

Improving the Improvement Act: Climate Change Management in the National Wildlife Refuge System

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INTRODUCTION

The United States Fish and Wildlife Service (“FWS”), an agency of the United States Department of the Interior, is responsible for managing the National Wildlife Refuge System (“Refuge System”).¹ The Refuge System permits the FWS to set aside public waters and lands to conserve fish, wildlife and plants in the United States. Among federal land systems, the Refuge System is the largest dominant use system and consists of over ninety million acres.² Because its dominant use is wildlife conservation, this large Refuge System is in a unique position to protect wildlife against the impacts of climate change. Climate change will create dramatic habitat transformations, causing wildlife to disappear or shift in location.³

Despite the system’s unique potential to protect wildlife, its legal framework is largely a relic from the early 1900s — a time when few understood the nature and consequences of climate change.⁴ The Refuge System emerged out of an early 1900s belief that the best way to protect wildlife was to preserve historic conditions.⁵ Accordingly, the Refuge System established that the FWS would direct management resources based on the individual purpose for each refuge.⁶ Congress’s most recent effort to provide more coherence to the Refuge System, the Wildlife Refuge Improvement Act of 1997 (“Improvement Act”), maintains the deference to a refuge’s individual purpose where it conflicts with one of the Act’s systemic purposes.⁷ However, because climate change is rapidly and permanently changing habitat conditions from their historic norms, Congress should update much of the Refuge System’s legal framework to create greater flexibility and adaptability.⁸

This article argues that climate change, by altering historic ranges of wildlife,

¹ National Wildlife Refuge System, U.S. FISH & WILDLIFE SERVICE, <http://www.fws.gov/Refuges/about/mission.html> (last visited Sept. 15, 2009).

² Under a dominant use system, other uses are allowed only to the extent that they are consistent with the primarily defined purpose. Michael J. Brennan & Leah A. Kukowski, *Managing the Wildlife Refuge System: Is Anything Compatible Anymore?*, 20 NAT. RESOURCES & ENV’T 51, 51 (2005).

³ See *infra* Part I.

⁴ See *infra* Part I.A.

⁵ See *infra* Part I.A.; Robert L. Glicksman, *Ecosystem Resilience to Disruptions Linked to Global Climate Change: An Adaptive Approach to Federal Land Management*, 87 NEB. L. REV. 833, 852-56 (2009) (discussing “paradigm shift” away from deterministic science and “equilibrium theory”); Fred P. Bosselman & A. Dan Tarlock, *The Influence of Ecological Science on American Law: An Introduction*, 69 CHI.-KENT L. REV. 847, 863-69 (1994) (discussing “equilibrium theory”).

⁶ See *infra* Part I.A.

⁷ An example of a systemic, or overarching, purpose is the maintenance of biological diversity. National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. § 668dd(a)(4)(b) (1998). See *infra* Part II; 16 U.S.C. § 668dd(a)(4)(D).

⁸ See *infra* Part II.

will increase conflict between individual and systemic purposes, particularly in those refuges with narrowly defined purposes.⁹ Accordingly, the Refuge System's mandate to provide for "biological integrity" may require the FWS to manage in ways that disfavor narrowly defined individual refuge purposes.¹⁰ Therefore, the Improvement Act's provision that a refuge's individual purpose must override systemic purposes in case of conflict is potentially inconsistent with the "biological integrity" requirement. This inconsistency would force managers to adopt management strategies that are ultimately futile and would frustrate federal aspirations for a more coordinated conservation system.¹¹

This article will proceed in three parts.¹² Part I introduces the legal framework of the Refuge System and the basic problem of wildlife migration due to climate change.¹³ It also discusses the most recent efforts of the Department of Interior to make public lands management more responsive to climate change challenges.¹⁴ Part II argues that the FWS cannot fully achieve its stated goals in public lands management due to the Improvement Act's deference to individual refuge purposes.¹⁵ This deference places an upper limit on what the FWS can achieve in the context of combating system-wide problems such as climate change.¹⁶ Part III proposes and discusses the merits of an amendment to the Improvement Act that would remove the specific provision that defers to original refuge purposes.¹⁷ Part III also proposes changes to FWS policy to avoid conflict and competition between systemic and individual purposes.

I. BACKGROUND

A. *The Management Structure of the Refuge System: Individual Versus Systemic Purposes*

The design of the National Wildlife Refuge System is perhaps best described as disorganized and fragmented.¹⁸ It is a sprawling network of ninety-six million acres of reserves and easements dedicated to ecological conservation.¹⁹

⁹ See *infra* Part II.

¹⁰ See *infra* Part II.

¹¹ See *infra* Part II.

¹² See *infra* Parts I-III.

¹³ See *infra* Part I.A-B.

¹⁴ See *infra* Part I.C.

¹⁵ See *infra* Part II.A.

¹⁶ See *infra* Part II.B.

¹⁷ See *infra* Part III.

¹⁸ ROBERT L. FISCHMAN, *THE NATIONAL WILDLIFE REFUGES* 23 (2003) [hereinafter "NATIONAL WILDLIFE"].

¹⁹ Robert L. Fischman, *From Words to Action: The Impact and Legal Status of the 2006 National Wildlife Refuge System Management Policies*, 26 *STAN. ENVTL. L.J.* 77, 78 (2007).

The Refuge System was not enacted fully conceived, but rather has its origins in various ad hoc presidential declarations in the early 1900s.²⁰ These declarations protected certain areas for wildlife conservation, typically protection of migratory birds.²¹ Scholars disagree over which was the first refuge, but a popular starting date is 1903 when Theodore Roosevelt reserved Florida's Pelican Island for native birds.²² Over the next several decades, executive orders, legislation, and administrative action added units of varying sizes, purposes, origins, ecosystems, and climates to the Refuge System.²³ The FWS is one of eight different bureaus of the Department of the Interior and it is responsible for managing the various units of the Refuge System.²⁴

From the point of view of public lands management, such wide variation among refuges is significant.²⁵ The FWS must manage refuges on an individual basis, according to the legislation, executive order, or administrative action that created the refuge.²⁶ The language of a refuge purpose can range from very narrow to very broad.²⁷ The narrower the language, the less discretion refuge managers have in pursuing other non-individual purposes. A purpose can be as narrow as preserving and managing the habitat for a single species.²⁸ For example, the act establishing Montana's National Bison Range states that one of the refuge's purposes is "for a permanent . . . herd of bison . . ."²⁹ A purpose can also be as broad as preserving and managing the habitat for "waterfowl."³⁰ In fact, several early wildlife refuge purposes state that the refuge should serve as a "refuge and breeding ground for migratory birds and other wildlife."³¹

[hereinafter "*From Words to Action*"].

²⁰ *Id.* at 33.

²¹ See Michael J. Brennan & Leah A. Kukowski, *Managing the Wildlife Refuge System: Is Anything Compatible Anymore?*, 20 NAT. RESOURCES & ENV'T 51, 51 (2005) (stating that government added refuges to the system primarily to serve waterfowl conservation objectives).

²² See *id.* at 54 (stating that creation of first wildlife refuge "is usually traced back to President Theodore Roosevelt's establishment of a refuge at Pelican Island").

²³ See Brad Griffith et al., *Climate Change Adaptation for the US National Wildlife Refuge System*, 44 ENVTL. MGMT. 6, 2 (2009), available at <http://dx.doi.org/10.1007/s00267-009-9323-7> (stating that Refuge System "is characterized by an uneven geographic and ecological distribution").

