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The National Wildlife Refuge System and the Hallmarks of Modern Organic Legislation

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The National Wildlife Refuge System and the Hallmarks of Modern Organic Legislation

*Robert L. Fischman**

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INTRODUCTION

The National Wildlife Refuge System ("Refuge System" or "System") is the nation's largest network of lands and most diverse array of ecosystems dedicated principally to nature protection. The System's commitment to the conservation of animals and plants is evident in its history, its legal authority, and its management policies. However, fragmented jurisdiction, poor funding, and encroaching uses that are incompatible with healthy ecosystems threaten the System's ability to

carry out its mission. This article explores the performance and potential of the Refuge System, as well as its influence on the broader currents in public land law.

Though the multiple-use lands of the Forest Service and the Bureau of Land Management have attracted greater attention from commentators, the search for resource management principles to implement sustainable development will increasingly turn to the Refuge System for models. Recreation, oil and gas development, grazing, and other activities may occur in the Refuge System generally only to the extent that they are compatible with the dominant use of the refuges for the protection of animals and plants. The System's dominant-use management regime, great size, and numerous units, however, present special challenges. For instance, the tendency of individual unit purposes to focus management around the peculiarities of each refuge resists many efforts to coordinate the collection of reserves into a coherent system that is more than the sum of its parts.

The law governing management of the National Wildlife Refuge System has undergone dramatic change in the past five years. Once subject only to the vaguest of congressional mandates, the System now finds itself struggling to implement a comprehensive statute containing use preferences, binding substantive management criteria, and planning requirements. The 1997 National Wildlife Refuge System Improvement Act ("Improvement Act")¹ is the most recent comprehensive congressional charter, or "organic" legislation, for a public land system. It is also the first organic legislation for a system of federal lands since the 1970s. Enacted with remarkably strong bipartisan support in Congress, the Improvement Act is the latest installment in the organic legislation narrative of steadily rising expectations and statutory detail. This article examines the Improvement Act as a paragon of organic legislation, along with the history of refuge management law, to aid in a deeper understanding of the entire project of systemic public land lawmaking. The legal benchmarks characterizing organic legislation serve as a framework to understand not only the extent of congressional control, but also the types of management tools (such as planning and performance criteria) and the topics of public concern (such as recreational use and protection of biological diversity) that are involved with public land management.

Federal public land management regimes range along a continuum defined by the extreme poles of unfettered multiple use and single-purpose exclusive use. Within this continuum, the National Wildlife Refuge System stands out in the center as a particularly important application of law to achieve a *dominant* purpose: nature protection.

1. 16 U.S.C. §§ 668dd, 668ee (2000).

Often spotlighted with the somewhat smaller National Park System² as a prototypical dominant-use regime of public land management, the Refuge System has been and continues to be shaped by the same forces that have remade public land management and conservation law during the past four decades.

These forces have tended to compress land management regimes towards the dominant-use center of the continuum. Even land systems previously associated with the ends of the continuum, such as multiple-use Bureau of Land Management ("BLM") grazing lands and exclusive-use military reservations are converging toward the dominant-use middle. Few exclusive-use areas today fail to promote at least the ecological values associated with restricted access; even bombing ranges manage wildlife habitat for conservation.³ At the other extreme, multiple-use areas increasingly constrain the types and extent of permitted activities through substantive management conditions, such as the prevention of permanent impairment⁴ or the maintenance of biological diversity,⁵ and through zoning in comprehensive plans.⁶

Therefore, a better understanding of the dominant-use Refuge System, which occupies the increasingly popular middle of the spectrum, helps identify the trends that are continually reshaping all public land management.⁷ In particular, the Refuge Improvement Act reveals three

2. The 547-unit Refuge System covers 93.6 million acres. Division of Realty, U.S. FISH & WILDLIFE SERVICE, *Query the National Wildlife Refuge System Lands Database*, at <http://realty.fws.gov/nwrs.htm#national> (last revised Apr., 24, 2001). The 369-unit National Park System covers 83 million acres. NATIONAL GEOGRAPHIC SOCIETY, *FEDERAL LANDS IN THE FIFTY STATES* (1996) (map). Most of the acreage in both Systems is in Alaska. In contrast, the larger multiple-use lands of the 155 unit National Forest System cover almost 200 million acres, and the Bureau of Land Management ("BLM") manages 270 million acres. *Id.*

3. For instance, the Navy manages a large portion of the controversial 22,000-acre Vieques bombing range as an environmental preserve. U.S. Navy, *The History of the Navy in Vieques*, at <http://www.navyvieques.navy.mil/history.html>, (last visited Oct. 16, 2002). In addition to providing protection for endangered species, the Navy boasts expending "significant resources" to research and develop databases for animals and plants. *Id.* On May 1, 2001, the Navy transferred 3100 of these acres to the U.S. Fish & Wildlife Service to manage as a national wildlife refuge. Establishment of the Vieques National Wildlife Refuge, 66 Fed. Reg. 35,807 (July 9, 2001). Another, broader example of wildlife protection on exclusive-use military lands is the Air Force conservation program on its military bases. U.S. Air Force, *Air Force Link: Conservation*, at http://www.af.mil/environment/enviro_conservation.shtml (last visited Sept. 18, 2002). See generally 16 U.S.C. §§ 670a-670f (2000) (conservation programs on military reservations).

4. *E.g.*, 43 U.S.C. § 1702(c) (1976) (mandate for BLM lands); see also 43 U.S.C. § 1732(b) (1976) (requiring the BLM "to prevent unnecessary or undue degradation of the lands").

5. *E.g.*, 16 U.S.C. § 1604(g)(3)(B) (2000) (mandate for national forests). As explored in Section III, *infra*, the new multiple-use Forest Service planning regulations contain ecological management constraints very similar to the new Refuge System policy.

6. See, *e.g.*, 16 U.S.C. § 1604 (2000) (national forest land use plans); 43 U.S.C. § 1712 (1976) (BLM land use plans).

7. The trend toward the dominant (or primary) use center of the public land use continuum can be traced back at least to the influential report UNITED STATES PUBLIC LAND

important, dynamic tensions that influence public resource management. First, in the rivalry between the President and Congress, the Improvement Act reflects the leadership of the executive branch in the sphere of refuge management. Though the Constitution places plenary power over public property in Congress, the President has often pioneered key innovations in public land law, at least as early as Jefferson's Louisiana Purchase.⁸ With the sole exception of the national monuments, the national wildlife refuges, more than any other system of public lands, bear the imprint of strong executive action. Repeatedly, legislation has merely endorsed and elaborated on executive initiatives. Examples abound, from the initial establishment of early wildlife conservation areas; through the creation of the U.S. Fish & Wildlife Service, the development of the compatibility standard, and the delineation of the hierarchy of dominant uses; to the recent inclusion of plants in the mission of the System.

Second, the Act reflects the ongoing effort to balance the conservation impetus behind the Refuge System with the desire to satisfy local interests in using public lands. This tension is particularly evident in attempts to reconcile recreation with wildlife protection. For example, the hunting community has always been an important constituency of the Refuge System, especially after the 1934 Duck Stamp Act compelled hunters to contribute to a refuge lands purchasing fund. From the steady erosion of the old "inviolable sanctuary" limitation on hunting to the more recent delineation of preferred uses on refuges, hunters have sought to prevent the Refuge System's brand of conservation from merging with the Park Service philosophy, which bans hunting in most parks. Hunters have largely succeeded in this effort. In contrast, conflicts between other forms of recreation, such as the use of motor boats and recreational vehicles, and conservation have not been resolved so decisively. The

LAW REVIEW COMMISSION, ONE THIRD OF THE NATION'S LAND 48-52 (1970); see also Bruce Babbitt, *Address to 1985 Annual Meeting of the Sierra Club*, excerpted in GEORGE COGGINS ET AL., *FEDERAL PUBLIC LANDS AND RESOURCES LAW 1080-81* (3d ed. 1993) (arguing for the need to "replace neutral concepts of multiple use with a statutory mandate that public lands are to be administered primarily for public purposes"); Jan G. Laitos & Thomas A. Carr, *The Transformation on Public Lands*, 26 *ECOLOGY L.Q.* 140 (1999) (arguing that a shift to dominant use for recreation has begun on public lands); Jack Ward Thomas, *What Now? From a Former Chief of the Forest Service, A VISION FOR THE U.S. FOREST SERVICE 10, 37* (Roger A. Sedjo ed., 2000) (proposing dominant-use zones for timber production in the national forests). Some commentators regard comprehensive planning mandates, now applicable to all public lands, as dominant-use zoning. E.g., GEORGE CAMERON COGGINS & ROBERT L. GLICKSMAN, *PUBLIC NATURAL RESOURCES LAW* § 10F:50 (2002).

8. U.S. CONST. art. IV, § 3; see PAUL W. GATES, *HISTORY OF PUBLIC LAND LAW DEVELOPMENT 77-78* (1979). Jefferson negotiated the treaty with France to purchase the new territory despite his doubts about its constitutionality. *Id.* The Senate subsequently ratified the treaty. *Id.* For a general discussion of the tradition of presidential leadership in preserving public lands, see John Leshy, *Shaping the Modern West: The Role of the Executive Branch*, 72 *U. COLO. L. REV.* 287 (2001).

tension between conservation goals and other refuge uses continues to spur conflict, now mediated through the discourse of compatibility and funding.

Third, the 1997 Improvement Act reflects the continual struggle to counteract the centrifugal, divergent push of establishment mandates with the centripetal, coordinating pull of systemic management. Organic legislation struggles to provide coherent direction to disparate refuges in order to make the System more than the sum of its parts. This tension is a particularly acute challenge for a dominant-use regime such as the Refuge or Park System, which comprises a collection of units created with their own, often individually tailored, legal charters. Though Congress consolidated refuges into a system for conservation and closed the System to all uses except those found to be compatible with establishment purposes in 1966, it failed to provide sufficient legal tools to meet modern standards of conservation and coordination. The difference between the 1966 Act and the 1997 Act highlights the intervening development of public land law's concept of organic legislation.

Ultimately, Refuge System law belies the notion that a single spectrum from multiple to exclusive use can fully characterize "dominant-use" regimes. The multi-tiered hierarchy of purposes and uses, established through piecemeal additions to the Refuge System, as well as through detailed organic legislation, represents the accretion of mandates and political compromises that become more specific and intertwined over time.⁹ Also, the rise of performance standards in management mandates, such as requirements to acquire water rights, monitor wildlife, and maintain biological diversity, complicates any effort to map public land law regimes on a linear scale.¹⁰

Section one of this article begins with a classification of the myriad types of units in the Refuge System. In order to describe the layers of law and policy that have settled into the foundation of the Refuge System, section one then proceeds to the legal history of the refuges prior to 1997. Section two of this article explores a question at the heart of modern public land law: what is an "organic" act? The evolution in meaning of "organic" act, one of the few specialized terms in the resource

9. I have previously explored the problem of congressional micro-management and statutory detail in the National Park System. Robert L. Fischman, *The Problem of Statutory Detail in National Park Establishment Legislation and its Relationship to Pollution Control Law*, 74 DENV. U. L. REV. 779 (1997). This article extends and expands those ideas through their application to the National Wildlife Refuge System.

10. Even the National Forest System, a classic multiple-use regime, originated with a statutory and administrative framework that set priority uses. In his seminal article, J. Michael McCloskey characterized the first half century of Forest Service management as "dominant with compatible use." J. Michael McCloskey, *The Multiple Use-Sustained Yield Act of 1960*, 41 OR. L. REV. 49, 71 (1961).

management field of environmental law, highlights the changing expectations of lawyers and the public toward conservation. The hallmarks of modern organic legislation, which are purpose statements, designated uses, comprehensive planning, substantive management criteria, and public participation, provide a framework for section three's analysis of the 1997 Act. These five dimensions of systemic mandates also offer indicia for comparing the Refuge System's dominant-use regime with other public land systems.

Section four of the article describes the purposes set out in the various sources that create individual Refuge System units and authorize acquisition of land. These sources include statutes, presidential orders, and administrative materials (collectively, "establishment documents" or "establishment instruments"). The establishment documents vary considerably in their degree of specificity. Although many refuges were established by committee, administrative, or executive directive, Congress has nonetheless shown remarkable deference to the purposes in the establishment documents. Statutes attempting to provide comprehensive authority and management requirements for the Refuge System explicitly limit their application to circumstances where they do not conflict with the particular purposes established for individual refuges.¹¹ The establishment purposes range from narrow missions, such as providing habitat for a single species, to broad goals, such as growing waterfowl habitat or fulfilling international migratory treaty obligations.¹² Though each refuge unit has its own establishment mandates from its initial authorization and subsequent expansions, section four focuses on common categories. It is the diverse management mandates of the

11. Though this is also the case for the National Park System, the other major federal public land system in which establishment mandates are important, it is more surprising for the Refuge System. Whereas all of the establishment mandates limiting the operation of the systemic, organic mandate in the National Park System are themselves statutes, the establishment mandates for many units of the Refuge System derive from non-legislative sources, such as public land orders. Even though establishment mandates do not figure prominently in the national forests and BLM lands, special unit designations containing specialized purposes do exist. For instance, in *Sierra Club v. United States Forest Service*, 259 F.3d 1281 (10th Cir. 2001), a court interpreted the Forest Service organic legislation in light of the special provisions in the statute creating the Norbeck Wildlife Preserve, which is part of the Black Hills National Forest. Custer State Park Game Sanctuary Act, 16 U.S.C. §§ 675-678 (2000). Though an unusual case, it illustrates that the Park Service and the U.S. Fish & Wildlife Service are not the only agencies that struggle to interpret establishment statutes in light of overall organic legislation. Also, the BLM manages national conservation areas and national monuments with special establishment purposes. See, e.g., 16 U.S.C. § 460ddd (2000) (establishing the Gila Box Riparian National Conservation Area); Proclamation No. 6920, 61 Fed. Reg. 50,223 (Sept. 24, 1996) (establishing the Grand Staircase-Escalante National Monument).

12. UNITED STATES GENERAL ACCOUNTING OFFICE, NATIONAL WILDLIFE REFUGES: CONTINUING PROBLEMS WITH INCOMPATIBLE USES CALL FOR BOLD ACTION 11 (RCED-89-196, 1989) [hereinafter 1989 GAO REPORT] (describing the broad range of individual purposes).

individual refuge units that create the great challenge for organic, systemic legislation.

Finally, section five of this article concludes with some observations about how well Refuge System law resolves the three historic tensions and achieves modern conservation goals. It begins with an evaluation of the 1997 Improvement Act and then considers the System as a model for future public land conservation. The trend in public land management in the United States and the rest of the world is away from the extremes of multiple and exclusive use regimes and toward more complex systems with hierarchies of dominant and subservient purposes and uses.¹³ Exclusive-use systems, whether military reservations or preservation enclaves, increasingly invite secondary, compatible uses. Multiple-use systems, whether public forestlands or rangelands, increasingly condition each possible use on its ability to meet certain substantive criteria. In other words, public land management systems are becoming more like the National Wildlife Refuge System.

Therefore, a better understanding of the history and law of the Refuge System will help guide us through the pitfalls and potential of future reform. In particular, this study of national wildlife refuge law cautions that organic legislation is no panacea for public land systems with divergent individual unit establishment mandates. Continued leadership from the executive branch will be needed to realize the promise of the Refuge System to serve as a conservation network restoring and maintaining ecological integrity.

I.

A LEGAL HISTORY OF THE NATIONAL WILDLIFE REFUGE SYSTEM

As highlighted in the introduction, three historic tensions have operated behind the scenes to generate many of the significant reforms analyzed in this section. Perhaps the most important message of the periodic attempts at reform is the steady growth of and enduring support for the only major federal public land system reserved principally for the benefit of wildlife. In this era in which high extinction rates and loss of biological diversity are preeminent environmental concerns, the history

13. Overseas, recent reforms in national public land laws have, for example, split the New Zealand multiple-use forestlands into two dominant-use regimes, one for commercial forestry and one for conservation. See, e.g., Robert L. Fischman & Richard L. Nagle, *Corporatisation: Implementing Forest Management Reform in New Zealand*, 16 *ECOLOGY L.Q.* 719 (1989). Nature preserve management in the developing world increasingly invites local communities to establish compatible commercial activities such as ecotourism and renewable resource extraction in preservation enclaves. See Gonzalo Castro et al., 41 *BIOSCIENCE* 284 (1991) (discussing extractive reserves in Brazil); Philip M. Fearnside, *A Prescription for Slowing Deforestation in Amazonia*, 31 *ENVIRONMENT* 16 (1989); Andrew D. Johns, *Economic Development and Wildlife Conservation in Brazilian Amazonia*, 17 *AMBIO* 302 (1988); Larry Rohter, *Discovering Amazon Rain Forest's Silver Lining*, *N.Y. TIMES*, Sept. 10, 2002, at A8.

of the Refuge System is worth examining as an example of how conservation goals and legal tools for achieving those goals evolve toward more effective protection.

Much of the comprehensive legislation concerning the Refuge System has a pretend quality to it. In 1956 when Congress "established" the Fish & Wildlife Service, in 1966 when it "designated" a National Wildlife Refuge System, and again in 1997 when it provided a mission for the System, Congress merely endorsed executive branch innovations implemented years earlier. Legislative endorsement of executive innovation does bolster reforms and prevent subsequent administrations from revoking policies. However, the convoluted history of refuge establishment, the timid character of the Service, and the dim public awareness outside of the hunting community all contribute to congressional neglect of the Refuge System. Moreover, Congress has consistently failed to reconcile its respect for individual refuge purposes with a desire to create an integrated system in which each unit contributes to a broad national goal. Compared to the other major public land systems, the Refuge System has suffered especially lax oversight, austere appropriations for management, and slow progress in modernizing organic legislation.¹⁴ Despite these disadvantages, the strong tradition of executive branch leadership on and power over refuges provides a basis for the U.S. Fish & Wildlife Service ("the Service" or "Fish and Wildlife Service") to take bold initiatives toward ambitious systemic management.

The law of the Refuge System has developed largely through accretion. With some notable exceptions, few statutes revoke or substantially modify older laws.¹⁵ All of the laws discussed in this section, even the old ones, remain in force unless specifically noted otherwise. This section begins with a snapshot of the taxonomy of the current Refuge System to provide some perspective. It then embarks on a chronological journey through the law creating the hodgepodge of refuge management categories.

14. See JEANNE NIENABER CLARKE & DANIEL C. MCCOOL, STAKING OUT THE TERRAIN 107-25 (1996); Richard J. Fink, *The National Wildlife Refuges: Theory, Practice, and Prospect*, 18 HARV. ENVTL. L. REV. 1, 43-44 (1994); Cam Tredennick, *The National Wildlife System Improvement Act of 1997: Defining the National Wildlife Refuge System for the Twenty-First Century*, 12 FORDHAM ENVTL. L.J. 41, 64-65 (2000) (citing H.R. REP. NO. 105-329, at 4 (1997) that showed that the Refuge System received smaller appropriations per acre managed than any other major federal public land system).

15. The notable exceptions include the increase in the proportion of refuge lands acquired under the Duck Stamp Act, 16 U.S.C. § 718 (2000), that are open to hunting and the repeal of the Refuge Recreation Act's, 16 U.S.C. § 460k (2000), fiscal criterion for wildlife-dependent recreation after 1997.

A. *The Taxonomy of the Refuge System*

The legal history of the National Wildlife Refuge System is a tangled tale. The wildlife refuges, migratory bird refuges, waterfowl production areas, game ranges, wildlife management areas, and other land unit categories that grew into the System have opportunistic origins.¹⁶ Units were created in response to crises, personal preferences of high-ranking officials (and legislators), funding availability, social program priorities, donations, and, of course, wildlife needs. The retrospective task of bringing coherence to this conglomeration requires historical context, flexible interpretation, and a modicum of imagination. Despite the diverse authorities and origins of the individual wildlife refuges, all share a general purpose of animal conservation. Beginning in the 1960s, important System-wide legislation provided central principles around which refuge management would coalesce.¹⁷

This tortuous history has given rise to a collection of units that defy tidy or logical organization.¹⁸ Most land managed by the Fish & Wildlife Service is part of the Refuge System.¹⁹ The taxonomy of the System is

16. A. STARKER LEOPOLD ET AL., NATIONAL WILDLIFE REFUGE SYSTEM, REPORT OF THE ADVISORY COMMITTEE ON WILDLIFE MANAGEMENT, APPOINTED BY INTERIOR SEC. STEWART L. UDALL (1968) [hereinafter LEOPOLD REPORT]. Beginning in 1940, there has been an ongoing effort to consolidate the refuge unit types into fewer categories. Proclamation No. 2416, 54 Stat. 2717 (July 25, 1940).

17. Kevin Gergely, J. Michael Scott & Dale Goble, *A New Direction for the U.S. National Wildlife Refuges: the National Wildlife Refuge System Improvement Act of 1997*, 20 NATURAL AREAS J. 107, 109–10 (2000), provides a helpful time-line summarizing the legal history of the System.

18. Two examples illustrate the confusing results of the System taxonomy. A prairie pothole acquired through the Farm Services Administration (“FSA”) may be an FSA unit refuge or a waterfowl production area, depending on its location. A “wildlife management area” may be a national wildlife refuge or a coordination area, depending on whether it is administered through a cooperative agreement. Reorganizing the Refuge System so that unit names and categories are more closely aligned with their management is a perennial topic of interest for reformers. See, e.g., COMMISSION ON NEW DIRECTIONS FOR THE NATIONAL WILDLIFE REFUGE SYSTEM, PUTTING WILDLIFE FIRST: RECOMMENDATIONS FOR REFORMING OUR TROUBLED REFUGE SYSTEM 20 (1992) (commissioned by Defenders of Wildlife).

19. See U.S. FISH & WILDLIFE SERVICE, ANNUAL REPORT OF LANDS UNDER CONTROL OF THE U.S. FISH AND WILDLIFE SERVICE AS OF SEPTEMBER 30, 2001 (2002). As I explore below, most fish hatcheries and administrative holdings are not part of the System. See *infra* Section I(D). However, some fish hatcheries may be part of the System because they occur within a System unit. For instance, the Hagerman fish hatchery is part of the Hagerman Coordination Area in Idaho. U.S. FISH & WILDLIFE SERVICE, ANNUAL REPORT OF LANDS UNDER CONTROL OF THE U.S. FISH AND WILDLIFE SERVICE AS OF SEPTEMBER 30, 2000, at 32, 36 (2001). On some units of the Refuge System, the Service shares management control. For instance, the National Aeronautics and Space Agency cooperatively manages Merritt Island National Wildlife Refuge (which includes the Kennedy Space Center) with the Service. 16 U.S.C. § 459j(4) (2000). Also, the Bureau of Reclamation administers the agricultural leases, subject to Service control, in Tule Lake, Lower Klamath, Upper Klamath, and Clear Lake refuges. *Klamath Forest Alliance v. Babbitt*, CIV S-97-2274 GEB GGH (Order Dec. 24, 1998).

illustrated in Figure 1. The 93.6 million acres of the System comprise 90.8 million acres of national wildlife refuges, 2.6 million acres of waterfowl production areas, and 0.2 million acres of coordination areas.²⁰

The Refuge System contains two major categories of units. The first is coordination areas, which are federally owned lands managed by states under cooperative agreements with or long-term leases from the U.S. Fish & Wildlife Service.²¹ Though these fifty coordination areas are part of the System, they are excluded from key statutory requirements of the 1997 Improvement Act, such as comprehensive planning and the substantive criterion of compatibility for all uses.²² Older statutory requirements, such as the compatibility criterion for approval of recreational uses, continue to apply to coordination areas, as lands within the System.²³

All other units of the System are refuges regardless of whether that term is included in their names.²⁴ Though the approximately 550 named national wildlife refuges are the best known and largest component of the refuges in the System, they form a category defined by what it is not. The most important affirmatively defined category of refuges is the waterfowl production area (“WPA”).²⁵ The WPAs are often excluded from studies

Other cooperating agencies include the Tennessee Valley Authority and the Department of Defense, at <http://refuges.fws.gov/general/establishment.html>. In 1976, the Game Range Act ended joint management with the Bureau of Land Management of four large refuges and placed them under the exclusive control of the Service. National Wildlife Refuge System Administration Act of 1966, Amendments, Pub. L. No. 94-223, § a(1), 90 Stat. 199 (codified at 16 U.S.C. § 668dd (2000)) (amended 1974). The 1976 law also limited the ability of the President to transfer control of any refuge from the Service. *Id.*; see also S. REP. NO. 94-593 (1976), 1976 U.S.C.A.N. 288.

20: Division of Realty, U.S. FISH & WILDLIFE SERVICE, *Query the National Wildlife Refuge System Lands Database*, at <http://realty.fws.gov/nwrs.htm#national> (last revised Apr. 24, 2001).

21. 16 U.S.C. § 668ee(5) (2000); 50 C.F.R. § 25.12 (2001). The U.S. Fish & Wildlife Service Realty database notes that cities and organizations also enter into cooperative agreements with the Service to manage coordination areas. Division of Realty, U.S. FISH & WILDLIFE SERVICE, *Query the National Wildlife Refuge System Lands Database*, at <http://realty.fws.gov/nwrs.htm#statesum> (last revised Apr. 24, 2001). However this does not fulfill the statutory definition of “coordination area.” 16 U.S.C. § 668ee(5) (2000).

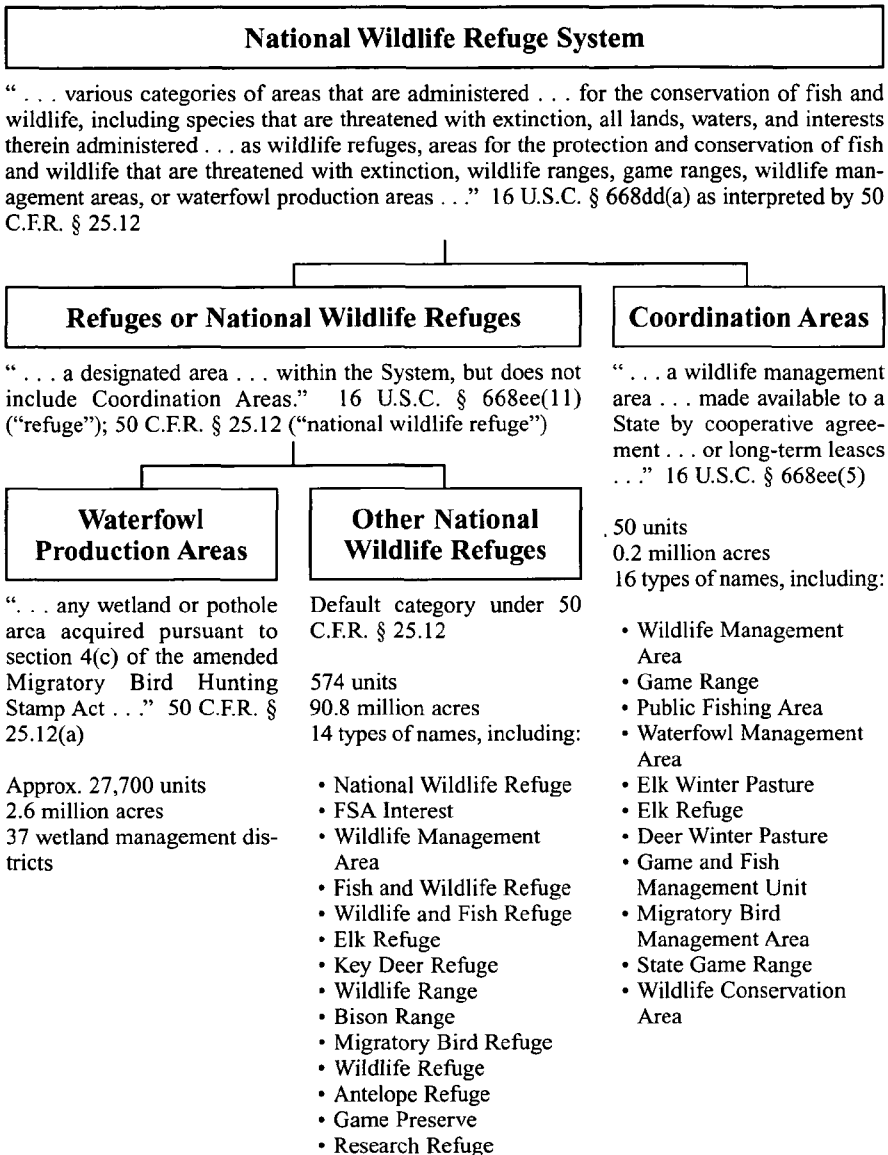
22. These requirements apply only to “refuges.” 16 U.S.C. §§ 668dd(d)(3) & (e) (2000); U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 1.6(F), *available at* <http://policy.fws.gov/602fw1.html> (last visited Sept. 19, 2002).

23. Refuge Recreation Act, 16 U.S.C. §§ 460k-k(4) (2000), discussed *infra* notes 88-107 and accompanying text, continues to apply the compatibility criterion to recreational uses on all units of the Refuge System, including coordination areas.

24. For example, Bull Mountain Game Range, Falls of the Ohio National Wildlife Conservation Area, Hart Mountain National Antelope Refuge, and National Bison Range are all national wildlife refuges, despite their formal names.

25. Waterfowl production areas are supposed to be limited to “any wetland or pothole area acquired pursuant to section 4(c) of the amended Duck Stamp Act (72 Stat. 487, § 4(c), 16 U.S.C. § 718d(c)).” 50 C.F.R. § 25.12(a) (2001) (discussed *infra* notes 65-69 and accompanying text). However, some WPAs are acquired under other programs, such as the Emergency Wetlands Resources Act, 16 U.S.C. § 3901(b) (2000), or through Farm Services Agency

Figure 1: The Taxonomy of the National Wildlife Refuge System (as of August, 2001).



of the Refuge System because of their unwieldy numbers, relatively narrow focus on increasing bird populations, and lack of intensive management.²⁶ The Service groups WPAs that are relatively isolated, small wetlands or prairie potholes, into 37 “wetland management districts.”²⁷ In order to qualify as a WPA, the property must be within one of 193 counties, primarily in eight north-central states, with acquisition targets.²⁸ When the Farm Service Agency (“FSA”), formerly the Farmers Home Administration,²⁹ acquires properties with waterfowl production values through foreclosure or bankruptcy it may transfer them to the U.S. Fish & Wildlife Service. If these properties are located in a qualifying county, they generally become WPAs. If they are outside of a WPA county, then they are categorized as FSA refuges.³⁰ With the exception of the FSA refuges, refuges that are not WPAs are the named national wildlife refuges that constitute the core identity of the System.

The Refuge System also contains special overlays of preservation zoning. For instance, Congress designates wilderness areas within existing public land units. The Refuge System includes over 20 million acres of wilderness areas, mostly in Alaska, on sixty-three refuges.³¹ Wilderness areas continue to be managed by the agency responsible for that unit, so additions to the National Wilderness Preservation System in wildlife

26. See, e.g., 1989 GAO REPORT, *supra* note 12, at 10; U.S. FISH & WILDLIFE SERVICE, OPERATION OF THE NATIONAL WILDLIFE REFUGE SYSTEM: FINAL ENVIRONMENTAL IMPACT STATEMENT, II-40 (1976) [hereinafter 1976 FINAL EIS]. In general, WPAs have less restrictive public use conditions than other refuges in the System. See U.S. FISH & WILDLIFE SERVICE MANUAL, 601 FW 2.2, available at <http://policy.fws.gov/601fw2.html> (last visited Sept. 10, 2002).

27. REPORT OF LANDS UNDER CONTROL OF THE U.S. FISH & WILDLIFE SERVICE AS OF SEPTEMBER 30, 2000, *supra* note 19; National Wildlife Refuge System Lands Database, at <http://reality.fws.gov/nwrs.htm> (tallying over 26,000 WPAs). The waterfowl production area may be a fee simple interest or an easement. *Id.* Nearly 3000 WPAs are held in fee simple by the U.S. FISH & WILDLIFE SERVICE. U.S. FISH & WILDLIFE SERVICE, CENTENNIAL HANDBOOK IX-15 (2001), available at <http://refuges.fws.gov/centennial/howtohandbook.html>.

28. The main waterfowl production area states are Iowa, Minnesota, Michigan, Montana, Nebraska, North Dakota, South Dakota, and Wisconsin. As with the other categories of the System, there are exceptions to the general rule. Idaho, for instance, has a 1900 acre wetland management district. REPORT OF LANDS UNDER CONTROL OF THE U.S. FISH & WILDLIFE SERVICE AS OF SEPTEMBER 30, 2000, *supra* note 19, at 25.

29. After a U.S. Department of Agriculture reorganization in 1994, the FSA succeeded the Farmers Home Administration as the principal federal lender to farmers. Farm Service Agency Online, *What is the Farm Services Agency?*, available at http://www.fsa.usda.gov/pas/about_us/fsa.htm (last visited July 28, 2002); Farm Service Agency Online, *What's Our Mission? Our Goals?*, available at http://www.fsa.usda.gov/pas/about_us/mission.htm (last visited July 28, 2002).

30. U.S. FISH & WILDLIFE SERVICE, NATIONAL POLICY ISSUANCE 89-21, PROTECTION OF IMPORTANT RESOURCES ON FARMERS HOME ADMINISTRATION INVENTORY PROPERTY (1989); Memorandum FWS/RF/F9-1666 from the Director of the U.S. Fish & Wildlife Service, to the Regional Directors of Regions 1-8 (May 3, 1989).

31. U.S. FISH & WILDLIFE SERVICE, SPECIAL AREAS MANAGEMENT, available at <http://refuges.fws.gov/specialareas/index.html> (last visited March 21, 2002); NATHANIEL P. REED & DENNIS DRABELLE, THE UNITED STATES FISH & WILDLIFE SERVICE 28 (1984).

refuges do not reduce the amount of land managed by U.S. Fish & Wildlife Service. The Wilderness Act limits development in wilderness areas, primarily through a prohibition on buildings and roads.³²

Another example of preservation overlays in the Refuge System are rivers designated under the 1968 National Wild and Scenic Rivers Act.³³ The Act allows for designation of protected river segments either through federal legislation or through a process wherein a state applies to the Secretary of the Interior for approval.³⁴ There are three different categories of designation, each with a different level of protection.³⁵ Generally, though, the Wild and Scenic Rivers Act limits federal actions, such as dam construction, that “might impair the value of a protected river segment.”³⁶ The Alaskan refuges contain most of the System’s river segments protected under the Act.³⁷

B. Early History

Like the National Park System, the Refuge System’s roots lie in the withdrawal of certain parcels of public domain from resource disposition laws, and reservation of those parcels for conservation purposes. Unlike the Park System, whose origin dates to the Congressional reservation of Yellowstone,³⁸ the Refuge System has been more strongly shaped by executive action.³⁹ Benjamin Harrison’s 1892 order protecting Afognak Island Forest and Fish Culture Reserve, which is now part of Kodiak National Wildlife Refuge (“NWR”), is probably the first presidential proclamation withdrawing public domain for wildlife conservation.⁴⁰ However, the order actually created a forest reserve under an 1891 act (sometimes called the General Revision Act), which authorized the president to set aside from occupation and sale public lands covered with

32. Wilderness Act, 16 U.S.C. § 1131–36 (2000).

33. National Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271–87 (2000).

34. 16 U.S.C. § 1273 (2000).

35. *Id.*

36. Fink, *supra* note 14, at 36; *see* 16 U.S.C. § 1278 (2000).

37. Fink, *supra* note 14, at 37.

38. Yellowstone Park Act of 1872, 16 U.S.C. §§ 21–22 (2000).

39. Executive and administrative documents establishing wildlife refuges outnumber statutes by almost six to one. Although some units of the National Park System, such as national monuments, originate as executive actions, the vast majority of park units were authorized by Congress. For a thorough description of refuge establishment documents, *see infra* section IV.

