend in court. Logical failings within decisions belie a "hard look"[250] at environmental consequences or "reasoned decisionmaking," contravening NEPA and the APA respectively.[251] Because these shortcomings render agency decisions "arbitrary and capricious," courts must set such decisions aside.[252] Omitting no-action alternatives' upsides for individual animals, while including effects to animal well-being in other contexts, thus creates not only normative weaknesses in removal decisions but also legal ones. If litigants brought such challenges, agencies might be hard-pressed to respond.

Even variation across decisions could spell legal trouble. The Supreme Court has made clear that "an unexplained inconsistency in agency policy is a reason for holding an interpretation to be an arbitrary and capricious change from agency practice."[253] In 2010, the Ninth Circuit vacated NOAA Fisheries' decision to remove sea lions because of the agency's unexplained departure from previous decisions.[254] The court faulted the agency for finding sea lions' impacts on salmon significant at a 4.2 percent take rate, when three years earlier, the agency had deemed fisheries' take of 5.5 to 17 percent insignificant.[255] NOAA Fisheries contested any obligation to "address apparent inconsistencies" because "previous environmental assessments addressed the impact of fisheries under NEPA, whereas the present action assessed the impact of pinnipeds under the MMPA."[256] But "an agency's duty to explain cogently the bases of its decisions," according to the court, "is not limited to circumstances in which the agency departs directly from an earlier path."[257] Although an agency has no obligation to "identify and address any potential tension between current and earlier factual determinations in marginally related administrative actions," an explanation is required when the inconsistency is "raised repeatedly and forcefully" throughout the decision-making process.[258]

Experience should temper expectations of consensus between animal advocates and agencies. Although agencies expressly justify equid removals as

250. Balt. Gas & Elec. Co. v. Nat. Res. Def. Council, Inc., 462 U.S. 87, 100 (1983) (internal quotation marks omitted).

251. Dep't of Homeland Sec. v. Regents of the Univ. of Cal., 591 U.S. 1, 16 (2020) (internal quotation marks omitted) (quoting Michigan v. E.P.A., 576 U.S. 743, 750 (2015)).

252. *See, e.g.*, ANR Storage Co. v. Fed. Energy Regul. Comm'n, 904 F.3d 1020, 1028 (D.C. Cir. 2018) ("Because FERC's decision is internally inconsistent, it is arbitrary and capricious.").

253. Encino Motorcars, LLC v. Navarro, 579 U.S. 211, 222 (2016) (cleaned up) (quoting Nat'l Cable & Telecomms. Ass'n v. Brand X Internet Serv., 545 U.S. 967, 981 (2005)).

254. Humane Soc'y of U.S. v. Locke, 626 F.3d 1040, 1049 (9th Cir. 2010).

255. *Id.* at 1044, 1048–49.

256. *Id.* at 1050.

257. *Id.* at 1050–51.

258. *Id.* at 1051.

benefiting horses and burros, animal advocates have continued to sue.[259] Nonetheless, more comprehensively discussing effects to individual animal well-being could refocus the debate in a constructive way. Rather than disputing whether individual animal interests matter, agencies and animal advocates could discuss a variety of topics: how to weigh individual animal interests against one another, thresholds for intervention, and whether non-removal alternatives are appropriate and feasible.

3. Undermining Agency Legitimacy

Inconsistencies across and within agencies run counter to the tenet that legitimate government treats like cases alike. Several administrative law scholars have explained that "reasoned consistency"[260] curbs, and thereby legitimizes, agency discretion and "has strong intuitive appeal to our sense of justice."[261] Recent scholarship urges "a more robust approach to consistency that looks not only at whether the justification for a particular rule is internally consistent but also at whether consistency is applied by the same agency across temporally proximate rules."[262] Through this lens, NOAA Fisheries' inattention to humaneness in removing sharks in 2009, given its pledge the previous year to remove sea lions humanely, raises concerns beyond animal cruelty. The agency's variation between the two decisions appears arbitrary, undermining the legitimacy of both.[263]

B. Possible Regulatory Approaches Under Different Normative Frameworks

For agencies, developing a new conservationism requires layering a coherent theoretical framework onto their statutory mandates. For inspiration about what possible frameworks could look like, I turn to the prominent theories

259. *See* Appendix A. Ongoing litigation may reflect disagreement over: whether life at or near carrying capacity is in fact inhumane, whether removals are in fact the best way to address such problems, and whether removal can be termed "rescue" when it carries a risk of resale to slaughterhouses. *See, e.g.*, AMELIA PERRIN, AM. WILD HORSE CAMPAIGN, FEDERALLY PROTECTED HORSES TO SLAUGHTER: AN EPIDEMIC WITHIN BLM ADOPTION INCENTIVE PROGRAM 2 (2022) (describing how a purported adoption program for wild horses and burros that both "rescue groups" and other individuals participate in ultimately becomes a "pipeline to slaughter").

260. John F. Manning, *Nonlegislative Rules*, 72 GEO. WASH. L. REV. 893, 935 n.208 (2004).

261. Yoav Dotan, *Making Consistency Consistent*, 57 ADMIN. L. REV. 995, 1000 (2005); *see also* William W. Buzbee, *The Tethered President: Consistency and Contingency in Administrative Law*, 98 B.U. L. REV. 1357, 1402 (2018) ("Even without a promulgated regulatory commitment, agency practices and policies revealed or declared over time through other modes . . . will also constrain an agency and require ongoing consistency or rational explanation for change."); Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1667, 1679–80 (1975) (describing consistency requirement as means of curbing agency discretion).

262. Richard L. Revesz, *Poisoning America: A "Reasoned Consistency" Response to the Trump Administration's Regulatory Shell Game*, 29 N.Y.U. ENV'T L.J. 471, 489 (2021).

263. *See supra* Part III.B.3.

discussed in Part I.[264] The goal is to sketch out a few possible regulatory approaches, not to endorse a particular framework or to develop any framework in detail. Those projects are important but beyond the scope of this paper. For now, erecting the scaffolding of a few alternative regulatory frameworks suffices to illustrate what is possible.

At least in the short term, agencies might each choose different frameworks and generate lessons about the pitfalls and potential of each approach. In the long term, cross-agency coalescence seems desirable. If ecological collectives and individual wild animals have inherent value, then getting the balance right in protecting these animals matters. Insofar as agencies range widely in their treatments, it seems unlikely that they are all striking the right balance. That said, one need not endorse inter-agency uniformity to endorse rational, coherent approaches within agencies and decisions.[265]

1. Traditional Conservationism Approach

One way of looking at the NEPA survey in Part III is that, in placing value on the well-being of individual animals, agencies have bitten off more than they can chew. Instead of crafting a new conservationism, the argument runs, agencies should cleave to traditional conservationism more tightly than ever, ignoring animals' inherent value except where statutorily required. Agencies must kill equids and marine mammals humanely pursuant to the WHA and the MMPA, but they can treat lynxes like logs.

At first blush, this approach has pragmatic appeal. Until this debate bubbles up from the deep-sea vents of philosophy to statutory mandates, agencies can ignore individual animals and a raft of thorny questions.[266]

But a strictly traditional conservation approach is both unrealistic and insufficient. As Part I explains, in the wake of the animal advocacy movement, many Americans have come to value animal well-being for its own sake.[267] Ignoring individual animal well-being could invite public backlash. And as Part

264. These frameworks are grounded in individual animals' intrinsic value; however, one might address many concerns about individual animal wellbeing through an approach grounded in "weak anthropocentrism." As Bryan Norton has argued, many humans' wish to live in harmony with nature and treat animals humanely, and concern for this human desire can ground ethical treatment of wildlife. See Norton, *supra* note 64, at 136. Even so, determining what constitutes ethical treatment of nature may require turning to the frameworks discussed in this paper.