²⁴ See Anne Polansky, *Interior Secretary Salazar on Right Track with New Climate Initiative but Faces Tough Road Ahead*, CLIMATE SCIENCE WATCH (Sept. 16, 2009), <http://www.climate-sciencewatch.org/2009/09/16/interior-secretary-salazar-on-right-track-with-new-climate-initiative-but-faces-tough-road-ahead/> (listing eight bureaus of Department of Interior).

²⁵ See *infra* notes 26-31 and accompanying text.

²⁶ *National Wildlife Refuge System*, U.S. FISH & WILDLIFE SERVICE, <http://www.fws.gov/refuges/policiesandbudget/mandates.html> (last visited Sept. 15, 2009).

²⁷ *Id.*

²⁸ H.R. REP. NO. 104-218, at 8 (1995), available at http://www.thomas.gov/cgi-bin/cpquery/?&dbname=cp104&sid=cp104fDBZZ&refer=&r_n=hr218.104&item=&sel=TOC_25539&; Griffith et al., *supra* note 23, at 2.

²⁹ 16 U.S.C. § 671 (1908).

³⁰ H.R. REP. NO. 104-218, at 8 (1995), available at http://www.thomas.gov/cgi-bin/cpquery/?&dbname=cp104&sid=cp104fDBZZ&refer=&r_n=hr218.104&item=&sel=TOC_25539&.

³¹ See, e.g., Exec. Order No. 9167, 7 Fed. Reg. 3767 (May 19, 1942) (establishing Halfbreed

Some refuges have multiple establishment documents that create several founding purposes.³² For example, Wyoming's National Elk Refuge owes its existence to congressional acts as well as to executive orders.³³ An act of Congress in 1912 established the refuge for "a winter game (elk) reserve . . ."³⁴ Then in 1921, an executive order added several other purposes, noting that the refuge should also serve as "breeding grounds for birds."³⁵ An additional act of Congress in 1927 added that a purpose of the refuge was "for the grazing of, and as a refuge for, American elk and other big game animals."³⁶ In managing refuges with multiple establishment documents, the FWS has discretion to define a refuge's ultimate individual purpose according to statutory interpretation, legislative history, or the particular circumstances leading to the refuge's approval.³⁷

Having multiple broad purposes raises the question of exactly how narrow the FWS should interpret overall refuge purposes.³⁸ Although no refuge has a singular purpose to protect only one specified species, several refuges do have as a purpose the protection of a specific species.³⁹ For example, one purpose of the Coachella Valley National Wildlife Refuge in southern California is to protect the endangered fringe-toed lizard.⁴⁰ Other refuges have narrow purposes because they place conditions on conservation measures.⁴¹ For example,

Lake National Wildlife Refuge in Montana); Exec. Order No. 7926, 3 Fed. Reg. 1669 (July 7, 1938) (establishing Wheeler National Wildlife Refuge); Exec. Order No. 7801, 3 Fed. Reg. 271 (Jan. 28, 1938) (establishing Black Coulee National Wildlife Refuge in Montana); Exec. Order No. 7655, 2 Fed. Reg. 1453 (July 12, 1937) (establishing Deer Flat National Wildlife Refuge); Exec. Order No. 7643, 2 Fed. Reg. 1305 (June 22, 1937) (establishing Bombay Hook National Wildlife Refuge in Delaware); Exec. Order No. 7562, 2 Fed. Reg. 537 (Feb. 27, 1937) (establishing Sacramento National Wildlife Refuge in California).

³² FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 164.

³³ *Id.*

³⁴ 16 U.S.C. § 673 (1912).

³⁵ Exec. Order No. 3596 (Dec. 22, 1921).

³⁶ 16 U.S.C. § 673(a).

³⁷ FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 166.

³⁸ *See supra* notes 25-37 and accompanying text.

³⁹ Griffith et al., *supra* note 23, at 2 (stating that most refuges were established to protect individual wildlife species or species groups).

⁴⁰ http://www.fws.gov/salttonsea/Coachella/CV_index.html (stating one purpose of Coachella NWR is to protect fringe-toed lizard); *See* Endangered Species Act of 1973, 16 U.S.C. § 1534(a) (2006) (stating purpose to "conserve fish or wildlife which are listed as endangered species").

⁴¹ *See, e.g.*, Exec. Order No. 9292, 8 Fed. Reg. 41 (Dec. 31, 1942) (establishing Hailstone National Wildlife Refuge with exceptions for "primary use for the purpose of oil and gas development"); Exec. Order No. 7938, 3 Fed. Reg. 1944 (Oct. 4, 1938) (establishing Breton National Wildlife Refuge with exceptions for "recovery of the oil and gas deposits from any of the island areas under the mineral leasing act"); Exec. Order No. 7795, 3 Fed. Reg. 225 (Jan. 21, 1938) (establishing Huron National Wildlife Refuge with exceptions for "the quarrying of stone . . . and the maintenance of the Huron Island Light Station"); Exec. Order No. 7509, 1 Fed. Reg. 2482 (Dec. 11, 1936) (establishing Charles M. Russell National Wildlife Refuge with exceptions for "mining," upper limits for certain species' populations, and "domestic livestock"); Exec. Order No. 1032 (Feb. 25, 1909) (establishing Minidoka National Wildlife Refuge with exceptions for "irrigation and other

Montana's Bowdoin National Wildlife Refuge serves "as a refuge and breeding ground for migratory birds and other wildlife," but is subject to the land's use "as a shooting area [for] irrigation [and] oil and gas development."⁴²

Perhaps the most narrowly defined refuges are those that have a singular purpose to protect "native birds."⁴³ Unlike other refuges that provide simply for the protection of "birds," the provision for "native" birds reflects the Refuge System's management paradigm of preserving the historical conditions within each refuge. The Refuge System Manual defines "native" species as "a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem."⁴⁴ On the other hand, the FWS defines "exotic" species as "any species, including its seeds, eggs, spores, or other biological material capable of propagating that species, that is not native to that habitat." Other terms sometimes used for exotic species include "non-native," "non-indigenous," and "alien."⁴⁵

Many laws influence system management by creating systemic purposes for the Refuge System.⁴⁶ The most important of these laws for purposes of this article are the National Wildlife Refuge System Administration Act of 1966 ("Administration Act")⁴⁷ and the National Wildlife Refuge System Improvement Act of 1997 ("Improvement Act").⁴⁸ As described above, the Refuge System had its beginnings in a series of ad hoc presidential declarations to set aside particular areas of land.⁴⁹ However, the Administration Act later consolidated these refuges under the jurisdiction of the FWS and created an organic act for the National Wildlife Refuge System.⁵⁰ The Improvement Act amended the

incidental purposes").

⁴² Exec. Order No. 8592, 5 Fed. Reg. 4478 (Nov. 12, 1940).

⁴³ See, e.g., Exec. Order No. 4467, (June 29, 1926) (establishing Johnston Island National Wildlife Refuge "as a refuge and breeding ground for native birds"); Exec. Order No. 3504 (June 25, 1921) (establishing Pablo National Wildlife Refuge "as a refuge and breeding ground for native birds"); Exec. Order No. 2199, (May 14, 1915) (establishing Mille Lacs National Wildlife Refuge "as a preserve and breeding ground for native birds"); Exec. Order No. 1019 (Feb. 3, 1909) (establishing Hawaiian Islands National Wildlife Refuge "as a preserve and breeding ground for native birds"); Exec. Order No. 958 (Oct. 23, 1908) (establishing Island Bay National Wildlife Refuge "as a preserve and breeding ground for native birds"); Exec. Order No. 682, (Aug. 17, 1907) (establishing Shell Keys National Wildlife Refuge "as a reserve and breeding ground for native birds").