40. Proclamation No. 39, 27 Stat. 1052 (Dec. 24, 1892). The U.S. FISH & WILDLIFE SERVICE MANUAL, 029 FW 3, available at <http://policy.fws.gov/029fw3.html> (last visited July 28, 2002), cites an even earlier action of President Grant in 1868 to protect the Pribilof Islands as a northern fur seal reserve. However, this is incorrect. No such proclamation was ever published in Statutes at Large, which, at the time, printed public land proclamations. ANNE R. ASHMORE, PRESIDENTIAL PROCLAMATIONS CONCERNING PUBLIC LANDS 1–7 (1981). Grant did not begin serving his term as president until 1869. Congress created a Pribilof Island reservation on March 3, 1869. Res. No. 22, 15 Stat. 348.

timber.⁴¹ Though this reservation provided for protection of sea lions and sea otters, it appears to have been motivated primarily by the need to sustain commercial harvest of marine mammals.⁴² Harrison does, however, deserve credit for at least recognizing the need to regulate harvests and for using presidential power to rein in commercial excess. Nonetheless, his more significant accomplishment in public land history was his use of delegated congressional authority under the 1891 law to reserve the first forest areas that would become the National Forest System.⁴³

In 1901, William McKinley issued a presidential proclamation establishing the Wichita Forest Reserve, which is now the Wichita Mountains Wildlife Refuge, under the same 1891 forest reserve law.⁴⁴ However, the proclamation makes no reference to wildlife conservation. Nonetheless, national concern about wildlife protection was rising. The Lacey Act of 1900, which bolstered state conservation efforts by making interstate transportation of animals killed in violation of state law a federal crime, began Congressional involvement in the Progressive Era wildlife conservation project.⁴⁵ Representative John F. Lacey of Iowa, after whom this landmark statute is named, was also instrumental in enacting the 1905 legislation transferring management of the National Forest System to the Department of Agriculture's Forest Service and the 1906 legislation giving the President authority to reserve lands as national monuments.⁴⁶

But, it is Theodore Roosevelt who personifies best the ascendancy of this political movement. His legendary, charismatic expansiveness established the strong association between the Refuge System and executive power. Congress, in 2000 legislation,⁴⁷ properly traced the birth of the refuge system to President Roosevelt's March 14, 1903 proclamation reserving Florida's Pelican Island as a "preserve and breeding ground for native birds."⁴⁸ The proclamation gave the Department of Agriculture's Division of Biological Survey, a predecessor agency to the U.S. Fish & Wildlife Service, management authority. The

41. General Revision Act of Mar. 3, 1891, ch. 561, 26 Stat. 1095, 1103 (repealed by 90 Stat. 2792).

42. See REED & DRABELLE, *supra* note 31, at 5; Fink, *supra* note 14.

43. See, e.g., Proclamation No. 303, 26 Stat. 1565 (Mar. 30, 1891); GATES, *supra* note 8, at 565-67 (1979).

44. Proclamation No. 5, 32 Stat. 1973 (July 4, 1901).

45. Act of May 25, 1900, ch. 553; MICHAEL J. BEAN & MELANIE J. ROWLAND, THE EVOLUTION OF NATIONAL WILDLIFE LAW 15-16 (1997).

46. SAMUEL P. HAYS, CONSERVATION AND THE GOSPEL OF EFFICIENCY: THE PROGRESSIVE CONSERVATION MOVEMENT 43, 189, 196 (1959).

47. Fish and Wildlife Improvement and National Wildlife Refuge System Centennial Act of 2000, Pub. L. No. 106-408, 114 Stat. 1762 (2000).

48. Executive Order of March 14, 1903.

Pelican Island proclamation differed from past reservations in its goal of wildlife protection for noncommercial purposes. It also differed from the previous executive reservations in citing no statutory authority.

An oft' told anecdote about Roosevelt's establishment of Pelican Island refuge reflects his audacious style and the precedent-setting origins of the Refuge System.⁴⁹ According to Charles F. Wilkinson, Roosevelt asked the Justice Department about the presidential power to establish the Pelican Island Reservation:

A few days later, a government lawyer, shallow, squinty-eyed, pursed-lipped—a classic lawyer—came to the White House. He solemnly intoned, "I cannot find a law that will allow you to do this, Mr. President."

"But," replied T.R., now rising to his full height, "is there a law that will prevent it?" The lawyer, now frowning, replied that no, there was not. T.R. responded, "Very well, I so declare it."⁵⁰

Between 1903 and 1909, Roosevelt decreed a total of fifty-one bird and four big game reserves, where none had existed before.⁵¹ Soon Congress, prompted by Roosevelt, jumped on the bandwagon and reserved land that would become wildlife refuges, beginning with the Wichita Mountain Forest and Game Preserve in 1905,⁵² the National Bison Range in 1908⁵³ and the National Elk Refuge in 1912.⁵⁴ The refuge system grew with remarkable speed during its first decade, primarily driven by the executive branch.

Both the boundaries and purposes of the early refuges bear the distinctive signature of the president. In contrast, although the executive branch drew the boundaries of the National Forest System, Congress has set the uniform mandates for management of national forest units since 1897.⁵⁵ National parks are established and given mandates by statute. Even statutes that establish individual refuges or impose system-wide requirements often merely endorse or slightly modify earlier executive actions.⁵⁶ Executive and administrative documents establishing wildlife refuges outnumber statutes by almost six to one. Although some units of the National Park System, such as national monuments, originate as

49. EDMUND MORRIS, *THEODORE REX* 487, 519 (2001); PAUL RUSSELL CUTRIGHT, *THEODORE ROOSEVELT: THE MAKING OF A CONSERVATIONIST* 223 (1985).

50. Charles Wilkinson, *Clinton Learns the Art of Audacity*, *HIGH COUNTRY NEWS*, Sept. 30, 1996.

51. Rachel F. Levin, *Leading the Way... Early Pioneers of the Refuge System*, *FISH & WILDLIFE NEWS*, Mar./Apr. 2000, at 14.

52. Pub. L. No. 58-23, ch. 137, 33 Stat. 614 (1905).

53. Ch. 192, 35 Stat. 267 (1908) (codified at 16 U.S.C. § 671 (2000)).

54. Ch. 284, 37 Stat. 293 (1912) (codified at 16 U.S.C. § 673 (2000)).

55. Act of June 4, 1897, 30 Stat. 35.

56. *E.g.*, *Wichita Mountains Wildlife Refuge*, *supra* note 52; *Alaska Maritime National Wildlife Refuge*, Pub. L. No. 96-487, § 302, 94 Stat. 2385 (1980).

executive actions, the vast majority of park units are authorized by Congress.

Haphazard at first, the growth of the Refuge System evolved to focus on particular geographic regions and broad national needs with the Migratory Bird Treaty Act of 1918.⁵⁷ In addition to establishing the first significant, preemptive, federal restrictions on hunting, the Act implemented new treaty obligations to sustain populations of certain birds.⁵⁸ Fulfilling these obligations has been an important impetus for the creation of refuges ever since.⁵⁹ Today, more refuges are designed to support a national network maintaining migratory bird habitat than for any other purpose.⁶⁰

The Migratory Bird Conservation Act of 1929 ("MBCA") is a significant landmark in the growth of the Refuge System because it authorized ongoing purchase of lands to serve as waterfowl refuges.⁶¹ It also provided the first multi-refuge, uniform management mandate. Though Congress had approved the use of federal funds to purchase land for wildlife conservation as early as 1909 on an *ad hoc* basis,⁶² the MBCA established a general, ongoing rationale for acquiring refuges to serve as "inviolable sanctuaries" for migratory birds.⁶³ Beyond that basic purpose, however, the 1929 Act contained no management mandates for refuge administration.

However, then, as now, authorization of government spending did

57. Migratory Bird Treaty Act, 16 U.S.C. §§ 703–11 (2000).

58. In order to protect listed migratory birds, the Act prohibits a wide range of activities besides hunting, including pursuing, taking, capturing, killing, selling, and possessing. 16 U.S.C. § 703 (2000).

59. Fulfilling the United States' treaty obligations with respect to fish and wildlife is a common purpose of refuges. See, e.g., Alaska National Interest Lands Conservation Act, 16 U.S.C. § 3101 (2000). In addition to the Migratory Bird Treaty, other important U.S. international law obligations for wildlife conservation include the 1940 Western Hemisphere Convention on Nature Protection and Wild-Life Preservation, and the Ramsar Convention (which designates over a dozen refuges "Wetlands of International Importance"). See Anne Criss, *Refuges at Risk*, NATIONAL WETLANDS NEWSLETTER, July/Aug. 1999, at 1; Kathleen Rogers & James Moore, *Revitalizing the Convention on Nature Protection and Wild Life Preservation in the Western Hemisphere: Might Awakening a Visionary But "Sleeping" Treaty be the Key to Preserving Biodiversity and Threatened Natural Areas in the Americas?*, 36 HARV. INT'L L.J. 465 (1995); Daniel Navid, *The International Law of Migratory Species: the Ramsar Convention*, 29 NAT. RES. J. 1001 (1989). Although President Clinton signed the Biodiversity Convention negotiated at the Rio Earth Summit, the Senate failed to ratify it. Robert F. Blomquist, *Ratification Resisted: Understanding America's Response to the Convention on Biological Diversity, 1989–2000*, 32 GOLDEN GATE U.L. REV. 493, 493 (2002).

60. As a result, many refuges in the contiguous 48 states are clustered along the four major north-south migration flyways. 1989 GAO REPORT, *supra* note 12, at 10.

61. Migratory Bird Conservation Act, 16 U.S.C. §§ 715–715r (2000); see Fink, *supra* note 14, at 13. Acquisition of land under this authority may occur only after the state in which the property is located consents to it. 16 U.S.C. § 715f (2000).

62. REED & DRABELLE, *supra* note 31, at 8.

63. 16 U.S.C. § 715. Congress, however, progressively whittled away at the hunting restrictions in the "inviolable sanctuaries." See *infra* notes 76–77 and accompanying text.

not guarantee actual appropriations. Funds to purchase refuges in the early years of the Great Depression were scarce.⁶⁴ After a precipitous decline in waterfowl populations in the early 1930s, Congress enacted the Migratory Bird Hunting Stamp Act of 1934.⁶⁵ This legislation created a dedicated fund for acquiring waterfowl conservation refuges from the sales of federal stamps that all waterfowl hunters would be required to affix to their state hunting licenses.⁶⁶ The law, therefore, is commonly called the Duck Stamp Act. Periodic congressional appropriations and loans have bolstered the fund's stamp income.⁶⁷ Along with the Land and Water Conservation Fund Act of 1964,⁶⁸ the Duck Stamp Act funding mechanism remains the major source of money for purchasing expansions to the Refuge System.⁶⁹

With assured acquisition funding, the growth of the Refuge System accelerated and created a strong constituency for refuge management among the hunters who made the annual mandatory contributions. Although reservation of public domain would remain an important source of refuges, particularly in Alaska, land acquisition would be the dominant engine of growth in the number of refuges after 1934.⁷⁰ On the other hand, from the perspective of area, the relative importance of acquisition is very low. After the establishment of the huge refuges in Alaska in 1980, the proportion of reserved public domain grew to 97% of

64. REED & DRABELLE, *supra* note 31, at 9.

65. Duck Stamp Act, 16 U.S.C. §§ 718–718(h) (2000); *see* REED & DRABELLE, *supra* note 31, at 9; Fink, *supra* note 14, at 17.

66. The Duck Stamp fund revenues were earmarked for acquisition of habitat and the remainder for refuge management. 16 U.S.C. § 715(d).

67. The original Duck Stamp Act transferred \$6 million into an emergency conservation program. REED & DRABELLE, *supra* note 31, at 10. Congress ultimately forgave a \$200 million federal loan, authorized in 1961, to the duck stamp fund. Fink, *supra* note 14, at 17.

68. Land and Water Conservation Fund Act of 1964 (“LWCFA”), 16 U.S.C. §§ 4601–4 to 4601–11 (2000). LWCFA finances federal and state acquisitions of land for recreation purposes by setting aside revenue collected from “user fees, the federal motorboat fuels tax, and receipts from oil and gas lease payments.” Fink, *supra* note 14, at 17.

69. *See* Fink, *supra* note 14, at 17. Although several subsequent statutes—including the Fish and Wildlife Coordination Act of 1934, 16 U.S.C. § 663(b) (2000); the Fish and Wildlife Act of 1956, 16 U.S.C. § 742f(a) (2000); LWCFA, 16 U.S.C. § 4601–4 to 4601–11(2000); and the Endangered Species Acts of 1966, 1969, and 1973, 16 U.S.C. § 1534 (2000)—contained acquisition authority, “the [Migratory Bird] Conservation Act continues to be a major source of authority for wildlife refuge acquisition.” BEAN & ROWLAND, *supra* note 45, at 284. The U.S. Fish & Wildlife Service electronic database lists 304 refuges that rely, at least in part, on the Migratory Bird Conservation Act authority for their purposes. U.S. FISH & WILDLIFE SERVICE, *America's National Wildlife Refuge System: Searchable Databases*, at <http://refuges.fws.gov/databases> (last visited Aug. 7, 2002) [hereinafter *Refuge System Database*]. The Endangered Species Act acquisition authority has added 56 refuges to the System. Criss, *supra* note 59, at 1.

70. *See* U.S. FISH & WILDLIFE SERVICE, ANNUAL REPORT OF LANDS UNDER CONTROL OF THE U.S. FISH AND WILDLIFE SERVICE AS OF SEPTEMBER 30, 2001, at 12–26 (2002). Thus, the most prevalent purpose for refuges is to contribute to the conservation of “the continental migratory waterfowl population.” LEOPOLD REPORT, *supra* note 16, at W-1.

the Refuge System.⁷¹ Even prior to 1980, 82% of the System's acreage had been reserved from public domain.⁷²

The bewildering taxonomic diversity of units in the Refuge System owes much to acquisition funding mechanisms. Many of the units purchased with Duck Stamp Act monies were named migratory bird refuges. After a 1958 amendment to the Duck Stamp Act, the U.S. Fish & Wildlife Service began acquiring waterfowl production areas, typically small wetlands or prairie potholes, which are exempt from the "inviolate sanctuary" mandate of the Migratory Bird Conservation Act.⁷³ Refuges reserved or transferred from existing public lands might be designated any of a wide variety of names (e.g. wildlife refuge, game range, wildlife and fish refuge, migratory waterfowl refuge, migratory bird refuge)⁷⁴ depending on the source (e.g. Congress, the President, the Secretary of the Interior) and the particular purpose of the establishment. In addition, the Department of the Interior has long accepted donations for refuge lands.⁷⁵ Part IV of this article discusses in detail the range of establishment methods.

As hunters contributed cumulatively greater sums through the Duck Stamp Act throughout the decades, they also gained stronger statutory handles to assert their interests in hunting on the refuges. A steady erosion of the "inviolate sanctuary" standard of the Migratory Bird Conservation Act now allows the Secretary to make regulations allowing hunting of migratory game birds on up to 40% of an area established under the MBCA.⁷⁶ Even that percentage may be exceeded to an unlimited extent where the Secretary finds that it would be "beneficial to the species."⁷⁷ Hunting of other kinds of animals is not specially restricted on these refuges. The political influence wielded by hunters would continue to play a key role in shaping the 1997 Improvement Act.

The creation of the U.S. Fish & Wildlife Service in the Department of the Interior by President Franklin Roosevelt in 1940 was another

71. REED & DRABELLE, *supra* note 31, at 22.

72. 1976 FINAL EIS, *supra* note 26, at II-38.

73. Duck Stamp Act Amendments, 16 U.S.C. §§ 718(d) & (c) (2000); *see also* BEAN & ROWLAND, *supra* note 45, at 284, 85; Fink, *supra* note 14, at 16; 1976 FINAL EIS, *supra* note 26, at II-5.

74. President Franklin Roosevelt imposed some uniformity on this collection of units by renaming many of them "national wildlife refuge." Proclamation No. 2416, 54 Stat. 2717 (July 25, 1940).

75. 1976 FINAL EIS, *supra* note 26, at II-38; REED & DRABELLE, *supra* note 31, at 21, 24.

76. 16 U.S.C. § 668dd(d)(1)(a) (2000) (enacted as part of the National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4, 80 Stat. 928). Congress had already expanded hunting in refuges established under the Migratory Bird Conservation Act ("MBCA") authorization on up to 25% of the area in 1949. Act of Aug. 12, 1949, ch. 421, § 2, 63 Stat. 600. Increases in hunting potential on MBCA refuges came as trade-offs for increases in duck stamp prices. *See* Fink, *supra* note 14, at 27, n. 170; Gergely et al., *supra* note 17, at 108.

77. Fish and Wildlife Improvement Act of 1978, 16 U.S.C. § 668dd(d)(1)(A) (2000).

significant legal development in the evolution of the Refuge System.⁷⁸ The Service was a merger of the Commerce Department's Bureau of Fisheries with the Agriculture Department's Bureau of Biological Survey.⁷⁹ Until the 1940 creation of the U.S. Fish & Wildlife Service, the Department of Agriculture's Bureau of Biological Survey managed most of the wildlife refuges, including all of the refuges principally created for bird conservation. Therefore, prior to 1940, refuges were closer institutional cousins to the national forests than to Interior Department lands such as national parks.⁸⁰

Finally, in 1956, Congress enacted what is sometimes called the organic act for the U.S. Fish & Wildlife Service.⁸¹ The Fish and Wildlife Act of 1956 purported to "establish" the Fish & Wildlife Service even though the Service had been in existence for sixteen years.⁸² The only provision in the 1956 Act dealing with refuges requires the Service to "take such steps as may be required for the development, management, advancement, conservation, and protection of wildlife resources through research, *acquisition of refuge lands*, development of existing facilities, and other means."⁸³ This represents a much broader grant of authority to acquire refuges than had been provided by prior legislation.⁸⁴

Although subsequent reorganizations would reshape the U.S. Fish & Wildlife Service,⁸⁵ they would not significantly modify its land management responsibilities. Commentators have noted that the Service

78. The Reorganization Plan No. 3, 54 Stat. 1232 (1940). Congress established the procedures permitting the President to reorganize government to improve efficiency in the Reorganization Act of 1939, Pub. L. No. 76-19, ch. 36, 53 Stat. 561.

79. These two parent bureaus had been transferred from the Departments of Agriculture and Commerce to the Interior Department a year earlier. Reorganization Plan No. 2, 53 Stat. 1431, 1433 (1939). The U.S. Fish & Wildlife Service traces its origins to the U.S. Fish Commission created by Congress in 1871 to study the decline in fish and recommend remedies. U.S. DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE ANNUAL PERFORMANCE PLAN 2001, ANNUAL PERFORMANCE REPORT 1999 4 (2000), at <http://planning.fws.gov/USFWFinal.pdf> (last visited Aug. 13, 2002). The origins of the Biological Survey date back to the 1880s. DONALD WORSTER, NATURE'S ECONOMY: A HISTORY OF ECOLOGICAL IDEAS 262 (2d ed. 1994).

80. Professor Worster notes that the Bureau of Biological Survey, under the leadership of C. Hart Merriam and in following years, had a strong economic orientation. WORSTER, *supra* note 79, at 262-63.

81. *Id.* at 114.

82. Fish and Wildlife Act of 1956, 16 U.S.C. § 742a.

83. *Id.* § 7(a)(5) (emphasis added).

84. REED & DRABELLE, *supra* note 31, at 22. The Refuge System database records 166 refuges that include at least some lands acquired under the 1956 Act. Refuge System Database, *supra* note 69. Other legislation with broad purposes for refuge designation had limited geographic application. For instance, the Lea Act of 1948, 16 U.S.C. §§ 695-695(c) (2000), authorized the acquisition and development of management areas in California for wildlife generally.

85. The most significant change would be the transfer of the Bureau of Commercial Fisheries from the U.S. Fish & Wildlife Service to the Commerce Department in 1970. REED & DRABELLE, *supra* note 31, at 10.

has been largely ineffective in fulfilling its conservation responsibilities in part because of its “roving parentage,”⁸⁶ self-conflicting mandates, unstable budget base, and insecure legislative foundation.⁸⁷ Like the U.S. Environmental Protection Agency (“EPA”) three decades later, the Service would struggle to establish a coherent institutional identity out of the disparate agencies from which the President and Congress pieced it together.

C. *The 1962 Refuge Recreation Act*

The 1962 Refuge Recreation Act⁸⁸ marked the beginning of the modern trend, culminating in the 1997 Refuge Improvement Act, to provide the Service with systemic management guidance. Prior to 1962, the “inviolable sanctuary” provision of the Migratory Bird Conservation Act of 1929 applied to many refuges and provided a basis for restricting or encouraging certain activities, but it did not apply system-wide and did not set out practical criteria for implementing the term. Congress had issued specific management mandates for individual refuges prior to 1962 but had never put forward a comprehensive vision for how the U.S. Fish & Wildlife Service should administer the System.

The 1962 Recreation Act employed the compatibility standard, now the touchstone of refuge administration, to determine which recreational uses could occur in refuges. The 1962 Recreation Act also highlighted the fiscal constraints on the ability to manage recreational uses in a way that ensures conservation. This gap between what can be done and what the Service can afford to do emphasizes the importance of appropriations in public land management.

In the early 1960s, growing recreational pressures spurred Congress to enact System-wide legislation. By 1960, the Refuge System was hosting 11 million visitor days, more than double the number in 1954.⁸⁹ The Recreation Act mandated that public recreation use be permitted in a refuge “only to the extent that is practicable and not inconsistent with... the primary objectives for which each particular area is

86. CLARKE & MCCOOL, *supra* note 14, at 107 (quoting RICHARD A. COOLEY, POLITICS AND CONSERVATION: THE DECLINE AND FALL OF THE ALASKA SALMON (1963)).

87. CLARKE & MCCOOL, *supra* note 14, at 111-12; *Hearings Before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 94th Cong. 29-44 (1975) (statement of U.S. Fish & Wildlife Service Director Greenwalt).

88. Refuge Recreation Act, Pub. L. No. 87-714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k-k(4) (2000)).

89. 1989 GAO REPORT, *supra* note 12, at 9. In comparison, in fiscal year 1999, the Refuge System hosted 36 million visitor days. U.S. DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE ANNUAL PERFORMANCE PLAN FY 2001/ANNUAL PERFORMANCE REPORT FY 1999 (2000) (Director's Message).

established."⁹⁰ This restriction on refuge use is significant as the first codified, systemic statutory provision to employ a consistency criterion to management decisions.⁹¹ Consistency with establishment objectives would become the touchstone for refuge management over the next forty years. As with most refuge legislation, the 1962 consistency standard borrowed from existing Service practice. As early as 1960, the Service incorporated the standard into its management regulations.⁹² Also, Congress married the consistency standard not with all the goals or purposes of the refuge but rather with just the *primary* objectives.

In order to ensure that the U.S. Fish & Wildlife Service followed the Congressional directive, the statute prohibits outright "those forms of recreation that are not directly related to the primary purposes" of the refuge until the Secretary of the Interior determines:

- (a) that such recreational use will not interfere with the primary purposes for which the areas were established, and
- (b) that funds are available for the development, operation, and maintenance of these permitted forms of recreation.⁹³

This limitation on the Secretary's (and hence the Service's) delegated proprietary discretion is unusual for the early 1960s. At the time, Congress required no other land management agency to make determinations before allowing recreational use. Although non-interference or consistency, two terms which are used interchangeably in the legislative history and statute, are not difficult thresholds to surmount, they nonetheless starkly contrast with the prevailing public land management mandates at the time, such as the Multiple-Use Sustained Yield Act of 1960, which "breathe discretion at every pore."⁹⁴

90. Refuge Recreation Act §1.

91. Congress did, however, use consistency language in refuge appropriations at least as early as 1945. *Miscellaneous Fish and Wildlife Legislation: Hearings Before the Subcomm. on Fisheries and Wildlife Conservation of the Comm. on Merchant Marine and Fisheries*, H.R. 1171, 87th Cong. 57 (1961) (statement of Daniel Janzen, Director, Bureau of Sport Fisheries and Wildlife). Non-congressional establishment documents employed the compatibility standard to limit uses on refuges as early as 1936. Exec. Order No. 8,039, 4 Fed. Reg. 438 (Jan. 25, 1939) (establishing the Kofa Game Range); Exec. Order No. 7,509, 1 Fed. Reg. 2,149-50 (Dec. 16, 1936) (establishing the Fort Peck Game Range). The origins of the standard, however, are older. As part of a 1910 seal conservation statute, Congress allowed the killing of seals in the Pribilof Islands whenever the Secretaries of Commerce and Labor find that it "is not inconsistent" with the preservation of the herd. Seal Fisheries Act, Pub. L. No. 61-146, ch. 183, 36 Stat. 326 (1910).

92. Title 50-Wildlife, 25 Fed. Reg. 8,397, 8,413 (Sept. 1, 1960) (revision and reorganization of Title 50 to be codified at 50 C.F.R. pt. 29.1) (permitting use "only when the authorized activity on a wildlife refuge area will not be incompatible with the purposes for which the refuge was established.") The Service and its predecessor, the Biological Survey, likely employed some version of the consistency standard to evaluate proposed refuge uses since the early days of the System.

93. Refuge Recreation Act § 1.

94. Multiple-Use Sustained Yield Act of 1960, 16 U.S.C. §§ 528-531 (2000); *Strickland v. Morton*, 519 F.2d 467, 469 (9th Cir. 1975); see COGGINS & GLICKSMAN, *supra* note 7, § 16:2.

The second required determination in the Recreation Act is still extraordinary today, when most public land mandates contain even more detailed criteria for determining what uses may be permitted. The fiscal criterion, requiring that funds be available to develop, operate, and maintain the forms of recreation, is a rare congressional recognition of the practical difficulties public land agencies generally, and the U.S. Fish & Wildlife Service in particular, have in accommodating public demands for recreation. These agencies constantly struggle to obtain appropriations to maintain adequate, safe, and (today) environmentally sound recreational operations.⁹⁵

Conditioning recreational use on adequate funding is a clever way to create a constituency for operational appropriations, which often take a back seat to the more glamorous appropriations for new acquisitions and facilities. A group wishing to open up a refuge to a certain type of recreation, e.g. snowmobiling, would have to lobby Congress to appropriate funds for the attendant administrative costs. Conditioning recreation on an administrative finding of adequate funds also gives the Service, generally a timid agency,⁹⁶ a statutory scapegoat to better justify administratively sensible but unpopular decisions.⁹⁷ Moreover, it relieves some of the pressure on the agency to divert funds from conservation to recreation.⁹⁸

Unfortunately, the Recreation Act does not define what constitutes an adequate level of funding. This flaw probably accounts for the relative obscurity of this standard in refuge management. However, the fiscal criterion continues to apply to limit nonwildlife-dependent recreation in the System. The Service and citizens should stir the fiscal criterion into

95. See CLARKE & MCCOOL, *supra* note 14, at 53, 54. As of 1981, the GAO reported an unfunded \$650 million backlog for development and rehabilitation. UNITED STATES GENERAL ACCOUNTING OFFICE, NATIONAL DIRECTION REQUIRED FOR EFFECTIVE MANAGEMENT OF AMERICA'S FISH AND WILDLIFE 22 (1981) [hereinafter 1981 GAO REPORT]. In 1996, the Service estimated a total maintenance backlog for providing effective wildlife management and meeting public use needs of \$440 million. *National Wildlife Refuge System, Oversight Hearing before the Subcomm. on Fisheries, Wildlife and Oceans of the Comm. on Resources House of Representatives*, 104th Cong., 104-961 (1996). By 2000, Congress was concerned enough about the backlog to require the Service to report on long-term plans to address priority operation, maintenance, and construction needs in the System. Fish and Wildlife Programs Improvement and National Wildlife Refuge System Centennial Act of 2000, 16 U.S.C. § 669.

96. See CLARKE & MCCOOL, *supra* note 14, at 107-25, on the Service's timidity and chronic under-funding.

97. See STEVEN L. YAFFEE, PROHIBITIVE POLICY 149-50 (1982), for an excellent description of the way the Service, in its regulatory capacity, favored clear, prohibitive guidelines because they give unambiguous direction and allow the Service to deflect criticism by maintaining that its hands are tied by a statute.

98. The legislative history of the Recreation Act indicates that the U.S. Fish & Wildlife Service had been diverting funds in this manner. S. REP. NO. 87-1858 (1962), *reprinted* in 1962 U.S.C.C.A.N. 2723, 2725-26 (report of the Assistant Secretary of the Interior); see also Fink, *supra* note 14, at 28.

action because this dormant provision is not widely discussed or closely followed.

Moreover, the fiscal criterion is an early predecessor of a statutory tool used in pollution control. The "hammer provision," most prominently employed in the 1984 amendments to the Resource Conservation and Recovery Act ("RCRA"),⁹⁹ is widely viewed as an innovation of pollution control law.¹⁰⁰ The fiscal criterion in the Recreation Act is an overlooked antecedent tool for shifting the political dynamic of interest group lobbying (whether hazardous waste generators regulated under RCRA or snowmobilers seeking to ride in refuges) from avoidance, delay, and budgetary austerity, to prompt appropriation of the necessary funds to make and implement determinations.

The Recreation Act also contains an unusual acquisition provision authorizing the Secretary to obtain limited areas of land for recreational development adjacent to refuges in order to avoid adverse effects upon fish and wildlife.¹⁰¹ In this poorly drafted section, it is ambiguous whether the provision is an expansion or just a clarification of the 1956 wildlife conservation purposes acquisition authorization.¹⁰² As always, though, acquisition is limited by available appropriations, and Duck Stamp funds may not be used to purchase these recreational areas.¹⁰³ However, the idea of grafting a recreational area onto a refuge established primarily for wildlife protection illustrates the difficulty of applying the consistency management standard. Because many refuges have expanded piecemeal through several separate acquisitions or reservations (or, transfers or donations) it may be inaccurate to speak of a primary purpose for the refuge as a whole. Instead, different areas within a single refuge may have been established for different purposes. This historical reality adds an additional layer of complexity to the management of the Refuge System.

Finally, the Recreation Act authorizes the Secretary to cooperate with a wide variety of entities, to accept donations, to establish reasonable fees, and to issue permits for public use.¹⁰⁴ Before this legislative authorization, the Secretary already had discretion to engage

99. Resource Conservation and Recovery Act of 1976, 42 U.S.C. § 6901 et seq. (1994).

100. A hammer provision operates by providing a draconian (prohibitive) rule that will take effect on a particular date unless the agency has promulgated a substitute regulation. For instance, the 1984 RCRA amendments would have virtually banned the land disposal of any hazardous waste for which the EPA had not promulgated a treatment standard by specified dates. 42 U.S.C. § 6942 (1994).

101. Refuge Recreation Act, Pub. L. No. 87-714, § 2, 76 Stat. 653 (1962) (codified at 16 U.S.C. § 460k-1 (2000)).

102. Fish and Wildlife Act of 1956, Pub. L. No. 84-1024, § 7(a)(5), ch. 1036, 70 Stat. 1123 (1956).

103. *Id.*

104. Refuge Recreation Act § 4; *see also* Fish and Wildlife Act of 1956 (authorizing acceptance of donations of real property).

in these activities. Agencies routinely cooperate in their day-to-day operations within their delegated authority, and the Interior Department had long accepted donations to the System.¹⁰⁵ Nonetheless, exhortations to cooperate and coordinate are a staple of public land law, and in this respect the Refuge System is typical.¹⁰⁶ The establishment of fees and permit programs likewise was already a long-established authority of federal land management agencies. The principle that general proprietary responsibility to administer public lands includes the establishment of binding rules had been widely accepted at least since the Supreme Court's landmark *Grimaud* decision in 1911.¹⁰⁷

The Recreation Act set key precedents for the Refuge System specifically and environmental law generally. The Act established the first System-wide limitations on refuge management. It also codified the compatibility principle that has come to be the touchstone of dominant-use management. In both these ways, the Recreation Act helped sow the seeds of the imminent growth of organic legislation. Finally, the fiscal criterion in the Act hints at a path not taken in resource management law but one that subsequently emerged as an important route for congressional control of the EPA in pollution control law.

D. *The 1966 Refuge Administration Act*

The 1966 Refuge Administration Act took the next step toward a comprehensive, organic statute for the Refuge System. Indeed, the 1997 Refuge Improvement Act is codified as Amendments to the 1966 law.¹⁰⁸ The 1966 Act consolidated the land units managed by the Service into a Refuge System and provided a comprehensive management mandate applicable to all uses, not just recreation. It also extended the applicability of the compatibility standard.

Congress enacted the 1966 Refuge Administration Act as part of a bill whose purpose was "to provide a program for the conservation, protection, restoration, and propagation of selected species of native fish and wildlife . . . threatened with extinction, and to consolidate, restate, and modify the present authorities relating to administration . . . of the National Wildlife Refuge System."¹⁰⁹ This legislation is commonly divided

105. As early as 1912, the Department accepted land donated by the Izaak Walton League for the National Elk Refuge. REED & DRABELLE, *supra* note 31, at 21; 1976 FINAL EIS, *supra* note 26, at II-38.

106. See, e.g., National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. §§ 668dd, 668ee (2000).

107. *United States v. Grimaud*, 220 U.S. 506 (1911); see COGGINS & GLICKSMAN, *supra* note 7, § 10D:5.

108. National Wildlife Refuge System Improvement Act of 1997 ("[a]n Act to amend the National Wildlife Refuge System Administration Act").

109. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 1(a), 80

into the Endangered Species Preservation Act of 1966,¹¹⁰ which authorized the Secretary of the Interior to acquire land and to review certain programs to conserve species at risk of extinction, and the National Wildlife Refuge System Administration Act of 1966 ["Refuge Administration Act"].¹¹¹ The partnering of the Refuge Administration Act with an endangered species conservation measure emphasizes that the refuge consolidation and operation features in the law were animated in large part by extinction concerns.¹¹²

The extinction concern in the 1966 legislation was part of a more general trend in the mid-sixties to begin managing public lands for preservation purposes. The trend is important for the Refuge System both because it is instructive about the milieu in which Congress enacted the Refuge Administration Act and also because other preservation statutes of the era directly shape management of refuges. Just two years before the 1966 Act, Congress enacted the Wilderness Act, which created a new system of public lands that would be managed to minimize the traces of development.¹¹³ Two years after the 1966 Act, another statute emerged from the preservation movement: the National Wild and Scenic Rivers Act.¹¹⁴ Like a wilderness area, a designated wild and scenic river is managed by the agencies responsible for the units on which it occurs. As discussed in section I(A), *supra*, the Refuge System includes both wilderness areas and wild and scenic rivers.

In this spirit of preservation, the 1966 Refuge Administration Act consolidated the wildlife refuges and was the first statute to refer to them as a National Wildlife Refuge System.¹¹⁵ Subsection 1, below, discusses this formative provision of the Act. The Refuge Administration Act also provided the first comprehensive management mandate for the Refuge System, borrowing the compatibility (or consistency) principle from the 1962 Refuge Recreation Act.¹¹⁶ Subsection 2 addresses this management mandate.

Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)). The Refuge Administration Act is sometimes abbreviated as "NWRSA." See, e.g., Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,458, 62,458 (2000).

110. Pub. L. No. 89-669, §§1-3.

111. National Wildlife Refuge System Administration Act §§ 4-5; BEAN & ROWLAND, *supra* note 45, at 194 n. 3 (describing the division of the 1966 bill into these two Acts).