265. This Article assumes that agencies' changes in approach will manifest in NEPA analyses. In recent years, NEPA has been at the center of significant regulatory push-and-pull, as well as legislative reform. *See* Daniel Farber, *Revamping the NEPA Process*, CTR. FOR PROGRESSIVE REFORM (Aug. 2, 2023), https://progressivereform.org/cpr-blog/revamping-nepa-process/ [https://perma.cc/6S2N-MSP9]. Even in a world without NEPA, however, agencies will still need to defend their decisions subject to notice-and-comment rulemaking and against arbitrary and capricious review. As the previous section outlined, an unexplained, inconsistent approach to individual animals could pose problems for such review.

266. *See supra* Part I.B (summarizing prominent ethical positions).

267. *See id.* (discussing societal attitudes toward animal welfare).

III reveals, agencies have widely accepted an obligation at least to avoid inhumane killing techniques.[268] The intuition that humans have *some* obligations to sentient animals is powerful and pervades removal decisions. Even if one could shove the genie back into the bottle, doing so would worsen problems highlighted at the beginning of this Part. The approach would decrease agencies' incentive to develop creative removal alternatives and increase litigation from animal advocates. And agencies could find themselves in the awkward position of explaining to courts why they ignored a seemingly relevant environmental effect under NEPA and the APA.[269] Against this backdrop, traditional conservationism looks less pragmatic than a new conservationism that incorporates individual animals' inherent worth.

2. Utilitarian Approach

Agencies could pursue a non-anthropocentric utilitarian approach to conservation. Under such a framework, agencies should protect or promote states of nature that yield the greatest net benefit for sentient society, human and nonhuman alike.

To calculate a policy's net welfare impact, agencies must tally all the harms and benefits that come from a policy. For removals, a partial list of relevant effects includes: physical or psychological suffering of removed animals; losing the opportunity of further life in the wild (which could be a benefit or harm, depending on how difficult the removed animals' lives are); benefits and harms to individual animals from nonabundant populations; and human preferences for recreation, aesthetics, and the like. Although agencies would need to develop a means of comparing these interests to one another, relatively minor benefits to humans (e.g., preferring a forest with more orchids for aesthetic reasons) would not, in themselves, justify grave harm to animals (e.g., killing hundreds of deer).[270]

Because anthropocentric utilitarianism already influences American regulations, folding non-anthropocentric utilitarianism into administrative law is comparatively straightforward. Executive orders require agencies to conduct comprehensive cost-benefit analyses for significant regulatory actions.[271] The

268. *See supra* Part III.B.1.c.

269. *See* Marsh v. Or. Nat. Res. Council, 490 U.S. 360, 371 (1989) (explaining that NEPA ensures that agencies "will not act on incomplete information" by requiring an analysis of environmental effects); Citizens to Preserve Overton Park, Inc. v. Volpe, 401 U.S. 402, 416 (1971) (explaining that agency decisions must be "based on a consideration of the relevant factors" to withstand arbitrary and capricious review).

270. Animal welfare research, an expanding field designed to help make welfare comparisons across species, could inform this methodology. *See, e.g.*, Mark Budolfson, Bob Fischer & Noah Scovronick, *Animal Welfare: Methods to Improve Policy and Practice*, 381 SCIENCE 32, 33–34 (2023).

271. *See* CASS R. SUNSTEIN, THE COST-BENEFIT REVOLUTION 22–23 (2018) (discussing the utilitarian roots of this analysis and further stating: "Cost-benefit analysis includes everything that

Supreme Court has interpreted "cost" liberally to include "any disadvantage" associated with a regulatory decision.[272] Over decades, agencies have refined the methodology to be more sophisticated in accounting not only for regulatory costs to industry but also benefits to human health and ecosystems.[273] Although removals do not usually rise to the level of requiring cost-benefit analyses, agencies treat NEPA analyses as opportunities to consider the pros and cons of regulations in the environmental context. Effects on individual animal well-being could be one more factor included in these analyses.

A utilitarian approach is also consistent with conservation statutes insofar as it permits removals and human intervention generally. If removing horses leads to net benefits for the animal and human community, then capturing or killing horses passes utilitarian muster. BLM, for instance, could define a "thriving natural ecological balance" under the WHA as the state that leads to the most net welfare and remove equids if they threaten that balance.[274]

That said, a utilitarian approach faces challenges.[275] First, a framework focused on net welfare sits in tension with the ESA, which requires that agencies use all tools necessary to prevent species extinction.[276] In some cases, the ESA's mandate may demand gravely harming many individual animals to help fewer animals—the opposite of what utilitarianism would advise. Agencies could mitigate, if not resolve, this difficulty with close attention to the endangered species at issue and the threshold for intervention. If the endangered species is a "keystone species," then it plays a critical role in supporting other animals in the ecosystem, so protecting even a small population could in fact protect a much wider range of sentient beings.[277] As for the thresholds for intervention, an

matters to people's welfare, including such qualitatively diverse goods as physical and mental health, freedom from pain, a sense of meaning, culture, clean air and water, animal welfare, safe food, pristine areas, and access to public buildings."); Exec. Order No. 14,094, 88 Fed. Reg. 21879, 21879 (Apr. 6, 2023) (setting defining in part a "[s]ignificant regulatory action" as a regulation projected to have an annual effect of at least $200 million threshold for cost-benefit analysis).

272. Michigan v. E.P.A., 576 U.S. 743, 752 (2015).

273. *See generally* RICHARD L. REVESZ & MICHAEL A. LIVERMORE, RETAKING RATIONALITY: HOW COST-BENEFIT ANALYSIS CAN BETTER PROTECT THE ENVIRONMENT AND OUR HEALTH (2008) (explaining how cost-benefit analysis could justify progressive regulations); OFF. INFO. & REGUL. AFF.'S., OFF. MGMT. & BUDGET, GUIDANCE FOR ASSESSING CHANGES IN ENVIRONMENTAL AND ECOSYSTEM SERVICES IN BENEFIT-COST ANALYSIS (2023) (proposing refinements to better incorporate effects on ecosystems); OFF. MGMT. & BUDGET, CIRCULAR NO. A-4 (2023) (proposing several revisions, including accounting for distributive and climate effects).

274. 16 U.S.C. § 1333(b)(2).

275. In addition to the two challenges discussed above in the text, the same critiques of utilitarianism and cost-benefit analysis that apply in the human context would apply in the animal context. *See, e.g.*, SEBO, *supra* note 1, at 175–78 (discussing "the rebugnant conclusion," riffing on DEREK PARFIT, REASONS AND PERSONS 388 (1986)); Lisa Heinzerling, *Climate Change, Racial Justice, and Cost-Benefit Analysis*, LPE PROJECT (Sept. 28, 2021), https://lpeproject.org/blog/climate-change-racial-justice-and-cost-benefit-analysis/ [https://perma.cc/P4XT-C97W] (criticizing cost-benefit analysis for discounting future human lives and its obliviousness to distributive effects).

276. *See* 16 U.S.C. § 1532(3).

277. *See* Bruce A. Menge, Alison C. Iles & Tess L. Freidenburg, *Keystone Species*, *in* 4 ENCYCLOPEDIA OF BIODIVERSITY 442 (2d ed. 2013) (defining keystone species).

agency might refrain from removals if the possible benefit to species is only slight. A 50 percent decrease in the likelihood of salmon extinction might justify killing many sea lions, whereas a 5 percent decrease might not. In sum, agencies could be more circumspect in determining that removals are necessary, and utilitarianism could inform their thinking.