⁴⁴ U.S. FISH & WILDLIFE SERVICE, NATIONAL WILDLIFE REFUGE SYSTEM: BIOLOGICAL INTEGRITY, DIVERSITY, AND ENVIRONMENTAL HEALTH 601 FW 3.6(E) (2001), available at <http://www.fws.gov/policy/601fw3.pdf> [hereinafter "FWS MANUAL"].

⁴⁵ *Id.* at 7 RM 8.4(A).

⁴⁶ *Legislative Mandates & Authorities*, NATIONAL WILDLIFE REFUGE SYSTEM, <http://www.fws.gov/refuges/policiesandbudget/mandates.html> (last visited Sept. 15, 2009); see Glicksman, *supra* note 5, at 859-61 (discussing cross-cutting statutes, including NEPA, ESA, and federal pollution control laws).

⁴⁷ 16 U.S.C. §§ 668dd-668ee (2006).

⁴⁸ § 668dd.

⁴⁹ See *supra* notes 20-23 and accompanying text.

⁵⁰ An organic act is a congressional act creating an agency to manage certain federal land.

Administration Act to ensure that the FWS manages the Refuge System as a national system of related lands, waters, and interests for the protection and conservation of wildlife.⁵¹ In so doing, the Improvement Act established a unifying mission of wildlife conservation.⁵² The Improvement Act states that the Refuge System's systemic purpose is "to administer a national network of lands and waters for the conservation, management, and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit or present and future generations of Americans."⁵³ To achieve this Refuge System mission, the Improvement Act states that the Secretary of the Interior must:

(A) provide for the conservation of fish, wildlife, and plants, and their habitats within the System; (B) ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans;⁵⁴

Although the Improvement Act provides an overall mission for the Refuge System, it does not guarantee systemic management.⁵⁵ This is because the Improvement Act provides that when an individual refuge purpose conflicts with the mission statement, the individual purpose will override the systemic purpose.⁵⁶ Because of this "deference provision," FWS's management may continue to be disjointed and differ from refuge to refuge.⁵⁷

To comply with the Improvement Act's provisions, the FWS adopted a set of policies in 2006.⁵⁸ One of these, the Goals and Refuge Purposes Policy ("Purposes Policy"), deals specifically with the role of individual refuge purposes in light of the system's new overarching mission.⁵⁹ Regarding the meaning of the Improvement Act's deference provision, the Purposes Policy

National Wildlife Refuge System Administration Act, DIGEST OF FEDERAL RESOURCE LAWS OF INTEREST TO THE U.S. FISH AND WILDLIFE SERVICE, <http://www.fws.gov/laws/lawsdigest/nwrsact.html> (last visited Nov. 22, 2009).

⁵¹ *Id.*

⁵² See 16 U.S.C. § 668dd(a)(1) (stating that Act's purpose is to "consolidat[e] the authorities relating to various categories of areas that Secretary administers for conservation of fish and wildlife").

⁵³ § 668dd(a)(2).

⁵⁴ § 668dd(a)(4)(A)-(B).

⁵⁵ See FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 80 (stating that overall mission is necessary, but not sufficient condition for systemic management).

⁵⁶ § 668dd(a)(4)(D).

⁵⁷ See FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 80.

⁵⁸ Policy on National Wildlife Refuge System Mission and Goals and Refuge Purposes, 71 Fed. Reg. 36,404 (June 26, 2006); Final Appropriate Refuge Uses Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 71 Fed. Reg. 36,408 (June 26, 2006); Final Wildlife-Dependent Recreational Uses Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 71 Fed. Reg. 36,418 (June 26, 2006).

⁵⁹ Policy on National Wildlife Refuge System Mission and Goals and Refuge Purposes, 71 Fed. Reg. 36404-01 (June 26, 2006).

instructs refuge managers in two principal ways.⁶⁰ First, it states that more specific goals will trump general conservation objectives where they conflict.⁶¹ One example of a conflict between an individual refuge purpose and systemic legislation can be found in the Ninth Circuit's *Schwenke v. Secretary of the Interior* decision regarding administration of the Charles M. Russell National Wildlife Refuge ("Refuge").⁶² The *Schwenke* case involved interpretation of three competing authorities: (1) Executive Order 6910 (November 26, 1934), which established the Refuge and set forth the purpose of limited priority for grazing; (2) the Administration Act; and (3) a 1976 act that transferred shared jurisdiction over game ranges to FWS alone for the purpose of improving wildlife conservation.⁶³ Ranchers holding grazing permits on the Refuge sought declaratory judgments that livestock grazing on the Refuge should have higher priority over wildlife protection.⁶⁴ The Ninth Circuit held that, considered alone, the 1976 act heightened the priority of wildlife protection over grazing on the Refuge, pursuant to the systemic guidelines in the Administration Act.⁶⁵ However, because the 1976 act did not expressly revoke the Executive Order that created the Refuge, the individual purpose set out in the Executive Order continued to control refuge management.⁶⁶

The second way in which the Purposes Policy implements the deference provision concerns situations in which there are not sufficient resources to satisfy both individual purposes and systemic purposes. The Policy incorporates the language of the deference provision and adds the following instruction: "[t]herefore, our first obligation is to fulfill and carry out the purpose(s) of each refuge."⁶⁷ In other words, even if there is no outright conflict between individual and systemic purposes, the FWS must resolve competition for resources in a manner that first fulfills individual refuge purposes. Given the

⁶⁰ See *infra* notes 61-67 and accompanying text.

⁶¹ *Service Manual Chapters*, U.S. FISH & WILDLIFE SERVICE, pt. 601 § 1.15, <http://www.fws.gov/policy/manuals/> [hereinafter "*Purposes Policy*"] (updated continually) (last visited Apr. 5, 2011).

⁶² 720 F.2d 571 (9th Cir. 1983). The opinion refers to it as the Charles M. Russell National Wildlife "Range," but for clarity purposes, this article refers to it as a "Refuge." This would be the more accurate way of describing the area according to Public Land Order 5635, which, in 1978, changed the name of the refuge to include "Refuge" in place of "Range." See Charles M. Russell National Wildlife Refuge and UL Bend National Wildlife Refuge, Montana, 72 Fed. Reg. 232,68175 (Dec. 4, 2007) (stating "[o]n February 25, 1963, the Fort Peck Game Range was redesignated the Charles M. Russell National Wildlife Range by Public Land Order 2951. . . . Public Land Order 5635 (1978) changed the name of the game refuge to Charles M. Russell National Wildlife Refuge and clarified the administration and management of the Refuge under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee)").

⁶³ *Schwenke*, 720 F.2d at 572-73.

⁶⁴ *Id.* at 572.

⁶⁵ *Id.* at 576.

⁶⁶ *Id.* at 577.

⁶⁷ Purposes Policy, *supra* note 61, at pt. 601 § 1.5.

realities of limited funding to cover all refuge purposes, this instruction renders systemic purposes an “unaffordable luxury.”⁶⁸

The foregoing discussion described some of the ways in which the legal structure of the Refuge System deals with conflicts between individual and systemic purposes. The following section describes an increasingly important potential source of conflict: the changes in wildlife behavior due to climate change.⁶⁹

B. Climate Change Consequences on Today’s Wildlife Refuges

Scientists who study the effects of climate change on the environment consider birds to be nature’s “barometers.”⁷⁰ Like the proverbial canary in a coal mine, changes in a bird population’s range, density, and composition are some of the first signs of environmental damage.⁷¹ Several studies of bird populations show that such changes are taking place and that the cause is climate change.⁷² The following discussion summarizes a few of the most recent studies on this phenomenon.⁷³

In September 2009, United States Geological Survey (“USGS”) scientists released a study documenting a dramatic shift in the winter distribution of the Pacific brant, a small, dark sea goose.⁷⁴ Historically, nearly ninety percent of the brant population wintered in Mexico, as opposed to their Alaskan breeding grounds.⁷⁵ However, because Alaska’s climate has sufficiently warmed over the last four decades, about thirty percent of the brant population now winter in Alaska.⁷⁶ The study’s authors predict that, given predictions of increasingly warm temperatures and less ice at higher latitudes, “brant numbers will continue to increase in Alaska during the winter.”⁷⁷ This is a significant finding because the Pacific brant is a geese species that traditionally winters at one of the highest

⁶⁸ Fischman, *From Words to Action*, *supra* note 19, at 93.