112. Today, the connection between refuges and endangered species continues to be strong. Approximately 260 species listed under the Endangered Species Act occur on refuges, and the Endangered Species Act acquisition authority has added 56 refuges to the System. Criss, *supra* note 59, at 1.

113. Wilderness Act, 16 U.S.C. §§ 1131-36 (2000).

114. National Wild and Scenic Rivers Act, 16 U.S.C. §§ 1271-87 (2000).

115. National Wildlife Refuge System Administration Act § 1(a).

116. The 1962 Act employs this non-interference standard through the term "not inconsistent with." Refuge Recreation Act, 16 U.S.C. §§ 460k-k(4) (2000).

1. Consolidation of Units

Congress, in 1966, designated as the National Wildlife Refuge System “all lands, waters, and interests therein administered by the Secretary as wildlife refuges, areas for the protection and conservation of fish and wildlife that are threatened with extinction, wildlife ranges, game ranges, wildlife management areas, or waterfowl production areas.”¹¹⁷ This constitutive phrase remains important because it has never been amended or repealed. While the 1997 Improvement Act substantially revises the management and administration of the System, it does not alter this definition of the System. The only prior legislation grouping refuges for management purposes was the 1962 Recreation Act, which applied to “national wildlife refuges, game ranges, national fish hatcheries, and other conservation areas administered by the Secretary . . . for fish and wildlife purposes.”¹¹⁸ These two descriptions of the land base to which legislation applies both include catch-all phrases and lists of unit types.

The catch-all phrase in the 1966 statute refers to areas created to stop species' slides to extinction. In contrast, the 1962 catch-all language refers much more broadly to other conservation areas designated for fish and wildlife purposes. There is no indication in the legislative history that this difference in coverage is intentional. Furthermore, although the 1966 statute lists more categories of U.S. Fish & Wildlife Service administered units, it does not list national fish hatcheries, a unit category included in the 1962 statute. All of the units listed in the 1966 statute and absent from the 1962 statute's list would fall under the 1962 catch-all description. On the other hand, only those national hatcheries propagating fish threatened with extinction could plausibly be considered part of the Refuge System under the 1966 definition. Congress could reasonably have intended to exclude hatcheries (and administrative sites) from the

117. National Wildlife Refuge System Administration Act § 4(a). It is worth noting here that although most statutory references to the manager of the Refuge System refer to “the Secretary” (of the Interior), I often use “the U.S. Fish & Wildlife Service” interchangeably to indicate the decision maker, since it is the line agency actively administering the System. As Bean and Rowland note, however, the system consolidated by Congress in 1966 included game ranges established both for wildlife conservation and livestock grazing purposes. BEAN & ROWLAND, *supra* note 45, at 289. These units were jointly managed by the U.S. Fish & Wildlife Service and the BLM until 1976 when Congress, in reaction to an attempt by the Interior Department to designate the BLM as the sole manager for three game ranges, required all System units to be “administered by the Secretary through the United States Fish and Wildlife Service.” Pub. L. No. 94-223, 90 Stat. 199 (codified at 16 U.S.C. § 668dd). This amendment to the Refuge Administration Act also declares that all units within the System shall remain in the System except under certain limited circumstances. BEAN & ROWLAND, *supra* note 45, at 290. See generally Alan Larsen, Comment, *National Game Ranges: The Orphans of the National Wildlife Refuge System*, 6 ENVTL. L. 515 (1976).

118. Refuge Recreation Act, Pub. L. No. 87-714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k-k(4) (2000)).

scope of the Refuge System because they are operated as production (or administration) facilities rather than as natural ecosystems. This limitation on the scope of the System is widely accepted within the Service.

However, it is important to note that the 1962 Recreation Act still requires a compatibility determination for each recreational use at hatcheries, regardless of whether they are part of the Refuge System.¹¹⁹ More broadly, the continuing operation of the Recreation Act raises the question of whether "other conservation areas administered by the Secretary for fish and wildlife purposes" but outside of the jurisdiction of the Service, such as BLM national conservation areas and national monuments, or national park units, might be subject to the recreational compatibility determination requirement. Though a literal reading of the statute would indicate that they are, the Interior Department has never applied the Recreation Act to non-U.S. Fish & Wildlife Service lands.

Another concern is whether Congress in 1966 might have intended to exclude coordination areas that were not established for species threatened with extinction. The absence of coordination areas in the 1966 Act's list of specific unit types is significant because the Service began to call areas cooperatively managed with agreements "coordination areas" at least as early as 1959.¹²⁰ But, there is nothing in the legislative history to suggest that Congress meant to consolidate anything less than all of the land management units of the U.S. Fish & Wildlife Service into a single system.¹²¹ On the other hand, the 1966 statute was part of a larger bill whose underlying theme is the protection of species threatened with extinction, while most coordination areas are managed for non-endangered game.

The Service resolves this ambiguity in scope by expansively interpreting the 1966 statute to define the System to include "other areas for the protection and conservation of fish and wildlife *including* those that are threatened with extinction."¹²² This broader phrase used in the regulatory definition originates in the 1966 statute's introductory

119. *Id.* § 1 (applying to "conservation areas administered by the Secretary of the Interior for fish and wildlife purposes").

120. Compare U.S. FISH & WILDLIFE SERVICE, *Annual Report of the Fish and Wildlife Service, Bureau of Commercial Fisheries, Bureau of Sports Fisheries and Wildlife for the fiscal year 1959* (1960) (employs term "coordination areas") with U.S. Fish & Wildlife Service, *Annual Report of the Fish and Wildlife Service, Bureau of Commercial Fisheries, Bureau of Sports Fisheries and Wildlife for the fiscal year 1958* (1959) (employs term "cooperative units").

121. *But see* S. REP. NO. 89-1463 (1966), reprinted in 1966 U.S.C.C.A.N. 3342, 3355 (a Department of Agriculture submission referring to the bill as "redefining the NWRS").

122. 50 C.F.R. § 25.12 (2001) (emphasis added). For those areas not specifically listed in the law but that are nevertheless managed by the Service, the Director will determine if they are managed "for the protection and conservation of fish and wildlife." If so, such areas are included in the System. *Id.*

language preceding the list of lands included in the System: "For the purpose of consolidating the authorities relating to the various categories of areas that are administered by the Secretary . . . for the conservation of fish and wildlife, including species that are threatened with extinction . . ." ¹²³ It is a stretch for the Service to interpret the statutory phrase introducing the purpose of consolidating units into a system as an element in the list of what constitutes the System. Nonetheless, it is an uncontroversial interpretation that ensures complete coverage of all of the significant land areas managed by the Service in the Refuge System. When the U.S. Fish & Wildlife Service expanded the scope of its regulatory definition of the Refuge System in 1976 from language that mirrored the 1966 statute to the current regulatory definition, it did not highlight the expansion. ¹²⁴ The promulgation of the final rule did not indicate any comment or controversy about the change, which was part of an effort the Service characterized as a reorganization and revision of the regulations. ¹²⁵

This confusing and legally tenuous definition of the Refuge System reflects the difficulty of managing the crazy-quilt of units together in an integrated system that is more than the sum of its parts. As I will explore in greater detail in Section IV below, the disparate origins of refuge units exacerbates the uncertainties and the crosscurrents in the definition of the Refuge System.

2. *Comprehensive Management Mandate*

Compatibility is the key concept, borrowed from the 1962 Recreation Act, that Congress applied to limit the U.S. Fish & Wildlife Service's discretion in managing uses of the Refuge System. The 1966 Refuge Administration Act constructs a legal framework for refuge administration that is quite modern for its time. This modern structure, adopted subsequently in the Clean Air and Clean Water Acts, as well as in the 1982 amendments to the Endangered Species Act ("ESA"), first imposes a number of restrictions but then provides a regulatory program (often a permit) to allow otherwise prohibited acts. ¹²⁶ This approach makes the prohibitory section of a statute primarily important in determining the scope of activities that will be subject to agency

123. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4(a), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)).

124. 40 Fed. Reg. 12,270 (Mar. 18, 1975) (proposed rule); 41 Fed. Reg. 9,166 (Mar. 3, 1976) (final rule).

125. 41 Fed. Reg. 9,166 (Mar. 3, 1976).

126. See, e.g., Clean Water Act, 33 U.S.C. § 1311 (2000) (prohibiting discharge without a permit); 33 U.S.C. § 1342 (2000) (providing for permits); Endangered Species Act, 16 U.S.C. § 1538 (a)(1)(B) (2000) (prohibiting takes of listed species without a permit), 16 U.S.C. § 1539(a) (2000) (providing for permits).

regulation. The regulatory section then establishes the terms under which the activity will be allowed. This is the refuge use policy the Service describes as "closed until open."¹²⁷

The 1966 Refuge Administration Act prohibits in any unit of the System:

- (1) disturbing, injuring, cutting, burning, removing, destroying, or possessing any U.S. property, including natural growth,
- (2) taking or possessing any animals or animal parts, including nests and eggs, and
- (3) entry, use, or occupancy for any purpose.¹²⁸

The term "take" is further defined in the 1966 Act to mean "to pursue, hunt, shoot, capture, collect, kill, or attempt" to do any of these things.¹²⁹ This definition, typical of wildlife laws of the time, does not include the term "harm." "Harm," part of the definition of "take" in the ESA, broadens the prohibition.¹³⁰ The absence of the term "harm" in the Refuge Administration Act's definition of "take" suggests that incidental significant habitat modification is not prohibited, even where it significantly impairs essential behavioral patterns of animals. Nonetheless, the overall scope of the Refuge Administration Act's prohibitions is broad. The prohibition on entry and use covers most activities that would directly harm wildlife, including habitat modification within a refuge.¹³¹

The broad prohibitions are not applicable under any one of three exceptions. The first exception exempts persons authorized to manage areas in the System.¹³² The second exception is for express provisions of establishment documents.¹³³ This exception highlights the continual management problems created by the wide variation in the language and

127. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,458, 62,460 (Oct. 18, 2000). Areas may be opened by regulation, individual permit, or public notice. 50 C.F.R. § 25.21(a) (2001) ("all areas . . . [of] the National Wildlife Refuge System are closed to public access until and unless we open the area for a use . . .").

128. National Wildlife Refuge System Administration Act § 4(c).

129. *Id.* § 5(b).

130. Endangered Species Act § 3, 16 U.S.C. § 1532 (2000); see BEAN & ROWLAND, *supra* note 45, at 213. The U.S. Fish & Wildlife Service has defined "harm" to include, under certain circumstances, "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." 50 C.F.R. § 17.3 (2001). The Supreme Court upheld this definition in *Babbitt v. Sweet Home Chapter of Communities for a Great Oregon*, 515 U.S. 687 (1995). The other broad definitional term present in the Endangered Species Act's definition of "take" but absent in the Refuge Administration Act's definition is "harass." 50 C.F.R. § 17.3 (2001).

131. Of course, transboundary pollution coming from outside the refuge can harm species through air/water degradation without direct human entry or use.

132. National Wildlife Refuge System Administration Act § 4(c).

133. *Id.*

style of establishment documents. The 1966 Refuge Administration Act consolidates the refuges into a system for comprehensive management only to the extent that establishment documents and amendments, which number over one thousand, allow for common ground. Organic or comprehensive mandates for public land systems are limited in their effectiveness where the system units have individual mandates.¹³⁴

The third exception is for activities permitted under Service regulations. For those areas where establishment documents are silent, refuges may be managed by the Service to allow only those activities provided by regulation.¹³⁵ That is why section 4(d) of the 1966 statute, authorizing regulation and imposing the compatibility criterion, is so important.¹³⁶ Section 4(d) authorizes two kinds of regulations. The first (section 4(d)(1)) and more general kind of regulation permits the use of an area in the System for any purposes when the Secretary "determines that such uses are compatible with the major purposes for which such areas were established."¹³⁷ This constraint borrows from the 1962 Recreation Act delegation, which required that the Secretary make determinations and also imposed a non-interference criterion.¹³⁸ The determination component of the delegation may not have carried much weight in the 1960s, but after the landmark *Overton Park* decision, agency determinations must be supported by an administrative record which reveals that the agency took into account the relevant factors.¹³⁹ In the case of compatibility determinations, the relevant factors would be the major purposes, the effects of the proposed uses, and consequences of those effects on achieving the major purposes.

The compatibility criterion in section 4(d)(1), which authorizes general use regulations, differs in two respects from the 1962 Recreation Act.¹⁴⁰ First, the 1966 statute uses the term "compatible with" as opposed to "not interfere with." This difference is not significant.¹⁴¹ In this article,

134. I explored this issue with respect to the National Park Service in Robert L. Fischman, *The Problem of Statutory Detail in National Park Establishment Legislation and its Relationship to Pollution Control Law*, 74 DENV. U. L. REV. 779 (1997).

135. *Id.*

136. National Wildlife Refuge System Administration Act § 4(d).

137. *Id.*

138. Refuge Recreation Act, Pub. L. No. 87-714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k-k(4) (2000)).

139. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1970).

140. Recall, though, that compatibility is not the sole criterion in the 1962 Recreation Act. In addition to determining compatibility, the Secretary must also determine that funds are available for the development, operation, and maintenance of these permitted forms of recreation. Refuge Recreation Act § 1.

141. The 1962 statute itself employs the terms "compatible with" and "not inconsistent with" in a context that suggests that the "not interfere with" criterion is meant to include those two standards. Refuge Recreation Act § 1. Professor Fink agrees: "'Not inconsistent' is a synonym for 'compatible' and 'not interfere' imparts the same meaning." Fink, *supra* note 14, at 28 n. 180. The 1966 statute, though it abandons the "not interfere with" criterion, does use "not

I will adopt the common practice of equating the meaning of the terms “not interfere with,” “compatible with,” “consistent with,” and “not inconsistent with.”

Second, the 1966 statute applies the compatibility criterion to “major” purposes of the establishment document(s).¹⁴² In contrast, the 1962 statute applies the criterion to the “primary” purposes or objectives.¹⁴³ Like the variation in the phrasing of the compatibility standard, this is a distinction without a difference. Nothing in the legislative history of the 1966 law suggests that Congress meant to change the scope of the purposes to which the compatibility criterion applies.¹⁴⁴

The other, and more specific, kind of regulation authorized in section 4(d)(2) allows the Service to grant or permit easements.¹⁴⁵ While Congress mandated the same compatibility standard, employing the same phrase as the general authorization of regulations, it did broaden the scope of the purposes to which the compatibility criterion applies. Instead of major or primary purposes, easement regulations must be compatible with “the purposes” of the establishment document.¹⁴⁶ This suggests that this easement regulatory standard should be interpreted more strictly than the general standard: a wider range of subsidiary, secondary, or minor purposes are subject to protection against incompatible easements. Congress’ establishment of a higher threshold for approving some uses (easements) foreshadows the important hierarchy of uses in the 1997 Improvement Act.

In whatever form, the congressional mandate to test all regulatory decisions against the purposes set out in establishment documents highlights a core dilemma. As legislation seeks to consolidate and integrate all the diverse areas managed by the U.S. Fish & Wildlife Service into a single system, it also elevates the importance of the establishment documents by using their multifarious purposes as limits on agency regulation. This tension between the convergent pull of Refuge System legislation and the divergent push of individual refuge purposes continues to contribute to conflicts and inefficiencies in refuge

inconsistent with” in the provision authorizing the Secretary to enter into contracts. Refuge Recreation Act § 1. The legislative history of the 1966 statute does not compare the phrasing of its compatibility criterion with that of the 1962 law. Fink, *supra* note 14, at 28, note 180. Professor Fink also shows that some commentators have conflicting interpretations about the comparative burdens imposed on the Service by the compatibility criteria under the two statutes. *Id.*

142. National Wildlife Refuge System Administration Act § 4(d)(1).

143. Refuge Recreation Act § 1.

144. As discussed *infra* notes 560–572 and accompanying text [section III(D)(1)(c)], the current law applies the compatibility criterion to an unmodified set of “purposes,” which potentially expands the analysis. 16 U.S.C. § 668ee(1) (2002).

145. National Wildlife Refuge System Administration Act § 4(d)(2).

146. *Id.*

management. It also led, in 1997, to an effort to impose a uniform System mission against which to measure the compatibility of uses.

Finally, there are other provisions of the 1966 Refuge Administration Act that explicitly confirm certain management practices generally implicit in proprietary discretion. The Act authorizes the Secretary to enter into contracts for the provision of public accommodations when they are not inconsistent with the primary purpose of a refuge, to accept donations of funds, and to acquire lands by exchange under certain conditions.¹⁴⁷ The Act also confirms the continued application of the 1962 Recreation Act and the federal mining laws where they are consistent with establishment documents.¹⁴⁸ The 1966 Act limits the regulatory power of the Secretary over fish and wildlife to lands within the System. Nonetheless, other statutes, such as the Migratory Bird Treaty Act and the Endangered Species Act,¹⁴⁹ provide independent regulatory power to the U.S. Fish & Wildlife Service to regulate animals on lands outside of the System. Moreover, Congress provided that regulations permitting hunting and fishing within the System shall be, "to the extent practicable, consistent with State fish and wildlife laws and regulations."¹⁵⁰ This consistency standard can lead to disagreements between states and the Service over how best to regulate hunting and fishing, where allowed on a refuge.¹⁵¹

Because the 1966 Refuge Administration Act failed to set out clear objectives and substantive criteria for management, it never succeeded in protecting natural resources to the extent that many of the other conservation statutes of the time did.¹⁵² More than any other factor, the weaknesses of the Refuge Administration Act led to the management problems that created the need for the 1997 Improvement Act.¹⁵³

147. National Wildlife Refuge System Administration Act § 4(b).

148. *Id.* §§ 4(c), (h). The explicit statement that mining laws continue to apply to System lands unless the lands are withdrawn (by establishment instruments) clarifies that the general prohibition on entry to refuge lands in section 4(c) likely does not prohibit prospecting, locating, and discovering minerals to secure mining rights on lands open to hardrock mining. *See infra* note 749 and accompanying text on the application of the 1872 mining law regime of mineral and land disposition to individual refuges.

149. Migratory Bird Treaty Act, 16 U.S.C. §§ 703-711 (2000); Endangered Species Act of 1973, Pub. L. No. 93-205, 87 Stat. 884.

150. National Wildlife Refuge System Administration Act § 4(c).

151. *See, e.g.*, Refuge Specific Hunting and Fishing Requirements, 60 Fed. Reg. 62,036 (Dec. 4, 1995) (promulgating final rules for refuge-specific hunting and fishing regulations and discussing a number of comments to the proposed rule, including the state of Wisconsin Department of Natural Resources' disagreement with the Service on nontoxic shot use mandates).

152. *See, e.g.*, Criss, *supra* note 59, at 16.

153. A stronger organic act would not have allowed the Service to drift so far from the refuge goals. It would have provided a shield for the Service to use in resisting pressures for incompatible uses. Also, a stronger statute would have facilitated more effective judicial intervention.

Nonetheless, the 1966 Act remains one of the foundation documents for modern organic legislation.

E. The Alaska National Interest Lands Conservation Act of 1980

Like the 1962 Recreation Act, which established a management criterion that Congress extended more broadly in 1966, the 1980 Alaska National Interest Lands Conservation Act (“ANILCA”)¹⁵⁴ employed new resource management tools that Congress would apply system-wide in 1997. The most important of these tools were a mandatory comprehensive refuge unit plan and a hierarchy of purposes.

Alaska has always played an exceptional role in the Refuge System. Some of the attributes that make it significant for the System are:

- (1) the location of the first executive withdrawal and Congressional hunting prohibitions for wildlife conservation;¹⁵⁵
- (2) unique, wild, and spectacular landscapes and animals;¹⁵⁶ and
- (3) by far, the largest refuges and the greatest total refuge acreage.¹⁵⁷

Due to these special characteristics, Alaska’s relatively recent statehood, the unique aboriginal claims settlement regime, and the state’s high proportion of federal public land, Alaska refuges are managed under special rules. The source of many of the rules is the ANILCA. In some cases, the special rules applicable in Alaska serve as models to promote improvements in administration throughout the entire System.¹⁵⁸

154. Alaska National Interest Lands Conservation Act, 16 U.S.C. § 3101 (2000).

155. Proclamation No. 39, 27 Stat. 1052 (Dec. 24, 1892) (reserving Afognak Island, parts of which are now in Kodiak National Wildlife Refuge); Act of July 27, 1868, ch. 273, 15 Stat. 240, § 6 (1868) (prohibiting the killing of fur-bearing animals in the Alaskan territory without authorization from the Treasury Secretary); S. Res. 22, 40th Cong., 15 Stat. 348 (1869) (declaring a special reservation on Saint Paul and Saint George Islands, which is now part of Alaska Maritime National Wildlife Refuge, for protection of fur seals); Act of Apr. 6, 1894, ch. 57, 28 Stat. 52, 53 (1894) (prohibiting killing, capturing, or pursuing fur seals in the waters surrounding the Pribilof Islands, now a part of Alaska Maritime National Wildlife Refuge).

156. The Arctic National Wildlife Refuge, for instance, is often called “America’s Serengeti.” See, e.g., Andrew C. Revkin, *Clashing Opinions at Meeting on Alaska Drilling*, N.Y. TIMES, Jan. 10, 2001, at A15; Sam Howe Hohovek, *Refuge Inside Arctic Circle Is Also in the Middle of U.S. Energy Debate*, N.Y. TIMES, Oct. 8, 2000, at A14. The Service describes this refuge, hosting a “rich pageant of wildlife,” as “among the most complete, pristine, and undisturbed ecosystems on earth.” U.S. FISH & WILDLIFE SERVICE, *Arctic National Refuge*, at <http://www.r7.fws.gov/nwr/arctic/index.html> (last visited Sept. 19, 2002).

157. The Arctic National Wildlife Refuge is the System’s largest, at 19.6 million acres. Division of Realty, U.S. Fish & Wildlife Service, *Query the National Wildlife Refuge System Lands Database*, at <http://realty.fws.gov/nwrs.htm> (last revised Apr. 24, 2001). The 16 Alaska refuges add up to 77 million acres, or nearly 83% of the area of the System. *Id.* The Alaskan refuges “may come closer than any other category of federal lands to constituting genuine biodiversity reserves,” in part because they are large enough to cover whole ecosystems. Bradley C. Karkkainen, *Biodiversity and Land*, 83 CORNELL L. REV. 1, 36 (1997).

158. Other special provisions, such as those dealing with subsistence activities on refuges have little or no relevance to the rest of the Refuge System and will not be discussed in this

But, the special rules also frustrate uniform policy and comprehensive management of the System.

ANILCA functioned in part as an establishment document, adding 53.7 million acres of land to the Refuge System in nine new refuges and in additions to six of the seven existing refuges.¹⁵⁹ The significance of this portion of ANILCA, which tripled the size of the Refuge System,¹⁶⁰ is the purposes it set out for both new and existing units. ANILCA established a hierarchy of purposes that foreshadows the approach of the 1997 Improvement Act. ANILCA subordinates purposes dealing with water quality, water quantity, interpretation, environmental education, and subsistence use to higher priority purposes dealing with conservation of animals and their habitat.¹⁶¹ ANILCA established this multi-tiered system of purposes by conditioning the subordinate ones with clauses such as “to the maximum extent practicable” and “in a manner consistent with [higher priority conservation purposes].”¹⁶²

More significantly, from the perspective of systemic management, ANILCA required the Service to engage in comprehensive refuge unit planning. Although at least one establishment statute had required comprehensive planning,¹⁶³ at the time of ANILCA, the Refuge System was the only major federal public land system without a comprehensive planning mandate. The System would remain unique in lacking a systemic unit planning mandate until 1997. The planning requirements for Alaska refuges established an important precedent and gave the Service valuable experience in modern public land planning. Indeed, the 1997 Improvement Act allows ANILCA provisions governing refuge management to prevail where they conflict with the more recent legislation.¹⁶⁴

For each Alaska refuge, ANILCA required a “comprehensive conservation plan.”¹⁶⁵ Like the Park Service general management plans¹⁶⁶ and the BLM resource management plans,¹⁶⁷ but unlike the Forest Service land and resource management plans,¹⁶⁸ comprehensive conservation plans do not need to be revised after a set period of time,

article. *E.g.*, Alaska National Interest Lands Conservation Act, Subsistence Management and Use, 16 U.S.C. § 3111, 3112 (2000).

159. Alaska National Interest Lands Conservation Act, 16 U.S.C. § 3101 (2000). 1989 GAO REPORT, *supra* note 12, at 9; Fink, *supra* note 14, at 31.

160. 1989 GAO REPORT, *supra* note 12, at 9.

161. Alaska National Interest Lands Conservation Act § 302.

162. *Id.* §§ 302, 303.

163. Minnesota Valley National Wildlife Refuge, Pub. L. No. 94-466, 90 Stat. 1992 (1976).

164. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, §§ 7,9, 111 Stat. 1260.

165. Alaska National Interest Lands Conservation Act § 304(g)(1).

166. 16 U.S.C. § 1a-7(b).

167. 43 U.S.C. § 1712.

168. 16 U.S.C. §§ 1604(f)(5), (g).

nor do they need to be based on substantive planning regulations. Nonetheless, comprehensive conservation plans must describe a range of natural and cultural values of the refuge, areas suitable for use as administrative or visitor facilities, special access issues, and "significant problems which may adversely affect the populations and habitats of fish and wildlife" in the refuge.¹⁶⁹ Based on these descriptions, the plan must fulfill four substantive requirements. It must:

- (1) designate areas within the refuge according to their respective resources and values;
- (2) specify programs for conserving fish and wildlife, and other special values, to be implemented within each area;
- (3) specify the uses within each area which may be compatible with the major purposes of the refuge; and
- (4) set forth those opportunities which will be provided (if compatible with refuge purposes) for fish and wildlife-oriented recreation, ecological research, environmental education, and interpretation.¹⁷⁰

These four planning requirements are the only substantive statutory management mandates for the content of plans. Together, they offer a sketchy blueprint for zoning the refuges in a way that both forces the agency to look ahead at how it can achieve its goals and allows the public to anticipate future actions, opportunities, and conditions on refuges.

ANILCA also includes procedures that the Service must follow in promulgating comprehensive conservation plans. In preparing plans, the Service must consult with appropriate Alaska state agencies and native corporations and hold hearings in the vicinity of local villages.¹⁷¹ The interested public outside of Alaska also may get involved in planning by reviewing and commenting on proposed plans, which must be made available at each U.S. Fish & Wildlife Service regional office and announced through notices in the Federal Register.¹⁷² Of course, National Environmental Policy Act ("NEPA") environmental impact statement procedures, especially the evaluation of alternatives, apply to comprehensive conservation planning as well.¹⁷³

The Service's planning experience with ANILCA became an important foundation for subsequent implementation of the 1997 Improvement Act, which requires comprehensive plans for all refuge units. Despite the gargantuan size of the Alaska portion of the System, it served as a pilot effort to extend modern elements of organic legislation

169. Alaska National Interest Lands Conservation Act § 304(g)(2).

170. *Id.* § 304(g)(3).

171. *Id.* § 304(g)(4).

172. *Id.* § 304(g)(5).

173. National Environmental Policy Act, 42 U.S.C. §§ 4321-4345 (2002); 40 C.F.R. §§ 1500.1-6 (2002).

to refuges. The need for that extension became achingly clear in the 1980s and 1990s, when a series of reports and investigations focused attention on the widespread problem of incompatible uses in the Refuge System.

F. The Struggle with Incompatible Uses in the Refuge System

As far back as 1962, when Congress enacted the Recreation Act to limit recreational activities that threatened the ability of refuges to fulfill their purposes, the problem of incompatible uses has spurred reform. In 1968, repeating the approach taken to identify and address long-term challenges for the National Park System,¹⁷⁴ the Secretary of the Interior appointed Professor A. Starker Leopold to chair an advisory committee for the Refuge System. The Leopold Committee Report was an important policy document describing long-range systemic goals. It stated that a wildlife refuge “should be a ‘wildlife display’ in the most comprehensive sense” where the “full-spectrum of native wildlife may find . . . a home.”¹⁷⁵ “In essence,” the committee stated, “we are proposing to add a ‘natural ecosystem’ component to the program of refuge management.”¹⁷⁶ In this recommendation, the Leopold Committee sought an over-arching, guiding principle that would provide a uniform direction for System management, represent a reasonable accommodation of most establishment purposes, and push the Service to respond to growing ecological concerns. The foresight of the report is illustrated by the term “natural ecosystem,” which the Leopold Committee felt compelled to place within quotation marks. Today it is common resource management jargon.¹⁷⁷

While surveying refuge management issues, the Leopold Report identified a number of situations where uses were interfering with wildlife conservation. For instance, the report described the upland sage-brush

174. A. STARKER LEOPOLD ET AL., *WILDLIFE MANAGEMENT IN THE NATIONAL PARKS* 3 (1963) (reprinted by the U.S. Department of the Interior, National Park Service).

175. LEOPOLD REPORT, *supra* note 16, at W-3. The Report repeats this recommendation by stating that the refuges “should be consciously developed as show places for all kinds of wildlife.” *Id.* at W-16. Not surprisingly, this articulation of the goal for refuges resembles the 1963 Leopold Committee Report that evaluated wildlife management in the National Park System, which famously recommended that each park “should represent a vignette of primitive America.” LEOPOLD ET AL., *supra* note 174, at 4.

176. LEOPOLD REPORT, *supra* note 16, at W-4.

177. See Robert Keiter, *Beyond the Boundary Line: Constructing a Law of Ecosystem Management*, 65 U. COLO. L. REV. 293 (1994). The U.S. Fish & Wildlife Service today adheres to a policy of ecosystem management for all of its programs. U.S. FISH & WILDLIFE SERVICE, Director’s Order No. 110 (Apr. 29, 1999), available at <http://policy.fws.gov/do110.html> (last visited August 12, 2002) (requiring “the ecosystem approach” to be reflected in System management policies); U.S. FISH & WILDLIFE SERVICE MANUAL, 052 FW 1 (Ecosystem Approach to Fish and Wildlife Conservation) available at <http://policy.fws.gov/052fw1.html> (last visited Sept. 19, 2002).

areas of the Malheur refuge as “largely sterile of wildlife,” possibly due to intensive grazing.¹⁷⁸ The report also discussed the pressures of recreation on the Refuge System and recommended that the Service develop master plans for refuges that outline the limits of recreational use to avoid disturbing wildlife values.¹⁷⁹ The report expressed particular concern that refuges in highly populated regions of the East and Midwest might succumb to pressure to allow incompatible levels of recreation.¹⁸⁰ This concern remains evident today, where proximity to urban areas leads to pressure for park-like amenities, such as picnic grounds, campsites, and boat ramps.¹⁸¹

In 1976, the Service prepared a comprehensive environmental impact statement for its proposed System management plan over the following ten years.¹⁸² In response to the physical and fiscal limitations of the System, the plan would realign priorities to emphasize conservation and reduce—or reduce the rate of increase of¹⁸³—secondary benefits, such as recreation.¹⁸⁴ Noting that operational funds and staff had not kept pace with the tripling of visitation levels and the doubling of area of the System from 1957 to 1975, the Service stated:

Public demands on System facilities have increased considerably beyond the capacity to provide services. Efforts are being made to reduce the demand to conform to legislative intent, existing facilities, enforcement and management capabilities. To achieve this balance will necessitate the shifting of funds and manpower to those basic management activities that will sustain the integrity of the refuge resources. This equilibrium should be achieved by 1985.¹⁸⁵

Nonetheless, the description of the proposed management activities contains no specific examples of incompatible uses or procedures to eliminate them, other than some general guidelines in the mitigation chapter.¹⁸⁶

178. LEOPOLD REPORT, *supra* note 16, at W-9, 10.

179. *Id.* at W-15.

180. *Id.* at W-14 to W-15. The report goes on to observe that once a nonwildlife-related recreational activity becomes established at a refuge, it is difficult to terminate. *Id.* at W-15.

181. *Review of the Management of the National Wildlife Refuge System: Joint Hearing Before the Env't., Energy and Natural Res. Subcomm. of the Comm. on Government Operations and the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the Comm. on Merchant Marine and Fisheries of the House of Representatives*, 101st Cong. 96 (1989); *Human Activity Is Found to Harm Wildlife Areas*, N.Y. TIMES, Sept. 13, 1989, at A21 (response of David Olsen, Assistant Director for Refuges and Wildlife, U.S. Fish & Wildlife Service, to the 1989 GAO REPORT).

182. 1976 FINAL EIS, *supra* note 26.

183. The EIS is not clear on whether the reduction in nonwildlife benefits is to be in the rate of increase or in the absolute amount. Compare 1976 FINAL EIS I-3 with 1976 FINAL EIS I-8, *supra* note 26.

184. 1976 FINAL EIS, *supra* note 26.

185. 1976 FINAL EIS, *supra* note 26, at I-8.

186. 1976 FINAL EIS, *supra* note 26, at Chap. IV.

Unfortunately, the Service failed to meet its target date of 1985. Refuge managers,¹⁸⁷ the General Accounting Office,¹⁸⁸ and environmental groups¹⁸⁹ continued to warn of threats to resources caused by activities on refuges. However, the Service did not make any of the bold changes needed to address the conflicts.¹⁹⁰ A 1981 GAO Report concluded that “local pressures to use refuge lands for such benefits as grazing, timber harvesting, and public recreation prevent refuge managers from effectively managing refuges primarily for wildlife.”¹⁹¹ That same report also criticized the Service for failing to update the Refuge Manual, which provides guidance and operating procedures for managers, since the early 1960s.¹⁹²

Although the Service revised its Refuge Manual in 1986 to provide compatibility determination guidelines for refuge managers,¹⁹³ incompatible uses continued to cause serious problems for refuge conservation. The guidelines required managers to follow five steps in reviewing uses: identification of proposed use; description of proposed use; assessment of the impacts of the use; consideration whether avoidance or minimization may make proposed incompatible use compatible; and final determination of compatibility and any conditions that may be placed on the use.¹⁹⁴ A 1989 GAO Report concluded that “[r]efuge managers have considerable discretion in implementing these guidelines and in making approval decisions. Further, in many situations U.S. Fish & Wildlife Service does not require that the justification for

187. DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, REPORT ON RESOURCE PROBLEMS ON NATIONAL WILDLIFE REFUGES, NATIONAL FISH HATCHERIES, RESEARCH CENTERS (1983), summarized a survey of refuge managers indicating that problems internal to the refuges played at least a role in resource degradation in 42% of all resource problems.

188. See, e.g., 1981 GAO REPORT, *supra* note 95; GENERAL ACCOUNTING OFFICE, ECONOMIC USES OF THE NATIONAL WILDLIFE REFUGE SYSTEM: UNLIKELY TO INCREASE SIGNIFICANTLY (1984) (focusing on the impacts of oil and gas development).

189. 1989 GAO REPORT, *supra* note 12, at 12 (reporting that the National Wildlife Refuge Task Force, which recommended in 1978 that secondary uses detrimental to refuge purposes be terminated, was established in response to environmental concerns).

190. *Id.*

191. 1981 GAO REPORT, *supra* note 95, at 28. As an example of incompatible uses, the report discusses the Cold Springs refuge where overgrazing and incompatible public use, such as off-road vehicle motoring and camping, destroyed wildlife habitat and adversely affected wildlife. *Id.* at 29. Conflicts between motorized recreation and ecological conservation occur on other public lands as well. See, e.g., GENERAL ACCOUNTING OFFICE, FOREST SERVICE DECISIONMAKING 61 (1997).

192. 1981 GAO REPORT, *supra* note 95, at 23–24.

193. 1989 GAO REPORT, *supra* note 12, at 13.