Second, utilitarianism not only permits but requires intervention to improve net welfare. Under such a framework, agencies could find themselves required to intervene much more frequently than they currently do to benefit animals. Some statutes provide helpful limits. The WHA instructs agencies to maintain range management activities "at the minimal feasible level," and the ESA forbids actions that drive species to the brink of extinction, no matter the net benefit of doing so.[278] A lack of information may present another practical limitation, at least for the present. If agencies lack sufficient information to assess the effects of their actions, they may refrain from intervening—absent improvements in access to information. This holds true even under a utilitarian framework.[279] Nonetheless, statutes leave agencies significant discretion to intervene, and, in situations with clear animal welfare implications, agencies working from a utilitarian model would need to develop an approach to prioritize interventions.

Under a utilitarian model, agencies would have negative duties to avoid harming animals and positive duties to help them. These duties, however, would give way when outweighed by other interests. With sufficient information to assess impacts, a utilitarian conservationism could be quite hands-on, for better or worse.

3. Rights Approach

Alternatively, agencies could recognize animal rights that cannot be violated simply to increase net welfare. Agencies could define rights as they see fit, but animal rights ethicists tend to recognize wild animals' rights to be free from human intervention.[280] Thus, an animal rights framework would militate against removals altogether and perhaps even against reproductive controls and hazing. This approach would require less work and may appeal to agencies for that reason.

One obvious challenge for a rights-based approach is that several conservation statutes expressly allow removing animals from the wild, lethally or otherwise.[281] Agencies cannot claim an absolute duty to avoid killing or

278. 16 U.S.C. § 1333(a) (WHA); *id.* § 1536(a)(2) (ESA).

279. *See* SINGER, *supra* note 43, at 226 ("Judging by our past record, any attempt to change ecological systems on a large scale is going to do far more harm than good.").

280. DONALDSON & KYMLICKA, *supra* note 56, at 156–57 (summarizing traditional animal rights approaches). Rights frameworks, like utilitarianism, spring from the idea of animal sentience, so non-sentient animals would not qualify for rights. *See* FASEL & BUTLER, *supra* note 47, at 40, 60 (describing bases for animal rights).

281. All the statutes discussed in Part II other than the ESA expressly allow or require removals. *See supra* Part II.

capturing wild animals if statutes require such actions. Moreover, animals lack standing to sue on their own behalf, a prerequisite to meaningful rights in some scholars' eyes.[282]

Ecological harms caused indirectly by humans also pose difficulties for an animal rights framework. Habitat fragmentation and climate change make life hard for many individual wild animals. But recognizing a positive duty to rescue animals from such conditions—as BLM and the Forest Service do with respect to equids—contradicts the animal rights principle that animals should be left alone. Of course, one might respond that humans should not have damaged animals' habitats in the first place. But that assertion does not tell us what to do about the difficult conditions our past actions have created.

Despite these challenges, conservation decisions could align more closely with an animal rights approach than they do at present. Agencies could pursue minimal interventions that forestall more invasive measures. For example, agencies provide water sources or "guzzlers" for wildlife in arid areas.[283] Such actions do not violate animal rights and may reduce the need for removals in some cases.[284] Agencies could also recognize a right against inhumane removals. Such an approach would hew closely to FWS's treatment of barred owls (providing strict lethal removal guidelines to minimize the risk of nonlethal injury or unnecessary suffering).[285] And agencies could raise the burden of proof required to show that abundant animals pose a threat and require removal. A heavier burden might take several forms, such as requiring more certainty that abundant animals threaten statutorily protected ecosystems or species, a greater degree of threatened harm to trigger intervention, or a greater certainty of removals' benefits to prevent extinction. To be sure, in some circumstances, statutes would require removals, but agencies could significantly reduce the number of removals conducted while remaining within statutory bounds.

4. Capabilities Approach

A capabilities approach to conservationism would incorporate the negative obligations of the rights-based approach but add positive obligations to improve animals' well-being in the wild. Like utilitarianism, a capabilities approach recognizes a positive duty to intervene to help wild animals under certain circumstances.[286] Unlike utilitarianism, a capabilities approach bars interventions that interfere with animals' ability to thrive, even if such

282. *See, e.g.*, GARY L. FRANCIONE, ANIMALS, PROPERTY, AND THE LAW 65 (1995) (advocating legal standing for animals). *But see* Cass R. Sunstein, *Slaughterhouse Jive*, NEW REPUBLIC (Jan. 28, 2001), https://newrepublic.com/article/63234/slaughterhouse-jive [https://perma.cc/HH8F-NJBW] (reviewing GARY L. FRANCIONE, INTRODUCTION TO ANIMAL RIGHTS: YOUR CHILD OR THE DOG? (2000)).

283. *See, e.g.*, 2002 Cedar Mountain EA at 14.

284. *See supra* notes 234–237 and accompanying text.

285. *See supra* note 218 and accompanying text.

286. *See supra* notes 58–64 and accompanying text.

interventions are net-beneficial.[287] This framework thus combines elements of both of the previous two approaches. A capabilities framework entails a strong presumption against removals that interfere with animals' life, liberty, or bodily integrity. But the framework remains open to the possibility of widescale interventions that improve the lives of some wild animals without interfering with the capabilities of others. One such intervention might be separating predators from their prey in large reserves and providing them with humanely killed meat and toys that simulate hunting.[288]

Because a capabilities approach has elements of each of the previous ethical frameworks, it also faces some of the same challenges. As with a utilitarian approach, a capabilities framework could foist significant affirmative duties on agencies to improve wild animals' lives. And as with a rights-based approach, a capabilities approach must give way to statutory mandates that animals be removed.

But the approach also has some relative advantages. The capabilities framework endorses only interventions that do not interfere with animals' capabilities. Because many interventions that help some animals harm others, the capabilities approach calls for fewer interventions than a utilitarian model might. At the same time, the capabilities approach is more amenable than a rights-based approach to aiding animals under pressure from harsh ecological conditions.

Part of the framework's appeal is that it necessitates finding alternatives that resolve conflicts among animal species without doing harm to animals. The downside is that such approaches may not always exist or may exceed agency resources. In such cases, the negative duty to avoid inflicting harm would presumably trump affirmative duties to intervene, effectively amounting to a rights-based framework.[289]

* * *

Agencies' approaches to conservationism and removals will look different depending on which normative framework they choose. Any approach will pose thorny questions and necessitate engaging with live debates among ethicists. But agencies routinely confront complex, morally freighted trade-offs in the human context.[290] The sooner agencies begin confronting theoretical challenges in the animal context, the sooner they can make progress.

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287. *Id.*

288. *Id.*

289. *See* NUSSBAUM, *supra* note 12, at 249 (rejecting eliminating predators to help prey because of the lack of respect the solution shows predators).

290. *See* SUNSTEIN, *supra* note 271, at 6–10 (describing the development of cost-benefit analysis to address difficult policy decisions).

C. Near-Term Improvements

In the short term, agencies can make relatively straightforward reforms to their NEPA analyses to better incorporate animal well-being.[291] These changes improve upon the status quo under any of the three new conservationist approaches discussed above.