⁶⁹ See *infra* Part I.B.

⁷⁰ See, e.g., Peter Fimrite, *Vast Shift in Bird Species Expected from Warming*, S.F. CHRONICLE, Sept. 2, 2009, at A1, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=/c/a/2009/09/02/MNBT19E450.DTL> (reporting scientist’s remark that “birds are nature’s barometers”); K.E. Schikorr & H.M. Swain, *Wading Birds—Barometer of Management Strategies in the Indian River Lagoon*, 57 BULL. MARINE SCI. 215, 215 (1995) (calling wading birds “barometer” of management strategies on Indian River Lagoon).

⁷¹ See *supra* note 70 and accompanying text.

⁷² See *infra* notes 74-91 and accompanying text.

⁷³ See *infra* notes 74-91 and accompanying text.

⁷⁴ David Ward et al., *Change in Abundance of Pacific Brandt Wintering in Alaska: Evidence of a Climate Warming Effect?*, 62 ARCTIC 301 (2009).

⁷⁵ Press Release, U.S. Geological Survey, *Opting Out of Migration: As Climate Warms, Arctic-Nesting Geese Elect to Winter in Alaska Instead of Mexico* (Sept. 9, 2009), available at <http://www.usgs.gov/newsroom/article.asp?ID=2302>.

⁷⁶ *Id.*

⁷⁷ *Id.*

latitudes.⁷⁸ This suggests that other species that normally breed in climates warmer than Alaska are also wintering at higher latitudes than they have in the past.⁷⁹ According to the study, the Pacific brant is “of federal management concern because its overall numbers have been declining steadily across its entire range since the early 1960s.”⁸⁰ The study’s findings suggest that climate change is responsible for this decline.⁸¹

The findings of the USGS study on the Pacific brant correspond with other recent studies on the effects of climate change on bird populations.⁸² A September 2009 Point Reyes Bird Observatory (“PRBO”) Conservation Science study predicts that the changes in population ranges and adaptive behavior that would normally occur over tens of thousands of years will actually occur within the next sixty years because of climate change.⁸³ Not only will some species decline significantly while others increase, the actual community compositions will reshuffle and exist in historically unique combinations.⁸⁴ One of the study’s specific predictions is the migration of the California thrasher, rufus-crowed sparrow, and ash-throated flycatcher to the Point Reyes Peninsula.⁸⁵ At that point, the species will commune with strangers such as the purple finch and black-throated gray warbler.⁸⁶ When species exist in different and unusual combinations, food and prey might not be available, and they will interact in unanticipated ways.⁸⁷

One solution to this type of problem is assisted migration.⁸⁸ Assisted migration is when humans physically moving certain individuals or populations of species that either cannot or will not migrate on their own.⁸⁹ Failure to

⁷⁸ *Id.*

⁷⁹ *See id.* (suggesting that environmental conditions have changed for one of northernmost wintering geese populations).

⁸⁰ *Id.*

⁸¹ *Id.*

⁸² *See infra* notes 83-94 and accompanying text; Herb Wilson, *Climate Change a Great Concern for Bird Population*, MORNING SENTINEL, March 16, 2010, <http://morningsentinel.maine.today.com/sports/stories/6200893.html> (reporting National Audubon Society study predicting average shift northward for 117 out of 305 bird species).

⁸³ Diana Stralberg et al., *Re-Shuffling of Species with Climate Disruption: A No-Analog Future for California Birds?*, PLOS ONE, available at <http://www.plosone.org/article/info:doi%2F10.1371%2Fjournal.pone.0006825>. PRBO was founded as Point Reyes Bird Observatory in 1965. *PRBO Conservation Science: About*, PRBO, <http://www.prbo.org/cms/37> (last visited Dec. 22, 2009).

⁸⁴ Fimrite, *supra* note 70 (reporting on Stralberg study).

⁸⁵ *Id.*

⁸⁶ *Id.*

⁸⁷ *Id.*

⁸⁸ *See generally* Julie Lurman Joly & Nell Fuller, *Advising Noah: A Legal Analysis of Assisted Migration*, 39 ENVTL. L. REP. NEWS & ANALYSIS 10413 (2009) (arguing that assisted migration is a desirable and feasible solution to problems of climate change on United States public lands management).

⁸⁹ *Id.* at 10413.

migrate may occur due to species' inherent nature or to the fragmented nature of habitat because of climate change.⁹⁰ "Assisted migration efforts may also include" the more passive approach "of creating new migratory corridors through which species could migrate independently."⁹¹ Because of the uncertainties and risk of further upsetting the balance of nature, assisted migration is currently a controversial idea.⁹² However, some scientists believe that it may be the only way to save some of the world's biodiversity.⁹³

One of the scientists of the PRBO study expressed hope that the study inspires a more collaborative effort to protect ecosystems instead of just individual species.⁹⁴ In fact, around the same time that the USGS and PRBO studies were released, both the Department of Interior itself and the FWS, an operating unit within the Department of Interior, released plans to protect the ecosystems under their jurisdiction.⁹⁵

C. Federal Efforts to Improve Public Lands Management in the Context of Climate Change

Efforts to coordinate conservation efforts among the plethora of federal public lands management agencies are relatively recent.⁹⁶ The following discussion summarizes the major initiatives that the Department of Interior and FWS have taken to improve management strategies in the face of climate change.⁹⁷

On September 14, 2009, the Department of Interior signed Secretarial Order Number 3289, entitled "Addressing the Impacts of Climate Change on America's Water, Land and Other Natural and Cultural Resources."⁹⁸ The order's purpose is to address the effects of climate change on public lands by increasing coordination between Interior bureaus and other groups.⁹⁹ At the

⁹⁰ *Id.*

⁹¹ *Id.*

⁹² Carl Zimmer, *A Radical Step to Preserve a Species: Assisted Migration*, N.Y. TIMES, Jan. 23, 2007, available at <http://www.nytimes.com/2007/01/23/science/23migrate.html>.

⁹³ *Id.*

⁹⁴ Peter Fimrite, *Vast Shift in Bird Species Expected from Warming*, SAN FRANCISCO CHRONICLE A-1, 9/2/2009, available at <http://www.sfgate.com/cgi-bin/article.cgi?f=c/a/2009/09/02/MNBT19E450.DTL>.

⁹⁵ See *infra* Part I.C.

⁹⁶ See *infra* notes 98-125 and accompanying text. Currently, the Department of Interior employs about 67,000 people in eight different bureaus: National Park Service, U.S. Fish and Wildlife Service, Bureau of Indian Affairs, Bureau of Land Management, Office of Surface Mining, Minerals Management Service, U.S. Geological Survey, and Bureau of Reclamation. See Polansky, *supra* note 24.

⁹⁷ See *infra* notes 98-125 and accompanying text.

⁹⁸ Press Release, U.S. Dep't of Interior, Salazar Launches DOI Climate Change Response Strategy (Sept. 14, 2009), available at <http://www.doi.gov/news/pressreleases/Salazar-Launches-DOI-Climate-Change-Response-Strategy.cfm>.