194. *Id.* The new manual guidelines, revised after the 1997 Improvement Act, provide greater detail but do not deviate significantly from these steps. See 65 Fed. Reg. 62,484, 62,491–93 (Oct. 18, 2000); U.S. FISH & WILDLIFE SERVICE MANUAL, 603 FW 2.12, available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 9, 2002).

compatibility decisions be documented.”¹⁹⁵ Nonetheless, judicial review of compatibility determinations under the 1962 and 1966 laws remanded Service management decisions only on a single refuge.¹⁹⁶

The 1989 GAO Report documented the failure of the Service to make headway against the proliferation of incompatible uses despite the continual warnings over the previous two decades. Because Service management of the Refuge System remained decentralized and because the Service lacked useful information about compatibility determinations for secondary uses, the GAO conducted a survey of all refuge managers, prepared sixteen detailed studies, and evaluated U.S. Fish & Wildlife Service policy.¹⁹⁷ The GAO findings revealed a shocking level of incompatible secondary use through both statistics and qualitative information. The survey found secondary uses occurring on 92% of refuges, and harming conservation goals on 59% of refuges.¹⁹⁸ The U.S. Fish & Wildlife Service had approved many of the secondary uses under the Manual’s guidance. Among the most commonly occurring causes of harmful secondary activities were: mining, off-road vehicles, airboats, military exercises, waterskiing, power boats, rights-of-way, grazing, logging, hunting, and beach use.¹⁹⁹

Examples of refuges harmed by incompatible uses included the Des Lacs refuge in North Dakota, where the Service maintained high lake levels to allow recreational boating.²⁰⁰ The high water severely limited the ability of the Service to manage wetlands for the refuge’s primary purpose, migratory bird production. Also, power boating and waterskiing on the lakes disrupted bird-nesting activities, cutting bird production in half.²⁰¹ In responding to the Report, the U.S. Fish & Wildlife Service conceded that “Des Lacs is not an isolated case.”²⁰²

Why was the Service allowing these incompatible uses to persist? The 1989 GAO Report found that, in two thirds of the situations, incompatible uses stemmed from two main causes.²⁰³ First, despite the

195. 1989 GAO REPORT, *supra* note 12, at 13.

196. *Defenders of Wildlife v. Andrus*, 11 Env’t Rep. Cases (BNA) 2098 (D.D.C. 1978); *Defenders of Wildlife v. Andrus*, 455 F. Supp. 446 (D.D.C. 1978) (two instances where a court found the U.S. Fish & Wildlife Service violated the compatibility standards in allowing boating and waterskiing in Ruby Lake NWR). This and the other unsuccessful challenges to Service management of refuges are reviewed in BEAN & ROWLAND, *supra* note 45, at 292–98, and Tredennick, *supra* note 14, at 59–62.

197. 1989 GAO REPORT, *supra* note 12, at 14.

198. *Id.* at 16, 18.

199. *Id.* at 20–21.

200. *Id.* at 22.

201. *Id.*

202. *Review of the Management of the National Wildlife Refuge System: Joint Hearing*, *supra* note 181, at 96 (statement of David Olsen, Assistant Director for Refuges and Wildlife, U.S. Fish & Wildlife Service).

203. 1989 GAO REPORT, *supra* note 12, at 24.

compatibility guidance from the Refuge Manual, the Service allowed non-biological factors to influence its approval of secondary uses.²⁰⁴ Coupled with the absence of periodic re-evaluation and documentation of compatibility decisions, the influence of political or economic interests sustained uses that hampered the achievement of refuge purposes. For instance, in the Des Lacs refuge, local officials persuaded Service leadership to block attempts by refuge managers to adjust lake levels to enhance waterfowl production because of concerns related to local commerce in waterskiing, a golf course's need for water, and nearby aesthetic and property values.²⁰⁵

Furthermore, the GAO found that the Service lacked financial data on the costs of managing secondary recreational uses.²⁰⁶ This finding suggested a violation of the 1962 Refuge Recreation Act requirement that the Secretary determine that funds are available for the development, operation, and maintenance of any permitted secondary recreation uses.²⁰⁷ The GAO reported that the Secretary "merely asserts that sufficient funds are available," without quantifying how much money actually might be spent on managing recreation.²⁰⁸ A number of refuge managers told the GAO that the costs of managing recreation "are high and draw a significant portion of limited refuge funding away from wildlife [conservation]."²⁰⁹

The second main cause of harmful incompatible uses identified by the GAO was the limited jurisdiction of the U.S. Fish & Wildlife Service over many refuges. The following constraints on jurisdiction led to weakness in the Service's ability to control secondary uses:

- 1) lack of ownership of subsurface mineral rights that limit the Service's control over mining;
- 2) Defense Department privileges that limit the Service's control over military air and ground exercises;
- 3) shared jurisdiction over navigable waters that limit the Service's control over boating, swimming, and beach use; and
- 4) easement components of refuges that limit the Service's control over farming and grazing.²¹⁰

Where the Service does not have jurisdiction to control harmful uses, the GAO recommended that the Service acquire property rights to

204. *Id.* at 24–27.

205. *Id.* at 26. Generally, though, it is elected members of Congress who can exert the greatest influence over Service decisions.

206. *Id.* at 27.

207. Refuge Recreation Act, Pub. L. No. 87-714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k–k(4) (2000)).

208. 1989 GAO REPORT, *supra* note 12, at 27.

209. *Id.*

210. *Id.* at 28–29.

expand its jurisdictional reach, attempt to continue to work cooperatively with users, or remove the refuge from the System.²¹¹ Removal should be used only as a last resort, according to the GAO.²¹² These problems stemming from limited jurisdiction, like the other findings of the 1989 GAO Report, had been raised by many of the earlier studies calling for reforms.²¹³

In part because it amplified so clearly the troubling conclusions from previous reports, the 1989 GAO Report ignited a new wave of reform efforts to conserve refuge resources. After a congressional hearing to evaluate the findings of the 1989 GAO Report,²¹⁴ Congress considered a number of reform bills to strengthen the operational mandate of the Refuge System.²¹⁵ The bills varied in their comprehensiveness, but many contained sections addressing refuge planning, compatibility determination standards, and the role of recreation.²¹⁶ These topics ultimately found their way into an executive order and the 1997 Refuge Improvement Act.

Responding to the 1989 GAO Report, the Service conducted its own study that confirmed the GAO finding.²¹⁷ In 1992, frustrated by the lack of progress in reducing incompatible uses, a group of environmental organizations sued the Secretary of the Interior.²¹⁸ When the Clinton Administration took office in 1993, it reached a settlement in the suit that called for written determinations of: which uses in the System were

211. *Id.* at 33.

212. *Id.*

213. The Leopold Report found the divided jurisdiction which weakens Service management of some refuges to be "an unsatisfactory arrangement." LEOPOLD REPORT, *supra* note 16, at W-12. The 1981 GAO Report cited grazing management problems at the Charles M. Russell NWR as a unit where shared management responsibilities with the BLM "thwarted" refuge objectives. 1981 GAO REPORT, *supra* note 95, at 29.

214. *Review of the Management of the National Wildlife Refuge System: Joint Hearing*, *supra* note 181, at 178, 328, 403.

215. The important bills included H.R. 4948, 101st Cong. (1990); H.R. 2881, 102d Cong. (1992); H.R. 3688, 102d Cong. (1992); S. 1862, 102d Cong. (1992); H.R. 833, 103d Cong. (1994); S. 823, 103d Cong. (1994); H.R. 1675, 104th Cong. (1996); H.R. 511, 105th Cong. (1997). Finally, H.R. 1420, 105th Cong. (1997), ultimately passed the House on June 3, 1997 by a vote of 407 to 1. 143 CONG. REC. 3238 (1997) (enacted). The Senate unanimously passed the bill with amendments on Sept. 10. S. Res., 105th Cong., 143 CONG. REC. 9096 (1997) (enacted). The House enacted the Senate version on Sept. 23 and President Clinton signed the law on Oct. 9, 1997. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, 111 Stat. 1260 (codified at 16 U.S.C. §§ 668dd, 668ee (2000)).

216. See Tredennick, *supra* note 14, at 72-75.

217. S. REP. NO. 103-324, at 6 (1994); see also BEAN & ROWLAND, *supra* note 45, at 292 n. 60 (citing U.S. FISH & WILDLIFE SERVICE, COMPATIBILITY TASK GROUP, A REVIEW OF SECONDARY USES ON NATIONAL WILDLIFE REFUGES (1990)).

218. The plaintiffs, who included the Wilderness Society, National Audubon Society, and Defenders of Wildlife, claimed that the Service was continuing to allow incompatible recreational and commercial uses on specified refuges. They also challenged the process by which the Service approved uses throughout the System. S. REP. NO. 103-324, at 6-7 (1994). Tredennick, *supra* note 14, at 70-71, describes the litigation and its political aftermath.

compatible with the primary purposes of the refuges, and the availability of funds for managing recreational uses.²¹⁹ Also in 1993, the Interior Department Inspector General issued a report documenting Service failure to manage refuges “in a manner that would effectively enhance and protect the wildlife.”²²⁰ By 1997, when the House Resources Committee reported on the bill that would become the Refuge Improvement Act, the U.S. Fish & Wildlife Service had reviewed over 5,200 uses and found compatibility problems on 40 refuges.²²¹ At that time, only 4 of the 40 refuges had resolved the problems.²²²

G. President Clinton's 1996 Executive Order

In response to the management problems highlighted in the 1989 GAO Report and the neglect by Congress, President Clinton issued an executive order in 1996 to reform administration of the Refuge System. In so doing, he followed in the tradition of strong executive leadership in shaping the Refuge System.²²³ Just as prior presidential actions established the first refuges,²²⁴ created the U.S. Fish & Wildlife Service,²²⁵ and supported agency development of the compatibility criterion for refuge management,²²⁶ Executive Order 12,996 laid the ground work for subsequent congressional action in 1997.²²⁷ The Executive Order asserts both constitutional and statutory authority.²²⁸ The statutes cited by the Executive Order to support the systemic management mandates include the Fish and Wildlife Act of 1956,²²⁹ the Refuge Recreation Act of 1962,²³⁰ and the National Wildlife Refuge System Administration Act of 1966.²³¹

The Executive Order formulates three levels of mandates for the Refuge System that progressively provide more detail for systemic

219. H.R. REP. NO. 105-106, at 3 (1997), *reprinted in* 1997 U.S.C.C.A.N. 1798-5, 1798-7. The Oct. 20, 1993, settlement also committed the Service to “terminate or modify incompatible uses.” S. REP. NO. 103-324, at 7 (1994); *see also* BEAN & ROWLAND, *supra* note 45, at 292.

220. U.S. DEPARTMENT OF THE INTERIOR INSPECTOR GENERAL, MAINTENANCE OF WILDLIFE REFUGES (1993).

221. *Id.* Bean and Rowland cite a U.S. Fish & Wildlife Service report that “showed progress in curtailing incompatible uses.” BEAN & ROWLAND, *supra* note 45, at 292-93 (citing U.S. FISH & WILDLIFE SERVICE, AUDUBON ET AL. V. BABBITT-FINAL REPORT (Dec. 1994)).

222. U.S. DEPARTMENT OF THE INTERIOR INSPECTOR GENERAL, MAINTENANCE OF WILDLIFE REFUGES (1993).

223. In addition, the Executive Order allowed the Democratic President to blunt attempts in the Republican Congress to enact legislation that would have expanded and made more secure hunting in the Refuge System.

224. *See supra* notes 39-42 and accompanying text.

225. *See supra* note 78 and accompanying text.

226. *See supra* notes 92 and 193-194 and accompanying text.

227. Exec. Order No. 12,996, 61 Fed. Reg. 13,647 (Mar. 25, 1996).

228. *Id.*

229. Fish and Wildlife Act of 1956, 16 U.S.C. § 742b (2000).

230. Refuge Recreation Act, 16 U.S.C. § 460k (2000).

231. 1966 National Wildlife Refuge Administration Act, Pub. L. No. 89-669, 80 Stat. 926.

management: the mission, guiding principles, and directives. It sets out a broad ecological mission for the System "to preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources."²³² This mission reflects a concern for plants in and of themselves, not just in their role of providing animal habitat. This interest in plant conservation significantly broadens the purposes of the Refuge System. The ecological mission, characterized by President Clinton as the "dominant refuge goal,"²³³ is the standard against which uses are compared to determine compatibility.

The mid-level guiding principles for management of the System add little to the extant initiatives the Service was and is pursuing. The first principle lists the public uses that may constitute compatible wildlife-dependent recreation.²³⁴ Because these uses are defined in the next level of mandates as priority public uses, this guiding principle is surplusage. The second guiding principle affirms the central ecological mission by mandating conservation and enhancement of the "quality and diversity of fish and wildlife habitat."²³⁵ The third principle is that partnerships with other federal agencies, state and tribal governments, businesses, and non-governmental organizations make significant contributions to management of the System.²³⁶ Finally, the fourth principle provides for public participation in acquisition and management decisions.²³⁷

The Executive Order's most detailed set of mandates are the directives to the Secretary concerning use of the Refuge System. The Executive Order establishes a hierarchy of purposes for the Refuge System, following the approach that first appeared in the 1980 ANILCA establishment mandates.²³⁸ The Executive Order applies the tiered approach to systemic purposes. It defines "priority general public uses" as compatible wildlife-dependent recreational activities involving hunting, fishing, wildlife observation and photography, and environmental education.²³⁹ These priority uses enjoy a level of promotion that other uses do not. The directives provide expanded opportunities for—and enhanced attention in planning and management to—these priority uses where compatible with the mission.²⁴⁰

Although the Executive Order strengthened the System by articulating a mission and establishing a hierarchy of uses to aid

232. 61 Fed. Reg. at 13,647.

233. Statement by President William J. Clinton Upon Signing H.R. 1420, 1997 U.S.C.C.A.N. 1798–22.

234. 61 Fed. Reg. at 13,647.

235. *Id.*

236. *Id.*

237. *Id.*

238. *See supra* note 161 and accompanying text.

239. Exec. Order No. 12,996, 61 Fed. Reg. at 13,647 (Mar. 25, 1996.)

240. *Id.* at 13,647–48.

management and planning, it failed to address directly the principal problems identified in the 1989 GAO Report that led to the proliferation of harmful, incompatible uses in the System. The lack of written compatibility determinations, absence of periodic reexamination of permitted uses, and failure to collect data on the costs of managing recreation were all left unaddressed by the Executive Order. Also, unlike systemic legislation, the Executive Order is revocable at will by the President, cannot be the basis for judicial review,²⁴¹ and does not carry the prestige of an organic statute to bolster agency power.²⁴²

For all of these reasons, the 1996 Executive Order set the stage for the most important statute Congress has passed for the Refuge System: the 1997 Improvement Act. As Section III will show, the approach taken and terms defined in the Executive Order powerfully influenced the content of the subsequent legislation. However, before examining the 1997 Act in detail, Section II addresses the meaning of “organic” legislation. The Section II study of the development of the term will provide a framework for exploring the key elements of the 1997 Act. The framework will highlight the most important features of the 1997 legislation and help relate the significance of the Improvement Act to other public land laws.

II.

THE MEANING OF ORGANIC LEGISLATION

The drafters of the 1966 Refuge Administration Act consolidated a system “for the conservation of fish and wildlife”²⁴³ and provided a framework for management that prohibited all uses unless they complied with management regulations authorized by the Act.²⁴⁴ Yet, the legislative history of the 1997 Improvement Act is replete with references to the lack of, and need for, organic legislation for the National Wildlife Refuge System. A typical example in the key committee report for the 1997 bill succinctly characterizes the special meaning ascribed to the term “organic act” in public land law. It states that

unlike the National Parks, National Forests and Bureau of Land Management lands, the National Wildlife Refuge System remains the only major Federal public lands system without a true “organic” act, a basic statute providing a mission for the System, policy direction, and management standards for all units of the System.²⁴⁵

241. *Id.* at 13,648.

242. CLARKE & MCCOOL, *supra* note 14, at 111.

243. Pub. L. No. 89-669, § 4(a), 80 Stat. 926.

244. See *supra* notes 108-153 and accompanying text describing the 1966 National Wildlife Refuge System Administration Act.

245. National Wildlife Refuge System Improvement Act of 1997, H.R. REP. NO. 105-106, at 3 (1997), reprinted in 1997 U.S.C.A.N. 1798-5, 1798-7; see also *National Wildlife Refuge System Improvement Act of 1997, Hearing Before the Committee on Environment and Public*

This section expounds the development of the modern meaning of organic legislation. In doing so, it explains why legislators at the close of the Twentieth Century, looking back to the 1966 law, failed to see the systemic authority intended by their predecessors. Subsection A traces the evolution in the use of the term “organic” to describe certain legislation. It demonstrates in public land law a clear trend toward greater use of the term and increased statutory detail. Subsection B explains how the term is used today by identifying the key distinguishing features of modern organic legislation. These features, which I call hallmarks, provide a framework for analyzing the 1997 Improvement Act in the context of the larger issues of public land law.

A. *Evolution of the Term*

Because “organic act” rhetoric was an important part of the debate over the 1997 Act, it is worth considering just what the term means. Also, “organic act” is such a key term in public land law that an exploration of its meaning reveals important underlying assumptions about our system of federal natural resource administration. Indeed, the legislative history of the Refuge System since 1960 is a search for ever more effective organic authority to bring coherence to the far-flung units managed by the U.S. Fish & Wildlife Service for a wide array of purposes. Thus, a review of refuge legislation provides an excellent source for tracking changed meanings of the concept.

The early legal meaning of “organic act,” (or, “organic law”) was a statute conferring powers (defining and establishing the organization) of government.²⁴⁶ Most of the references to “organic act” in legal materials prior to 1970 refer to legislation organizing a municipality, territory, state, or nation.²⁴⁷ The term “enabling act” was more frequently employed to

Works on S. 1059, 105th Cong. 2 (1997); National Wildlife Refuge System Management and Policy Act of 1994, S. REP. NO. 103-324, at 3-4 (1994). This has come to be accepted as conventional wisdom. *See, e.g.*, Draft Policy on National Wildlife Refuge System: Mission, Goals, and Purposes, 66 Fed. Reg. 3,668, (Jan. 16, 2001) (asserting that the 1997 legislation provided an “Organic Act” for the System); R. Max Peterson, *Discussion: Does the Forest Service Have a Future?*, in A VISION FOR THE U.S. FOREST SERVICE, 191, 194 (Roger A. Sedjo ed., 2000) (“there was no organic act for the National Wildlife Refuge System until . . . 1997”). *But see* George C. Coggins & Michael E. Ward, *The Law of Wildlife Management on the Federal Public Lands*, 60 OR. L. REV. 59, 87 (1981) (referring to the 1966 legislation as an organic act).

246. BLACK’S LAW DICTIONARY 860 (2d ed. 1910) (citing *In re Lane*, 135 U.S. 443 (1890)); 30 WORDS AND PHRASES, “organic act,” “organic law” (Perm. ed. 1972).

247. *See, e.g.*, Organic Act of Puerto Rico, ch. 145, 39 Stat. 951 (1917); Organic Act of the Virgin Islands, ch. 699, 49 Stat. 1807 (1936); Organic Act of Alaska, ch. 637, 56 Stat. 1016 (1942); Organic Act of Guam, ch. 512, 64 Stat. 384 (1950); *Yellow Cab Transit Co. v. Johnson*, 48 F. Supp. 594, 598 (W.D. Okla. 1942) (citing “the Act of Congress of May 2, 1890, 26 Stat. at Large 81, known as the Organic Act, designat[ing] the boundaries of the Territory of Oklahoma”). The term was also used occasionally to refer to a law granting powers to non-governmental entities, such as joint-stock associations. 30 WORDS AND PHRASES, “organic act” (Perm. ed. 1972); *see*

refer to statutes establishing new states.²⁴⁸

With the rise of the administrative state in the late nineteenth and early twentieth centuries, the term "organic act" came also to be applied to laws that establish agencies or delegate power to departments.²⁴⁹ This usage retains the core meaning of the term, as organizing a political or public institution. Although not employed at the time of passage, the use of the term "organic act" to characterize the statute creating the National Park Service ("NPS") in 1916 is an example of this application to agencies. In this sense, it is correct to characterize the 1956 Fish and Wildlife Act, a foundational delegation of legislative power to the Fish & Wildlife Service, as an organic act.²⁵⁰ When describing the creation of a new administrative or political entity, the term "creative act," or less commonly, "organization act," may also be used.²⁵¹

However, in contemporary public land law, we use the term "organic act" in a substantially different sense. In addition to signifying the organization of an agency or political institution, we also use the term to refer to a charter for a network of public lands.²⁵² This more recent, more specialized sense of "organic act" derives from the same root as that of the word "organize."²⁵³ It refers to something that constitutes or

also *City of Detroit v. Detroit City Ry.*, 56 F. 867, 907 (C.C.E.D. Mich. 1893).

248. See, e.g., GATES, *supra* note 8, at 285-318.

249. See, e.g., Department of Agriculture Organic Act of 1944, ch. 412, 58 Stat. 734 (a miscellany of authorizations for such tasks as animal disease control and paying rewards to promote the protection of national forests); Department of Agriculture Organic Act of 1956, ch. 950, 70 Stat. 1032 (a miscellany of authorizations for such tasks as disease control and establishment of a Forest Service working capital fund for buildings and improvements); *Organic Act of the United States Geological Survey: Hearing on H.R. 3106 Before the House Comm. on Public Lands, Subcomm. on Mines and Mining*, 80th Cong. (1947) (statement of Subcommittee Chairman Lemke describing a bill to confirm the exercise of duties and functions of the U.S. Geological Survey as an "organic act"); Recent Case, *Federal Trade Commission-FTC Has Power to Issue Subpoenas In Proceedings to Enforce § 2 of the Clayton Act*, 70 HARV. L. REV. 1476, 1477 (1957) (referring to the "organic acts" creating the Federal Trade Commission and the Interstate Commerce Commission).

250. See, e.g., *Hearings Before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 94th Cong. 29-44 (1975) (statement of U.S. Fish & Wildlife Service Director Greenwalt); CLARKE & MCCOOL, *supra* note 14, at 113-14 (stating that the 1956 law gave the Service "its long-awaited organic act"). This is also one of the senses in which the term can be understood in *Wildlife Refuges and Organic Act: Hearing before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries*, 94th Cong. 6 (1975), which discusses the creation of a Bureau of National Wildlife Refuges to manage refuges.

251. See, e.g., *Organic Act of the United States Geological Survey: Hearing on H.R. 3106 before the House Comm. on Public Lands, Subcomm. on Mines and Mining*, 80th Cong. 21 (1947) (statement of Julian Sears, Administrative Geologist of the Geological Survey referring to the "creative act" of the Geological Survey); Department of Energy Organization Act of 1977, Pub. L. No. 95-91, 91 Stat. 565 (codified as amended at 42 U.S.C. § 7101 et seq.) (creating the Department of Energy).

252. See, e.g., National Wildlife Refuge System Improvement Act of 1997, H.R. REP. NO. 105-106, at 3 (1997), *reprinted in* 1997 U.S.C.C.A.N. 1798-5, 1798-7.

253. The etymology of "organ" can be traced partly to *organon*, a Greek word for tool, and

coordinates a system, the way organs work together to operate a body as a system.²⁵⁴

The 1916 “Act to Establish a National Park Service”²⁵⁵ is an organic act in the traditional sense of creating, and delegating authority to, a new agency. It is also an organic act in the contemporary sense because it establishes a comprehensive mandate for all national park units. Nonetheless, the names by which this statute is known vary.²⁵⁶ Even within the same treatise, it receives the titles “National Park Act,”²⁵⁷ and “National Park System Act.”²⁵⁸ The U.S. Code Popular Name Table now calls it the “National Park Service Organic Act.”²⁵⁹ It is, of course, all of these things.

In this sense, the 1916 National Park legislation is an important organic act not merely because it created the Park *Service*, but because it organized a Park *System*. Similarly, the Federal Land Policy and Management Act (“FLPMA”), which did not create the BLM, is nonetheless the organic act for BLM lands because it organized them into a coherent system. And, of course, the 1897 statute establishing uniform management and administration of forest reserves (today’s national forests) is the ur-organic act in natural resources law even though it did not create an agency.²⁶⁰ The analogy to organs working in concert to create bodily health captures the gist of Herbert Kaufman’s observation in his classic study discussing the challenge of managing the expansive, decentralized National Forest System: “Unity does not demand uniformity, but it does require consistency and co-ordination.”²⁶¹

Although it is commonplace today to refer to the old national forest and national park statutes as organic acts, they were not known by those terms at the time they were enacted. Neither statute contains the term.

ergon, a Greek word for energy. These roots and words are unrelated to the word “origin.” WEBSTER’S THIRD NEW INTERNATIONAL DICTIONARY, “organ” (Merriam-Webster 1993).

254. Sources for this definition of “organic” are: Online Oxford English Dictionary, 2d edition at <http://dictionary.oed.com/> (last visited Sept. 10, 2002) and MERRIAM-WEBSTER’S COLLEGIATE DICTIONARY (10th ed. 1999). Likewise, in chemistry, the term “organic” refers to the compounds generally found in organized bodies. William Safire, *On Language: Fulminations*, N.Y. TIMES MAG., May 6, 2001, at 22.

255. This is the title attached to the law passed by Congress at ch. 408, 39 Stat. 535 (1916).

256. See, e.g., JOHN ISE, OUR NATIONAL PARK POLICY 191–92 (John Hopkins Press 1967) (1961) (“National Parks Act”); ALFRED RUNTE, NATIONAL PARKS: THE AMERICAN EXPERIENCE 103 (2d ed. 1987) (“National Park Service Act”).

257. COGGINS & GLICKSMAN, *supra* note 7, § 2:11.

258. *Id.* § 6.14.

259. UNITED STATES CODE INDEX.

260. Ch. 2, 30 Stat. 34 (1897). This act granted forest reserve management authority to the Secretary of the Interior, who administered the reserves through the General Land Office until Congress transferred the lands to the Department of Agriculture in 1905.

261. HERBERT KAUFMAN, THE FOREST RANGER: A STUDY IN ADMINISTRATIVE BEHAVIOR 80 (1960). Kaufman ultimately determined that the Forest Service achieved unity in restraining the “centrifugal” tendencies of the large organization. *Id.* at 203–7.

The title of the law we refer to today as the “Forest Service’s Organic Act”²⁶² does not contain the term. Indeed, the 1897 Act did not have a title at all because it was a rider on a larger piece of legislation. Gifford Pinchot, the first Forest Service Chief, ubiquitous forestry proponent of the Progressive era, and participant in the negotiations over the legislation, described the act as the “Pettigrew Amendment to the Sundry Civil Act of June 4, 1897.”²⁶³ In his seminal 1956 book on forest policy, Samuel Trask Dana referred to the law as the “Forest Reserve Act of 1897.”²⁶⁴ Some variation on Dana’s terminology was common in references to the Act until 1970.²⁶⁵

The specialized meaning of “organic act,” as something different from a statute creating an agency, is a usage that first appeared in the 1950s and grew with the modern era of environmental law in the 1960s. The use of the term “organic” to describe the 1916 law was rare until that time. The earliest reference to an “organic act” that I have found appears in a 1931 memorandum by Horace M. Albright, Director of the National Park Service, on the preparation of park development plans, where he cites the “organic law creating the Service.”²⁶⁶ Director Albright subsequently used the term “organic act” sporadically, but always in reference primarily to the mandates of Service, not the system of park units.²⁶⁷

Federal cases reported on Westlaw did not use “organic act” in the

262. See, e.g., COGGINS & GLICKSMAN, *supra* note 7, § 19:30. Strangely, there is no listing employing the term organic in the Popular Name Table of the U.S. Code for this Act under entries for “organic,” “national forest,” “Forest Service,” or “United States Forest Service.” This suggests that the specialized use of the term in public land law is not widely known outside of the field, even to the mavens of legislation at the House Office of Law Revision Counsel and the U.S. Government Printing Office.

263. GIFFORD PINCHOT, *BREAKING NEW GROUND* 116 (1972) (1947).

264. SAMUEL TRASK DANA, *FOREST AND RANGELAND POLICY: ITS DEVELOPMENT IN THE UNITED STATES* 107, 118 (1956).

265. See, e.g., JOHN ISE, *THE UNITED STATES FOREST POLICY* 141–42 (1920) (“the Act of 1897”); DARRELL HEVENOR SMITH, *THE FOREST SERVICE: ITS HISTORY, ACTIVITIES AND ORGANIZATION* 21 (1930) (“Act of June 4, 1897”); KAUFMAN, *supra* note 261, at 27 (“an historic statute that became law in 1897”); MARION CLAWSON & BURNELL HELD, *THE FEDERAL LANDS: THEIR USE AND MANAGEMENT* (1957) (no use of the term “organic” legislation). Paul Gates, in his now-standard reference book on the history of public land law, describes the “Organic Act of March 2, 1853,” as extending certain homesteading measures to Washington territory. GATES, *supra* note 8, at 389. This reference is the only entry for organic act in the index to the Gates study. *Id.* at 824. Though the statute cited by Gates was important as a predecessor and model for the later federal homestead acts, his use of the term “organic” is inexplicable under any common meaning.

266. *AMERICA’S NATIONAL PARK SYSTEM: THE CRITICAL DOCUMENTS* 99 (Larry M. Dilsaver, ed. 1994).

267. See, e.g., HORACE M. ALBRIGHT & MARIAN ALBRIGHT SCHENCK, *CREATING THE NATIONAL PARK SERVICE: THE MISSING YEARS* 147 (1999); HORACE M. ALBRIGHT AS TOLD TO ROBERT CAHN, *THE BIRTH OF THE NATIONAL PARK SERVICE: THE FOUNDING YEARS, 1913–33*, 286 (1985).

context of the creation of the National Park Service (let alone, System) until 1970. The Westlaw result may be as much a function of the lack of judicial challenges to the agency based on the 1916 law as it is a reflection of the use of the term "organic act." A Westlaw search likewise failed to turn up any Forest Service cases before 1970 that used the term "organic act." The Forest Service had been more heavily involved in litigation before 1970 than the Park Service. But, even the seminal cases establishing the proprietary management authority over national forests delegated in the 1897 statute, such as *United States v. Grimaud*,²⁶⁸ do not employ the term "organic act" to refer to the 1897 statute.²⁶⁹

The Forest Service itself, in setting forth the basic regulations implementing the 1897 statute, did not use the term "organic act" in either its original 1905 "Use Book" or its 1936 regulations.²⁷⁰ The term first began to creep into use in the 1950s and 1960s.²⁷¹ The 1958 edition of the Forest Service Manual, the key operational document for the national forests, refers to the 1897 law as the "organic administration act."²⁷² The periodic publication of the Department of Agriculture compiling the principal laws relating to the national forests followed suit in 1964 and began referring to the "Administration Act of 1897" (as prior editions had called it) as the "Organic Administration Act of 1897."²⁷³

268. 220 U.S. 506 (1911).

269. Other old cases interpreting the 1897 law that do not use the term organic include *Osborne v. United States*, 145 F.2d 892 (9th Cir. 1944) (upholding grazing regulations), *Hervey Veneer Co. v. United States*, 74 F. Supp. 940 (Ct. Cl. 1948) (discussing purposes of the Forest System), and *United States v. Perko*, 108 F. Supp. 315 (D. Minn. 1952), *aff'd*, 204 F.2d 446 (8th Cir. 1953), *cert. denied*, 346 U.S. 832 (1953) (discussing the validity of a roadless area designation under the 1897 act); *see also* Rights-of-Way Across National Forests, 42 Op. Att'y. Gen. 127 (1964) (referring to the "Act of June 4, 1897" in question posed by Secretary of Agriculture and in Attorney General answer).

270. The original national forest management manual, the 1905 "Use Book," uses the term "Act of June 4, 1897." U.S. DEPARTMENT OF AGRICULTURE, THE USE OF THE NATIONAL FOREST RESERVES: REGULATIONS AND INSTRUCTIONS (1905), *available at* http://fs.jorge.com/archives/history_national/1905usebook.htm (last visited Sept. 10, 2002). The 1936 regulations use the term "Act of Congress of 1897." 1 Fed. Reg. 1,259 (Aug. 15, 1936) ("Regulations of the Secretary of Agriculture Relating to the Protection, Occupancy, Use and Administration of the National Forests").

271. Adumbrating the modern use of the term "organic act," Forest Service Chief Richard E. McArdle, in congressional testimony, used the phrase "organic act for the national forests of the East" to characterize the 1911 "Weeks Act," which authorized the acquisition of eastern lands by the Secretary of Agriculture. *Testimony Before House Comm. on Agriculture re Conservation*, 83rd Cong. 211 (May 7, 1953) (statement of Richard E. McArdle, Chief, Forest Service, United States Department of Agriculture). However, the same testimony refers to the 1897 statute as the "Act of June 4, 1897." *Id.*

272. 1 U.S. DEPARTMENT OF AGRICULTURE, FOREST SERVICE MANUAL § A (GA-A1-2) (Aug. 1958) ("Organic Administration Act").

273. *Compare* U.S. DEPARTMENT OF AGRICULTURE, THE PRINCIPAL LAWS RELATING TO THE ESTABLISHMENT AND ADMINISTRATION OF THE NATIONAL FORESTS AND TO OTHER FOREST SERVICE ACTIVITIES 44 (May 1951) ("Administration Act of 1897") *with* U.S. DEPARTMENT OF AGRICULTURE, THE PRINCIPAL LAWS RELATING TO THE ESTABLISHMENT

In the 1960s, as the modern era of environmental law dawned, the specialized public land law meaning of “organic act” began to appear sporadically in the scholarly literature. The first reference to the 1897 law as an organic act that I have found in a law journal occurred in Michael McCloskey’s 1966 article on the Wilderness Act.²⁷⁴ Just five years earlier, when McCloskey published his analysis of the 1960 Multiple-Use Sustained Yield Act and its relationship to the 1897 act, he did not use the term “organic.”²⁷⁵

By 1970, the modern meaning of “organic” had come into widespread use. That year witnessed the first reported federal court opinion to use the term to refer to the 1897 and 1916 Acts.²⁷⁶ Also in 1970, the Public Land Law Review Commission issued its landmark report, which employed the term “organic” to refer to the 1897 statute.²⁷⁷

Part of the significance of the usage of “organic” is rhetorical. Characterizing a statute as organic may strengthen an agency’s image of having a distinctive, important mission from Congress. The Public Land Law Review Commission’s Legal Chief and Assistant General Counsel, Jerome C. Muys, recalls that the Commission did not itself coin the term organic legislation to refer to the 1897 and 1916 laws. Instead, Muys remembers that material the Commission received from the agencies, especially the Forest Service, had used the term. He speculates that the Service may have first used the term in its modern sense to distinguish itself as a prestigious agency with a strong mandate, as compared to the

AND ADMINISTRATION OF THE NATIONAL FORESTS AND TO OTHER FOREST SERVICE ACTIVITIES 63 (July 1964) (“Organic Administration Act of 1897”).

274. Michael McCloskey, *The Wilderness Act of 1964: Its Background and Meaning*, 45 OR. L. REV. 288, 313 (1966) (discussing rights of ingress and egress to inholdings “under the Forest Service’s organic act of June 4, 1897”).

275. Michael McCloskey, Note and Comment, *The Multiple Use-Sustained Yield Act of 1960*, 41 OR. L. REV. 49, 58 (1961) (stating that the Pettigrew rider to the appropriations bill “thus became what is known as the ‘1897 act’”).

276. The case was the celebrated Mineral King controversy and the opinion was from the court of appeals decision, *Sierra Club v. Hickel*, ultimately upheld by the Supreme Court. 433 F.2d 24 (9th Cir. 1970), *aff’d sub nom.*, *Sierra Club v. Morton*, 405 U.S. 727 (1970). The decision referred to the 1897 legislation for forests as the “Organic Administration Act,” and the 1916 law as the “Organic Act of the National Park Service.” *Id.* at 28.