For starters, agencies should separate discussions of effects on individual animals from effects on populations. FWS took this approach in its 2021 EIS for cougar removal, which analyzes "cougar removal population-level effects" as a subsection of a broader discussion of "Effects on Cougars."[292] Likewise, in a 1995 EIS on removing white-tailed deer from Gettysburg National Military Park (excluded from the set because of its date), the Park Service included two separate sections: one concerning "Effects on Deer Population Management" and another concerning "Effects on Deer."[293]

Distinct sections prevent conflating population-based considerations with individual-based ones and avoid overlooking the latter altogether. Better still, dedicated discussions may encourage more robust consideration of individual animals than the one-off sentences that dapple analyses today. For example, FWS's bighorn sheep EIS failed to distinguish between effects on individual bighorn sheep and effects on their population, emphasizing the latter at the expense of individual considerations.[294] The Park Service's Gettysburg EIS filled five pages with a discussion of effects on deer, a stark contrast with several later analyses that claim harms to individual deer lie outside NPS's consideration.[295]

Another straightforward improvement to removal analyses involves descriptions of no-action alternatives. As discussed, agencies routinely fail to acknowledge the benefits of avoiding removal to individual animals.[296] This omission is difficult to justify because the same documents consider individual animal well-being in other contexts, such as defining alternatives and analyzing their effects. For example, BLM explains that potentially stressful reproductive

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291. The Fiscal Responsibility Act of 2023 requires that project sponsors, rather than the lead agency, prepare EAs and EISs. Fiscal Responsibility Act of 2023, Pub. L. No. 118-5, § 321, 137 Stat. 10, 42 (2023). To the extent permittees will prepare removal analyses going forward, agencies can nonetheless influence analyses through "appropriate guidance and assist[ance with] preparation" as well as through their independent review. *Id.*

292. 2021 Hart Mountain Cougar EIS at 4-6 to 4-8.

293. 1995 Gettysburg Deer EIS at 59, 66.

294. 2021 Hart Mountain Cougar EIS at 4-4 to 4-6. Consider, for example, the EIS's acknowledgement that "bighorn sheep may be captured or injured by snares or foothold traps set for cougars." *Id.* at 4-4. Neither a discussion of bighorn sheep stress or pain, nor a commitment to euthanize sheep humanely, accompanies this admission.

295. 1995 Gettysburg Deer EIS at 66–70; *see, e.g.*, *supra* note 196 (explaining that agency considers only effects on "deer populations as a whole").

296. *See, e.g.*, 2013 Barred Owl EIS at xxix–xxxiii (noting the disparity of text and discussion between the "action alternatives" and the "no action alternative"); *supra* notes 197–198 and accompanying text.

control is preferable to permanently removing wild horses from the range.[297] FWS removes cormorants only as a "last resort."[298] If removals constitute harm to removed animals, then no-action alternatives spare them harm, and environmental analyses should reflect that baseline benefit. To be sure, agencies should discuss any harms that no-action alternatives create, including increased competition for resources. But a full consideration of foreseeable effects to individual animals requires acknowledging the benefits of no-action alternatives.

Finally, agencies should discuss effects of removal to individual animals beyond removed species. At a minimum, decisions motivated by saving endangered populations should discuss consequences for individual animals in the endangered group. The benefits of removal to those animals should be apparent and easy to describe.[299] To the extent that such effects are uncertain, agencies' proposals may have broader problems. For example, if agencies cannot confidently predict that monk seal pups will suffer less with fewer sharks—perhaps because pups may instead starve—that ambivalence casts doubt on removals' effectiveness at protecting seal populations and calls into question species-based justification for such actions.[300] Agencies also should attempt to include effects on individual animals of unlisted species. This analysis will involve more individuals of more species and perhaps implicate more indirect effects—nuances that complicate assessing removals and their alternatives. All the same, agencies should make efforts to acknowledge such effects and recognize uncertainty if applicable.

CONCLUSION

This Article uses removals to vivify the tension between traditional conservation goals and emerging societal concerns with animal well-being. Because the same difficult trade-offs play out over and over again, removals position animal well-being as a core conservation issue requiring more sophisticated treatment than an ad hoc approach provides. Animal well-being need not be the only consideration in conservation decisions, nor even the most important one. But agencies should consider it in a coherent way.

Removals also provide a promising incubator for new conceptions of conservationism. Because removals occur across jurisdictions and species,

297. 2012 Challis EA at 39.

298. 2020 Cormorant EIS at 106.

299. *See, e.g.*, 2009 Shark EA at 9 (2009) (discussing the number of endangered seal pups harmed by sharks and discussing their injuries). This information could easily translate into a discussion of impacts to seal pup welfare.

300. In fact, in its subsequent monk seal recovery plan, NOAA Fisheries explained that it "lack[ed] sufficient information on . . . food web dynamics to make a reliable prediction whether predator reduction would be an effective method for improving juvenile monk seal survival without unintended consequences." U.S. DEP'T OF COM., NAT'L OCEANIC & ATMOSPHERIC ADMIN. & NAT'L MARINE FISHERIES SERV., *supra* note 247, at ES-5; *see also id.* at 1-1 (listing "starvation" as a threat to monk seals as well as "predation of pups by sharks").

agencies can learn from one another's best practices. Because NEPA analyses describe the harms and benefits of removals, scholars can gain insight into agency thinking and suggest improvements. And because animal advocates persistently sue agencies over removals, agencies have incentives to develop new frameworks to address dilemmas that pit wild animals against ecological collectives.

Regulatory reforms could pave the way for legislative ones. Sustained attention from agencies could raise congressional awareness of the dilemmas confronting agencies and the options at their disposal. Modest legislative reforms might require that removal methods be humane or that agencies receive more funding to pursue humane removals or removal alternatives. More ambitious reforms could limit or eliminate the circumstances in which mass removals are permitted or require agencies to intervene more frequently to rescue wildlife in distress.[301] With or without congressional changes, however, agencies can and should make progress toward a new conservationism that coherently incorporates animal well-being.

Beyond removals, environmental law is veined with decisions that implicate the well-being of wild animals. Reconceptualizing nature at the individual level ultimately entails a paradigmatic shift in environmental law.[302] Such changes will take time, not least because policymakers and scientists have only a fuzzy idea of what constitutes "the good life" for a cormorant. We can start by acknowledging that such a thing exists, and that the law should account for it.

301. The reasonableness of these approaches depends on which ethical frames have purchase in Congress.

302. Major shifts in environmental law and policy sometimes begin in halting fashion. Environmental justice (EJ) scholars have pointed out to me that the changing norms I've observed in NEPA documents follow a path similar to EJ principles' gradual introduction into agency decision-making. *See generally* Sheila R. Foster, *Meeting the Environmental Justice Challenge: Evolving Norms in Environmental Decisionmaking*, 30 ENV'T L. REP. 10992 (2000) (describing incorporation of EJ concerns into EAB decisions). In the 1990s, no EJ challenges succeeded before the Environmental Protection Agency's Environmental Appeals Board (EAB); nonetheless, the EAB's decisions revealed a new receptivity to EJ concerns. *Id.* at 10993. In particular, the EAB was "increasingly willing to determine whether a permit w[ould] be issued in a minority or low-income community, to assess whether that community ha[d] been exposed to a disproportionate number of facilities posing risks to their environment or health, to assure community participation in the permitting process, and to respond to and incorporate community concerns into the ultimate permit decision." *Id.* There too, these new considerations ran up against the prevailing decision-making paradigm (comparative risk analysis). *Id.* at 10997–11000. The point is not to equate the EJ and animal advocacy movements but to observe that norms may enter agency decision-making through inconsistent or weak consideration before giving rise to different decisions.

APPENDIX A: ANIMAL ADVOCATES' CASES CHALLENGING REMOVALS

Over the past two decades, federal agencies have repeatedly found themselves in court defending their wildlife management decisions against animal advocates. While the challengers range from individuals who profess an aversion to animal suffering to nonprofits, such as Friends of Animals, all oppose removing animals to serve conservation aims.[303]

To document this phenomenon, I searched Westlaw and Bloomberg Law for federal cases mentioning species that I knew agencies had removed.[304] From the results, I selected cases arising from federal agency decisions to permanently capture or kill wild animals to protect other species or ecosystems. To determine whether to characterize plaintiffs as animal advocates, I consulted plaintiff organizations' websites and mission statements. For an organization to qualify as an animal advocate, it had to champion animals' "welfare," "well-being," "dignity," "rights," "humane" treatment, or inherent value, or oppose "inhumaneness," "cruelty," or animal "suffering." For plaintiffs lacking informative websites, I turned to the alleged injuries described in judicial opinions or complaints. In addition to the criteria above, I counted descriptions of deep personal connections to removed animals as evidence of valuing individual animals and thus animal advocacy.[305] Curating cases sometimes involved close judgment calls, but most decisions were straightforward. My searches yielded seventy-three cases, sixty-six of which were filed since 2000.