⁹⁹ See *id.* (stating that order establishes framework through which Interior bureaus will coordinate climate change science and resource management strategies).

signing, Department of Interior Secretary Ken Salazar acknowledged that the order is a response to the historically disjointed nature of public lands management: "This is one house which frankly over its history . . . has been divided, with every one of its agencies doing its own thing."¹⁰⁰

The order sets forth a tripartite framework to coordinate response efforts among Interior bureaus, federal agencies, state and local governments, and private landowners.¹⁰¹ This framework consists of a new Climate Change Response Council, eight Regional Climate Change Response Centers ranging from Alaska to the Northeast, and a network of Landscape Conservation Cooperatives.¹⁰² The Council will help Interior bureaus share scientific information regarding the impacts of climate change.¹⁰³ In turn, the Centers will synthesize this information and help resource managers implement corresponding management strategies.¹⁰⁴ The Cooperatives aim to address impacts on a landscape or regional level, beyond traditional refuge, Bureau of Land Management ("BLM") unit, or National Park borders.¹⁰⁵ The Cooperatives will not be limited to federal efforts, but will also engage local governments, state governments, and the public.¹⁰⁶ One purpose of the Cooperatives will be to develop strategies to mitigate climate change impacts on wildlife migration.¹⁰⁷

It is too early to determine the effectiveness of the order, but the outlook appears to be optimistic. Brenda Ekwurzel, climate scientist at the Union of Concerned Scientists, believes that "the United States will be much better prepared to respond to the current and coming changes due to global warming."¹⁰⁸ Department of Interior employee Mike Pellant, who is the Great Basin Restoration Initiative coordinator, believes that the order will lead to more public and agency support of the efforts to solve the problem of invasive cheatgrass in the Great Basin.¹⁰⁹ However, it is unclear how much additional resources the Interior will devote to support the new strategy.¹¹⁰ Salazar noted

¹⁰⁰ Ayesha Rascoe, *U.S. Interior Dept Seeks Better Climate Cooperation*, REUTERS, Sept. 14, 2009, <http://www.reuters.com/article/environmentNews/idUSTRE58D5GE20090914>.

¹⁰¹ See Press Release, U.S. Dep't of Interior, Salazar Launches DOI Climate Change Response Strategy (Sept. 14, 2009), available at <http://www.doi.gov/news/pressreleases/Salazar-Launches-DOI-Climate-Change-Response-Strategy.cfm> (providing summary of three basic parts of framework including council, centers, and cooperatives).

¹⁰² *Id.*

¹⁰³ *Id.*

¹⁰⁴ *Id.*

¹⁰⁵ *Id.*

¹⁰⁶ *Id.*

¹⁰⁷ *Id.*

¹⁰⁸ Juliet Eilperin, *Interior Launches Climate Strategy: New Council's Aim Is to Help Curb Warming*, WASHINGTON POST, Sept. 15, 2009, available at <http://www.washingtonpost.com/wp-dyn/content/article/2009/09/14/AR2009091403307.html?hpid=moreheadlines>.

¹⁰⁹ *Id.*

¹¹⁰ *Id.*

that the Department of Interior will require funds beyond the ten million dollars the USGS has already received to address climate change.¹¹¹

On September 23, 2009, FWS released its own proposed Strategic Plan and Five-Year Action Plan (“Action Plan”) to respond to the impacts of climate change on wildlife and their habitats.¹¹² Both plans were up for public review until November 23, 2009.¹¹³ The Strategic Plan describes FWS’s goals and objectives in building a coordinated strategy to respond to the impacts of climate change.¹¹⁴ The Action Plan consists of three basic strategies.¹¹⁵ The first strategy is adaptation, whereby the FWS pledges to help fish, wildlife, and their habitats adapt to climate change.¹¹⁶ The second strategy is mitigation, whereby the FWS aims to reduce levels of greenhouse gases in the atmosphere.¹¹⁷ The third strategy is engagement, whereby the FWS will collaborate with other federal agencies and non-federal groups in developing solutions to climate change problems.¹¹⁸ Within each of these three categories, there are several specific objectives.¹¹⁹ Of particular interest is Objective 2.6 which acknowledges the likely existence of legal barriers to addressing climate change:

Objective 2.6: Evaluat[ing] Fish and Wildlife Service Laws, Regulations, and Policies to Identify Barriers To and Opportunities for Successful Implementation of Climate Change Actions. We will focus particularly on determining the need to develop new policies (e.g., for managed relocation) and necessary revisions of existing policies (e.g., what constitutes native, invasive, or exotic species).¹²⁰

The FWS’s Action Plan details the specific actions that the FWS will take during the fiscal years 2009 through 2013 to implement the goals and objectives in the Strategic Plan.¹²¹ The specific actions proposed to meet Objective 2.6 consist of a series of legal and policy reviews throughout the organization hierarchy within the FWS, culminating in actual revision and review of both the

¹¹¹ *Id.*

¹¹² Press Release, U.S. Fish and Wildlife Serv., Service Releases Climate Change Strategy for Public Review & Comment (Sept. 23, 2009) *available at* <http://www.fws.gov/news/NewsReleases/showNews.cfm?newsId=E79B541B-E2B2-1661-CE45BAD69C7597F7>.

¹¹³ *Id.*

¹¹⁴ *Id.*

¹¹⁵ U.S. FISH & WILDLIFE SERV., STRATEGIC PLAN FOR RESPONDING TO ACCELERATING CLIMATE CHANGE 18-26 (2010), *available at* <http://www.fws.gov/home/climatechange/pdf/ccstrategicplan.pdf> [hereinafter “*Strategic Plan*”].

¹¹⁶ *Id.*

¹¹⁷ *Id.*

¹¹⁸ *Id.*

¹¹⁹ *See id. at 19-30.*

¹²⁰ *Id. at 22.*

¹²¹ *See* U.S. FISH & WILDLIFE SERV., A FIVE-YEAR ACTION PLAN 1 (2009), *available at* www.fws.gov/home/climatechange/pdf/ClimateActionPlan.pdf [hereinafter “*Action Plan*”].

Action Plan and Strategic Plan in early 2010.¹²²

As described above, both the Department of Interior as a whole and the FWS in particular have recently expressed a commitment to reforming management of public lands in light of climate change.¹²³ However, there has not yet been any corresponding or analogous action on the part of the President or Congress that would affect public lands management regarding climate change. The following section discusses the limits of what FWS can do within the Refuge System's current legal framework to fully realize its Strategic Plan objectives.¹²⁴

II. THE CURRENT MANAGEMENT STRUCTURE OF THE REFUGE SYSTEM CANNOT FULLY ADDRESS THE PROBLEMS OF CLIMATE CHANGE

The Refuge System's approach to wildlife conservation is to set aside particular areas of land which certain species historically occupied and to direct management efforts towards maintaining historical conditions.¹²⁵ However, the bird population studies show that the problem that climate change imposes on public lands management is not simply one of species decline.¹²⁶ Rather, the problem is the need for species to move to new areas as changes in climate shift the locus of suitable living conditions, usually to higher latitudes or altitudes.¹²⁷ When the geographical range of a wildlife population changes, it changes the balance that public lands managers must maintain in a refuge's ecosystem.¹²⁸ Even the FWS itself acknowledged in its Strategic Plan that, due to climate change, "we can no longer assume that the future will look like the past."¹²⁹ The following section argues that the current Refuge System is ill equipped to effectively address the challenges of climate change. It cannot fully accommodate the Department of Interior and FWS's recently stated strategies to combat climate change.¹³⁰

A. Climate Change Will Render Some Refuge Purposes Obsolete

Changes in the behavior and geographic distribution of wildlife populations will require a corresponding change in public lands management.¹³¹ However, the Improvement Act's deference provision requires FWS to direct its

¹²² *Id.*

¹²³ See *supra* notes 99-122 and accompanying text.