277. ONE THIRD OF THE NATION’S LAND, *supra* note 7, at 93, 151 (1970). The Commission, which Congress chartered in the Public Land Law Review Commission Organic Act of 1964, Pub. L. No. 88-606, 78 Stat. 982, contracted with Shepard’s Citations, Inc. to produce an exhaustive compilation of public land laws. That compilation fails to call either the “Forest Reserve Act of 1897” or the National Park Service Act “organic.” PUBLIC LAND LAW REVIEW COMMISSION, DIGEST OF PUBLIC LAND LAWS 218, 349 (1968). The Commission published the compilation in 1968, just two years before the final Commission report using organic in its modern sense. *Id.* However, the Digest did refer to the 1964 statute creating the Commission as its “organic act,” employing the term in the traditional administrative law sense. *Id.* at iv. Also, no hint of the coming change in the use of the term “organic” is revealed in a 1967 symposium engaging many of the people and issues involved in the Commission’s work. Symposium, *Administration of Public Lands*, 7 NAT. RESOURCES J. 149 (1967).

BLM.²⁷⁸ This interpretation, which is consistent with the recollection of Michael McCloskey,²⁷⁹ and with the evidence discussed above from the Department of Agriculture, makes sense in light of one of the chief recommendations of the Commission to Congress: subsume the Forest Service within a new Department of Natural Resources.²⁸⁰ The merger of the Forest Service with other resource management agencies would have all but destroyed the institution, with its storied history.²⁸¹ The Forest Service sought to portray itself as more than just another resource management bureau. An organic act bolsters the foundation for something more substantial, and may have helped the Forest Service resist the merger. Echos of this strategy are evident in the context of the 1997 Improvement Act debates, where describing the desire for an assortment of statutory improvements as the need for a fundamental organic act may have made the case for legislation more compelling.

In addition to its rhetorical value, however, the specialized meaning of “organic act” as a comprehensive, organizing, unifying framework for a public land system provides a sharp contrast to establishment legislation that addresses just a specific parcel of land. Though there is at least one modern instance in which Congress did not follow this usage convention,²⁸² on the whole it captures the terminology that has evolved over the past 35 years.²⁸³

278. Telephone Interview with Jerome C. Muys (June 27, 2001).

279. Telephone Interview with Michael McCloskey (July 17, 2001).

280. ONE THIRD OF THE NATION'S LAND, *supra* note 7, at 281–86.

281. Professor Huffman notes another reason why the Forest Service acted defensively following the passage of the 1964 Wilderness Act. The congressional wilderness overlays on Forest Service land represented the “antithesis of some conceptions of multiple-use management and in a sense the Act expressed a lack of faith in the ability of the Forest Service to implement the multiple-use requirement.” James L. Huffman, *A History of Forest Policy in the United States*, 8 ENVTL. L. 239, 277 (1978).

282. Mining in the Parks Act, 16 U.S.C. § 1902 (2000), part of the National Park Mining Regulation Act of 1976, refers to the purposes of both the National Park System and to the “individual organic Acts for the various areas of the National Park System.” Though this use of the term might correspond to the early “creative” meaning (acts that create individual park units), by 1976 Congress should have referred instead to the “individual establishment Acts.” See Fischman, *supra* note 9, on national park unit establishment legislation. More generally, all of the articles contained in the 1997 Denver University Law Review’s symposium issue on national parks reserve the term “organic” to refer only to systemic legislation applicable to all units of the Park System. Symposim. *The National Park System*, 74 DENV. U. L. REV. 567 (1997). Modern judges also sometimes get the terminology wrong. In *Sierra Club v. United States Forest Service*, 259 F.3d 1281 (10th Cir. 2001), Judge McKay refers repeatedly to the “Norbeck Organic Act” as the statute establishing a wildlife preserve managed by the Forest Service. However, the 1920 statute does not use the term “organic.” Instead it refers to the “creation” of a reserve. It is an establishment statute. Custer State Park Game Sanctuary Act, ch.247, 41 Stat. 986 (codified 16 U.S.C. §§ 675–78 (2000)).

283. By the time Congress enacted the NFMA and FLPMA in 1976, the term “organic” was a normal part of the discourse over the management strictures for the system of national forests and BLM lands, respectively. See, e.g., *National Resource Land Management Act: Hearing on S. 507 Before the Senate Comm. on Interior and Insular Affairs*. 94th Cong. 1846 (1975) (statement

While many statutes address systemic concerns on public lands, some do so more comprehensively than others. All might be considered forms of organic legislation. But which truly deserve the title “organic act”? The 1962 Recreation Act would not be characterized as organic because, though it applied system-wide, it dealt with just one aspect of management: recreational use. The 1966 Act might properly be called an organic act as it consolidated the refuges into a system and provided a broad management framework. But why then, in light of the 1966 Act, did the legislative history of the 1997 Improvement Act call for a Refuge System organic act? Answering this question illustrates another facet of the significance of the meaning of organic legislation.

As the 1970 Public Land Law Review Commission Report observed, the 1966 Act did provide a goal for administering the System—conservation.²⁸⁴ The 1966 Administration Act dealt comprehensively with all refuge uses. Indeed, the Public Land Law Review Commission contrasted the Forest Service and BLM lands, which suffered from an “absence of statutory goals,” with the Refuge System and Park and Wilderness Systems, which had “a clearly defined primary purpose.”²⁸⁵ Because the 1966 Refuge Administration Act provided more Congressional guidance than either the 1916 Park System or the 1897 Forest System legislation, it is inconsistent today to call the 1897 law an organic act but deny the moniker to the 1966 Act.

It was only more recently that refuge advocates voiced frustration with the Act’s lack of affirmative guidance for management and a precisely defined mission. As the level of statutory detail in public land law increased throughout the 1970s,²⁸⁶ our expectations for what Congress should provide in organic legislation rose as well. The broad guidance that left land managers with wide latitude, contained in such landmark, system-wide statutes as the 1960 Multiple-Use Sustained Yield Act for national forests²⁸⁷ and the 1966 Refuge Administration Act, no longer provided sufficient congressional direction after the environmental law revolution of the late 1960s and early 1970s. This explains the demands in the 1990s for a Refuge System organic act.

The meaning of the term “organic act” continued to evolve even after it became associated with systemic management of public lands. As the newer environmental legislation grew in complexity and judicial enforceability, our expectations of the minimum standards for an act that would effectively *organize* a public land system likewise grew. By tracing

of Senator Haskell).

284. ONE THIRD OF THE NATION’S LAND, *supra* note 7, at 42.

285. *Id.*

286. See Fischman, *supra* note 9, on the rise of statutory detail in environmental law generally and national park legislation in particular.

287. Multiple-Use Sustained Yield Act of 1960, 16 U.S.C. §§ 528–31(2000).

how our standards for characterizing a statute as “organic” have risen over time, we can better understand broader trends in public land law.

B. The Hallmarks of Modern Organic Legislation

By the late 1990s, although Congress had fortified the 1897 and 1916 laws, the Refuge System lagged in the greater statutory detail associated with contemporary organic legislation. I sort this statutory detail into five basic categories that now serve as hallmarks for legislation deserving the title “organic act.” They are: purpose statements, designated uses, comprehensive planning, substantive management criteria, and public participation. Although not every major public lands act possesses each of these attributes, these hallmarks do characterize modern public lands organic law and they are helpful criteria in separating limited or piecemeal alterations from comprehensive reform.

The articulation of a systemic purpose remains the sine qua non of organic legislation. An organic act must generate a purpose to guide land management on an array of individual units in order to create a coordinated system. Otherwise, each unit proceeds in its own direction, in response to its own local circumstance. Unless a collection of public land units can align to become more than the sum of its parts, it cannot be considered a system.

Systemic purposes, however, usually must be defined in the most general of terms in order for them to speak to the diverse circumstances of far-flung lands. A conservation purpose for the Refuge System, for instance, must be applicable both to the Alaska Maritime National Wildlife Refuge, which extends over a thousand miles to encompass 2400 islands, and to Mason Neck National Wildlife Refuge, a bicycle ride away from Washington, D.C. Also, because Congress revisits organic legislation infrequently, purpose statements must be written somewhat vaguely to avoid locking in particular ecological understandings that may soon be superseded. Nonetheless, most post-1970 organic acts, concerned with orchestrating individual land units into harmonious public land systems, contain missions with defined terms. A defined mission is particularly useful in resolving conflicts and ambiguities in establishment authorities. Although an organic act rarely contains all of the delegations of power to a land management agency, the systemic purpose serves as the interpretive pilot to guide implementation of other relevant laws.

In order to relate broad purposes to real management decisions, organic legislation typically designates particular uses to be prohibited, preferred, encouraged, or merely tolerated. The designated uses in an organic act often are the strongest indicators of the cultural values reflected in the system. In contrast to performance standards, which look objectively to effects of activities to decide what to allow, designated uses

concentrate on the categories or types of the activities themselves. For instance, Refuge System legislation designates hunting as a use that receives special encouragement, in part because a hunting tax funds the purchase of many refuges and refuge expansions. This is a judgment based on concerns for tax fairness and the leadership role that hunters have played in the American conservation movement. It is not principally based on the effects of hunting on the land, waters, and life of the refuges.

Though we often describe public land systems based on their designated use regimes (i.e., multiple use, dominant use, exclusive use), no modern organic legislation permits a use solely on the basis of the qualitative attributes of the use. Substantive management criteria demand that a use in a permitted category not exceed a particular effect level.²⁸⁸ However, organic legislation does sometimes outright prohibit an activity based on its type without regard to its effect. The category of new roads and buildings in wilderness areas is an example of this.²⁸⁹

Comprehensive planning is a key element in any organic act because it ensures that individual management decisions are made not haphazardly but rather to promote some greater goal, namely, the system mission. It provides a framework within which individual unit administrators may make management decisions and segregate particular uses to appropriate zones. Planning facilitates the evaluation of cumulative effects from a projected series of small actions authorized over the term of the plan.²⁹⁰ Uniform, system-wide rules that govern planning exert a coordinating force on the diverse array of activities that may occur on land units. The comprehensive plan translates the general mission statements and broadly permissive designation of uses into prescriptions for a particular area over a particular time. It is the link between the systemic mandate and the local project.

The rise of substantive management criteria is an almost entirely new development of modern organic legislation. More than any other hallmark, the appearance of substantive management criteria characterizes the reforms of the 1970s. Substantive management criteria represent a reversal of the proprietary management tradition, which relied on the "expert" judgment and location-specific experience of a unit administrator. Unlike designated uses (or, best technology standards in

288. *See, e.g.*, 43 U.S.C. § 1732(b) (1994 & Supp. V 1999) (FLPMA provision requiring the Secretary of the Interior to prevent "unnecessary or undue degradation").

289. 16 U.S.C. § 1133(c) (2000).

290. JOHN B. LOOMIS, INTEGRATED PUBLIC LANDS MANAGEMENT 363-64 (1993). Cumulative effects are explained at 40 C.F.R. §1508.25 et seq. Analysis of cumulative effects is one of the most difficult tasks under NEPA. It is explored in COUNCIL ON ENVIRONMENTAL QUALITY, CONSIDERING CUMULATIVE EFFECTS UNDER THE NATIONAL ENVIRONMENTAL POLICY ACT (1997).

pollution control), substantive management criteria shift the discourse over conflicts away from judgments about the worthiness of an activity and toward measurable benchmarks of environmental consequences (e.g., whether the activity would exceed the threshold criterion of “unnecessary or undue degradation”²⁹¹ of lands). In this way, substantive management criteria (like ambient standards in pollution control) are closely aligned with the utilitarian view that outcomes matter more than intentions. The rise of substantive management criteria with the use of the term “organic” legislation belies the cynical claims of Professors Fairfax and Popper that “our tools for thinking about public resources have not changed much in a century.”²⁹²

The statutory use of environmental criteria to condition land managers’ discretion has changed the nature of public land law. Though we still distinguish among public lands systems by categorizing them as multiple or dominant use, substantive management criteria have joined the designated uses as a signature feature of organic acts. The Forest Service’s diversity mandate, the BLM’s no undue degradation criterion, and the National Park Service’s unimpaired standard reveal as much about these agencies’ land management programs as do the terms “multiple” or “dominant” use. As I explore below, the 1997 mandate to maintain biological integrity, diversity, and environmental health is a distinctive milestone characterizing the Refuge System’s conservation path.

The final hallmark of modern organic legislation is public participation. Public participation requirements transformed administrative law in the 1970s.²⁹³ Natural resources law did not escape this transformation, which contributed to the revision of systemic legislation. Public land management agencies today must provide stakeholders opportunities to contribute to decisions about individual projects, comprehensive plans, and system-wide policies. For instance, section 553 of the Administrative Procedure Act requires agencies to employ procedures for rulemaking that give “interested persons an opportunity to participate” and that require the agency to respond to public comments.²⁹⁴ NEPA provides avenues for public participation even for specific decisions without broad applicability. Though the organic acts

291. 43 U.S.C. § 1732(b) (1994 & Supp. V 1999).

292. Sally K. Fairfax, *State Trust Lands Management*, in *A VISION FOR THE U.S. FOREST SERVICE* 105, 105–6 (Roger A. Sedjo ed., 2000) (quoting Frank Popper, *A Nest Egg Approach to the Public Lands*, in *MANAGING PUBLIC LANDS IN THE PUBLIC INTEREST* 87 (Benjamin C. Dysart & Marion Clawson, eds. 1988)).

293. See, e.g., Richard B. Stewart, *The Reformation of American Administrative Law*, 88 HARV. L. REV. 1669 (1975).

294. 5 U.S.C. § 553(c) (2000). This procedure is often termed “notice and comment rulemaking.”

themselves generally contain few directly applicable provisions relating to appeals, information disclosure, advisory committee activity, and judicial review, these avenues for public participation are all maintained through administrative law statutes and judicial doctrines. Much of this hallmark is folded into organic acts by reference to these other statutes and doctrines.

A deeper understanding of organic acts may aid in the application of lessons from natural resources law to pollution control law.²⁹⁵ An important criticism of the Environmental Protection Agency's piecemeal pollution control authorities is that they are myopic to the distant long-term: they fixate on the specific, close-up problems but lack clear vision for integrated environmental quality improvement. In response, critics often propose more comprehensive, coordinated management, through an "integrating" statute for the EPA.²⁹⁶ Another way to think about these proposals is to consider what an organic act for a system of pollution control might look like. Rather than orchestrating a jumble of unit establishment mandates, an EPA organic act would have to integrate a jumble of media-, pollutant-, sector-, and (sometimes) place-specific pollution control mandates. Though I leave to another day an analysis of how the five hallmarks of modern organic legislation would apply to the EPA, it is important to recognize that pollution control law raises challenges similar to public land management law.

The dis-aggregation of elements that constitute an organic act provides a basis for evaluating the new Refuge Improvement Act. Organic legislation performs a set of tasks to coordinate the disparate units of a public land system so that they cohere rather than fragment. In its ideal form, an organic act makes public land units more than the sum of their parts, just as the human body is more than just a wet bag of organs. This is a particular challenge for the Refuge System because of the diverse array of unit establishment mandates.

295. The characteristic differences between the resource management and pollution control strands of environmental law, and opportunities for sharing lessons are explored in greater depth in Robert L. Fischman & Jaelith Hall Rivera, *A Lesson for Conservation from Pollution Control Law: Cooperative Federalism for Recovery Under the Endangered Species Act*, 27 COLUM. J. ENVTL. L. 45 (2002); Fischman, *supra* note 9, at 784-86; and David J. Hayes, *Cross-Pollination*, ENVTL. F., July/Aug. 1998, at 28.

296. See, e.g., Robert Stephens, *Innovation Is Needed But It's Performance That Counts*, ENVTL. F., Mar/Apr. 2002, at 24; J. CLARENCE DAVIES & JAN MAZUREK, *POLLUTION CONTROL IN THE UNITED STATES, EVALUATING THE SYSTEM* (1998); Robert M. Sussman, *An "Integrating" Statute*, ENVTL. F., Mar./Apr. 1996, at 16; NATIONAL ACADEMY OF PUBLIC ADMINISTRATION, *SETTING PRIORITIES, GETTING RESULTS: A NEW DIRECTION FOR THE ENVIRONMENTAL PROTECTION AGENCY* (1995); *Single Environmental Statute May Emerge from Reform Debate, Former Officials Say*, Env't Rep. (BNA), Current Developments, June 30, 1995, at 501; Symposium, *Integrated Pollution Control*, 22 ENVTL. L. 1 (1992).

III.

THE NATIONAL WILDLIFE REFUGE SYSTEM IMPROVEMENT ACT OF 1997

The National Wildlife Refuge System Improvement Act of 1997 ("Improvement Act")²⁹⁷ is the only organic act for a system of public lands enacted since the reform spurt of the 1970s rewrote the land management charters for the U.S. Forest Service,²⁹⁸ the Bureau of Land Management,²⁹⁹ and the National Park Service.³⁰⁰ As such, it is a rare expression of the current congressional attitudes toward public land law, and perhaps a forecast for future reforms.³⁰¹ It is our most revealing expression of the hallmarks of organic legislation. The Improvement Act is also a manifestation of the unusual circumstances and compromises that can result in passage of a sweeping new public land law in an era of divided government.³⁰²

While the statutory detail of the Improvement Act dramatically reforms the modest mandates of the 1966 Refuge Administration Act,³⁰³

297. 16 U.S.C. §§ 668dd, 668ee (2000). Throughout this article, I use the term "Improvement Act," "1997 Act," or "1997 Refuge Improvement Act" to refer to this National Wildlife Refuge System Improvement Act of 1997. I find these terms more comprehensible than the acronym often used by the Service, "NWRSA-1997." See, e.g., 65 Fed. Reg. 62,458, 62,458 (2000) (U.S. Fish & Wildlife Service final compatibility regulations). Also, the Service often uses the easily confused acronym "NWRSA-1966" to refer to the 1966 Refuge Administration Act. *Id.* Congress enacted another "National Wildlife Refuge System Improvement Act" in 1998 (Pub. L. No. 105-312, Title II, 112 Stat. 2957 (1998)). This statute, however, is not a significant System-wide law. With respect to the System, the 1998 Act merely made a slight alteration to the penalties provision of the 1966 Administration Act. *Id.* § 206. The 1998 Act also contained provisions dealing with specific refuges to make a name change, a land transfer, and two unit terminations. *Id.* § 202.

298. Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476 (1974), amended by National Forest Management Act of 1976, Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended at 16 U.S.C. §§ 160-1614 (2000)).

299. Federal Land Policy and Management Act of 1976 ("FLPMA"), 43 U.S.C. §§ 1701-1702 (1994 & Supp. V 1999).

300. National Park System General Authorities Act of 1970, Pub. L. No. 91-383, 84 Stat. 825 (1970); Redwood Amendment Act of 1978, Pub. L. No. 95-250, 92 Stat. 163 (1978); National Parks and Recreation Act of 1978, Pub. L. No. 95-625, 92 Stat. 3518 (codified as amended at 16 U.S.C. § 1a-1 to 8 (2000)).

301. In recent sessions, legislative reform of the National Forest System's mandate has topped the priority list of Congress. See, e.g., S. 1320, 106th Cong. (1999).

302. The Improvement Act passed a Republican-controlled Congress by votes of 407-1 in the House on June 3, 1997, 143 CONG. REC. H3238 (1997), and by unanimous consent with proposed amendments in the Senate on Sept. 10, 1997, 143 CONG. REC. S9092 (1997). The House then repassed the Senate's amended version of the bill on Sept. 23, 1997, by a vote of 419-1. 143 CONG. REC. H7714. Both sole dissenting House votes were cast by the Libertarian, Ron Paul of Texas. The Democratic President Clinton signed the law on Oct. 9, 1997. 1997 U.S.C.A.N. 1798-22. Tredennick reviews the series of bills and political negotiations that resulted in the 1997 compromise. Tredennick, *supra* note 14, at 72-75.

303. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, 80 Stat. 926 (1966) (codified at 16 U.S.C. §§ 668dd & 668ee). It is important to note that while the 1997 Improvement Act modifies and enhances the shorter 1966 Administration Act, it does not repeal the older law. Indeed, the 1997 Act is codified as amendments in the framework

much of it came from existing guidance in the Service's Refuge Manual and the President's Executive Order. So, many of the topics discussed below are significant not because they are new guidelines for managing the System but because they are newly inscribed into legislation. In this respect, the Improvement Act maintains the strong executive tilt in the historical tension between the President and Congress. Still, the memorializing of management directives in a statute is important for several reasons. The statute raises the profile of the management guidelines and promotes better citizen oversight of the Service. It also serves as a stronger basis for judicial review. Finally, a statute resists modification at the convenience of the agency, or under the pressure of new circumstances, much more than manual provisions or even executive orders do.

The core operative provisions of the Improvement Act were shaped by the struggle to balance the conservation mission of the System with the desire to satisfy recreational and other demands. The Act retains the compatibility determination as the basic means of striking this balance. It places great weight on conservation through the new systemic mission and several substantive management criteria, such as a mandate to maintain biological integrity, diversity, and environmental health. However, the Act also creates a category of priority public uses, including hunting, which serve as a counter-balance to the conservation mission. Perhaps the most important manifestations in the Improvement Act of this historic tension are the new mechanisms through which the Service strikes the balance, such as written determinations of compatibility and unit-level comprehensive conservation plans.

Investigations in the decade preceding the 1997 Act established that the U.S. Fish & Wildlife Service had been unable to respond to refuge threats and to achieve the conservation potential of the System.³⁰⁴ Implementation of the Improvement Act will reveal whether the new statutory measures effectively respond to the ills of the System. An analysis of the Act lays the foundation for this evaluation. The sheer size of the System, currently 94 million acres, amplifies the importance of its organic mandates.

A major challenge for the Improvement Act is to provide unity of purpose for the System while preserving the individual establishment mandates for the units of the System. Though the Act sets out an integrating set of objectives for the System in as great a level of detail as any organic legislation, it also strengthens somewhat the divergent force of individual refuge purposes. This will limit the ability of the Act to

established by the 1966 law. See 16 U.S.C. § 668dd (National Wildlife Refuge System); 16 U.S.C. § 668ee (2000) (definitions).

304. See *supra* notes 174–222 and accompanying text.

achieve comprehensive reform of the administration of the national wildlife refuges.

The legislative history for the Improvement Act contains the usual section-by-section analysis of the new statute, but it is unusually thin and not very revealing.³⁰⁵ Rather than rehash that material, this part of the article parses the statute in terms of the five hallmarks of modern organic legislation, discussed in the previous section (section II): A) purpose statements, B) designated uses, C) comprehensive planning, D) substantive management criteria, and E) public participation. In categorizing the Improvement Act provisions along these lines, this article provides a framework to evaluate both the strengths and shortcomings of the legislation.³⁰⁶

A. Purpose Statements

It is important to remember that refuges have two sets of purposes: the comprehensive purposes of the National Wildlife Refuge System, and the specific purposes for which individual refuges were established. Almost all legislative history acknowledges the dual nature of the System mission.³⁰⁷ This part of the article focuses on the broader, comprehensive purposes of the Refuge System. Part IV examines the narrower individual refuge purposes.

Prior to enactment of the 1997 Improvement Act, Congress had provided little guidance to the U.S. Fish & Wildlife Service on the purposes for consolidating refuges into a system.³⁰⁸ Conservation has always been the common theme of establishment mandates for the individual units.³⁰⁹ However, conservation encompasses a range of concerns from ecosystem preservation, to endangered species recovery, to sustaining game populations for hunting. Thus, the mention of

305. H.R. REP. NO. 105-106, 5-15 (1997), *reprinted in* 1997 U.S.C.C.A.N. 1798-5, 1798-9 to 19.

306. In addition to addressing the five hallmarks, the Improvement Act also makes a technical change to the authority of the Service. The 1966 National Wildlife Refuge System Administration Act authorized the Secretary of the Interior to make refuge regulations only to permit uses and to grant easements under § 4(d). National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4(d), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)). In order to ensure that the Secretary would be explicitly authorized to make any regulations needed to manage the System, the 1997 Improvement Act grants the Secretary power to "issue regulations to carry out this Act." National Wildlife System Improvement Act of 1997, 16 U.S.C. § 668dd(b)(5) (2000).

307. *See, e.g.*, H.R. REP. NO. 105-106, at 9 (1997), *reprinted in* 1997 U.S.C.C.A.N. 1798-5, 1798-13; S. REP. NO. 103-324, at 32-33 (1994).

308. Statutory consolidation occurred in the 1966 National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4, 80 Stat. 926 (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)).

309. *See infra* notes 731-839 and accompanying text.

“conservation” in the purpose and findings section of prior legislation,³¹⁰ undefined until the 1997 Improvement Act, made only a modest contribution to articulating the purpose of the System.

Specifying a systemic purpose, or mission, is a prerequisite to aligning and coordinating unit management for a larger goal. A mission statement must be sufficiently detailed in order to serve as the ultimate test for management plan adequacy and, ultimately, implementation success.³¹¹ On the other hand, it must be sufficiently general to provide relevant direction to a wide range of refuge types. The diversity of units, the same characteristic of the System that creates the need for a coordinating mission, also limits the degree to which a mission statement can provide detailed answers to management dilemmas, such as regulation of lake levels and impoundments.

The Improvement Act’s legislative history asserts that “refuges have not always been managed as a national system because of the lack of an overall mission for the System.”³¹² Indeed, the House Report accompanying the legislation explains that an important problem, which surfaced in hearings and evaluations, was that refuges were managed more as a collection of disparate units than as a true system.³¹³ Congress sought to “remedy this shortcoming by establishing an over-arching mission statement . . . to guide overall management of the System and to supplement the purposes for which individual refuges have been established.”³¹⁴

Although an overall mission is a necessary condition for systemic management, it is not sufficient. While the 1997 Act does provide the first statutory mission for the System, it may not succeed in spurring systemic management. This is because the 1997 Act allows individual refuge purposes in establishment documents to override the mission statement where they conflict.³¹⁵ This may continue to sustain divergent goals and management among the units.

The purpose statement that Congress established in 1997 for the Refuge System as part of the Improvement Act states that: “The mission of the System 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

310. See, e.g., National Wildlife Refuge System Administration Act §§ 1(a), 4(a).

311. Of course, substantive management criteria provide more specific objectives for actual performance assessment.

312. H.R. REP. NO. 105–106, at 3, *reprinted in* 1997 U.S.C.C.A.N. at 1798–7.

313. *Id.* at 2–3, *reprinted in* 1997 U.S.C.C.A.N. at 1798–6 to 1798–7.

314. *Id.* at 8, *reprinted in* 1997 U.S.C.C.A.N. at 1798–12.

315. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105–57, § 5(a)(4)(D), 111 Stat 1255 (1997) (“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, and, to the extent practicable, that also achieves the mission”).

States for the benefit of present and future generations of Americans.”³¹⁶

The act defines conservation and management as synonymous.³¹⁷ Both mean “[1] to sustain and, where appropriate, restore and enhance, healthy populations of fish, wildlife, and plants utilizing . . . [2] methods and procedures associated with modern scientific resource programs.”³¹⁸ This definition largely reiterates the language of the mission itself.

The remainder of this subsection explores the key elements of this mission statement for conservation and its application in practice. Subsection 1 analyzes the meaning of the element of the mission requiring the Service “to sustain and, where appropriate restore and enhance healthy populations.”³¹⁹ Subsection 2 discusses the expansion of the refuge mission to include plant conservation. Subsection 3 attempts to determine what the “methods and procedures associated with modern scientific resource programs”³²⁰ might be. Subsection 4 reviews issues associated with other aspects of the System mission: habitat conservation, the role of future benefits, and latitude for exercise of agency discretion. Finally, subsection 5 highlights the importance of coordination in fulfilling the Improvement Act’s mission.

1. *Sustaining, Restoring, Enhancing Healthy Populations*

This systemic mission of conservation has a desired goal of sustaining-restoring-enhancing healthy populations. There are two alternative ways to interpret this language. One interpretation of the meaning of conservation in the Act would understand “healthy” to describe only the quantitative threshold where population levels are sustainable. An alternative interpretation of the goal would include both quantitative characteristics (e.g., the number of individuals in a population) and qualitative attributes (e.g., the condition of health).

The legislative history interpreting the mission statement offers no help in choosing between these definitions. However, the qualitative threats to refuge plants and animals due to habitat alteration and contamination are an important theme of the reports of the 1980s and

316. *Id.* § 4.

317. In this respect, “conservation” under the Improvement Act is different from “conservation” under the Endangered Species Act (“ESA”). Under the ESA, conservation requires restoration, at least to the extent of enhancing species populations and habitat so that the species is no longer on the brink of extinction. 16 U.S.C. § 1532(3) (2000) (definition of conservation); 16 U.S.C. 1536(a)(1) (2000) (mandate to carry out conservation programs). Under the Improvement Act, “conservation” requires restoration only under the discretionary circumstances where it is “appropriate.” National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105–57, § 5(4), 111 Stat. 1252 (1997).

318. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105–57, § 5(4), 111 Stat. 1252 (1997).

319. *Id.*

320. *Id.*

1990s documenting the System's struggle with incompatible uses. The 1997 Act is, in large part, a response to those reports.

Additionally, the overall concern in the Improvement Act to favor nature protection further strengthens the case for the qualitative interpretation of "healthy." While the U.S. Fish & Wildlife Service has long worked with population size management, the use of the term "healthy" in the definition of conservation is a new systemic mandate that directs the Service to examine more closely environmental quality concerns affecting refuges. This view is bolstered by the Act's substantive management criterion to ensure the maintenance of biological integrity, diversity, and environmental health.³²¹ This seems to be the interpretation favored by the Service, which defines "environmental health" to mean "[a]biotic composition, structure, and functioning of the environment consistent with natural conditions, including the natural abiotic processes that shape the environment."³²² Also, the Service has stated that its goals include both qualitative and quantitative components of a region's ecology.³²³ In addition, a specific management mandate in the Improvement Act directs the Service to ensure the maintenance of "biological integrity, diversity and environmental health" of the System.³²⁴

The U.S. Fish & Wildlife Service has taken an important step in adopting the purpose of sustaining, restoring, and enhancing healthy populations through its performance review standards. As Professor James Q. Wilson noted in his classic study of bureaucracy, measured outcomes tend to "drive out work that produces unmeasurable outcomes."³²⁵ The Service has established both the quantitative and the qualitative aspects of the mission as elements in its performance review.³²⁶ It has set a goal to restore 600,000 acres and annually improve 3.2 million acres of habitat in the System.³²⁷ Perhaps more important is the Service's

321. *Id.* § 5(a)(4)(B).

322. 65 Fed. Reg. 33,892, 33,906 (May 25, 2000), U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 1.6(I), available at <http://policy.fws.gov/602fw1.html> (last visited Sept. 10, 2002).

323. 66 Fed. Reg. 3,810, 3,812 (Jan. 16, 2001).

324. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(B), 111 Stat. 1252 (1997).

325. JAMES Q. WILSON, BUREAUCRACY 161 (1989); see also Bradley C. Karkkainen, *Information as Environmental Regulation: TRI and Performance Benchmarking, Precursor to a New Paradigm?*, 89 GEO. L.J. 257 (2001) (describing the transparency and accountability created by publicly disclosed performance metrics).

326. Pursuant to the Government Performance and Results Act ("GPRA") of 1993, Pub. L. No. 103-62, 107 Stat. 285 (1993) (codified at scattered sections of 5 U.S.C. and 31 U.S.C.), the Department of the Interior has created an Office of Planning & Performance Management, which issues strategic plans, annual performance plans, and annual performance reports. See U.S. Department of Interior, *Overview of GPRA and Links to Documents*, at <http://www.doi.gov/gpra> (last visited Sept. 10, 2002).

327. U.S. DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE STRATEGIC PLAN FY 2000-2005 35 (2000), available at <http://planning.fws.gov/USFWSstrategicPlanv3.pdf>

performance goal to develop standardized methods to measure biological diversity and environmental health on all refuges.³²⁸ This will allow Congress, the public, and the agency to track progress in fulfilling the Improvement Act's mission.

2. *Plant Conservation*

The Improvement Act begins with a series of congressional findings which reiterate that the System "was created to conserve fish, wildlife, and plants and their habitats,"³²⁹ and "serves a pivotal role in the conservation of migratory birds, . . . fish, marine mammals, endangered and threatened species, and the habitats on which these species depend."³³⁰ While Congress had never before defined the term "conservation," which appears in earlier statutes directing Refuge System management,³³¹ the statute is incorrect in stating that the System was created in part to conserve plants. Floral conservation, at least as separate from habitat conservation, had never been part of the System's mission. In fact, the Improvement Act is the first statute applicable System-wide to mention plant conservation, aside from references to habitat for animals. Its only antecedent is the 1996 Executive Order, which added plant conservation to the System's mission.³³²

The Improvement Act echoes the congressional findings in its purpose statement by including plants among the resources to be conserved (i.e., sustained, restored, enhanced). Adding plant conservation to the Refuge System's purposes represents an important expansion. It reflects a broader trend to expand environmental concerns beyond the animal kingdom.³³³ This broader scope is consistent with the national trend toward ecosystem management, which the U.S. Fish & Wildlife Service administratively adopted for the Refuge System in 1996.³³⁴ Although "fish and wildlife" generally means all animals,³³⁵ the

(last visited Sept. 10, 2002). The five-year plan also calls for acquiring 1.275 million acres within the System. *Id.*

328. U.S. DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE ANNUAL PERFORMANCE PLAN FY 2001/ANNUAL PERFORMANCE REPORT FY 1999 42-45 (2000), available at <http://planning.fws.gov/USFWFinal.pdf> (last visited Sept. 10, 2002).

329. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 2(2), 111 Stat. 1252 (1997).

330. *Id.* § 2(3).

331. See, e.g., National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 1(a), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)).

332. Exec. Order No. 12,996, 61 Fed. Reg. 13,647 (March 25, 1996). The first (and one of the only, pre-1997) establishment mandate for plant protection called for conservation of "wild flowers and aquatic plants" on the Upper Mississippi River Wild Life and Fish Refuge. Upper Mississippi River Wildlife and Fish Refuge Act, Pub. L. No. 68-268, ch. 346, 43 Stat. 650 (1924).

333. See Faith Campbell, *Legal Protection of Plants in the United States*, 6 PACE ENVTL. L. REV. 1, 20 (1988).

334. See Keiter, *supra* note 177; Steven L. Yaffee, *Three Faces of Ecosystem Management*,

U.S. Fish & Wildlife Service has assumed conservation responsibilities for certain plant species at least since the enactment of the Endangered Species Act of 1973.³³⁶ The specific provisions of the Improvement Act implementing plant conservation for refuges illustrate that the embrace of the plant kingdom in the Act's purpose statement is more than a mere rhetorical flourish.³³⁷

Nonetheless, plants do not enjoy equal treatment in all respects. The emergency power granted to the U.S. Fish & Wildlife Service to "temporarily suspend, allow, or initiate any activity" is conditioned on a finding that the activity is necessary to protect the "health and safety" of the public or any animal population.³³⁸ A direct threat to plants alone would not satisfy the conditions for exercising emergency authority. More troubling from the standpoint of systematic plant conservation is the Service's animal focus in implementing the Improvement Act. Despite the broad taxonomic embrace of the statute's conservation mandate, the Service incorrectly hews to a "wildlife first" policy.³³⁹

3. *Modern Scientific Research Programs*

The definition of conservation and management in the Improvement Act requires the use of "modern scientific resource programs" as a means

13 CONSERVATION BIOLOGY 713 (1999); U.S. FISH & WILDLIFE SERVICE MANUAL, 052 FW 1.3(B), available at <http://policy.fws.gov/052fw1.html> (last visited Sept. 10, 2002).