If "decision year" is marked "NA," then no published opinion is associated with the case. If "appellate decisions" is "NA," the district decision was not appealed.

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
Am. Horse Protection Ass'n v. Frizzell, 403 F. Supp. 1206	75-143	1975	1975	D. Nev.	Equid	NA

303. *See, e.g.*, Downer v. Bureau of Land Mgmt., No. 20-cv-191, 2020 WL 13049422 (D. Wyo. Nov. 2, 2020) (individual plaintiffs); Friends of Animals v. Haugrud, 236 F. Supp. 3d 131 (D.D.C. 2017) (organizational plaintiff).

304. Bloomberg's docket database allowed me to identify relevant complaints, even if they resulted in no written judicial opinions. That said, not all cases' complaints are searchable on Bloomberg, so some cases without written opinions may have evaded my research. I had learned of removals through reporting, court dockets, and discussions with animal law practitioners.

305. I counted plaintiffs who melded conservation and individual animal concerns as animal advocates because such plaintiffs implicate the tension animating this Article, notwithstanding valuing animals for additional, population-based reasons. If a case included at least one animal advocate plaintiff, I included the case. Once I established a plaintiff as an animal advocate, I included all removal cases brought by that plaintiff.

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
Am. Horse Protection Ass'n v. Andrus, 460 F. Supp. 880	78-105	1978	1978	D. Nev.	Equid	Am. Horse Protection Ass'n v. Andrus, 608 F.2d 811 (9th Cir. 1979)
Humane Soc'y v. Lujan, 768 F. Supp. 360	89-2772	1989	1991	D.D.C.	Deer	NA
Davis v. Latschar, 83 F. Supp. 2d 1	97-0232	1997	1998	D.D.C.	Deer	Davis v. Latschar, 202 F.3d 359 (D.C. Cir. 2000)
Animal Protection Inst. v. Stanton	97-2563	1997	NA	D.D.C.	Deer	NA
Fund for Animals v. BLM, 357 F. Supp. 2d 225	01-1903	2001	2004	D.D.C.	Equid	Fund for Animals, Inc. v. BLM, 460 F.3d 13 (D.C. Cir. 2006)
Fund for Animals v. Norton, 365 F. Supp. 2d 394	04-959	2004	2005	S.D.N.Y.	Cormorant	Fund for Animals v. Kempthorne, 538 F.3d 124 (2d Cir. 2008)
In Defense of Animals v. U.S. Government, 2005 WL 3413681	05-2754	2005	2005	D. Ariz.	Equid	NA
Colo. Wild Horse & Burro Coalition, Inc. v. Salazar, 639 F. Supp. 2d 87	06-1609	2006	2009	D.D.C.	Equid	NA
Cloud Foundation, Inc. v. Kempthorne, 546 F. Supp. 2d 1003	06-111	2006	2008	D. Mont.	Equid	NA
Humane Soc'y of US v. Gutierrez, 625	08-357	2008	2008	D. Or.	Sea lion	Humane Soc'y v. Locke, 626

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
F. Supp. 2d 1052						F.3d 1040 (9th Cir. 2010)
Cloud Foundation, Inc. v. Salazar, 999 F. Supp. 2d 117	09-1651	2009	2013	D.D.C.	Equid	NA
In Defense of Animals v. Salazar, 675 F. Supp. 2d 89	09-2222	2009	2009	D.D.C.	Equid	NA
Jubic v. United States, 2009 WL 3094861	09-1842	2009	2009	D.D.C.	Equid	NA
Leigh v. Salazar	09-511	2009	NA	D. Nev.	Equid	NA
Friends of Animals v. Caldwell, 2010 WL 4259753	09-5349	2009	2010	E.D. Pa.	Deer	Friends of Animals v. Caldwell, 434 Fed. App'x 72 (3d Cir. 2011)
In Defense of Animals v. Interior, 909 F. Supp. 2d 1178	10-1852	2010	2012	E.D. Cal.	Equid	In Defense of Animals, Dreamcatcher Wild Horse and Burro Sanctuary v. Interior, 751 F.3d 1054 (9th Cir. 2014)
Colorado Wild Horse and Burro Coalition, Inc. v. Salazar, 890 F. Supp. 2d 99	10-1645	2010	2012	D.D.C.	Equid	NA
Habitat for Horses v. Salazar, 2011 WL 4343306	10-7684	2010	2011	S.D.N.Y.	Equid	NA
Leigh v. Salazar, 954 F. Supp. 1090	10-597	2010	2013	D. Nev.	Equid	NA
Cloud Foundation v	11-459	2011	2013	D. Nev.	Equid	NA

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
BLM, 2013 WL 1249814						
Wild Horse Observers Ass'n v. Salazar, 2012 WL 13076299	11-335	2011	2012	D.N.M.	Equid	Wild Horse Observers Ass'n v. Jewell, 550 Fed. App'x 638 (10th Cir. 2013)
Am. Wild Horse Preservation Campaign v. Salazar, 115 F. Supp. 3d 1	11-2222	2011	2012	D.D.C.	Equid	NA
Kleinert v. Salazar, 2011 WL 4382614	11-2428	2011	2011	D. Colo.	Equid	NA
Am. Wild Horse Preservation Campaign v. Salazar, 800 F. Supp. 2d 270	11-1352	2011	2011	D.D.C.	Equid	NA
Leigh v. Jewell, 2014 WL 31675	11-608	2011	2014	D. Nev.	Equid	NA
Downer v. Interior	11-816	2011	NA	D. Or.	Equid	NA
Humane Soc'y of US v. Bryson, 924 F. Supp. 2d 1228	12-642	2012	2013	D. Or.	Sea lion	Humane Soc'y of U.S. v. Pritzker, 548 Fed. App'x 355 (9th Cir. 2013)
Grunewald v. Jarvis, 930 F. Supp. 2d 73	12-1738	2012	2013	D.D.C.	Deer	Grunewald v. Jarvis, 776 F.3d 893 (D.C. Cir. 2015)
Am. Wild Horse Preservation Campaign v. Vilsack	13-441	2013	NA	D. Nev.	Equid	NA
Leigh v. Salazar, 2014 WL 4700016	13-6	2013	2014	D. Nev.	Equid	NA

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
Friends of Animals v. Jewell, 2014 WL 3837233	13-2034	2013	2014	E.D. Cal.	Owl	NA
Am. Wild Horse Preservation Campaign v. Jewell, 2015 WL 11070090	14-152	2014	2015	D. Wy.	Equid	Am Wild Horse Preservation Campaign v. Jewell, 847 F.3d 1174 (10th Cir. 2016)
Friends of Animals v. FWS, 2015 WL 4429147	14-1449	2014	2015	D. Or.	Owl	Friends of Animals v FWS, 879 F.3d 1000 (9th Cir. 2018)
Friends of Animals v. Haugrud, 236 F. Supp. 3d 131	15-1500	2015	2017	D.D.C.	Equid	NA
Friends of Animals v Sparks, 200 F. Supp. 3d 1114	15-59	2015	2016	D. Mont.	Equid	NA
Colo. Wild Horse v. Jewell, 130 F. Supp. 3d 205	15-1454	2015	2015	D.D.C.	Equid	NA
Friends of Animals v. BLM, 2015 WL 803169	15-118	2015	2015	D. Utah	Equid	NA
Friends of Animals v. BLM, 2015 WL 555980	15-57	2015	2015	D. Nev.	Equid	NA
Salt River Wild Horse Mgmt Group v. USDA	15-1511	2015	NA	D. Ariz.	Equid	NA
Audubon Soc'y of Portland v. U.S. Army Corps of Eng'rs,	15-665	2015	2016	D. Or.	Cormorant	NA