¹²⁴ See *infra* Part II.

¹²⁵ See FWS MANUAL, *supra* note 44, at 601 FW 3.11(C).

¹²⁶ See *supra* Part I.B.

¹²⁷ See *supra* Part I.B.

¹²⁸ See *infra* Part II.A-B.

¹²⁹ Strategic Plan, *supra* note 115, at 8.

¹³⁰ See *infra* Part II.A-B.

¹³¹ See *supra* Part I.B. See generally Strategic Plan, *supra* note 115 (discussing FWS's need to change management policy in light of climate change).

management according to the refuge's individual purpose first and to the Improvement Act's systemic goals second.¹³² This aspect of the framework will constitute a severe limitation as climate change causes original purposes to become obsolete. As a refuge's individual purpose becomes obsolete, there will be an unnecessary waste in management resources directed towards maintaining such a refuge. Because of the deference provision, FWS will remain bound to allocate resources towards outdated or obsolete purposes instead of systemic purposes.

A scenario in which a refuge's original purpose may become obsolete is when a refuge's target species (e.g., "bison") or type of species (e.g., "native birds") no longer lives there in historically significant numbers.¹³³ Many refuges have a purpose to protect "migratory birds,"¹³⁴ and the bird population studies show that significant shifts are already occurring among several species.¹³⁵ Other species for which refuges were created are in the process of migrating or have a need to migrate, but cannot do so effectively.¹³⁶ The question of exactly which species are most sensitive to climate change and which are migrating is entirely scientific.¹³⁷ However, there is enough scientific evidence to show that certain refuge purposes will no longer be relevant in the near future.¹³⁸

When a refuge loses the purpose for which it was created, the FWS would not necessarily lack any basis on which to direct refuge management efforts.¹³⁹ If a purpose becomes obsolete, the Improvement Act's systemic goals would "take over," because there would be no actual conflict between any refuge purpose and the mission statement.¹⁴⁰ However, there could still be conflict in the interim, as a refuge purpose becomes increasingly outdated.¹⁴¹ This conflict would arise when systemic goals would require the introduction of technically "exotic" species into a refuge, as explained below.¹⁴²

B. Climate Change Will Increase Instances of Conflict with Organic Legislation

Another important management problem that climate change may create for

¹³² See *supra* notes 67-68 and accompanying text.

¹³³ See *supra* 29-36 and accompanying text.

¹³⁴ See sources cited *supra* note 31.

¹³⁵ See *supra* Part I.B.

¹³⁶ See Griffith et al., *supra* note 23, at 1045 (stating that climate change will likely affect "habitat specialists," "populations on the edges of their . . . [ranges]," "species [occupying] fragmented or restricted ranges," and "poor colonizers").

¹³⁷ See *supra* Part I.B.

¹³⁸ See generally Brad Griffith et al., *supra* note 23 (discussing need for changes to management of Refuge System due to climate change).

¹³⁹ See *supra* 55-59 and accompanying text.

¹⁴⁰ See *supra* notes 55-59 and accompanying text.

¹⁴¹ See *infra* Part II.B.

¹⁴² See *infra* Part II.B.

refuges is when a refuge's original purpose conflicts with the Improvement Act's mission statement. As described above, the Improvement Act's purpose is to "ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans."¹⁴³ In addressing climate change problems, managing for the system as a whole may require compromises on the individual refuge level that would be against refuges' original purposes. As discussed above, such compromises would occur due to the Improvement Act's deference to individual refuge purposes when in conflict with systemic purposes.¹⁴⁴

One example of a necessary compromise would be that of introducing non-native, or "exotic" species into refuges under an assisted migration plan.¹⁴⁵ Under the FWS's policy regarding the Improvement Act, refuge boundaries are one-way doors in the context of assisted migration.¹⁴⁶ In other words, moving animals out of a refuge would not be a problem, but moving other animals in would be a problem, unless the animal is a threatened or endangered species:

Unless we determine that a species was present in the area of a refuge under historic conditions, we will not introduce or maintain the presence of that species for the purpose of biological diversity. We may make exceptions where areas are essential for the conservation of a threatened or endangered species and suitable habitats are not available elsewhere. In such cases, we strive to minimize unnatural effects and to restore or maintain natural processes and ecosystem components to the extent practicable without jeopardizing refuge purposes.¹⁴⁷

Even if FWS revised this policy or broadened the definition of "native" species, the problem of conflict with the Improvement Act would still exist in refuges that specify the protection of a certain species.¹⁴⁸ Systemic goals might favor relocating certain wildlife into a refuge where it would compete with the refuge's target species.¹⁴⁹ However, under the Improvement Act, the refuge's original purpose to protect the target species would override the systemic purpose and forbid this relocation.¹⁵⁰

Other conflicts are likely to occur in other types of narrowly defined refuges.¹⁵¹ As discussed above, some refuges have purposes that do not relate to

¹⁴³ 16 U.S.C. § 668dd(a)(4)(B) (2006).

¹⁴⁴ See *supra* notes 55-57 and accompanying text.

¹⁴⁵ See *supra* note 45 and accompanying text.

¹⁴⁶ FWS MANUAL, *supra* note 44, at 601 FW 3.11(C).

¹⁴⁷ *Id.*

¹⁴⁸ See *supra* notes 28-29, 39-40 and accompanying text.

¹⁴⁹ See *supra* notes 88-93 and accompanying text.

¹⁵⁰ See 16 U.S.C. § 668dd(a)(4)(D) (2006) (stating that refuge purpose must override mission purpose in case of conflict).

¹⁵¹ See *infra* notes 152-153 and accompanying text.

conservation, such as mining, drilling, and hunting.¹⁵² If any action furthering a systemic goal conflicts with such purposes, the original purpose would override it under the Improvement Act.¹⁵³

Both initiatives of the Department of Interior and FWS acknowledge the need to identify and remove existing legal barriers to create climate change solutions at landscape levels.¹⁵⁴ Indeed, there are many policies that the Interior and FWS can simply revise to allow refuge managers to implement systemic goals, such as adopting a new definition of “native” species.¹⁵⁵ However, the Improvement Act’s mandate to prefer original refuge purposes will remain as a barrier to what FWS can do to protect wildlife from climate change.¹⁵⁶

III. A PROPOSAL

As previously described, even though the Department of Interior and FWS have announced a commitment to integration and new thinking in management, the very design of the system places legal limits on FWS’s efforts to address climate change.¹⁵⁷ Even if FWS changes its policies in key areas such as the definition of “native” versus “exotic” species and its policy regarding assisted migration, the Improvement Act still acts as the absolute upper limit as to how much FWS can do.¹⁵⁸ The following section presents two proposals, in order of preference, to alleviate this problem.¹⁵⁹

A. Amend the Organic Act

The Improvement Act’s deference to individual refuge purposes where they conflict with a provision in organic legislation is a major obstacle blocking systemic management approaches to climate change.¹⁶⁰ This raises the question

¹⁵² See, e.g., Exec. Order No. 9292, 8 Fed. Reg. 41 (Dec. 31, 1942) (establishing Hailstone National Wildlife Refuge with exceptions for “primary use for the purpose of oil and gas development”); Exec. Order No. 7938, 3 Fed. Reg. 1944 (Oct. 4, 1938) (establishing Breton National Wildlife Refuge with exceptions for “recovery of the oil and gas deposits from any of the island areas under the mineral leasing act”); Exec. Order No. 7795, 3 Fed. Reg. 225 (Jan. 21, 1938) (establishing Huron National Wildlife Refuge with exceptions for “the quarrying of stone . . . and the maintenance of the Huron Island Light Station”); Exec. Order No. 7509, 1 Fed. Reg. 2482 (Dec. 11, 1936) (establishing Charles M. Russell National Wildlife Refuge with exceptions for “mining,” upper limits for certain species’ populations, and “domestic livestock”).