335. See, e.g., National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(7), 111 Stat. 1252.

336. See 16 U.S.C. §§ 1532 (6), 1533(c), 1536(a) (2002). But see 16 U.S.C. § 1541 (giving to the Smithsonian Institution the responsibility to review endangered plant conservation). Currently, 1071 animals and 746 plants receive protection under the ESA. U.S. FISH & WILDLIFE SERVICE, *Summary of Listed Species*, at <http://ecos.fws.gov/tess/html/boxcore.html> (last visited Aug. 1, 2002). The U.S. Fish & Wildlife Service is the principal agency responsible for protecting and recovering the listed plants.

337. National Wildlife Refuge System Improvement Act of 1997 §§ 5(a)(4)(N), 7(a)(2)(B) & (E).

338. *Id.* § 8(a)(k).

339. See, e.g., 65 Fed. Reg. 33,892 (May 25, 2000) (notice of final refuge planning policy) (stating that "we will prepare refuge plans that, above all else, ensure that wildlife comes first on national wildlife refuges"). "The first and foremost goal of the Refuge Improvement Act is to ensure that wildlife conservation is the principal mission of the Refuge System." *Id.* at 33893 (chapter 1.5 of the new planning section of the U.S. Fish & Wildlife Service manual listing as the first goal of refuge planning to ensure that wildlife comes first); 65 Fed. Reg. 62,458, 62,461 (Oct. 18, 2000) (final compatibility regulations) ("the terms 'wildlife conservation' and 'wildlife first' when referring to the National Wildlife Refuge System mission are consistent with the" Improvement Act of 1997); 66 Fed. Reg. 3,810, 3,818 (Jan. 16, 2001), U.S. FISH & WILDLIFE SERVICE MANUAL, 601 FW 3.7, available at <http://policy.fws.gov/601fw3.html> (last visited Sept. 10, 2002) (final policy on biological integrity, diversity, and environmental health, citing House Report 105-106 as a basis for finding the fundamental mission of the System is wildlife conservation). But see 50 C.F.R. § 25.11(b) (2001) ("All national wildlife refuges are maintained for the primary purpose of developing a national program of wildlife and ecological conservation and rehabilitation.").

of achieving the mission. This term receives no further attention in the legislative history. Perhaps this modifier in the definition of conservation and management does little to limit the range of tools the Service may employ: any approach that is currently associated with resource programs elsewhere might be used in refuges.

Instead, one could read the reference to emphasize “modern” and infer a disapproval of old management practices. What those old practices might be, however, is unanswered in the legislative history. Classic game management, promoting favored sport hunting species, would be a prime candidate for “nonmodern” scientific management that does not meet the criteria for ecological health.³⁴⁰ Still, even today, most wildlife management in the United States is oriented toward hunting concerns.³⁴¹ And many problems with game management center on the narrow measures of success (e.g., single species populations) more than the actual practices employed (e.g., habitat management). So even incorporating “modern” into the definition of conservation and management will not necessarily improve the refuge programs.

Alternatively, an emphasis on “scientific” might limit some experimental management practices that do not have the imprimatur of mainstream scientists. Perhaps, then, this provision would limit the U.S. Fish & Wildlife Service from experimenting with techniques, such as Alan Savory’s grazing prescriptions, which remain unendorsed by the majority of the range management academic community.³⁴² Yet, this interpretation is also unsatisfying because experimentation is the life blood of the scientific method. Along these lines, an emphasis on “scientific” would insist that all conservation in the System employ “adaptive management.” Adaptive management responds to ecological characteristics by “[r]ecognizing that every land management practice is an experiment with an uncertain outcome.”³⁴³ In adaptive management, authorized activities are coordinated and monitored to determine their effects on biological integrity.³⁴⁴ The information gained then feeds back

340. See, e.g., *infra* note 814 on the impairment of biological diversity resulting from management of the National Elk Refuge to maximize the size of the elk herd.

341. Jonathan Rosen’s observation sums up the situation: “wildlife management’ basically means maintaining the area to facilitate hunting.” Jonathan Rosen, *The Ghost Bird*, THE NEW YORKER, May 14, 2001, at 61, 64.

342. For a brief explanation of Alan Savory’s Holistic Resource Management (“HRM”) and some of the controversies arising out of his “non-selective” and “short-duration” grazing techniques, see Todd M. Olinger, Comment, *Public Rangeland Reform: New Prospects for Collaboration and Local Control Using the Resource Advisory Councils*, 69 U. COLO. L. REV. 633, 692 n. 69 (1998) and DEBRA L. DONAHUE, THE WESTERN RANGE REVISITED 82–83, 141–142 (1999).

343. Reed F. Noss, *Some Principles of Conservation Biology As They Apply to Environmental Law*, 69 CHI.-KENT L. REV. 893, 907 (1994). Adaptive management is based on feedback from continual management experimentation.

344. See generally KAI N. LEE, COMPASS & GYROSCOPE: INTEGRATING SCIENCE AND

into the plan "to adjust management in a desirable direction."³⁴⁵

This puzzling phrase, "modern scientific research programs," may be a tribute to the influence of the Leopold Report of 1968, which recommended a Refuge System that retains or expands and restores native biota wherever practicable.³⁴⁶ The House Report accompanying the Improvement Act characterizes the Leopold Report as recommending that the Refuge System "stand as a monument to the science and practice of wildlife management."³⁴⁷ Although the U.S. Forest Service receives mixed reviews for its leadership in modern forestry, it has supported the development of new tools, such as the "sloppy clearcuts" of "new forestry."³⁴⁸ The U.S. Fish & Wildlife Service should use its new mandate to spur innovation in wildlife management and to become a premier practitioner of what one might call "new conservation." Unfortunately, this will be a difficult challenge for the U.S. Fish & Wildlife Service. Unlike the Forest Service, which contains a research division within its ranks, the U.S. Fish & Wildlife Service relies principally on scientists in the U.S. Geological Survey for its research.³⁴⁹ The lack of internal scientific expertise at the U.S. Fish & Wildlife Service will hamper its ability to be a leader in establishing modern scientific research programs and practicing adaptive management.

4. *Habitats, Utilitarianism, and Agency Discretion*

Three other terms in the mission statement are worth brief mention. First, the statement is applicable not just to animals and plants, but their habitats as well. It is now a fundamental axiom of wildlife management and resource administration that animals and plants cannot be conserved

POLITICS FOR THE ENVIRONMENT (1993); CARL WALTERS, ADAPTIVE MANAGEMENT OF RENEWABLE RESOURCES (1986). The U.S. Fish & Wildlife Service provides a helpful bibliography of relevant adaptive management literature in Notice of Availability of a Final Addendum to the Handbook for Habitat Conservation Planning and Incidental Take Permitting Process. 65 Fed. Reg. 35,242, 35,256-57 (June 1, 2000).

345. Noss, *supra* note 343, at 907.

346. LEOPOLD REPORT, *supra* note 16, at W-4.

347. H.R. REP. NO. 105-106, at 9 (1997), reprinted in 1997 U.S.C.C.A.N. 1798-5, 1798-13.

348. "Sloppy clearcuts" result when even-aged logging techniques retain scattered live trees, standing dead trees, and coarse woody debris to create a more diverse structure on the logging site. See REED F. NOSS AND ALLEN Y. COOPERRIDER, SAVING NATURE'S LEGACY: PROTECTING AND RESTORING BIODIVERSITY 210-13 (1994); ROGER DOWER, ET AL., FRONTIERS OF SUSTAINABILITY: ENVIRONMENTALLY SOUND AGRICULTURE, FORESTRY, TRANSPORTATION, AND POWER PRODUCTION 236-237 box 4-7 (1997); Jerry Franklin, *Toward A New Forestry*, AMERICAN FORESTS, Nov-Dec. 1989, at 37; see also Anna Marie Gillis, *The New Forestry: An Ecosystem Approach to Land Management*, 40 BIOSCIENCE 558 (1990); Jack Ward Thomas, *Making Forests Work Better*, AMERICAN FORESTS, Mar-Apr. 1995, at S7.

349. Frederic H. Wagner, *Whatever Happened to the National Biological Survey*, 49 BIOSCIENCE 219 (1999).

without providing for their habitat.³⁵⁰ Still, the explicit recognition of habitats in the mission statement helps promote the move toward ecosystem management.

Second, the mission statement mandates conservation "for the benefit of the present and future generations of Americans." This phrase adds a utilitarian flavor to a mission that otherwise eschews the language of costs and benefits, in contrast to the multiple-use mandates of the BLM and Forest Service. But, there is an ambiguity in the meaning of the phrase. One interpretation of the phrase is declaratory: Congress has found that conservation of life benefits present and future generations. Another interpretation is conditional: the Service should conserve only under those conditions that benefit present and future generations. Because the cost-benefit criterion is largely absent from the rest of the statute, it seems unlikely that Congress intended the phrase to be conditional. This is particularly true given the difficulties of applying the utilitarian calculus to future generations.³⁵¹

Third, both the mission statement itself as well as the definition of conservation and management employ the term "where appropriate" to limit the mandate as it applies to restoration and enhancement. This grant of discretion to the U.S. Fish & Wildlife Service is probably most significant in contrast to its absence in the part of the mission that commands sustaining populations. The tradition of public land and resource management is one of great deference and broad delegation.³⁵² But, Congress explicitly endorsed this traditional flexibility for the Service in one part of the mission (restore and enhance) but not another (sustain). Therefore, the U.S. Fish & Wildlife Service may not enjoy its normal proprietary management discretion for that part of the mandate requiring populations to be sustained. This would make the Refuge System mandate similar to the Endangered Species Act, which provides wide latitude for agencies to choose and tailor actions to restore listed species, but very strictly constrains agencies to sustain populations to avoid jeopardizing the continued existence of species.³⁵³ It also echoes the old National Forest Management Act ("NFMA") regulations binding the

350. See NATIONAL RESEARCH COUNCIL, SCIENCE AND THE ENDANGERED SPECIES ACT (1995); REED F. NOSS, MICHAEL A. O'CONNELL, & DENNIS D. MURPHY, THE SCIENCE OF CONSERVATION PLANNING: HABITAT CONSERVATION UNDER THE ENDANGERED SPECIES ACT (1997).

351. See Derek Parfit, *On Doing the Best For Our Children*, in ETHICS AND POPULATION 100 (Michael D. Bayles 1976); see also MARK SAGOFF, THE ECONOMY OF THE EARTH, 60-65 (1988); Lisa Heinzerling, *Discounting Life*, 108 YALE L.J. 1911 (1999); DANIEL FARBER, ECO-PRAGMATISM: MAKING SENSIBLE ENVIRONMENTAL DECISIONS IN AN UNCERTAIN WORLD 133-162 (1999).

352. *Udall v. Tallman*, 380 U.S. 1 (1965); *United States v. Grimaud*, 220 U.S. 506 (1911).

353. Compare ESA § 7(a)(1) (restoration mandate) with § 7(a)(2) (no jeopardy mandate). 16 U.S.C. § 1536 (2000); see BEAN & ROWLAND, *supra* note 45, at 239-40.

Forest Service to “maintain viable populations” of vertebrate species.³⁵⁴ This alteration of traditional, broad discretion would reflect the trend toward stricter legislative biological protection.

At the very least, the mission statement is a useful tool of interpretation for resolving ambiguities and conflicts. The mission also serves as a broad-brush goal statement to act as a navigational aid for long-range planning. Congress sought to endorse the ecological protection and enhancement in refuge management over the often-competing commercial or economic goals.

5. *Coordination*

In addition to the definitions in the Act, the legislative history offers some indication of how Congress meant the mission statement to guide the System. In explaining the mission, the overriding theme in the legislative history is coordination. The most obvious goal of the statement is to respond to disparate administration by “managing a series of refuges in a coordinated manner to meet the life-cycle needs of migrating species, providing habitat for threatened or endangered species, or representing the various habitats that provide for the conservation of the Nation’s wildlife resources.”³⁵⁵

The legislative history also adumbrates coordination of refuges with state programs.³⁵⁶ Indeed, the Act itself requires coordination with states in the administration of the System generally and in planning.³⁵⁷ Furthermore, coordination across jurisdictional boundaries is necessary for ecosystem management and long-term protection of biological diversity. The new Service policy implementing its ecological management criteria, which I analyze in subsection D(2), below, provides important practical guidance in addressing external threats to refuge conservation.³⁵⁸

The mission statement in the Improvement Act succeeds in concisely and sharply focusing and shifting the over-arching goals of the System. It adequately incorporates the current insights of conservation biology in

354. *Seattle Audubon Soc’y v. Moseley*, 798 F. Supp. 1473, 1476 (W.D. Wash. 1992), *aff’d* *Seattle Audubon Soc’y v. Espy*, 998 F.2d 699 (9th Cir. 1993) (invalidating Forest Service plans because they failed to maintain viable populations of the northern spotted owl); 36 C.F.R. § 219.19.

355. H. REP. NO. 105–106, at 8 (1997).

356. *Id.*

357. National Wildlife Refuge Improvement Act of 1997 §§ 5(a)(4)(E), 7(e)(3), 16 U.S.C. §§ 668dd, 668ee (2000). However, federal preemption overrides state law that conflicts with U.S. Fish & Wildlife Service management control on refuges. *National Audubon Society v. Davis*, 2002 WL 31109353 (9th Cir. Sept. 24, 2002); *see also* *North Dakota v. United States*, 460 U.S. 300 (1983) (finding North Dakota state law restrictions on easements do not apply to waterfowl production areas acquired under the Migratory Bird Conservation Act).

358. *See infra* notes 575–627 and accompanying text.

updating the conservation impetus that has driven expansion and management of the System over the decades. Nonetheless, the mission of the System is weakened by its subservience to conflicting purposes in establishment documents,³⁵⁹ which I explore in greater detail below in section IV.

B. Designated Uses: The Hierarchy

While agreement on the conservation purpose of the Refuge System is largely unanimous, disputes continue over the kinds of uses that have a legitimate place in the System. The Improvement Act builds on the tiered use framework developed in the Executive Order to create a hierarchy of uses. The standard, simple description contains three basic tiers, from highest to lowest priority: 1) conservation; 2) wildlife-dependent recreation; and 3) other uses.³⁶⁰ However, as I show in this subsection (and illustrate in Figure 2), a closer reading of the statute reveals a more nuanced hierarchy with five different categories of uses having somewhat different priorities.

Conservation, the over-arching mission of the System, is the maintenance and, where appropriate, restoration and enhancement of healthy populations of animals and plants.³⁶¹ Conservation occupies the apex of the hierarchy of uses unless displaced by a purpose or mandate from a refuge unit's establishment document.³⁶² In this respect, the top tier of the hierarchy of uses may itself be subdivided into two levels: a top sub-tier for establishment purposes, and a bottom sub-tier for the System conservation mission.

President Clinton, when he signed the Act, identified conservation as the "dominant" priority.³⁶³ Dominant-use schemes of public land management have historically received less attention from commentators than multiple-use approaches. However, the dominant (or primary) use model promoted in the early modern era by the Public Land Law Review Commission continues to thrive as an important paradigm.³⁶⁴ Professor Jan Laitos and Thomas Carr have recently asserted that recreation and preservation are becoming the dominant uses of all of the federal public lands, including those governed by the multiple-use, sustained-yield

359. National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4)(D).

360. See, e.g., COGGINS & GLICKSMAN, *supra* note 7, § 14A:5.

361. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(4).

362. *Id.* § 5(a)(4)(D).

363. Statement by President William J. Clinton Upon Signing H.R. 1420, 105th Cong. (1997), 1997 U.S.C.C.A.N. 1798-22.

364. UNITED STATES PUBLIC LAND LAW REVIEW COMMISSION, *supra* note 7, at 48-52; see also Steven E. Daniels, *Rethinking Dominant Use Management in the Forest-Planning Era*, 17 ENVTL. L. 483 (1987).

mission.³⁶⁵ Certainly this is true of the Refuge System where preservation has always been a principal use and where certain types of recreation have been elevated under the Improvement Act to priority status.

The 1997 Improvement Act actively promotes "wildlife-dependent" recreation uses, including hunting and fishing, subject to the substantive management criterion that they comply with the compatibility standard. "Wildlife-dependent recreation" is the same category that the 1996 Executive Order termed "priority general public uses."³⁶⁶ The list of activities defining this category differs only slightly, and insignificantly, between the Executive Order and the Improvement Act. Both include hunting, fishing, wildlife observation and photography, and environmental education.³⁶⁷ The Improvement Act adds environmental interpretation, but environmental interpretation is generally considered part of environmental education.³⁶⁸

An important semantic issue that causes confusion in refuge management is whether to term the individual refuge purposes and mission of the System "dominant uses." Before the 1996 Executive Order, hunting, fishing and other wildlife-dependent recreation were commonly described as "secondary" uses.³⁶⁹ This terminology links to the dominant-use idea by suggesting that the individual and systemic refuge purposes, which the compatibility criterion protects, were "primary" uses.

However, in the enactment and implementation of the 1997 Act, the Interior Department moved away from the conception of the mission and purposes as uses. Secretary of the Interior Bruce Babbitt, commenting on an earlier version of the 1997 Act, successfully encouraged Congress to distinguish between the conservation purpose of the System and wildlife-dependent recreation uses.³⁷⁰ Babbitt feared that the earlier bill, which

365. Jan G. Laitos and Thomas A. Carr, *The Transformation on Public Lands*, 26 *ECOLOGY L.Q.* 142 (1999); Jan G. Laitos and Thomas A. Carr, *The New Dominant Use Reality on Multiple Use Lands*, 44 *ROCKY MOUNTAIN MINERAL LAW INSTITUTE* 1-1 (1998).

366. Exec. Order No. 12,996, § 3(a), 61 *Fed. Reg.* 13,647, 13,647 (Mar. 25, 1996). Congress began considering a priority use category for wildlife-dependent recreation in a version of S.B. 823 discussed in S. REP. NO. 103-324 (1994). See also H.R. 1675, 104th Cong., §§ 5(a)(4)(G)-5(a)(4)(J) (1996). The U.S. Fish & Wildlife Service Manual uses the term "priority general public uses" to mean "wildlife-dependent recreation." Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 *Fed. Reg.* 62,484, 62,487 (Oct. 18, 2000).

367. Exec. Order No. 12,996 § 3(a), 61 *Fed. Reg.* at 13,647; National Wildlife Refuge Improvement Act of 1997 § 3(a)(2).

368. Doug Knapp, *The Relationship Between Environmental Interpretation and Environmental Education*, LEGACY: MAGAZINE OF THE NATIONAL ASSOCIATION OF INTERPRETATION, vol. 8, no. 3, at 10-13 (1997).

369. See, e.g., 1989 GAO REPORT, *supra* note 12; U.S. FISH & WILDLIFE SERVICE, COMPATIBILITY TASK GROUP, A REVIEW OF SECONDARY USES OCCURRING ON NATIONAL WILDLIFE REFUGES (1990).

370. *National Wildlife Refuge Improvement: Hearing on H.R. 511 and H.R. 512 before the Subcomm. on Fisheries Conservation, Wildlife and Oceans of the House Committee on Resources*,

categorized both as purposes, would provide a basis for legal challenges by wildlife-dependent recreationists complaining that their uses were impaired by other wildlife-dependent recreationists. He criticized this enlarged category of purposes as “scrambl[ing] the distinction between purpose and use.”³⁷¹ Actually, Babbitt’s real complaint was that the bill did not clearly subordinate wildlife-dependent recreation to conservation.³⁷² However, his means of expressing the dominant-subordinate use distinction as one between purpose and use has taken root in the Service’s policy implementing the designated uses hallmark.

Whether we call something a purpose or a use,³⁷³ the framework adopted in the 1997 Act clearly elevates conservation above wildlife-dependent recreation and provides no recourse to wildlife-dependent recreationists who find their activities impaired by other types of wildlife-dependent recreation.³⁷⁴ Nonetheless, I believe it is important to categorize conservation as an affirmative use to counter critics who regard nature protection as a lock-up that embalms public land.³⁷⁵ If we relegate conservation to a non-use status, we fail to appreciate that preserved land sustains many uses, such as ecosystem services, that provide real value to the nation.³⁷⁶ As the “dominant-use” moniker suggests, conservation lands *are* being used—by people, in fact—even if people are not present on the lands.

Separating the conservation functions from use categories supports the traditional, dualistic treatment of land as a passive entity, doing nothing until transformed by development, rather than as a functioning, productive system vulnerable to damage.³⁷⁷ Viewing habitat protection as non-use has legal consequences, such as the Idaho Supreme Court’s denial of water rights to wildlife refuges based on the notion that there is

105th Cong. 10 (1997) (Statement of Bruce Babbitt, Secretary of the Interior).

371. *Id.*

372. *Id.* at 9–13.

373. The terminology used by the U.S. Fish & Wildlife Service excludes “refuge management activities,” which are done to fulfill the mission or a refuge purpose, from the definition of “refuge use” as long as the activities do not generate commodities which can be sold or traded, such as hay or timber. 50 C.F.R. § 25.12 (2001).

374. The new compatibility regulation states that “in case of direct conflict between these priority public uses, the Refuge Manager should evaluate, among other things, which use most directly supports long-term attainment of refuge purposes and the System mission.” Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,490 (Oct. 18, 2000); *see also* 65 Fed. Reg. at 62,471.

375. *See, e.g.,* James R. Rasband, *Moving Forward: The Future of the Antiquities Act*, 21 J. LAND RESOURCES & ENVTL. L. 619, 619 (2001) (quoting Senator Wallace Bennett’s criticism of President Lyndon Johnson’s executive reservations of national monument lands in Utah).

376. *See* Robert L. Fischman, *The EPA’s NEPA Duties and Ecosystem Services*, 20 STAN. ENVTL. L.J. 497, 499–500, 502 (2001).

377. Professor Sax characterizes these two contrasting views of land in Joseph L. Sax, *Property Rights and the Economy of Nature: Understanding Lucas v. South Carolina Coastal Council*, 45 STAN. L. REV. 1433, 1442 (1993).

a dichotomy between conserving habitat for migratory birds and advancing the interests of people.³⁷⁸ The Refuge System should be at the forefront of educating the public and courts that refuge conservation is a use that works for people too.

Support for the Service's view that the mission of the System is not a "use" can be inferred from the 1966 Administration Act's exclusion of activities "performed by persons authorized to manage" System areas from the compatibility criterion.³⁷⁹ Therefore, the Service excludes "refuge management activities," which are conducted to fulfill a refuge purpose or the System mission, from the definition of refuge use.³⁸⁰ The Service defines a refuge use as a "recreational use," "refuge management economic activity," or some "other use."³⁸¹ So, the compatibility determination, which is a public process designed to ensure that the System's mission is not impeded by refuge uses, does not apply to "refuge management activities."³⁸² These excluded management activities include water level management, invasive species control, scientific monitoring, historic preservation activities, and routine maintenance.³⁸³ Water level management is a controversial issue in some refuges because of conflicts between habitat requirements and recreation demands.³⁸⁴ Without the public scrutiny afforded use approvals, Service refuge management activities may drift away from their core function to further the refuge purposes and mission. But, the issue of whether management activities ought to be subjected to the compatibility determination need not

378. U.S. v. State of Idaho, 23 P.3d 117, 128-29 (Idaho 2001); see *infra* note 643 and accompanying text for a discussion of the significance of this case for the Improvement Act's mandate to acquire water for refuges.

379. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4(c), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)). This provision of the 1966 Act is unchanged by the 1997 legislation. National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. §§ 668dd, 668ee (2000).

380. 50 C.F.R. § 25.12 (2001); Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,467-68. A federal district court upheld this U.S. Fish & Wildlife Service interpretation in *Fund for Animals v. Clark*, 27 F. Supp. 2d 8, 11 (D.D.C. 1998) (no compatibility determination necessary for U.S. Fish & Wildlife Service elk and bison feeding program in National Elk Refuge).

381. 50 C.F.R. § 25.12. "Other use" most likely would include oil development.

382. *Fund for Animals*, 27 F. Supp. 2d at 8, upheld this interpretation of the 1997 Act. The court endorsed the view that the statutory compatibility criterion applies only to "uses," and that all of the examples of uses provided in the legislation are "meant to be performed by third parties or the public." *Id.* at 11.

383. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,488 (Oct. 18, 2000).

384. For instance, the GAO found that maintaining water levels to facilitate boating at the Des Lacs refuge impaired wetland habitat conservation. See 1989 GAO REPORT, *supra* note 12, at 22. However, because boating is not a purpose of the System or the Des Lacs refuge, this resource management decision would fail to meet the Service's regulatory definition of a "refuge management activity." 50 C.F.R. § 25.12; Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,467-68.

constrain our understanding of the term “use.” Even if the Service recognized the purposes and mission as uses of refuges, it still could have exempted management activities from the ambit of the compatibility test.

Wildlife-dependent recreation is a lower priority use than conservation because it must be consistent with the conservation mission of the Improvement Act in order to be permitted. Any conflict between conservation and what the Service defines as a “refuge use”³⁸⁵ must be resolved in favor of conservation in the absence of contrary intent manifest in the establishment document. Figure 2 displays this subordination of wildlife-dependent recreation to, what I call, “primary uses.”

Wildlife-dependent uses *do* enjoy a higher priority than “other” non-conservation uses.³⁸⁶ The new Service compatibility policy, incorporated in the Fish & Wildlife Service Manual, states outright that “[w]here there are conflicts between priority [wildlife-dependent recreational] and non-priority public uses, priority public uses take precedence.”³⁸⁷ Because “other,” non-priority public uses include electricity transmission and oil/gas development,³⁸⁸ the recent Bush Administration national energy policy may drive an early round of conflicts and cases on the hierarchy of uses. These “other” uses are often called “secondary” uses by the Service today, but “tertiary,” or even in some cases “quaternary,” uses would be a more accurate term.

As Figure 2 illustrates, I categorize conservation as a primary use, and make the compatibility-conditioned wildlife-dependent recreation a secondary use. The tertiary uses must not only demonstrate compatibility with the primary uses of conservation and individual refuge purposes,

385. 50 C.F.R. § 25.12.

386. These “other” uses include grazing, oil and gas production, and electricity transmission. 143 CONG. REC. S9093 (1997). Many of these “other” uses are identified in the reports criticizing System management as the sources of environmental degradation. 1989 GAO REPORT, *supra* note 12, at 18, 20–21 (additional other uses include mining, off-road vehicle recreation, boating, waterskiing, and logging). Trapping is not included in the priority wildlife-dependent uses category; it is not a kind of hunting. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,458, 62,462 (Oct. 18, 2000). In fact, the Service intends to allow trapping only as part of a population management plan. Refuge Planning Policy Pursuant to the National Wildlife Refuge System Administration Act as amended by the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 33,892, 33,898 (May 25, 2000) (refuge planning policy).

387. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,490. “Priority public uses” is synonymous with wildlife-dependent recreational uses. *Id.*; see *supra* notes 366–368 and accompanying text.

388. Report of the National Energy Policy Development Group, *Reliable, Affordable, and Environmentally Sound Energy for America's Future* (2001), at <http://www.whitehouse.gov/energy/> (last visited Aug. 21, 2002). In addition to supporting drilling in the Arctic National Wildlife Refuge, the plan cites refuges as places where petroleum exploration and production can occur “in an environmentally sensitive manner.” *Id.* Forty-two national wildlife refuges currently allow exploration and production. *Id.*

Figure 2: Hierarchy of Refuge System Designated Uses

| | |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <p>Primary Uses (achieved, in part, through “refuge management activities,” e.g., water level management, invasive species control, routine maintenance)</p> | <p>1. Individual refuge purposes</p> <p>2. Conservation WHERE IT DOES NOT CONFLICT WITH INDIVIDUAL REFUGE PURPOSES</p> |
| <p>Secondary Uses</p> | <p>3. Wildlife-dependent recreation (Priority general public uses) (hunting, fishing, wildlife observation/photography, and environmental education/interp.)</p> <p>WHERE IT IS COMPATIBLE WITH PRIMARY USES</p> <ul style="list-style-type: none"> ▪ Reevaluation every 15 years ▪ Exemption from Recreation Act funding criterion ▪ Service mandate to promote |
| <p>Tertiary Uses</p> | <p>4. Other recreational uses (e.g., snowmobiling, boating, off-road vehicle use)</p> <p>WHERE IT IS COMPATIBLE WITH PRIMARY USES AND DOES NOT CONFLICT WITH SECONDARY USES</p> <ul style="list-style-type: none"> ▪ Reevaluation every 10 years |
| <p>Quaternary Uses</p> | <p>5. Refuge management economic activities (e.g., timber thinning, trapping, hay cropping)</p> <p>Economic uses of natural resources (“other” uses) (e.g., logging, grazing, oil/gas production, electricity transmission)</p> <p>WHERE IT IS COMPATIBLE WITH PRIMARY USES, DOES NOT CONFLICT WITH SECONDARY USES, AND CONTRIBUTES TO ATTAINING A PRIMARY USE</p> <ul style="list-style-type: none"> ▪ Reevaluation every 10 years |

Note: Non-economic refuge management activities (e.g., water level management, invasive species control, and scientific monitoring) are not considered uses.

they also must avoid conflict with the secondary wildlife-dependent recreational uses. The names for the categories of uses I define in the left column of Figure 2 are my own invention to make sense and bring order to the hierarchy of uses in refuge management; they are not terms used by the Service. However, the priority system they describe, indicated by the five-tier set of purposes and uses in the right column, is an accurate rendering of the current state of dominant-use law in the System.

The 1997 Improvement Act expresses the preference for wildlife-dependent recreational uses over other uses in five ways.³⁸⁹ First, the Improvement Act sets out a number of policies for the administration of the System that favor wildlife-dependent activities including:

- 1) “[C]ompatible wildlife-dependent recreational uses are the priority general public uses of the System and shall receive priority consideration in refuge planning and management;”³⁹⁰ and
- 2) compatible wildlife-dependent recreation should be “facilitated, subject to such restrictions or regulations as may be necessary, reasonable, and appropriate.”³⁹¹

Though not defined by the statute, the word “facilitated” conveys strong encouragement, but not a requirement, to permit wildlife-dependent uses if they are compatible. As Secretary Babbitt stated, “[t]he law will be whispering in the manager’s ear that she or he should look for ways to permit the use if the compatibility requirement can be met.”³⁹² By the same token, however, the legislative history recognizes that there will be occasions when, based on sound professional judgment, the manager will determine that such uses will be found to be incompatible and cannot be authorized.³⁹³

Though only policy declarations, these provisions highlight the consistent and repeated desire of Congress in the statute, legislative history, and prior bills, to clarify its view that hunting and fishing are generally consistent with the System’s conservation mission.³⁹⁴ This

389. Another important issue the Service will have to settle is how to resolve conflicts among the wildlife-dependent uses. The new compatibility regulation sensibly states that managers give priority to uses that “most positively contribute to the achievement of refuge purposes” and the System mission. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,471; *see also* Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,490 (“in case of direct conflict between these priority public uses, the Refuge Manager should evaluate, among other things, which use most directly supports long-term attainment of refuge purposes and the System mission”).

390. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(3)(C), 111 Stat. 1260.

391. *Id.* § 5(a)(3)(D).

392. H.R. REP. NO. 105-106, at 9 (1997).

393. *Id.*

394. Senator Kempthorne, one of the three co-sponsors of the Senate bill that became the Refuge Improvement Act, understood the priority public use provision to, “for the first

reflects, in part, the strength of hunting and fishing interests (and the state agencies they fund through license fees). They financed the acquisition of many refuges and wish to continue to use the refuges for their sports. The policy statements are important because at least one wildlife-dependent recreational activity, hunting, is not always associated with dominant-use conservation. The National Park Service, with a statutory conservation mission very similar to the Refuge System, even though it gives priority to public use, bans hunting from its units absent special legislation or unusual circumstances.³⁹⁵

Hunting and fishing are longstanding uses of refuges. Indeed, the Duck Stamp and other revenue sources derived from the hunting and fishing community helped acquire many refuge lands. Prioritizing wildlife-dependent uses recognizes this traditional relationship between the hunting and fishing constituency and the System. It also acknowledges the on-the-ground facts of existing activities of many visitors to the System. The Service permits hunting to occur on most refuges³⁹⁶ and courts routinely uphold Service decisions to expand hunting.³⁹⁷ This is the case despite the fact that the 1989 GAO Report identifies hunting as one of the uses that causes harm to refuges.³⁹⁸

Second, and more importantly, the Improvement Act includes mandates that, in administering the System, the Service shall:

- 1) "ensure that opportunities are provided within the System for compatible wildlife-dependent recreational uses;"³⁹⁹
- 2) "ensure that priority general public uses . . . receive enhanced

time . . . , establish hunting and fishing as priority uses on wildlife refuges." *Hearing on S. 1059 Before the Comm. on Env't and Pub. Works*, 105th Cong. 3 (1997).

395. 16 U.S.C. § 1 (2000) (establishing the purpose of the National Park System to "conserve the scenery and the natural and historic objects and the wild life therein and to provide for the enjoyment of the same in such manner and by such means as will leave them unimpaired for the enjoyment of future generations"). The Park Service prohibits hunting under its general authority to make regulations concerning uses of national park land. 36 C.F.R. § 2.2 (2001); see *National Rifle Ass'n v. Potter*, 628 F. Supp. 903 (D.D.C. 1986) (upholding the hunting ban).

396. A search in the Refuge System online public use database for refuge recreational profiles turned up 300 units open to hunting out of 520 total units. U.S. FISH & WILDLIFE SERVICE, *Where Can I Go Hunting?*, at <http://hunting.fws.gov/wherego.html> (last visited Oct. 18, 2002). This number is approximately consistent with the U.S. Fish & Wildlife Service Director's claim that there are 290 "public hunting programs" and 260 public fishing programs in refuges. DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at Director's Message (2000), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002). The Service states that 98% of the land in the System is open to the public for wildlife-dependent recreation. *Id.* at 56.

397. BEAN & ROWLAND, *supra* note 45, at 297.

398. 1989 GAO REPORT, *supra* note 12, at 20 (25% of refuge managers who have waterfowl hunting on their unit viewed the use as harmful).

399. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(I), 111 Stat. 1260.

consideration over other . . . uses in planning and management;⁴⁰⁰ and

3) “provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting.”⁴⁰¹

Again, though not absolute commands for wildlife-dependent recreation, these provisions stress their priority.⁴⁰² In particular, the third mandate reveals the unstated impetus behind much of the tiered use framework: the concern of sports hunters and fishers that wildlife refuges remain open to their activities. Indeed, the third mandate calls for increased opportunities. The Service has quantified this mandate by setting a performance review goal of increasing the number of compatible wildlife-dependent recreational visits to the System by twenty percent from the 1997 levels by 2005.⁴⁰³ This is a reversal of the Service direction urged in the 1976 comprehensive environmental impact statement (“EIS”), which called for a reduction in System recreation in order to free up resources for conservation programs.⁴⁰⁴ It is a confirmation that the Improvement Act increases pressure on the Service to boost recreational use of the System.⁴⁰⁵

The difference in the way the Service evaluates wildlife-dependent recreational uses and other uses in making compatibility determinations is another way in which these mandates for System administration express themselves in management decisions. Where there is insufficient information to document compatibility, the Service manual instructs refuge managers to deny the use unless it is in a wildlife-dependent

400. *Id.* § 5(a)(4)(J).

401. *Id.* § 5(a)(4)(K).

402. These mandates parallel closely some of the directives contained in the Executive Order, which originated the category of wildlife dependent recreational uses. Exec. Order No. 12,996, § 3(b)-(d), 61 Fed. Reg. 13,647, 13,647 (March 25, 1996). The new compatibility regulations describe how the Service will facilitate wildlife-dependent uses. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,471.

403. DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, STRATEGIC PLAN 2000–2005, at 43 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002); DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at 11 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002). This goal would result in an increase from 38.3 million visits to 41.4 million visits. DEPARTMENT OF THE INTERIOR, FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at 11 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002).

404. Compare DEPARTMENT OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at 11 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002) with 1976 FINAL EIS I-8 (discussed at *supra* note 26 and accompanying text).

405. See also Gergely et al., *supra* note 17, at 116.

recreation category. For those priority public uses, the refuge manager “should work with the proponent of the use to acquire the necessary information before finding the use not compatible based solely on insufficient available information.”⁴⁰⁶

Third, wildlife-dependent uses are favored over other uses by the schedule for review of use compatibility. The Improvement Act requires a reevaluation of the compatibility of all uses whenever conditions change significantly or significant new information arises regarding the effects of the use. Even if there is no significant change in conditions or new information, the Act requires the Service to reevaluate most existing uses at least every ten years to determine whether they are still compatible with the mission of the System.⁴⁰⁷ However, existing wildlife-dependent recreational uses must only be reevaluated at least every fifteen years, allowing their perpetuation over a longer term.⁴⁰⁸

Fourth, bolstering the Act’s mandates to provide and enhance wildlife-dependent activities, the Improvement Act requires that the Service prepare comprehensive resource management plans for each refuge. Although I will discuss planning in greater detail in subsection C below, it is important to highlight here that the statute requires each plan to include, among other things, “opportunities for compatible wildlife-dependent recreational uses.”⁴⁰⁹ Plans are not specifically required to include opportunities for other kinds of uses. Each refuge has to come up with something to say in its plan about opportunities for wildlife-dependent recreation and justify any lack of prospects.

Fifth, the 1997 statute repeals the 1962 Refuge Recreation Act requirement that the Service make a finding that funds exist to develop, operate, and maintain wildlife-dependent recreation. The Improvement Act states that “no other determinations or findings [except for the compatibility considerations in the Improvement Act] are required to be made by the refuge official under this Act or the Refuge Recreation Act for wildlife-dependent recreation to occur.”⁴¹⁰ Because the compatibility criterion in the Improvement Act duplicates the “not interfere with” criterion of the Recreation Act,⁴¹¹ it is only the budgetary analysis that the Improvement Act waives for priority uses. Nonwildlife-dependent recreation, such as snowmobiling or boating, however, must continue to

406. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,492 (Oct. 18, 2000).

407. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 6(a)(3)(B)(vii), 111 Stat. 1260; *see also* 50 C.F.R. § 25.21(h) (2001).

408. National Wildlife Refuge System Improvement Act of 1997 § 6(a)(3)(B)(viii); *see also* 50 C.F.R. § 25.21(f).

409. National Wildlife Refuge System Improvement Act of 1997 § 7(e)(2)(F).

410. *Id.* § 6(3)(A)(iii).

411. Refuge Recreation Act, 16 U.S.C. § 460k (2000).

meet the Recreation Act requirements. Therefore, for nonwildlife-dependent recreation only, the Service has a statutory mandate to determine that funds are available to develop, operate, and maintain the uses.⁴¹² It is important to note, however, that the Service includes the consideration of whether available resources can adequately manage a proposed use, including wildlife-dependent recreation, within its compatibility policy.⁴¹³ However, this element in administrative compatibility policy is weaker than the stark congressional command of the Recreation Act.

An additional category—"economic uses of the natural resources" of a refuge—occupies the lowest position in the Improvement Act's hierarchy. These uses, which include grazing, harvesting hay and stock feed, logging, farming, and removing a variety of natural products from the ground, face an additional requirement not applicable to other uses.⁴¹⁴ Even commercial operations facilitating approved programs on refuges, such as offering boats or guides for hire, constitute an economic use.⁴¹⁵ The Service may authorize these economic uses only where they contribute to the achievement of a refuge purpose or the System mission.⁴¹⁶ The Service compatibility regulations distinguish "refuge management economic activity," which is conducted by the Service (or an authorized agent) to fulfill a refuge purpose or System mission and results in the generation of a commodity, from other sorts of economic uses conducted by private parties.⁴¹⁷ However, the test for both types of economic activities comes down to a showing of some affirmative contribution to a refuge purpose or the System mission. Also, the economic uses may not conflict with wildlife-dependent recreation.⁴¹⁸ Because they face even greater hurdles to approval by the Service, I categorize these "economic" uses in Figure 2 as quaternary, subordinate even to the tertiary uses.

The studies of incompatible uses in the 1980s found nonwildlife-dependent uses to be the cause of many of the problems preventing the System from achieving conservation goals.⁴¹⁹ An alternative approach to creating a multi-level hierarchy would have banned nonwildlife-dependent uses entirely. That would have left the top priority of conservation and individual refuge purposes, followed only by wildlife-

412. *Id.*

413. 65 Fed. Reg. at 62,468; *see infra* notes 527–543 and accompanying text.

414. 50 C.F.R. § 29.1 (2001).

415. 50 C.F.R. § 29.1; Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,472.

416. 50 C.F.R. § 29.1.

417. 50 C.F.R. § 25.12; 50 C.F.R. § 29.1.

418. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,490.

419. 1989 GAO REPORT, *supra* note 12, at 18–21.

dependent recreation, where compatible. No other uses would be allowed on refuges. This was the thrust of the original House bill, ultimately amended to conform to the Senate approach, which eventually became the Improvement Act.⁴²⁰ By removing consideration of “other” uses from the Service’s discretion, Congress would have made it easier for the Service to defend locally unpopular actions.⁴²¹ Also, a legislative nonwildlife-dependent use ban would have solved the problem of Service control over destructive uses in refuges with divided management. For instance, on some refuges, jurisdictional arrangements with the Army Corps of Engineers give the U.S. Fish & Wildlife Service little if any authority to control harmful uses that may be associated with navigable waters adjoining or within refuge boundaries.⁴²² The Corps need not heed the Service, but it must abide by statutory proscriptions.

McGrail & Rowley v. Babbitt presents an interesting application of the preference rules governing commercial, or economic, uses, though it was not decided under the 1997 Act.⁴²³ In *McGrail & Rowley*, a federal district court upheld a Service denial of a permit to operate a commercial boat service to Boca Grande Key in the Key West National Wildlife Refuge. The applicant sought to bring tours of people to the island in a catamaran that would be anchored in deep water. “Passengers would wade ashore, advised to stay below the high tide mark.”⁴²⁴ Some would kayak around the island while others would be provided kites, paddleballs and frisbees for play in the water. The Service distinguished this application from another for which it had granted a permit on the basis that the other tour boat operator ran a program that was “passive and education oriented.”⁴²⁵ The refuge manager found that the unit lacked the resources to monitor and control the catamaran use.⁴²⁶

Though the new compatibility regulations exclude guiding, outfitting, or boat rental from the priority public use category,⁴²⁷ *McGrail & Rowley* illustrates how the Service can encourage prospective commercial users, like the catamaran operator in Key West, to alter their

420. H.R. 1420, 105th Cong. § 4 (1997).

421. Robert L. Fischman, *Endangered Species Conservation: What Should We Expect of Federal Agencies?*, 13 PUB. LAND L. REV. 1, 6 (1992) (citing YAFFEE, *supra* note 97, at 149).

422. 1989 GAO REPORT, *supra* note 12, at 31; *Review of the Management of the National Wildlife Refuge System: Joint Hearing*, *supra* note 181, at 96 (statement of David Olsen, Assistant Director for Refuges and Wildlife, U.S. Fish & Wildlife Service) (asserting that there are 40 refuges where the majority of acreage is under the primary control of the Bureau of Reclamation, the Corps of Engineers, or the Tennessee Valley Authority).

423. 986 F. Supp. 1386 (S.D. Fla. 1997).

424. *Id.* at 1390.

425. *Id.* at 1393 (quoting the refuge manager). The opinion does not specify which activities the “passive and education oriented” program included.

426. *Id.*

427. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,472.

commercial programs to support the wildlife-dependent recreational values. Environmental education, environmental interpretation, wildlife observation and photography, and fishing are all uses that fall in the wildlife-dependent recreation category. If the catamaran operator were to replace the frisbees, kites, and paddleballs with reels, underwater cameras, and a biologist intern, it would have a better case under the Act to compel the Service to grant a permit. In this respect, the use preferences create incentives for competition among commercial users to advance the purposes and preferred uses of refuges.

C. Comprehensive Planning

Few attributes of public land management legislation better characterize the modern era than comprehensive planning mandates. Beginning with the national forests in 1974 and 1976,⁴²⁸ and extending through legislation for BLM lands in 1976⁴²⁹ and national parks in 1978,⁴³⁰ Congress has required land management agencies to commit to writing long-term plans for resource use and conservation. Comprehensive planning prompts an agency to forecast and coordinate future demands and development. Ideally, planning establishes a basis for adaptive management. Comprehensive planning also provides the public with an opportunity to participate more effectively in the strategic decisions that drive project choices during the term of the plan. The public participation component of planning is important and discussed in section E, below.

Comprehensive planning for public lands generally occurs on two different scales.⁴³¹ First, agencies may plan system-wide. Refuge System planning has occurred sporadically under the National Environmental Policy Act ("NEPA"), which requires that federal agencies use a "systematic, interdisciplinary approach" in planning, and prepare environmental impact statements for major actions significantly affecting the quality of the human environment.⁴³² For instance, the Service prepared an impact statement in 1976 to plan for and evaluate the

428. Forest and Rangeland Renewable Resources Planning Act of 1974, Pub. L. No. 93-378, 88 Stat. 476 (1974), amended by National Forest Management Act of 1976, Pub. L. No. 94-588, 90 Stat. 2949 (1976) (codified as amended at 16 U.S.C. §§ 160-1614 (2000)).

429. FLMPLA, 43 U.S.C. §§ 1701-02 (1994 & Supp. V 1999).

430. E.g., Redwood Amendment Act of 1978, Pub. L. No. 95-250, 92 Stat. 163. The NPS requirement to prepare "general management plans" is now codified at 16 U.S.C. § 1a-7 (2000).

431. In addition to national and unit-level planning, federal land management agencies also occasionally engage in regional planning. See, e.g., U.S. Forest Service, *Sierra Nevada Framework* (2001), at <http://www.r5.fs.fed.us/snfc> (last visited Sept. 21, 2002) (described in *Restoring the Range of Light*, HIGH COUNTRY NEWS, Aug. 27, 2001); Lawrence Ruth, *Changing Course: Conservation and Controversy in the National Forests of the Sierra Nevada*, in A VISION FOR THE U.S. FOREST SERVICE 213, 232-34).

432. 42 U.S.C. §§ 4332(2)(A), (C) (1994).

direction of the System over the next ten years.⁴³³ Although the NEPA mandate to conduct an interdisciplinary analysis when planning is strong, its mandate to engage in long-term planning is difficult to enforce and often ignored.⁴³⁴ NEPA remains significant, however, as a partner with authorizing statutes in requiring analysis of alternatives.⁴³⁵

The national forests are the only public lands system with a system-wide planning requirement in its organic legislation. The Forest and Rangeland Renewable Resources Planning Act of 1974 (commonly referred to as the "Resources Planning Act," or "RPA") requires, among other studies and plans, that the Forest Service prepare periodic five-year programs, based on decennial assessments, to plan for "protection, management, and development of the National Forest System."⁴³⁶ However, even this specific system-wide planning mandate has failed to chart a course that the agency and Congress can agree to follow. Though the Forest Service continues its assessment activities, Congress lately has blocked the agency from preparing the five-year plans.⁴³⁷

The Improvement Act manifests the recent trend to downplay or ignore system-wide planning. Instead of formal plans, the Service articulates systemic or national goals in such documents as the U.S. Fish & Wildlife Service Manual, the North American Waterfowl Management Plan, and several other "vision" policies.⁴³⁸ Strategic plans, required by

433. 1976 FINAL EIS, *supra* note 26. A 1994 Senate Committee Report described the Service's subsequent attempts to engage in system-wide planning:

In February 1986, the USFWS published its notice of intent to develop a System plan and EIS. A draft EIS was released on the management of the Refuge System in December 1988. Following its release, the USFWS received many comments questioning whether the draft EIS fully complied with the provisions of NEPA. As a result, the Service withdrew the document and prepared a new Plan/EIS addressing the management needs of the System through the year 2003 (the centennial of the establishment of the first national wildlife refuge) . . . The USFWS released a new draft Plan/EIS in March 1993 under the title "Refuges 2003—A Plan for the Future of the National Wildlife Refuge System."

S. REP. NO. 103-324 (1994); *see also* LOOMIS, *supra* note 290, at 363 (1993); David E. Brown, *Wildlife Refuges Have Room for Everything But . . . Wildlife*, HIGH COUNTRY NEWS, Feb. 27, 1989, at 6. The Service never issued a final Refuges 2003 plan.

434. 42 U.S.C. §§ 4332(2)(A), (C)(4), (F); 4341(5); *see* COUNCIL ON ENVIRONMENTAL QUALITY, THE NATIONAL ENVIRONMENTAL PROTECTION ACT: A STUDY OF ITS EFFECTIVENESS AFTER TWENTY-FIVE YEARS 11-12 (1997); James McElfish, *Back to the Future*, ENVIRONMENTAL FORUM, Sept./Oct. 1995, at 14, 17-18.

435. 42 U.S.C. § 4332(2)(C)(iii), (E).

436. 16 U.S.C. § 1602 (2000). The Forest Service produced RPA program plans in 1979, 1989, and 2000. USDA Forest Service, *The RPA Assessment: Past, Present, and Future*, at <http://svinet2.fs.fed.us/pl/rpa/what.htm> (last visited Aug. 19, 2002).

437. *See, e.g.*, Department of the Interior and Related Agencies Appropriations Act, 2001 § 115, 16 U.S.C. § 460 bb-3nt (2000); Department of the Interior and Related Agencies Appropriations Act, 1998, Pub. L. No. 105-83, § 333, 111 Stat. 1543, 1601 (1997).

438. *See, e.g.*, 65 Fed. Reg. 33,892, 33,907 (May 25, 2000), U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 1.7(A), available at <http://policy.fws.gov/602fw1.htm> (last visited Aug. 21, 2002) (citing a variety of national policies); Department of the Interior, U.S. FISH & WILDLIFE

the Government Performance and Results Act, must contain specific benchmarks for measuring progress toward long-term, programmatic goals.⁴³⁹ These plans, discussed in the previous section,⁴⁴⁰ are the most important current engines for system-wide planning.⁴⁴¹

The second type of comprehensive planning occurs at the unit level. Unit level resource management planning is common and has played an important role in public land management legislation since 1976, when the National Forest Management Act and Federal Land Policy and Management Act required unit-level planning for national forests and BLM districts, respectively. Congress required the National Park Service to prepare general management plans for national park units in 1978, and even required the U.S. Fish & Wildlife Service to prepare refuge plans for the Alaska units in the 1980 ANILCA.⁴⁴² Therefore, the 1997 Act closes an important gap in public land management by requiring unit-level comprehensive resource planning for all refuges.⁴⁴³ The Service excludes from its comprehensive planning process state-managed "coordination areas," though they are part of the Refuge System.⁴⁴⁴

SERVICE, STRATEGIC PLAN 2000–2005, available at <http://planning.fws.gov/> (last visited Aug. 21, 2002).

439. Government Performance and Results Act of 1993 § 3, 5 U.S.C. § 306(a)(4) (requiring the inclusion of performance goals in plans); 31 U.S.C. § 1115(a) (2000) (requiring performance goals to be specific and measurable).

440. See *supra* notes 326–328 and accompanying text.

441. In addition, Congress recently required the Service to report on long-term plans to address priority operation, maintenance, and construction needs in the System. U.S. Fish & Wildlife Programs Improvement and National Wildlife Refuge System Centennial Act of 2000 § 304(a), 16 U.S.C. § 669 (2000). This report, however, will duplicate some of the material under the goal of "stewardship of U.S. Fish & Wildlife Service facilities" contained in the GPRR strategic plans. Department of the Interior, U.S. FISH & WILDLIFE SERVICE, STRATEGIC PLAN 2000–2005, at 37 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002); Department of the Interior, U.S. FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at 46–48 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002).

442. Alaska National Interest Lands Conservation Act § 304(g), 16 U.S.C. § 3101 (2000); see *supra* notes 165–173 and accompanying text for a discussion of the planning provisions of ANILCA. Also, some refuges outside of Alaska were required to prepare unit plans under their establishment documents. See, e.g., Grays Harbor National Wildlife Refuge Act § 5(c), 16 U.S.C. § 668dd nt (1988) (establishing Grays Harbor National Wildlife Refuge); Minnesota Valley National Wildlife Refuge Act, Pub. L. No. 94–466, § 6(a), 90 Stat. 1992, 1994 (1976).

443. Beginning in the late 1970s, the Service began to develop guidelines for refuge planning and created a section in the Refuge Manual on master planning. LOOMIS, *supra* note 290, at 364. However, application of and compliance with national guidelines remained decentralized. *Id.*; H.R. REP. NO. 105–106, at 14 (1997). Although these administrative guidelines covered both plan procedure and content in greater detail than the Improvement Act, they lacked the binding power of statute and did not mandate a term of years after which plans would need revision. LOOMIS, *supra* note 290, at 365–73.

444. Refuge Planning Policy Pursuant to the National Wildlife Refuge System Administration Act as Amended by the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 33,892, 33,906 (May 25, 2000), U.S. FISH & WILDLIFE SERVICE MANUAL 602 FW 1.6(F), available at <http://policy.fws.gov/602fw1.html> (last visited Sept. 10, 2002); see *supra*

Unit-level, comprehensive planning includes a description of the important resources in the unit, the uses currently occurring in the unit, management zones within the unit that will be designated for special conservation practices or human uses, development (including recreation) opportunities in the plan, environmental consequences of the plan, and (as compelled by NEPA) a range of alternative management regimes and their effects on the environment.⁴⁴⁵ The Improvement Act implements the mandate through a number of specific provisions that apply to all refuges not covered by ANILCA or by planning requirements in their establishment documents.⁴⁴⁶ In order to ensure that all refuge units in the System align site-specific goals with the conservation mission, each unit plan describes the desired future conditions on the refuge.⁴⁴⁷ This should provide a target for long-term management.

Following the model established by the NFMA, the Improvement Act requires the Service to prepare a “comprehensive conservation plan” for each unit within 15 years and to update each plan every 15 years, or sooner if conditions change significantly.⁴⁴⁸ In contrast, the Alaska refuges’ comprehensive conservation plans, the BLM resource management plans and the NPS general management plans have no statutory schedule for periodic revision after a certain number of years have elapsed. The Improvement Act’s action-forcing deadline for revision limits agency latitude to focus resources where the planning challenges are greatest, but also makes it more difficult for the agency to skirt controversies. Also, with statutory expiration dates for plans, Congress may not withhold adequate planning monies without resulting in flagrant violations of statutory mandates. Administratively, the Service has strengthened the ANILCA planning requirement by putting the Alaska refuges on the same 15-year revision schedule as the rest of the

notes 21–23 and accompanying text, describing coordination areas, which are federally owned lands managed by states.

445. 42 U.S.C. § 4332(2)(C)(iii), (E) (1994).

446. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 7(e)(1)(A), 111 Stat. 1257. Recall that ANILCA requires comprehensive refuge plans for all Alaska units. 16 U.S.C. § 3101 (2000). Also, individual requirements of the Improvement Act’s planning provision would not apply where they conflict with mandates for individual refuges in establishment documents. National Wildlife Refuge System Improvement Act of 1997 § 7(e)(1)(A).

447. Refuge Planning Policy Pursuant to the National Wildlife Refuge System Administration Act as Amended, 65 Fed. Reg. at 33,912 (planning policy in U.S. FISH & WILDLIFE SERVICE MANUAL 602 FW 3.4(C)(1)(g)), available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002); Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000) (definition of comprehensive conservation plan in compatibility policy in U.S. FISH & WILDLIFE SERVICE MANUAL 603 FW 2.6(C)), available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 10, 2002).

448. National Wildlife Refuge System Improvement Act of 1997 § 7(e)(1)(A)(iv), 7(E).

System.⁴⁴⁹

Once approved, the unit plan becomes a source of management requirements that bind the agency.⁴⁵⁰ The Service would, barring emergency, have to modify a plan before it could approve an action that conflicts with the plan.⁴⁵¹ The Service, therefore, is bound by two consistency standards: 1) the statutory mandate to allow only uses consistent with the conservation mission of the System and individual refuge purposes, and 2) the requirement that management actions comply with the parameters established by the refuge plan. In this way, a plan adds site-specific substantive management mandates to the broader ones contained in the Act and discussed below. This dual source of management standards has proved to be an important feature in the NFMA framework for citizens seeking judicial review of activities in the National Forest System and promises to be important for the Refuge System as well.⁴⁵²

The Improvement Act sets out a typical set of procedural and content requirements for the comprehensive conservation plans. The procedural requirements add little to the existing mandates of NEPA and the Administrative Procedure Act. They include:

- 1) consultation with federal, state, local, and private landowners and relevant state conservation agencies;⁴⁵³
- 2) coordination with relevant state conservation plans;⁴⁵⁴ and
- 3) opportunity for the public to participate in the plan development.⁴⁵⁵

Like agency regulations and EISs, conservation plans are first published as drafts for public comment and then republished in final form after the agency has considered the comments.⁴⁵⁶ The U.S. Fish & Wildlife Service policy implementing its planning mandate fleshes out the details of the process.⁴⁵⁷ Compatibility determinations for all anticipated

449. U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 3.2 & 3.4(C)(8)(B), available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002).

450. Once the Service approves a plan, it must manage the refuge consistently with the plan. National Wildlife Refuge System Improvement Act of 1997 § 7(e)(1)(E).

451. *Id.* § 8(a).

452. 16 U.S.C. § 1604(i) (2000); see, e.g., *Sierra Club v. Martin*, 168 F.3d 1 (11th Cir. 1999).

453. National Wildlife Refuge System Improvement Act of 1997 § 7(e)(3)(A).

454. *Id.* § 7(e)(3)(B).

455. *Id.* § 7(e)(4).

456. Typically, a draft EIS will accompany a draft plan, and a final EIS will accompany the final plan.

457. Comprehensive conservation planning consists of eight steps: preplan; initiate public involvement and scoping; review vision statement and goals and determine significant issues; develop and analyze alternatives; prepare draft plan and NEPA document; prepare and adopt final plan; implement plan, monitor, and evaluate; and review and revise plan. 65 Fed. Reg. 33,892, 33,910–916 (May 25, 2000); U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 3.4, available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002). The Service will tier “step-down management plans” to comprehensive conservation plans for more specific

and current uses are folded into the planning efforts.⁴⁵⁸ Though the Service employs scoping⁴⁵⁹ for all comprehensive conservation plans, it does not commit to preparing EISs for all plans.⁴⁶⁰ This may prove to be a weakness of the comprehensive planning process. As the Park Service discovered years ago when it attempted to couple general management plans with environmental assessments,⁴⁶¹ the Fish & Wildlife Service will better comply with NEPA and its organic mandate if the U.S. Fish & Wildlife Service prepares EISs for all comprehensive conservation plans.

The content requirements for comprehensive conservation plans are generally unremarkable. With the exception of two specific mandates related to visitor use of the refuges, the statutory content requirements are all topics that NEPA requires be analyzed and discussed in the EIS accompanying a comprehensive plan. The specific visitor use mandates require identification and description of:

- 1) areas “suitable for use as administrative sites or visitor facilities;”⁴⁶² and
- 2) “opportunities for compatible wildlife-dependent recreational uses.”⁴⁶³

These specific content requirements distort the unifying effect of planning to coordinate units to achieve the larger System mission. Managers concentrating on meeting the operative mandates risk losing sight of the tasks necessary to conserve the ecological resources of the System. To best implement the mission, Congress should have balanced these specific facility and recreation location identification mandates with equally detailed requirements to identify and describe affirmative opportunities for ecological enhancement and restoration. Instead, the

implementation programs, as needed. Such programs may include pest management, hunting, special area management, and pollution control. 65 Fed. Reg. at 33,918–919; U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 4, available at <http://policy.fws.gov/602fw4.html> (last visited Sept. 10, 2002).

458. 65 Fed. Reg. at 33,913; U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 3.4(C)(5)(b), available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002).

459. Scoping is a term originating in the Council on Environmental Quality regulations implementing NEPA. 40 C.F.R. § 1501.7 (2002). It is “an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed” plan. *Id.*

460. 65 Fed. Reg. at 33,912, U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 3.4(C)(2), available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002).

461. After citizens challenged the general management plan for North Cascades National Park, which the NPS prepared with a finding of no significant impact accompanied with an environmental assessment, the NPS changed its planning policy to require EISs for all general management plans. Jeanne Porges Thompson, *Steshkin, Washington: An Analysis of National Park Service Land Acquisition and Management 25 Years After Establishment of the Lake Chelan National Recreation*, 9 J. ENVTL. L. & LITIG. 215, 221 (1994).

462. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105–57, § 7(e)(2)(D), 111 Stat. 1260.

463. *Id.* § 7(e)(2)(F).

Improvement Act requires only that the plans describe significant adverse ecological effects and actions necessary to mitigate those effects. This merely duplicates what NEPA would require in an EIS.⁴⁶⁴ The affirmative content requirement in ANILCA, mandating specific conservation programs in plans,⁴⁶⁵ would have better linked the new planning provisions to the new Refuge System mission. Moreover, imperiled species reintroduction programs ought to be a specific category addressed in planning. Certainly, the Service may take (and has taken) on these tasks in the implementing policy for planning, but a mandate from Congress makes a stronger impact.⁴⁶⁶ The content requirements reflect an overall disparity in the Act between the overarching conservation mission and the focus of the detailed mandates on wildlife-dependent recreation.

D. Substantive Management Criteria

In addition to the standards for management established in the individual comprehensive conservation plans, there are also statutory criteria that bind agency administration of refuge resources. A substantive management criterion is a binding mandate from Congress to fulfill a specific statutory objective. The objective operates to limit resource management discretion.

The criteria help shape plans but apply to refuge activities irrespective of the plans. A specific management action, even if consistent with a plan, may still run afoul of the Improvement Act if it would violate a substantive management criterion.⁴⁶⁷ Therefore, along with the planning mandate that will apply them, the substantive management criteria will effect the greatest changes in Refuge System management. The substantive management criteria include compatibility; maintenance of biological integrity, diversity, and environmental health; acquisition of sufficient water rights; biological monitoring; and a general conservation stewardship mandate.⁴⁶⁸

The criteria are also important because they will be footholds for litigation over management of the System.⁴⁶⁹ Given the tradition of

464. 42 U.S.C. § 4332(2)(C) (1994); 40 C.F.R. § 1502.16 (2002).

465. ANILCA § 304(g)(3), 16 U.S.C. § 3101 (2000).

466. The Service's policy governing the content of plans counteracts somewhat the imbalance of the statute in detailing numerous categories that plans must address. 65 Fed. Reg. 33,892, 33,917-918 (May 25, 2000); U.S. FISH & WILDLIFE SERVICE MANUAL 602 FW 3, 4, available at <http://policy.fws.gov/ser600.html>. (last visited Sept. 10, 2002).

467. The U.S. Fish & Wildlife Service substantive management criteria apply generally to the U.S. Fish & Wildlife Service "[i]n administering the System." National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4).

468. *Id.*

469. At the hearing for S. 1059, the bill that became the Improvement Act, Secretary Babbitt (himself a lawyer) expressed the view that the compatibility standard would be judicially enforceable. *National Wildlife Refuge System Improvement Act of 1997: Hearing before the*

deference to the proprietary discretion of federal land management agencies, these substantive footholds are crucial in spurring courts to review federal resource management decisions. This is illustrated by the relative success plaintiffs have experienced challenging national forest management under the NFMA, compared to BLM land or national park management.⁴⁷⁰ Because the NFMA contains more extensive substantive criteria than the organic acts for the BLM and NPS, it serves as a foothold for effective court challenges.⁴⁷¹ The ability to litigate resource management issues also serves as a prophylactic, preventing an agency from disregarding the position of interested parties.

The substantive criteria in the Improvement Act are more specific than those for the National Park System or BLM lands. They are even more specific than many in the NFMA, though no single Improvement Act criterion is as specific as the NFMA strictures on timber management.⁴⁷² The greater statutory detail and more binding management prescriptions in the 1997 Act, as compared with earlier organic legislation, reflects Congress' greater interest in controlling public land management. This strengthening of legislative mandates at the expense of agency discretion in public land administration parallels

Senate Comm. on Env't and Pub. Works on S. 1059, 105th Cong. 9, 13 (1997). The House committee report is unrealistically optimistic in expecting that the Improvement Act "will diminish the likelihood of future litigation by providing a statutory compatibility standard" H.R. REP. NO. 105-106, at 4 (1997).

470. While courts have overturned BLM and NPS management actions, it has usually been for violations of statutes, such as the Endangered Species Act or the National Environmental Policy Act, other than the applicable organic acts. *See, e.g., Lane Co. v. Jamison*, 958 F.2d 290 (9th Cir. 1992) (proposed BLM land management would violate the ESA); *Sierra Club v. Lujan*, 716 F. Supp. 1289 (D. Ariz. 1989) (proposed new NPS project would violate NEPA).

471. The substantive mandates of the NFMA, e.g. the requirement that "timber will be harvested on National Forest lands only where" the lands will be restocked in 5 years, 16 U.S.C. § 1604(3)(E) (2000), have served as the basis for judicial remands of national forest management decisions. *See, e.g. Citizens for Env'tl. Quality v. U.S.*, 731 F. Supp. 970 (D. Colo. 1989); *Sierra Club v. Cargill*, 732 F. Supp. 1095 (D. Colo. 1990); *Curry v. U.S. Forest Service*, 988 F. Supp. 541 (W.D. Pa. 1997). Judicial remands of comprehensive unit plans occur less often today because of the Court's 1998 ripeness decision with respect to national forest comprehensive plans. *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726 (1998). Nonetheless, courts will review plans when plaintiffs challenge specific actions authorized by the plan. The NFMA specific substantive requirements contrast with the NPS's Organic Act, which provides a rather vague mandate "to conserve the scenery and the natural and historic objects and the wildlife therein and to provide for the enjoyment of the same in such manner . . . as will leave them unimpaired for future generations." 16 U.S.C. § 1 (2000). Similarly, FLPMA of 1976, which provides the comprehensive management provisions for the BLM, merely offers a general policy goal of "protecting quality of scientific, scenic, historical, ecological, environmental . . . values that will . . . preserve and protect . . . certain public lands in their natural condition." 43 U.S.C. § 1701(a)(8) (1994 & 1999 Supp. V). Even the NFMA standards, however, provide limited restrictions on agency discretion. *See Federico Cheever, Four Failed Forest Standards: What We Can Learn from the History of the National Forest Management Act's Sustainable Timber Management Provisions*, 77 OR. L. REV. 601 (1999).

472. 16 U.S.C. § 1604 (2000).

the contemporaneous trend toward greater statutory detail in pollution control law.⁴⁷³

The Service has now begun to implement the 1997 Improvement Act's substantive criteria through revisions to the U.S. Fish & Wildlife Service manual. These manual revisions are sometimes called policies and, with the exception of the compatibility guidelines, are not promulgated as regulations. Nonetheless, they are promulgated through a notice and comment procedure in the Federal Register.

The most innovative conservation guidelines to emerge from the Improvement Act have been the Service's policy implementing the compatibility, and biological integrity, diversity, and environmental health criteria. As with the Forest Service's 2000 planning regulations, which broke new ground in applying conservation biology to federal lands management,⁴⁷⁴ the U.S. Fish & Wildlife Service policy signals the next wave of conservation management. In particular, the policy provisions prohibiting habitat fragmentation⁴⁷⁵ and requiring managers to respond to external threats to refuges⁴⁷⁶ now stand at the forefront of protective public land administration.

This subsection analyzes the five substantive criteria that I have distilled from the Improvement Act. The Act itself does not particularly highlight these five provisions, with the exception of the compatibility standard. However, I have chosen to focus on these criteria because of both their quality of binding the Service and their substantive contribution to the overall conservation mission of the System. The Service has issued detailed interpretations for most aspects of the five substantive criteria. In some cases, the statutory criteria await further legal developments to ascertain their meaning.

Subsection 1 analyzes the components of the compatibility standard, the keystone concept of dominant-use management. In large part because of the critical reports described in section I(F), *supra*, the Improvement Act stresses the importance of compatibility. Subsection 2 explores the most innovative, and potentially far-reaching, criterion, the mandate to maintain biological integrity, diversity, and environmental health. Subsection 3 explains the significance of the Service's new duty to acquire water rights for refuges. Subsection 4 looks at the obligation to monitor

473. Robert L. Fischman, *The Problem of Statutory Detail in Nat'l Park Establishment Legislation and Its Relationship to Pollution Control Law*, 74 DEN. U. L. REV. 779 (1997).

474. National Forest System Land and Resource Management Planning, 65 Fed. Reg. 67,514 (Nov. 9, 2000); *see infra* notes 620–627 and accompanying text.

475. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000); *see infra* notes 510, 525 and accompanying text.

476. Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. 3,810, 3,822 (Jan. 16, 2001); *see infra* notes 608–619 and accompanying text.

wildlife, an issue that has sparked great controversy when applied through other statutes. Finally, subsection 5 describes the vague, affirmative stewardship requirement.

1. *The Compatibility Standard*

The compatibility standard refers to the requirement that the Service “not initiate or permit a new use of a refuge or expand, renew, or extend an existing use of a refuge, unless the Secretary has determined that the use is a compatible use.”⁴⁷⁷ The legislative origins of compatibility date to at least 1945, when Congress passed appropriations for “facilities incident to such public recreational uses of wildlife refuges as are not inconsistent with the primary purposes of such refuges.”⁴⁷⁸ Congress has required the Service to make individual determinations of compatibility for all recreational uses since the 1962 Recreation Act.⁴⁷⁹ The 1966 Refuge Administration Act broadened the scope of uses subject to the compatibility standard through the authorization of general use regulations, but failed to require individual determinations.⁴⁸⁰ The 1997 law borrows from the strength of both prior statutes: it requires *individual determinations* of compatibility for *all* non-primary uses of the Refuge System.⁴⁸¹ In addition, it adds the conservation mission to the particular refuge establishment purposes as the touchstone for determining what uses may be allowed in refuges.

A compatible use is one that, “in the sound professional judgment of the [U.S. Fish & Wildlife Service,] will not materially interfere with or detract from the fulfillment of the mission of the System or the purposes of the refuge.”⁴⁸² The three important elements of this statutory

477. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 6(3)(a)(i), 111 Stat. 1257.

478. Act of July 3, 1945, ch. 262, 59 Stat. 357; Miscellaneous Fish and Wildlife Legislation: *Hearing on H.R. 1171 Before the Subcomm. on Fisheries and Wildlife Conservation of the Comm. on Merchant Marine and Fisheries*, 87th Cong. 57 (1961) (statement of Daniel Janzen, Director, Bureau of Sport Fisheries and Wildlife, quoting from an un-cited appropriations act). Congress had earlier applied the compatibility principle to particular refuges, as opposed to system-wide. *See, e.g.*, Act of April 21, 1910, ch. 183, 36 Stat. 326 (authorizing killing of seals on the Pribilof Islands where it is “not inconsistent” with the preservation of the seal herd).

479. Refuge Recreation Act, Pub. L. No. 87-714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k-k(4) (2000)); *see supra* notes 88–107 and accompanying text.

480. National Wildlife Refuge System Improvement Act of 1997 § 6; *see supra* notes 137–153 and accompanying text.

481. *Id.* § 6.