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
2016 WL 4577009						
Friends of Animals v BLM, 2018 WL 1612836	16-1670	2016	2018	D. Or.	Equid	NA
Am. Wild Horse Preservation Campaign v. Zinke, 2017 WL 4349012	16-1	2016	2017	D. Idaho	Equid	NA
Friends of Animals v BLM, 2017 WL 5247929	16-199	2016	2017	D. Wy.	Equid	NA
Friends of Animals v. Fellner, 2018 WL 11432021	16-6006	2016	2018	E.D.N.Y.	Deer	Friends of Animals v. Romero, 948 F.3d 579 (2d Cir. 2020)
Am Wild Horse Preservation Campaign v. Zinke, 2017 WL 11450184	17-170	2017	2017	D. Wy.	Equid	NA
Friends of Animals v BLM, 232 F. Supp. 3d 53	17-136	2017	2017	D.D.C.	Equid	NA
Friends of Animals v. Sheehan, 2021 WL 150011	17-860	2017	2021	D. Or.	Owl	Friends of Animals v. FWS, 28 F.4th 19 (9th Cir. 2022)
Animal Welfare Inst. v. Romero, 2020 WL 4451926	17-6952	2017	2020	E.D.N.Y.	Deer	NA
Friends of Animals v. BLM, 548 F. Supp. 3d 39	18-2029	2018	2021	D.D.C.	Equid	NA
Am. Wild Horse Campaign v.	18-1529	2018	2020	D.D.C.	Equid	Western Watersheds Project v.

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
Bernhardt, 442 F. Supp. 3d 127						Haaland, 850 Fed. Appx. 14
Am. Wild Horse Campaign v. Zinke, 353 F. Supp. 3d 971	18-59	2018	2018	D. Nev.	Equid	Am Wild Horse Campaign v Bernhardt, 963 F.3d 1001 (9th Cir. 2020)
Friends of Animals v. Silvey, 353 F. Supp. 3d 991	18-43	2018	2018	D. Nev.	Equid	Friends of Animals v. Silvey, 820 Fed. Appx. 513 (9th Cir. 2020)
Kathrens v. Zinke, 323 F. Supp. 3d 1142	18-125	2018	2018	D. Mont.	Equid	NA
Friends of Animals v. Rose	18-1850	2018	NA	D. Or.	Equid	NA
Kathrens v. Zinke	18-1691	2018	NA	D. Or.	Equid	NA
Friends of Animals v. Culver, 610 F. Supp. 3d 157	19-3506	2019	2022	D.D.C.	Equid	NA
Friends of Animals v. BLM	19-878	2019	NA	D. Or.	Equid	NA
Friends of Animals v. Bittner	19-2280	2019	NA	E.D. Cal.	Equid	NA
Downer v BLM, 2020 WL 13049422	20-191	2020	2020	D. Wy.	Equid	NA
Am. Wild Horse Campaign v. Bernhardt	20-3598	2020	NA	D.D.C.	Equid	NA
Arcamone-Makinano v. BLM, 2022 WL 3045192	21-458	2021	2022	D. Utah	Equid	NA

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
Aduddell v. Haaland, 2021 WL 9668347	21-196	2021	2021	D. Wy.	Equid	Arcamone-Makinano v. Haaland, 2022 WL 1042573 (10th Cir. 2022)
Central Oregon Wild Horse Coalition v. Sec. of Ag.	21-1443	2021	NA	D. Or.	Equid	NA
Return to Freedom v. Bernhardt	21-546	2021	NA	D.D.C.	Equid	NA
Arcamone-Makinano v. BLM, 2022 WL 4585298	22-621	2022	2022	D. Nev.	Equid	NA
Internat'l Soc'y for Protection of Mustangs and Burros v. USDA, 2022 WL 2702534	22-8114	2022	2022	D. Ariz.	Equid	NA
Wild Horse Fire Brigade v. BLM	22-3006	2022	NA	D.D.C.	Equid	NA
Front Range Equine Rescue v. Vilsack	22-2471	2022	NA	D.D.C.	Equid	NA
Leigh v. Interior	22-1200	2022	NA	D. Nev.	Equid	NA
Leigh v. Raby, 2022 WL 267353	22-34	2022	2022	D. Nev.	Equid	NA
Unknown, case referenced in appellate opinion	NA	NA	1981	D.D.C.	Equid	Am Horse Protection Ass'n v. Watt, 694 F.2d 1310 (D.C. Cir. 1982)
Unknown, case referenced in appellate opinion	NA	NA	NA	D.D.C.	Equid	Am Horse Protection Ass'n v. Interior, 551

Case Name	Docket number	Year filed	Decision year	Court	Animal	Appellate decision
						F.2d 432 (D.C. Cir. 1977)

APPENDIX B: NEPA DOCUMENTS ANALYZED

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2002 Cedar Mountain EA	Adjustment of Appropriate Management Levels and Herd Management Area Boundaries for the Cedar Mountain and Onaqui Mountain Herd Management Areas	BLM	Salt Lake, UT	2002	EA	horses
2005 Caspian Tern EIS	Caspian Tern Management to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary: Final Environmental Impact Statement	FWS (lead) + NOAA Fisheries & Corps	Migratory Bird and Habitat Programs	2005	EIS	terns
2005 West Douglas EA	West Douglas Herd Area Amendment to the White River Resource Management Plan: Environmental Assessment	BLM	White River, CO	2005	EA	horses
2008 McCullough Peaks EA	McCullough Peaks Herd Management Area Gather & Fertility Control Implementation Plan	BLM	Cody, WY	2008	EA	horses
2008 Sea Lion EA	Reducing the Impact on At-Risk Salmon and Steelhead by California Sea Lions in the Area	NOAA Fisheries	Northwest Region	2008	EA	California sea lions

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Downstream of Bonneville Dam on the Columbia River, Oregon and Washington					
2009 Beaty Butte EA	Beaty's Butte Herd Management Area Wild Horse Population Control and Gather Environmental Assessment	BLM	Lakeview, OR	2009	EA	horses
2009 Catoctin Mountain Deer EIS	Final White-Tailed Deer Management Plan / Environmental Impact Statement: Catoctin Mountain Park	NPS	Catoctin	2009	EIS	deer
2009 Four-Mile Herd Management Area EA	Four-Mile Herd Management Area and Sands Basin Herd Management Area Wild Horse Gathers	BLM	Boise, ID	2009	EA	horses
2009 Paisley Desert EA	Paisley Desert Herd Management Area Wild Horse Population Control and Gather Environmental Assessment	BLM	Lakeview, OR	2009	EA	horses
2009 Shark EA	Environmental Assessment: Issuance of Two Conservation and Management Permits to the National Marine Fisheries Service Pacific Islands Fisheries Science Center Protected Species Program for Conducting	NOAA Fisheries	Pacific Islands	2009	EA	Galapagos sharks