¹⁵³ See 16 U.S.C. § 668dd(a)(4)(D) (stating that refuge purpose must override mission purpose in case of conflict).

¹⁵⁴ Rascoe, *supra* note 100; Strategic Plan, *supra* note 115, at 22.

¹⁵⁵ See, e.g., Strategic Plan, *supra* note 115, at 22 (noting possibility of need to adopt new definition of “native”).

¹⁵⁶ See *supra* notes 55-57 and accompanying text.

¹⁵⁷ See *supra* Part II.

¹⁵⁸ See *supra* Part II.B.

¹⁵⁹ See *infra* Part III.A-B.

¹⁶⁰ See *supra* Part II.B.

of whether removing the deference provision or reversing the deference would be a good idea. The following discusses the merits of both approaches and concludes that reversal would be preferable to removal.¹⁶¹

1. Remove the Deference Provision

One approach to the problem of the Improvement Act's deference to individual refuge purposes is to simply remove that particular provision. The individual purpose of a refuge would then function as merely one of several foundational documents that refuge managers would consider in managing a refuge. As described more fully in Part III.B below, refuge managers have discretion in defining a refuge's ultimate purpose in refuges that have multiple purposes.¹⁶² Thus, a refuge manager would be able to make case-by-case determinations as to whether a narrow individual refuge purpose should override a systemic purpose when the two conflict.

One drawback to this approach would be an increase in litigation similar to the *Schwenke* case because this approach would increase the number of possible interpretations of a refuge's purpose.¹⁶³ There would also be a problem with giving the agency too much discretion while imposing few firm obligations relating to climate change.¹⁶⁴ Such discretion in an organic act is problematic because climate change has only recently become a priority for the FWS.¹⁶⁵ The fact that the Department of Interior and FWS are currently committed to serious climate change reform does not necessarily mean that they will remain so committed under a subsequent administration. A prominent example of such ideological flip-flopping occurred among the Bush I, Clinton, and Bush II administrations regarding the meaning of the "unnecessary and undue degradation" ("UDD") provision in the BLM's organic act.¹⁶⁶ This provision requires the BLM to prevent unnecessary or undue degradation of the public lands.¹⁶⁷ In the 1980s, the BLM interpreted the UDD standard in a way that gave BLM authority to deny a mining permit only if mining activities would violate an environmental statute.¹⁶⁸ Then, under the Clinton administration, the BLM interpreted the same standard in a way that made it more difficult for mining to occur on public lands by giving the BLM greater authority to deny

¹⁶¹ See *infra* Part III.A.1.

¹⁶² See *infra* Part III.B.

¹⁶³ See *supra* notes 62-66 and accompanying text.

¹⁶⁴ Glicksman, *supra* note 5, at 862.

¹⁶⁵ *Id.*

¹⁶⁶ Federal Land Policy and Management Act of 1976, 43 U.S.C. § 1732(b) (2006).

¹⁶⁷ *Id.*

¹⁶⁸ See George Vranesh & Eugene Riordan, *Water for Synfuels Development: Problems in Acquisition and Development*, 16 NAT. RESOURCES LAW. 439, 460 (1983) (explaining that, as of 1983, BLM may revoke permit if holder "violates certain laws or fails to observe the terms of applicable permits").

mining permits.¹⁶⁹ However, under the Bush II administration, the BLM went back to the more lenient interpretation it had adopted under the Bush I administration.¹⁷⁰ In the refuge context, the potential for such ideological flip-flopping among administrations is unacceptable in any plan to address a problem as serious and enduring as climate change. Rather, as a State Department Senior Climate Negotiator expressed at a government expert seminar, “addressing climate change will require sustained effort involving all nations over many generations”¹⁷¹

The above discussion illustrates the importance of both removing the deference provision and providing firm obligations to consider climate change in managing wildlife refuges. The next section discusses the merits of amending the Improvement Act to accommodate both of these principles.¹⁷²

2. Replace the Deference Provision and Require Protection from Climate Change Effects

A preferable solution would be to remove the deference provision and replace it with a new provision requiring that the systemic mission purpose override the individual refuge purpose. In addition, the amendment should include a new requirement that the FWS manage the refuges in a way that protects against the effects of climate change. Under this approach, refuge managers would not be tied to increasingly outdated individual refuge purposes that stand in the way of assisted migration.¹⁷³ The very existence of such a new provision in the Improvement Act would also serve as a strong policy message regarding the need for management at landscape levels. Accordingly, the amendment would move the management paradigm away from fragmented management, which has long “plagued” public lands management in the United States.¹⁷⁴ Furthermore, the FWS would have regulatory authority to prevent climate change harm in a way that would not be as susceptible to ideological changes among future administrations.¹⁷⁵

Critics might argue that such an amendment would have serious legal and policy consequences because political compromises have been part of the refuge

¹⁶⁹ See Robert B. Keiter, *Breaking Faith with Nature: The Bush Administration and Public Land Policy*, 27 J. LAND RESOURCES & ENVTL. L. 195, 209 (2007) (discussing Clinton hard rock mining reforms giving BLM express authority to deny mining permit when project would “result in substantial irreparable harm to significant . . . environmental resource values of the public lands”).

¹⁷⁰ See *id.* (describing Bush II administration’s reversal of Clinton administration’s policies in order to give mining companies “more free reign” in siting and developing their operations).

¹⁷¹ Dr. Harlan Watson, , *U.S. Climate Change Policy*, SEMINAR OF GOVERNMENT EXPERTS, 1 (May 16, 2005), www.unfccc.int/files/meetings/seminar/application/pdf/sem_pre_usa.pdf.

¹⁷² See *infra* Part III.A.2.

¹⁷³ See *supra* Part II.

¹⁷⁴ See *supra* Part II.

¹⁷⁵ See *supra* notes 166-171 and accompanying text.

creation and expansion processes.¹⁷⁶ Establishment document details, such as conditions for mining or hunting, are the result of political compromises to gain support of private actors to create or expand a refuge.¹⁷⁷ An amendment to the Improvement Act to subordinate individual refuge purposes in case of conflict with systemic goals would arguably violate basic notions of contractual fairness among those who have participated in such compromises.¹⁷⁸ Such an amendment would also discourage future negotiations for refuge creation or expansion because of the mission statement's broad language.¹⁷⁹ For example, if the FWS wants to acquire BLM land as a relocation site for a group of native birds, the FWS would have few bargaining chips available to gain support among ranchers who also want to use the land. In other words, the FWS would not be able to guarantee any amount of grazing opportunities in the refuge's establishment document because subsequent regulation under the Improvement Act's broadly defined mission statement could always override this guarantee.

However, the concept of "valid existing rights" would address at least some of the above concerns by permitting negotiation and compromise with private actors.¹⁸⁰ The phrase "subject to valid existing rights" appears often in public lands legislation and denotes Congress's intent to protect property interests acquired under prior law.¹⁸¹ Congress establishes such "savings" or "grandfather" clauses when federal land management policies evolve in response to political trends and exigencies.¹⁸² These clauses operate in conjunction with the Fifth Amendment's Takings Clause, which provides: "[N]or shall private property be taken for public use, without just compensation."¹⁸³ In the context of Refuge System management, these clauses provide that systemic refuge purposes cannot completely override the rights already negotiated for in individual refuge purposes. The Takings Clause limits the government's inherent eminent domain power by requiring that government take property only for "public use" and provide just compensation to the owner.¹⁸⁴

¹⁷⁶ See FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 164-65 (discussing policy rationales for Improvement Act's deference to establishment purposes).