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Shark Deterrent and Removal Activities in the Papahānaumo-kuākea Marine National Monument					
2009 Valley Forge Deer EIS	Final White-Tailed Deer Management Plan/Environmental Impact Statement	NPS	Valley Forge	2009	EIS	deer
2010 Black Mountain EA	Black Mountain and Hardtrigger HMA Wild Horse Capture, Treat, Release, and Removal Plan	BLM	Boise, ID	2010	EA	horses
2010 Stinkingwa-ter EA	Stinkingwater Herd Management Area Wild Horse Gather Environmental Assessment	BLM	Burns, OR	2010	EA	horses
2010 Twin Peaks EA	Twin Peaks Herd Management Area Wild Horse and Burro Gather Plan	BLM	Eagle Lake, CA	2010	EA	burros; horses
2010 Warm Springs EA	Warm Springs Herd Management Area Wild Horse Gather Environmental Assessment	BLM	Burns, OR	2010	EA	horses
2011 Flanigan EA	Flanigan, Dogskin Mountain, and Granite Peak Wild Horse Gather	BLM	Carson City, NV	2011	EA	horses
2011 Garfield Flat EA	Garfield Flat and Marietta Herd Management Area Gather Plan	BLM	Carson City, NV	2011	EA	burros; horses
2011 Kiger & Riddle Mountain EA	Kiger and Riddle Mountain Herd Management Areas Wild	BLM	Burns, OR	2011	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Horse Gather: Environmental Assessment					
2011 Rock Creek Park Deer EIS	Rock Creek Park Final White-Tailed Deer Management Plan / EIS	NPS	Rock Creek Park	2011	EIS	deer
2011 Three Fingers EA	Three Fingers Herd Management Area Wild Horse Gather Plan	BLM	Vale, OR	2011	EA	horses
2012 Black Mountain EA	Black Mountain and Hardtrigger Herd Management Areas Wild Horse Capture, Treat, and Release Plan	BLM	Boise, ID	2012	EA	horses
2012 Bullfrog Herd Management Area EA	Bullfrog Herd Management Area: Wild Burro Gather Plan and Environmental Assessment	BLM	Tonopah, NV	2012	EA	burro
2012 Challis EA	Final Environmental Assessment: Challis Wild Horse Gather Plan	BLM	Challis, ID	2012	EA	horses
2012 Diamond Complex EA	Diamond Complex Wild Horse Gather Plan: Environmental Assessment	BLM	Mount Lewis, NV	2012	EA	horses
2012 Indiana Dunes Deer EIS	Indiana Dunes National Lakeshore Final White-Tailed Deer Management Plan / Environmental Impact Statement	NPS	Indiana Dunes	2012	EIS	deer
2012 Jackson Mountains EA	Environmental Assessment: Jackson Mountains Wild Horse Gather	BLM	Black Rock, NV	2012	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2012 Murderer's Creek EA	Murderer's Creek HMA Wild Horse Gather Plan	BLM	Prineville, OR	2012	EA	horses
2012 Owyhee Complex EA	Owyhee Complex Herd Management Area Gather	BLM	Elko & Winnemucca, NV	2012	EA	horses
2012 Wassuk EA	Wassuk Herd Management Area Wild Horse Gather Plan	BLM	Carson City, NV	2012	EA	horses
2013 Barred Owl EIS	Experimental Removal of Barred Owls to Benefit Threatened Northern Spotted Owls: Final Environmental Impact Statement	FWS	Portland	2013	EIS	owls
2013 Gull EA	Final Environmental Assessment– Adaptively Manage Predation on Caspian Terns in the Lower Columbia River Estuary	Corps	Portland District	2013	EA	Western & Glaucous-winged gulls
2013 Humboldt EA	Environmental Assessment: Humboldt Herd Area Wild Horse Gather Plan Environmental Assessment	BLM	Humboldt River, NV	2013	EA	horses
2014 Antietam Deer EIS	Final White-Tailed Deer Management Plan and Environmental Impact Statement	NPS	Antietam, Manassas, Monocacy	2014	EIS	deer
2014 Bible Spring EA	Bible Spring Complex Wild Horse Gather and Removal and Fertility Treatment Plan	BLM	Cedar City, UT	2014	EA	horses
2014 Caspian Tern EA	Inland Avian Predation Management	Corps (lead) with	Walla Walla District	2014	EA	terns

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Plan: Environmental Assessment	Bureau of Land Reclama-tion				
2014 Cuyahoga Deer EIS	Cuyahoga Valley National Park Final White-Tailed Deer Management Plan / Environmental Impact Statement	NPS	Cuyahoga Valley	2014	EIS	deer
2014 Fish Creek EA	Fish Creek Herd Management Area Wild Horse Gather Plan	BLM	Battle Mountain, NV	2014	EA	horses
2015 Cold Springs EA	Cold Springs Herd Management Area Population Management Plan Environmental Assessment 2015	BLM	Vale, OR	2015	EA	horses
2015 Cormorant EIS	Double-Crested Cormorant Management Plan to Reduce Predation of Juvenile Salmonids in the Columbia River Estuary	Corps (lead) + NOAA Fisheries, FWS, & Animal and Plant Health Inspection Service (APHIS)	Portland District	2015	EIS	cormorants
2015 Fire Island Deer EIS	Fire Island National Seashore Final White-Tailed Deer Management Plan and Environmental Impact Statement	NPS	Fire Island	2015	EIS	deer
2015 West Douglas EA	Environmental Assessment: West Douglas Herd Area Wild Horse Gather	BLM	White River, CO	2015	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2016 Blue Wing Complex EA	Environmental Assessment: Blue Wing Complex Gather	BLM	Humboldt River, NV	2016	EA	burros; horses
2016 Conger EA	Population Control Research Wild Horse Gather for the Conger and Frisco Herd Management Areas	BLM	West Desert, UT	2016	EA	horses
2016 Sand Wash Basin EA	Sand Wash Basin Wild Horse Management Area Bait/Water Trapping Gather/Population Control Environmental Assessment	BLM	Little Snake, CO	2016	EA	horses
2016 Sea Lion Supplement-al EA	Supplemental Environmental Assessment: Reducing the Impact on At-Risk Salmon and Steelhead by California Sea Lions in the Area Downstream of Bonneville-Dam on the Columbia River, Oregon and Washington	NOAA Fisheries	West Coast Region	2016	EA	California sea lions
2016 Sinbad EA	Sinbad Wild Burro Gather and Removal and Research Plan	BLM	Green River, UT	2016	EA	burros
2016 Sulphur EA	Sulphur Wild Horse Gather Plan	BLM	Cedar City, UT	2016	EA	horses
2017 Adobe Town EA	Environmental Assessment for Adobe Town, Salt Wells Creek, and Great Divide Basin Herd Management Areas Wild Horse Gather	BLM	High Desert, WY	2017	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2017 Antelope & Triple B EA	Antelope and Triple B Complexes Gather Plan Environmental Assessment	BLM	Elko District, NV	2017	EA	horses
2017 Chesapeake Deer EA	White-Tailed Deer Management Plan and Environmental Assessment, Chesapeake and Ohio Canal and Harpers Ferry National Historical Parks	NPS	Chesapeake & OH Canal and Harpers Ferry	2017	EA	deer
2017 East Pershing EA	East Pershing Complex Gather Plan	BLM	Humboldt River, NV	2017	EA	horses
2017 Bison EA	Initial Bison Herd Reduction: Environmental Assessment	NPS	Grand Canyon	2017	EA	bison
2017 Hog Creek EA	Hog Creek Herd Management Area Population Management Plan	BLM	Vale, OR	2017	EA	horses
2017 Pine Nut Mountains EA	Pine Nut Mountains Herd Management Area Plan: Environmental Assessment	BLM	Carson City, NV	2017	EA	horses
2017 Red Desert EA	Red Desert Complex Herd Management Area Gather	BLM	High Desert, WY & Wind River Big Horn Basin, WY	2017	EA	horses
2017 Silver King EA	Silver King Herd Management Area Wild Horse Gather	BLM	Ely, NV	2017	EA	horses
2017 Smoke Creek EA	Smoke Creek Complex Gather	BLM	Winnemucca, NV	2017	EA	horses
2017 Stinking-water EA	Stinkingwater Herd Management Area Population Management Plan	BLM	Burns, OR	2017	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2018 Beaty Butte EA	Beaty Butte Wild Horse Gather and Fertility Control Plan: Environmental Assessment	BLM	Lakeview, OR	2018	EA	horses
2018 Caliente Herd Area EA	Caliente Herd Area Complex Wild Horse Gather	BLM	Ely, NV	2018	EA	horses
2018 Eagle Complex EA	Eagle Complex Wild Horse Gather: Final Environmental Assessment	BLM	Ely, NV	2018	EA	horses
2018 Fifteenmile EA	Fifteenmile Herd Management Area Update and Wild Horse Gather	BLM	Worland, WY	2018	EA	horses
2018 Little Brook EA	Little Book Cliffs Wild Horse Range Gather: Environmental Assessment	BLM	Grand Junction, CO	2018	EA	horses
2018 Muddy Creek EA	Muddy Creek Wild Horse Herd Management Area Gather Plan	BLM	Green River, UT	2018	EA	horses
2018 North Hills EA	North Hills Wild Horse Herd Management Area Plan and Gather Plan	BLM & U.S. Forest Service	Cedar City, UT (BLM) & Pine Valley Ranger District, UT (FS)	2018	EA	horses
2018 Onaqui EA	Onaqui Mountain Herd Management Area Population Control	BLM	Salt Lake, UT	2018	EA	horses
2018 Seaman & White River EA	Seaman and White River Herd Area Wild Horse Gather	BLM	Ely, NV	2018	EA	horses
2018 Spring Creek EA	Spring Creek Basin Herd Management Area Bait Trap Gathers	BLM	Tres Rios, CO	2018	EA	horses
2018 Warm Springs EA	Spay Feasibility and On-Range	BLM	Burns, OR	2018	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Behavioral Outcomes Assessment and Warm Springs HMA Population Management Plan					
2019 Challis EA	Challis Herd Management Area Management Plan	BLM	Challis, ID	2019	EA	horses
2019 Range Creek EA	Range Creek Wild Horse Herd Management Area Gather Plan	BLM	Price Field, UT	2019	EA	horses
2019 Saylor Creek EA	Final Saylor Creek Herd Management Area Wild Horse Gather Plan Environmental Assessment	BLM	Twin Falls, ID	2019	EA	horses
2019 Twin Peaks EA	Twin Peaks Herd Management Area Wild Horse and Burro Gather Plan	BLM	Northern CA, CA	2019	EA	burros; horses
2020 Black Mountain EA	Black Mountain Herd Management Area Wild Burro Gather and Population Control Plan Final Environmental Assessment	BLM	Colorado River, AZ	2020	EA	burros
2020 Confusion HMA EA	Confusion HMA Wild Horse Gather Plan	BLM	West Desert, UT	2020	EA	horses
2020 Cormorant EIS	Final Environmental Impact Statement: For the Management of Conflicts Associated with Double-Crested Cormorants	FWS (lead) + APHIS	HQ	2020	EIS	cormorants

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
2020 Four Mile HMA EA	Four Mile Herd Management Area Wild Horse Gather Plan Environmental Assessment	BLM	Boise, ID	2020	EA	horses
2020 Lake Mead EA	Lake Mead Complex Wild Horse and Burro Gather Plan	BLM	Southern NV, NV	2020	EA	burros; horses
2020 Moriah EA	Moriah Herd Area Wild Horse Gather	BLM	Ely, NV	2020	EA	horses
2020 Nev. Wild Horse Range EA	Nevada Wild Horse Range Herd Management Area Wild Horse Gather Plan	BLM	Southern NV, NV	2020	EA	burros; horses
2020 Reveille EA	Reveille Herd Management Area Wild Horse Gather Plan Final Environmental Assessment	BLM	Battle Mountain, NV	2020	EA	horses
2020 Sea Lion EA	Environmental Assessment: Reducing Predation Impacts on At-Risk Fish by California and Steller Sea Lions in the Columbia River Basin	NOAA Fisheries	West Coast Region	2020	EA	California & Steller sea lions
2020 Spring Creek EA	Spring Creek Basin Herd Management Area Plan (HMAP) Revision	BLM	Tres Rios, CO	2020	EA	horses
2020 Swasey HMA EA	Swasey Herd Management Area Wild Horse Management and Gather Plan	BLM	West Desert, UT	2020	EA	horses
2021 Adobe Town EA	Wild Horse Gather to Appropriate Management Levels on the Adobe Town,	BLM	Rock Springs, WY & Rawlins, WY	2021	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Salt Wells Creek, Great Divide Basin, White Mountain and Little Colorado Herd Management Areas					
2021 Calico Complex EA	Calico Complex Wild Horse and Burro Gather: Plan Final Environmental Assessment	BLM	Winnemucca, NV	2021	EA	burros; horses
2021 Centennial EA	Centennial, Panamint and Slate Range Herd Areas Wild Burro Gather Plan	BLM	CA Desert, CA	2021	EA	burros
2021 Desatoya EA	Environmental Assessment: Desatoya Herd Management Area Wild Horse Gather Plan	BLM	Carson City, NV	2021	EA	horses
2021 Hart Mountain Cougar EIS	Hart Mountain National Antelope Refuge Final Bighorn Sheep Management Plan and Environmental Impact Statement	FWS (lead) + APHIS	Columbia Pacific Northwest Interior Region	2021	EIS	cougars
2021 Heber EA	Heber Wild Horse Territory Management Plan Draft Environmental Assessment	Forest Service	Black Mesa Ranger District, AZ	2021	EA	horses
2021 Pancake Complex EA	Pancake Complex Wild Horse Gather Final Environmental Assessment	BLM	Ely, NV	2021	EA	horses
2021 Piceance-East Douglas EA	Piceance-East Douglas Herd Management Area Gather and Fertility Control Plan	BLM	White River, CO	2021	EA	horses
2021 Sand Wash Basin EA	Sand Wash Basin Wild Horse Herd	BLM	Little Snake, CO	2021	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Management Area Gather					
2021 Surprise Complex EA	Surprise Complex Wild Horse and Burro Gather Plan	BLM	Northern CA, CA	2021	EA	horses
2022 Bible Spring EA	Bible Spring Complex Wild Horse Gather Plan	BLM	Cedar City, UT	2022	EA	horses
2022 Bordo Atravesado EA	Bordo Atravesado HMA Wild Horse Gather Plan	BLM	Socorro, NM	2022	EA	horses
2022 Canyon-lands EA	Canyonlands HMA Gather Plan	BLM	Richfield, UT	2022	EA	burros
2022 Jackson Mountains EA	Jackson Mountains Wild Horse Gather: Environmental Assessment	BLM	Black Rock, NV	2022	EA	horses
2022 Little Fish Lake EA	Little Fish Lake Joint Management Area Wild Horse Gather Plan Final Environmental Assessment	BLM	Battle Mountain, NV	2022	EA	horses
2022 Marietta EA	Environmental Assessment: Marietta Wild Burro Range Gather Plan	BLM	Carson City, NV	2022	EA	burros
2022 North Lander EA	North Lander Wild Horse Gather Environmental Assessment	BLM	Lander, WY	2022	EA	horses
2022 Sinbad EA	Sinbad Wild Burro Herd Management Area Gather Plan	BLM	Price Field, UT	2022	EA	burros
2022 Spring Mountains EA	Spring Mountains Wild Horse & Burro Complex Herd Management Area Plan	BLM & Forest Service	Humboldt -Toiyabe National Forest & Southern NV District (BLM)	2022	EA	burros; horses
2022 Stone Cabin Complex EA	Stone Cabin Complex Wild Horse Gather	BLM	Battle Mountain, NV	2022	EA	horses

Short title	Full document title	Agency	District office	Year	Document type	Overabundant animal
	Plan Preliminary Environmental Assessment					
2023 Roberts Mountain EA	Roberts Mountain Complex Wild Horse Gather and Population Management Plan	BLM	Battle Mountain, NV	2023	EA	horses