¹⁷⁷ FISCHMAN, NATIONAL WILDLIFE, *supra* note 18, at 165.

¹⁷⁸ *Id.*

¹⁷⁹ See generally Fischman, *From Words to Action*, *supra* note 19, at 165.

¹⁸⁰ See *infra* note 181 and accompanying text.

¹⁸¹ See, e.g., The Wild and Scenic Rivers Act, 16 U.S.C.A. § 1280(a)(iii) (West 1985) (withdrawing minerals in federal lands which are part of system, "subject to valid existing rights"); see also Martin Nie, *The Use of Co-management and Protected Land-use Designations to Protect Tribal Cultural Resources and Reserved Treaty Rights on Federal Lands*, 48 NAT. RESOURCES J. 585, 627 n. 207 (2008) (discussing effect of "subject to valid existing rights" language in wilderness legislation).

¹⁸² *Id.*

¹⁸³ U.S. CONST. amend. V.

¹⁸⁴ *Id.*; Morgan Lewis, *Good Fences Make Good Neighbors, But Do They Make Good Cents?*, 41 TEX. TECH. L. REV. 1193, 1207-08 (2009).

Thus, for example, private landowners with absolute ownership over their property would enjoy full protection under the Takings Clause, regardless of the manner in which Congress amends the Improvement Act.¹⁸⁵ Additionally, owners of other kinds of vested rights, such as patented mining claims and homestead patents, would receive full protection under the Takings Clause.¹⁸⁶ Owners of non-vested property rights, such as leases, permits, licenses, and rights of way, also have protection under the Takings Clause to the extent of the right granted.¹⁸⁷ Should Congress amend the Improvement Act to reverse the deference to original refuge purposes, these Fifth Amendment protections would respect the political compromises that went into establishing the existing refuges. At the same time, they would provide a sense of security to private actors who might wish to negotiate refuges with the FWS in the future.

In accordance with the above discussion, I propose amending the language of § 668dd(a)(4)(D) of the Improvement Act as follows:

(4) In administering the System, the Secretary shall—. . .

(D) **subject to valid existing rights**, ensure that the mission of the System described in paragraph (2) and the purposes of each refuge are carried out, ~~except that~~ **and** if a conflict exists between the purposes of a refuge and the mission of the System, the conflict shall be resolved in a manner that first ~~protects the purposes of the refuge~~ **achieves the mission of the System, which includes protection against climate change effects**, and, to the extent practicable, that also ~~achieves the mission of the System~~ **protects the purpose of the refuge**; . . .

B. *Revise FWS Policy to Avoid Conflicts and Competition*

In absence of action at the congressional level, FWS should adopt policies to avoid and resolve conflicts whenever possible. In the context of species migration due to climate change, how the FWS defines “native” will become critical. As discussed above, the FWS currently defines “native” species in historical terms: “a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem.”¹⁸⁸ Thus, when a refuge’s purpose is to protect “native birds,” only those birds historically or currently present in the refuge will receive protection.¹⁸⁹ If systemic goals favor relocation of new bird species into such a refuge, the refuge’s foundational purpose would conflict with this relocation effort. To avoid this problem, the

¹⁸⁵ See *supra* notes 181-184 and accompanying text.

¹⁸⁶ *Id.*

¹⁸⁷ *Id.*

¹⁸⁸ FWS MANUAL, *supra* note 44.

¹⁸⁹ See *id.* (discussing definition of “native” species).

following language proposes a way of redefining “native” as part of FWS policy:

a species that, other than as a result of an introduction, historically occurred or currently occurs in that ecosystem, or, according to the best scientific data available, will likely find that ecosystem most suitable for long-term habitation due to changes in climate conditions.

In addition, the FWS should revise its Purposes Policy to allow systemic purposes to compete equally with refuge purposes when there are insufficient funds to satisfy all purposes. As discussed above, the Purposes Policy goes further than the language of the Improvement Act, which only states that refuge purposes prevail over systemic purposes when the two are in direct conflict. The Purposes Policy places an additional obstacle on the implementation of systemic goals by stating that refuge purposes have priority over systemic purposes when the two merely compete for resources. Accordingly, the FWS should remove the language in its Purpose Policy stating that its “first obligation is to fulfill and carry out the purpose(s) of each refuge.”¹⁹⁰ That way, the FWS will not automatically sideline systemic goals, such as the implementation of the Strategic Plan, when it has limited funding.¹⁹¹ Furthermore, the FWS should add a provision affirmatively requiring that climate change considerations have equal priority with individual refuge purposes. Adding this requirement would avoid the problem discussed above in Part III.A of granting unfettered discretion without any firm obligations.¹⁹²

Merely changing FWS policy would not be as effective as adopting the statutory proposals described in the preceding section. One reason is that agency policies are more subject to change among administrations than are congressional mandates.¹⁹³ Even if the FWS adopts policies that effectuate all of the Strategic Plan objectives, a subsequent administration could reverse or simply refuse to follow the policies.¹⁹⁴ In addition, FWS policies are not necessarily binding on the agency.¹⁹⁵ In *McGrail & Rowley v. Babbitt*, the Southern District of Florida held that an FWS manual for refuge management was nonbinding guidance.¹⁹⁶ In so holding, the court noted that the manual did

¹⁹⁰ Purposes Policy, *supra* note 61, at pt. 601 § 1.5.

¹⁹¹ See *supra* notes 58-68 and accompanying text.

¹⁹² See *supra* Part III.A.

¹⁹³ See, e.g., *supra* notes 166-170 and accompanying text.

¹⁹⁴ See *id.*

¹⁹⁵ See COMMITTEE ON GOVERNMENT REFORM, NON-BINDING LEGAL EFFECT OF AGENCY GUIDANCE DOCUMENTS, H.R. REP. NO. 106-1009, at 1 (2000) (criticizing agencies’ use of informal devices as “backdoor” rulemaking attempts); Sam Kalen, *The Transformation of Modern Administrative Law: Changing Administrations and Environmental Guidance Documents*, 35 *ECOLOGY L. QUARTERLY* 657, 660 (2008) (noting that courts have failed to articulate coherent approach toward informal agency devices).

¹⁹⁶ 986 F. Supp. 1386, 1393-94 (S.D. Fla. 1997).

not conform to the Administrative Procedure Act's procedural requirements for notice and comment rulemaking.¹⁹⁷ Although this leaves open the possibility of a manual having a binding effect by undergoing proper procedural requirements,¹⁹⁸ *McGrail* demonstrates what little deference courts give to agency decision-making. This lack of judicial deference to agency policies adds an extra element of uncertainty to the effectiveness of revising FWS policy. The best approach for ensuring effective climate change management in the Refuge System is amending the Improvement Act in the manner proposed in Part III.A.2.

CONCLUSION

Considering the nascent state of serious management initiatives with regard to climate change at the Department of Interior and FWS, the particular problem of conflict between a refuge purpose and systemic legislation may not arise immediately. In the interim, it may be possible for the FWS to make substantial progress by implementing new policies and removing outdated ones. However, this article shows that the Improvement Act's deference to individual purposes is an upper limit on the effectiveness of the FWS's efforts against any system-wide problem such as climate change. Only an amendment to the Improvement Act that removes the deference to original purposes would provide FWS with all the tools necessary to implement climate change solutions on wildlife refuges.

¹⁹⁷ *Id.* at 1394.

¹⁹⁸ See Fischman, *From Words to Action*, *supra* note 19, at 123-30 (discussing judicial factors that determine whether policy is binding).