482. *Id.* § 5(1). The House bill originally limited compatible uses to those that are wildlife-dependent. However, after the Senate adopted language that broadened the definition to include wildlife-dependent *and* other uses, the House endorsed the Senate approach. *See National Wildlife Refuge System Improvement Act of 1997: Hearing before the Comm. on Env't and Pub. Works U.S. S. on S. 1059*, 105th Cong. 9, 2 (1997). Other uses may include grazing, oil

definition, taken from the administrative interpretation the Service had long been using, are: the extent of discretion afforded the Service in applying "sound professional judgment," the meaning of "not materially interfere with or detract from," and the applicability of the compatibility standard to both the systemic mission and the establishment purposes of the refuge. I explore, in detail, each of these three elements in subsections below.

The compatibility standard is important because it is the key mechanism to ensure that the conservation mission of the System effects real change in the refuges. For instance, the Service policy finding incompatible all uses that managers "reasonably may anticipate to reduce the quality or quantity or fragment habitats" on a refuge will bolster conservation efforts by ensuring that ecosystems supporting wildlife do not degrade through permitted uses.⁴⁸³

Courts already have called into question whether uses such as docking facilities, roads, canals, airstrips, utilities, and pipelines in the Yukon Delta National Wildlife Refuge,⁴⁸⁴ an oil support facility in the Alaska Maritime National Wildlife Refuge,⁴⁸⁵ and permissive boating and waterskiing regulations in Ruby Lake National Wildlife Refuge⁴⁸⁶ are compatible with individual refuge purposes. The new Refuge System mission will likely constrict further the range of compatible activities.

The compatibility standard is also important because Congress enacted the Improvement Act largely to respond to reports that incompatible uses were a chief threat to the Refuge System.⁴⁸⁷ Nonetheless, uses meeting the compatibility standard are not guaranteed a place in the System. Compatibility is a necessary but not sufficient condition for allowing a use.⁴⁸⁸

To understand the effectiveness of the compatibility standard, one

and gas production, and electricity transmission. 143 CONG. REC. S9093 (1997).

483. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000); see *supra* Part III(A) on the meaning of the conservation mandate.

484. National Audubon Soc'y v. Hodel, 606 F. Supp. 825, 838 (D. Alaska 1984).

485. *Id.* at 842.

486. Defenders of Wildlife v. Andrus, 455 F. Supp. 446, 449 (D.D.C. 1978).

487. 1989 GAO REPORT, *supra* note 12; National Wildlife Refuge System Improvement Act of 1997: Hearing before the Comm. on Env't and Pub. Works U.S. S. on S. 1059, 105th Cong. 22 (1997) (comment by Senator Chafee, Chairman of the Committee).

488. "[A] determination of compatibility must be made by the USFWS prior to permitting an activity to occur, but a determination of compatibility does not require that a particular proposed use be permitted." H.R. REP. NO. 105-106, at 13 (1997); see also Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,468. In order to determine which compatible uses should be permitted in a refuge, the Service is preparing a policy on "appropriate refuge uses." Draft Appropriate Refuge Uses Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 66 Fed. Reg. 3,673 (Jan. 16, 2001). It is likely that the "appropriate" use test will screen out some uses before they are evaluated for compatibility. *Id.*

must consider two issues. First, the scope of application of the standard is important. Even the most stringent management criterion will not improve management unless applied to a wide range of activities. Second, considering the means by which the standard operates, when applied, is important to determine how the criterion will shape resource management. This subsection will address these two issues before considering the key elements of the actual compatibility test.

Though the vast majority of uses in the Refuge System are subject to the compatibility test, not all are. Like comprehensive conservation planning, compatibility determinations do not apply to management of coordination areas, which are managed by the states, even though these units are part of the System.⁴⁸⁹ Further, as discussed above, “refuge management activities,” such as water level maintenance, are excluded from the compatibility test. In contrast, refuge management activities that generate a commodity which can be sold or traded, such as farming, grazing, haying, timbering, and trapping, *are* included in the definition of refuge uses, the domain to which compatibility determinations apply.⁴⁹⁰

The compatibility criterion also does not apply to military overflights or “activities authorized, funded, or conducted by” a federal agency other than the U.S. Fish & Wildlife Service that has “primary jurisdiction over a refuge or portion of a refuge, if the management of those activities is in accordance with a memorandum of understanding between” the Service and the other agency.⁴⁹¹ Conflicts arising from these refuges where other agencies have shared management authority or where the military conducts airborne exercises continue to raise conservation concerns.⁴⁹² In its influential 1989 report, the General Accounting Office listed overflights as one of the five activities most harmful to the refuges.⁴⁹³ So, this exception may also prove to be a significant loophole for uses that thwart the System mission.

Second, aside from the scope of its application, there are serious operational problems with the emphasis on compatibility as a management mandate. Compatibility tends to divert management focus from affirmative initiatives designed to advance the System’s conservation mission. Instead, refuge management attention focuses reactively on the prediction and mitigation of impacts from allowable uses. The conservation stewardship mandate, discussed below, shoulders

489. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,458, 62,459, 62,480 (Oct. 18, 2000).

490. *Id.* at 62,462; *see supra* notes 379–384 and 409–422.

491. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105–57, § 6(3)(4), 111 Stat. 1260.

492. 1989 GAO REPORT, *supra* note 12, at 30.

493. 1989 GAO REPORT, *supra* note 12, at 21–23; *see supra* notes 197–222 and accompanying text for a description of the 1989 GAO REPORT and its significance.

the burden of affirmative improvements in a vague, weak provision that does not have the procedural triggers or written determination requirements of the compatibility mandate.

Also, the compatibility mandate requires the Service to approve or disapprove a particular level of impact as meeting or violating the mandate. This binary, or categorical, approach to conservation finds a use either compatible or not. In contrast, the ecological view teaches that “different kinds and intensities of human use will affect various aspects or components of biodiversity to differing degrees.”⁴⁹⁴ A more forthright approach to compatibility would ask the Service to describe and mitigate the degree to which uses impede the conservation and establishment goals. To its credit, the Service endorses consideration of avoidance and minimization in making compatibility determinations but limits compensatory mitigation as a means to make a proposed use compatible.⁴⁹⁵

The Improvement Act gives less emphasis to the scientific basis for compatibility determinations than did prior bills.⁴⁹⁶ The use of biological criteria in making compatibility determinations will be one of the most important challenges for the Service. The 1989 GAO Report recommended greater use of biological criteria to improve System conservation.⁴⁹⁷ The Service’s current effort to develop “standardized protocols to monitor the biological integrity, diversity, and environmental health” of refuge habitats may address this challenge.⁴⁹⁸ Still, a stronger statutory mandate would have made biological criteria a high priority rather than an administrative initiative.

Although the compatibility standard itself is a weak test for forcing the Service to implement its mission assertively, it nonetheless represents a significant statutory improvement over the pre-1997 law. As implemented, though, the difference between the 1986 U.S. Fish & Wildlife Service manual provisions governing compatibility

494. Kent H. Redford & Brian D. Richter, *Conservation of Biodiversity in a World of Use*, 13 CONSERVATION BIOLOGY 1246, 1247 (1999); see also Gergely et al., *supra* note 17, at 115 (“Even low impact recreation has some impact”).

495. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 50 C.F.R. § 26.41(b) (2002). This limitation on the use of compensatory mitigation will be especially important in ending the practice of allowing roads in exchange for donations of land. *Id.*; Eric Eckl, *New Policies Revolutionize Refuges’ Relationship With the Public*, FISH & WILDLIFE NEWS, Nov./Dec. 1999, at 3. Existing rights-of-way are subject to somewhat different limitations. 50 C.F.R. § 26.41(c).

496. See, e.g., S. 823, 103d Cong. § 5(6)(B) (1993) (requiring compatibility regulations to “describe the biological, ecological, and other criteria to be used in making the determinations”).

497. 1989 GAO REPORT, *supra* note 12, at 5.

498. Department of the Interior, U.S. FISH & WILDLIFE SERVICE, ANNUAL PERFORMANCE PLAN 2001/ANNUAL PERFORMANCE REPORT 1999, at 42 (undated), available at <http://planning.fws.gov/> (last visited Aug. 21, 2002).

determinations and the 2000 regulation and manual revisions is narrower than the legislation might suggest. The new manual provision replaced the old five-step compatibility determination with a fifteen step process,⁴⁹⁹ but the basic procedures are fundamentally the same. This should raise some skepticism about the ability of the new manual provisions to abate incompatible uses where the 1986 provisions failed.

Still, there are important improvements in the new compatibility process. First, the requirement to provide written determinations of compatibility,⁵⁰⁰ the greatest difference between the old manual provision and the new statutory standard, ought to spur greater agency and public investigation of the range of uses occurring on the refuges and their effects.⁵⁰¹ Second, the notice and comment regulations required by the 1997 Act⁵⁰² help to facilitate public participation.⁵⁰³ The Service's manual now folds compatibility determinations into the comprehensive conservation planning process, which assures heightened public participation.⁵⁰⁴ Even when managers continue to make determinations after a plan is adopted, the compatibility process requires public review.⁵⁰⁵ Third, refuge management economic activities are now clearly

499. Compare 1989 GAO REPORT, *supra* note 12, at 13 (old provision) with Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,491-93 (Oct. 18, 2000).

500. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57 § 6(3)(B)(iv), 111 Stat. 1260.

501. See 1989 GAO REPORT, *supra* note 12, at 13 (linking incompatible uses with the lack of written determinations by the Service).

502. National Wildlife Refuge Improvement Act of 1997 § 6(3)(B); Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,458 (Oct. 18, 2000). The final regulations set out a framework for making compatibility determinations but are thin on just how the Service should analyze the effects of uses on the System mission or refuge purposes. *Id.* As with most other aspects of refuge management, the policy in the U.S. FISH & WILDLIFE SERVICE MANUAL (as distinct from the regulations in the C.F.R.) provides greater detail. U.S. FISH & WILDLIFE SERVICE MANUAL 603 (2000), available at <http://policy.fws.gov/manual.html> (last visited Oct. 18, 2002). The Service published the final compatibility policy at the same time as it promulgated the regulations. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484. The policy outlines the process for determining compatibility and the procedures for documentation and periodic review. *Id.*

503. Public participation is also a requirement of the statute. National Wildlife Refuge Improvement Act of 1997 §§ 6(3)(B), 7(3)(B)(4)(A). The U.S. Fish & Wildlife Service would invite greater public participation if it adopted management policies like those of the National Park Service that require decisionmakers to conduct investigations when they become aware that ongoing activities might lead to impairment of resources or values. National Park Service, Management Policies 2001 § 1.4.7, available at <http://www.nps.gov/policy/mp/policies.pdf>.

504. 65 Fed. Reg. 33,892, 33,913 (May 25, 2000); U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 3.4(C)(5)(b), available at <http://policy.fws.gov/602fw3.html> (last visited Sept. 10, 2002); Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,470 (discussing the relationship between compatibility determinations and management plans).

505. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,490-92; U.S. FISH & WILDLIFE SERVICE MANUAL

covered by the compatibility criterion, and face a more stringent standard for approval.⁵⁰⁶ Fourth, the new policy clearly places the burden on a proponent of a new use to show compatibility.⁵⁰⁷ Finally, the substantive considerations, which explicitly require a review of indirect and cumulative impacts,⁵⁰⁸ prohibit compensatory mitigation,⁵⁰⁹ and prohibit habitat fragmentation,⁵¹⁰ will likely give the compatibility criterion new vitality in promoting Refuge System conservation.

The following subsections discuss the three key elements in the statutory definition of compatible use: sound professional judgment; “not materially interfere with or detract from;” and the System mission and refuge purposes.⁵¹¹ The U.S. Fish & Wildlife Service regulations required by the statute and the manual provisions detailing the compatibility determination process interpret the statute authoritatively and are incorporated into the discussion below.

a. Sound Professional Judgment

To what extent does the compatibility criterion provide an independent basis for reviewing actions of the Service? The 1997 Act defines “sound professional judgment” as a “determination or decision that is consistent with [1] principles of sound fish and wildlife management and administration, [2] available science and resources, and [3] adherence to the” Improvement Act and other applicable law.⁵¹² Although this definition succeeds in establishing some independent principles against which to test management decisions, the Service retains great discretion under the compatibility standard. The legislative history makes clear that courts should play a role in ensuring that standards and procedures are applied by the Service.⁵¹³ However, courts will need more

603 FW 2.11(I), 2.12(A)(9), available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 10, 2002).

506. See *supra* notes 414–418, *infra* note 574, and accompanying text.

507. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,489.

508. *Id.*; see *infra* note 550 and accompanying text.

509. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 50 C.F.R. § 26.41(b) (2001).

510. 65 Fed. Reg. at 62,486.

511. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 3(a)(5)(1), 16 U.S.C. §§ 668ee(1) (2000).

512. *Id.* § 3(a)(5)(3).

513. H.R. REP. NO. 105-106, at 7 (1997).

The Committee is aware of concerns that the definition of sound professional judgment confers such a level of discretion that compatibility determinations might be held to be unreviewable as an agency action “committed to agency discretion by law” within the meaning of the Administrative Procedure Act. . . . [W]hile discretion resides in refuge officials, there is clearly law to apply so as to permit judicial review if other conditions of reviewability under the APA are met.

specific guidelines promulgated as Service policy in order to assert oversight that goes beyond ensuring that the Service followed relevant procedures.

According to the statutory definition, there are three components to "sound professional judgment." First, and most importantly, the judgment must be consistent with principles of "sound fish and wildlife management and administration."⁵¹⁴ This component of sound professional judgment neglects to include the applied botanical sciences, despite the inclusion of plant conservation in the System's mission. It would seem odd to make compatibility decisions with respect to plant conservation (other than for animal habitat use) based on the principles of animal management. Prior to the 1997 Act, the Service interpreted the compatibility standard to require consistency "with principles of sound wildlife management."⁵¹⁵

As with all applied fields related to the natural sciences, fish and wildlife management principles are neither codified nor uncontroversial. Therefore, in disagreements where outside experts challenge the Service's expert determinations, courts can be expected to defer to the agency. Also, because fish and wildlife management is what the Service has done for decades, continuation of poor management practices may be justified by their longstanding use as principles in refuge administration.

Courts already had been yielding to the compatibility judgments of refuge management staff before 1997.⁵¹⁶ Applying the arbitrary and capricious standard⁵¹⁷ of examining whether the Service took account of all the relevant factors in making compatibility determinations under the pre-1997 legislation, courts uniformly deferred to the Service's assertions about ecological management.⁵¹⁸ Even courts applying the NEPA hard-look doctrine accepted the Service's biological justifications of compatibility decisions.⁵¹⁹ Going further still, a district court that found

Id. At the very least, the "sound professional judgment" standard endorses the approach taken by the D.C. district court in the Ruby Lake litigation, *supra* note 196, where the judge refused to defer to Service assertions of compatibility without evidence in the record supporting the determination and responding to indications that the recreational boating was harming refuge resources.

514. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(5)(3).

515. 50 C.F.R. § 32.1 (1999).

516. BEAN & ROWLAND, *supra* note 45, at 293. Bean & Rowland comprehensively review the pre-1997 compatibility litigation. *Id.* at 293-98.

517. *See infra* note 545.

518. *See, e.g.*, *Montero v. Babbitt*, 921 F. Supp. 134 (E.D.N.Y. 1996); *Animal Lovers Volunteer Ass'n v. Cheney*, 795 F. Supp. 994 (C.D. Cal. 1992); *Humane Soc'y v. Lujan*, 768 F. Supp. 360 (D.D.C. 1991). In contrast, courts are less likely to defer to the Service on matters of interpreting legislation and establishment documents. *See, e.g.*, *Schwenke v. Sec'y of the Interior*, 720 F.2d 571 (9th Cir. 1983).

519. *See, e.g.*, *Humane Soc'y v. Hodel*, 840 F.2d 45 (D.C. Cir. 1988); *Friends of Animals v. Hodel*, 1988 WL 236545 (D.D.C. 1988).

bias in the statements of the refuge's biologist upon whose findings the refuge manager had based an incompatible determination for a commercial boating operation nonetheless upheld the Service's permit denial.⁵²⁰

The tendency of courts to defer to all resource management determinations as sound professional judgment is countered somewhat by the Improvement Act's overall commitment to conservation biology principles. The conservation mission and the substantive criterion to maintain biological integrity, diversity, and environmental health, read together with the compatibility standard, require application of science to achieve ecologically protective results. This may lead to stricter judicial scrutiny of Service actions that clearly depart from the tenets of conservation biology than would be the case if the Improvement Act made no reference to conservation biology in other provisions.

The Forest Service operates under organic legislation that has virtually no language harkening to conservation biology. In resolving a challenge to two national forest plans in Wisconsin, a federal court of appeals deferred to the Forest Service's rejection of the theory of island biogeography in meeting the NFMA diversity mandate.⁵²¹ Island biogeography would have supported the establishment of large, unfragmented habitat reserves "to protect at least some old-growth forest communities."⁵²² The court explained that the Forest Service "acknowledged the developments in conservation biology but did not think that they had been shown definitively applicable to forests" like the ones in Wisconsin.⁵²³ As a result, the Forest Service is able to use its own methodology, "unless it is irrational."⁵²⁴

In contrast to the NFMA, the Improvement Act's ecological language and the emerging Service policies, such as the linking of habitat fragmentation with mission incompatibility, provide clearer parameters for the meaning of sound management.⁵²⁵ These policies, which the

520. *McGrail & Rowley, Inc. v. Babbitt*, 986 F. Supp. 1386 (S.D. Fla. 1997). The court opined that the biologist, though dedicated, "gives lip service to the Agency position that the public is welcome . . . , but the court feels he does not believe it. He clearly dislikes the visitors who picnic, wade in the water by the beach, and especially the kayakers." *Id.* at 1392-93. The permit applicant sought to bring visitors to the island to picnic, wade, kayak, and engage in other recreational activities.

521. *Sierra Club v. Marita*, 46 F.3d 606, 623 (7th Cir. 1995).

522. *Id.* at 620.

523. *Id.* at 623.

524. *Id.* at 621.

525. Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000). Also, the new policy on maintaining the biological integrity, diversity, and environmental health of the System fills in more details on the substance of the conservation mission. Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. 3,809 (Jan. 16, 2001).

Service puts through the notice and comment procedures of the Administrative Procedure Act, will be key sources of objective, scientific standards binding refuge managers' judgments to the methods of conservation biology.

The second component of the definition of "sound professional judgment" requires that the Service make decisions consistent with "available science and resources."⁵²⁶ This component raises the troubling potential for the Service to justify uses that may harm refuge purposes. Agencies frequently lack the resources to determine the full range of consequences of permitting uses on public lands. In exercising "sound professional judgment," ignorance can become an excuse for acquiescing to consumptive refuge uses based on the lack of scientific data. The legislative history explicitly excuses the Service from developing new information on which to base compatibility determinations.⁵²⁷ The new compatibility regulations instruct refuge managers to use available information and do not require them "to independently generate data to make determinations."⁵²⁸

The Service suffers from low annual appropriations for refuge administration⁵²⁹ and a dearth of scientists. Indeed, the Interior Secretary transferred most U.S. Fish & Wildlife Service scientists to the National Biological Survey, which Congress incorporated into the U.S. Geological Survey in 1996.⁵³⁰ So, without sufficient scientific expertise to determine the full range of consequences of a use, and without funding for new studies to better understand impacts, the Service may fail to forecast many interferences with or detractions from the purposes of the refuge.⁵³¹ This "ignorance is optimism" scenario has historically characterized

526. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 3(a)(5)(3), 111 Stat. 1260.

527. H.R. REP. NO. 105-106, at 12 (1997).

528. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. at 62,470; *see also* Final Compatibility Policy Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 62,490.

529. One illustration of the low appropriations is the backlog of maintenance projects in the System. As of 2002, the deferred maintenance backlog stood at \$663 million, about twice the annual appropriation for refuge operation and maintenance. U.S. Department of the Interior, *Fiscal Year 2003 Interior Budget in Brief* (undated), available at <http://www.doi.gov/budget/2003/03Hilites/toc.html> (last visited Sept. 17, 2002). This compares to a total appropriation for the Refuge System in Fiscal Year 2002 of \$243 million. Congressional Research Service, Appropriations for FY2003: Interior and Related Agencies 10 (2002), available at <http://www.cnire.org/nle/crsreports/legislative/>; *see also* S. HRC. 105-286, at 38-41; CLARKE & MCCOOL, *supra* note 14, at 112; Tredennick, *supra* note 14, at 64-65.

530. CLARKE & MCCOOL, *supra* note 14, at 124; *see infra* note 855 for a description of the ill-fated Biological Survey.

531. Timothy Egan, *On Hot Trail of Tiny Killer In Alaska*, N.Y. TIMES, June 25, 2002, at D1, D2 (describing a scientist studying spruce decline in the Kenai National Wildlife Refuge as "one of few government scientists for the Fish & Wildlife Service who is paid to study the big picture").

management of the System.⁵³²

The “available resources” component of the definition of sound professional judgment, coupled with the elimination of the funding criterion (from the 1962 Refuge Recreation Act) for permitting wildlife-dependent recreational use, reduces the incentives for user interests to lobby for greater Refuge System appropriations. However, judicial review and the new compatibility regulations have placed the legal burden on the Service to build a record that shows lack of harm from a proposed activity to the purposes of the refuge.⁵³³ This will serve to counteract the “available science and resources” limitation on sound professional judgment. Also, the U.S. Fish & Wildlife Service compatibility policy does state that without sufficient information to document that a proposed use is compatible, the refuge manager may not allow it.⁵³⁴

Moreover, where compatibility determinations lead to authorization of uses, NEPA will require environmental impact statements where there are significant environmental effects.⁵³⁵ Environmental impact statements must develop new information where it “is essential to a reasoned choice among alternatives and the overall costs of obtaining it are not exorbitant.”⁵³⁶ Judicial review will also require refuge managers to document how their “field experience and knowledge of the particular refuge’s resources,” both permissible components of sound professional judgment in the new compatibility regulations, support their compatibility findings.⁵³⁷

Also, the House Report accompanying the bill that became the 1997 Act interprets the “available resources” component of the “sound professional judgment” test as requiring that compatibility determinations include considerations of whether funds, personnel, and

532. See, e.g., *Defenders of Wildlife v. Andrus*, 455 F. Supp. 446 (D.D.C. 1978) (the “Ruby Lake” case); see *supra* note 196.

533. See COGGINS & GLICKSMAN, *supra* note 7, § 17:6; BEAN & ROWLAND, *supra* note 45, at 295 (citing the “Ruby Lake” case); 50 C.F.R. §§ 25, 26, 29 (2001); U.S. FISH & WILDLIFE SERVICE MANUAL, 603 FW 2.11 (B)(1), available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 10, 2002).

534. U.S. FISH & WILDLIFE SERVICE MANUAL, 603 FW 2.11 (A)(2), available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 10, 2002).

535. National Environmental Policy Act of 1969, § 102(2)(C), 42 U.S.C. § 4322 (1988 & Supp. II 1990). Compatibility determinations themselves are not actions triggering NEPA. But, they may lead to authorization of uses, which are NEPA actions. Also, many compatibility determinations will occur as part of comprehensive conservation planning, which will involve the NEPA process. See 65 Fed. Reg. at 62,475, 62,494 (discussing the relationship between NEPA and compatibility determinations).

536. 40 C.F.R. § 1502.22(a) (1986); see Robert L. Fischman, *The EPA’s NEPA Duties and Ecosystem Services*, 20 STAN. ENVTL. L.J. 497, 511–12 (2001) (describing the EIS requirements for incomplete or unavailable information).

537. 65 Fed. Reg. at 62,481.

infrastructure exist to manage permitted activities adequately.⁵³⁸ While this would be a sensible, if roundabout, restoration of the 1962 Act's funding availability criterion as applied to wildlife-dependent recreation, it is contradictory that Congress would explicitly exempt wildlife-dependent recreation from the funding determination requirement in the text of the statute,⁵³⁹ only to incorporate it in the committee report defining the kind of judgment that the Service should exercise in making compatibility determinations. Nonetheless, the legislative history repeatedly stresses that the Service should not permit uses where the agency lacks resources to properly ensure compatibility.⁵⁴⁰ The new compatibility regulations endorse this view of "sound professional judgment."⁵⁴¹

At the same time, though, the House Committee clearly expected the U.S. Fish & Wildlife Service affirmatively to seek out sources of funding to sustain wildlife dependent recreation.⁵⁴² The new compatibility regulations interpret the Improvement Act to require refuge managers to make "reasonable efforts to secure resources" that are needed to make a priority public use compatible.⁵⁴³ This is part of the larger policy to facilitate wildlife-dependent recreational uses, discussed in subsection B, *supra*.

The third component, "adherence to the law," adds little to the

538. H.R. REP. No. 105-106, at 6 (1997), *reprinted in* 1997 U.S.C.C.A.N. at 1798-10. The new compatibility regulations echo this view of sound professional judgment. 65 Fed. Reg. at 62,468 (The Service must "consider lack of adequate budgets for all uses, including priority public uses" in exercising sound professional judgment.).

539. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 6(3)(A)(iii), 111 Stat. 1256.

540. H.R. REP. No. 105-106, at 6.

541. 65 Fed. Reg. at 62,468. The Service has incorporated this view in its compatibility policy as ("Implicit within the definition of sound professional judgment is that adequate resources (including financial, personnel, facilities, and other infrastructure) exist or can be provided by the Service . . . to properly develop, operate, and maintain the use . . . If adequate resources cannot be secured, the use will be found not compatible and cannot be allowed."); U.S. FISH & WILDLIFE MANUAL, 603 FW 2.12(A)(7).

542. H.R. REP. No. 105-106, at 6. For instance, the committee report describes a hypothetical situation where

a manager determines that a bird-watching program could be conducted in accordance with principles of sound fish and wildlife management and administration, but that the program is incompatible because adequate financial resources are not available to design, operate, and maintain the use so as to prevent trespassing on sensitive nesting areas and adjacent private lands. It is the Committee's expectation in this case that the manager would take reasonable steps to obtain outside assistance from States and other conservation interests before determining that the activity is incompatible.

Id. at 9.

543. 65 Fed. Reg. at 62,468, 62,469 ("The Refuge Manager must make reasonable efforts to ensure that the lack of resources is not an obstacle to permitting otherwise compatible wildlife-dependent recreational uses.").

definition of “sound professional judgment.” The adherence component refers to compliance with both the Improvement Act itself as well as other applicable law.⁵⁴⁴ Failure to abide by any applicable law would be an independent basis for finding that the Service has acted in an arbitrary and capricious manner under the Administrative Procedure Act, so it need not be part of sound professional judgment.⁵⁴⁵

The legal question of what constitutes applicable statutory or regulatory requirements ought not dilute the meaning of “sound professional judgment.” After all, the phrase does not refer to the legal profession; it is aimed at the resource management or science profession. Additionally, adherence to the 1997 Act is, in part, what “sound professional judgment” helps determine. It is circular to define the standard of judgment, which determines compliance with a management mandate, in terms that refer to adhering to the mandate.

b. The “Not Materially Interfere With or Detract From” Standard

The standard for determining the requisite degree of consistency with purposes is at the core of the substantive meaning of the compatibility criterion. The requirement that a use should not materially interfere with or detract from the mission of the System or the purposes of a refuge continues the tradition of Refuge System management that tests uses against a no interference standard.⁵⁴⁶ One could imagine a substantive standard that requires uses to contribute affirmatively to the mission of the refuge.⁵⁴⁷ Instead, in an effort to promote uses, especially wildlife-dependent recreational uses, Congress has encouraged the Service to find ways to accommodate uses as long as they do not impair other goals of the refuges.

Nonetheless, the conservation mission of the System does establish a backstop to prevent uses, through an incompatibility determination, that degrade the ecological integrity of an area.⁵⁴⁸ The Service interprets the materially interfere/detract aspect of the compatibility definition to prohibit uses that reasonably may be anticipated to fragment habitats.⁵⁴⁹

544. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(5)(3).

545. 5 U.S.C. § 706 (“the reviewing court shall decide all relevant questions of law, . . . determine the meaning or applicability of agency action . . . and hold unlawful and set aside agency action, findings, and conclusions found to be . . . arbitrary, capricious, or otherwise not in accordance with law”).

546. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(5)(1). As noted *supra* in note 91 and accompanying text, the legislative antecedents to the compatibility standard date back at least to 1945.

547. Indeed, this is the standard for authorizing economic uses (such as grazing, haying, timbering, or quarrying). 50 C.F.R. § 29.1 (2001).

548. 65 Fed. Reg. 62,489 (Oct. 18, 2000).

549. 65 Fed. Reg. 62,486 (Oct. 18, 2000). Conservation biologists agree that fragmentation of wildlife habitats is a direct threat to biological integrity. See NATIONAL RESEARCH COUNCIL,

This may prove to be the most potent litigation handle for searching judicial review in the revamped policy regime for refuge management. Also, in evaluating the effects of uses, the Service has committed itself to consider direct, indirect, and cumulative impacts irrespective of whether it prepares an EIS.⁵⁵⁰ The U.S. Fish & Wildlife Service manual includes the diversion of “resources from an activity that would support fulfilling the System mission or refuge’s purposes” in the indirect effects refuge managers must consider in making compatibility determinations.⁵⁵¹ Moreover, new Service policy places the burden of proof on the proponent of a new use to show that a proposed use does not materially interfere with or detract from a purpose.⁵⁵² All of these policy provisions significantly strengthen the Service’s commitment to use the best science to protect vigorously the refuges.

In considering the impacts of a use on a refuge, the statute creates an initial threshold below which Service regulations should provide expedited approval.⁵⁵³ Uses that “will likely have no detrimental effect” on the purpose of the refuge or mission of the System qualify for the streamlined process.⁵⁵⁴ This trigger is similar to the Endangered Species Act threshold that allows expedited approval of federal actions that agencies find will likely have no adverse effect on a listed species.⁵⁵⁵ An important difference, however, is that ESA expedited consideration requires the action agency to solicit confirmation of its determination from another, specialized agency that has less institutional investment in going forward with the proposal.⁵⁵⁶ The Improvement Act lacks such an independent check.⁵⁵⁷ This omission, combined with the promotion of

SCIENCE AND THE ENDANGERED SPECIES ACT (1995); REED F. NOSS, MICHAEL A. O’CONNELL, & DENNIS D. MURPHY, *THE SCIENCE OF CONSERVATION PLANNING: HABITAT CONSERVATION UNDER THE ENDANGERED SPECIES ACT* (1997); LARRY HARRIS, *THE FRAGMENTED FOREST* (1984).

550. 65 Fed. Reg. 62,489 (Oct. 18, 2000). The U.S. Fish & Wildlife Service uses these terms in the same way as the CEQ does in the NEPA regulations. *Cf.* 40 C.F.R. §§ 1508.7, 1508.8 (2002); *see supra* notes 535–537 and accompanying text on the relationship between NEPA and the compatibility determination.

551. 65 Fed. Reg. 62,492 (Oct. 18, 2000).

552. 65 Fed. Reg. 62,489 (Oct. 18, 2000). Although the burden to show compatibility rests with the prospective user, even if the use is a priority, wildlife-dependent use, the refuge manager has an obligation to work with proponents of wildlife-dependent uses “to acquire the necessary information before finding the use not compatible based solely on insufficient available information.” 65 Fed. Reg. at 62,492.

553. National Wildlife Refuge System Improvement Act of 1997 § 6(3)(B)(v).

554. *Id.*; *see* 65 Fed. Reg. 62,493 (Oct. 18, 2000) (expediting the compatibility determination process).

555. 16 U.S.C. § 1536(a)(2) (2000); 50 C.F.R. §§ 402.12, 402.13(a) (2001).

556. *See* 16 U.S.C. § 1536(c); 50 C.F.R. § 402.12.

557. Though the compatibility regulations require regional chiefs to concur with determinations made by refuge managers, these chiefs will likely come from the same U.S. Fish & Wildlife Service culture as the refuge managers. 65 Fed. Reg. at 62,462, 62,463. It is unrealistic to expect these superior System officers to provide critical scrutiny. *See* Bradley Bobertz &

wildlife-dependent recreational uses in the Act⁵⁵⁸ and the pressure that interests groups can bring to bear on the Service,⁵⁵⁹ will likely lead to superficial findings of “likely to have no detrimental effect.”

c. *System Mission and Refuge Purposes*

The benchmarks against which the standard for compatibility is measured are the System mission and the refuge purposes. The Improvement Act clearly establishes the mission of the System: conservation.⁵⁶⁰ However, the refuge purposes against which effects of uses are measured for compatibility require some interpretation. The Improvement Act defines refuge purposes to include goals identified in instruments that establish, authorize, acquire, or expand a refuge.⁵⁶¹ There may be a tangle of several purposes for refuges that have accreted through a combination of these instruments. I explore the sources and nature of these individual refuge purposes in section IV of this article.

For the purposes of understanding the compatibility determination, it is significant that Congress explicitly included acquisition and expansion documents in the sources of individual refuge purposes. In contrast, the 1966 Administration Act’s compatibility test, superseded by the 1997 law, employed only purposes “for which such areas were established.”⁵⁶² The 1962 Act lacked consistency on this issue and used the phrase “acquired or established” in one description of the sources of purposes but then used only the phrase “established” in two subsequent descriptions of the management criterion.⁵⁶³ Throughout this article, I use the term “establishment document” or “establishment instrument” broadly to include significant sources of individual refuge purposes

Robert Fischman, *Administrative Appeal Reform: The Case of the Forest Service*, 64 U. COLO. L. REV. 371 (1993), for a detailed argument on the analogous system in national forest administrative appeals. A limited appeals process for certain landowners does apply to compatibility determinations in Alaska because of complications created by aboriginal claims. 65 Fed. Reg. at 62,463–465.

558. For instance, the Improvement Act requires the Service to “facilitate” or strongly encourage wildlife-dependent recreational uses. National Wildlife Refuge System Improvement Act of 1997 § 5(a)(3)(D); H.R. REP. No. 105–106, at 9.

559. See, e.g., 1989 GAO REPORT, *supra* note 12, at 45.

560. National Wildlife Refuge System Improvement Act of 1997 § 4. The meaning of conservation is explored in section III(a).

561. *Id.* § 3(10); H.R. REP. No. 105–106, at 11. The statute and regulations list the following documents in which refuge purposes may be found: laws, proclamations, executive orders, agreements, public land orders, donation documents, and administrative memoranda. *Id.*; 50 C.F.R. § 25.12. I examine these specific sources of refuge purposes in detail in Section IV. The purposes of the Wilderness Act apply to those parts of refuges designated by Congress as wilderness. 50 C.F.R. § 25.12.

562. National Wildlife Refuge System Administration Act, Pub. L. No. 89–669, § 4(d), 80 Stat. 926 (1966).

563. Refuge Recreation Act, Pub. L. No. 87–714, 76 Stat. 653 (1962) (codified at 16 U.S.C. §§ 460k–k(4) (2000)).

regardless of whether they derive from an initial designation or a subsequently authorized acquisition. After 1997, with respect to the Refuge System, there is no longer any question that purposes in acquisition documents are included in compatibility analyses.

However, the 1997 statute does not resolve the question of whether a purpose contained in an instrument authorizing acquisition of additional land for a refuge applies to the refuge as a whole, or just to the addition. The Service takes the position that the initial establishment/acquisition purposes apply to the entire refuge unit but that subsequent acquisition purposes apply only to the specific tracts acquired.⁵⁶⁴ This creates a very complex zoning problem for refuges acquired piecemeal over time.

While the Improvement Act amended the organic law for the System by adding a definition of compatible use that employs “the purposes of the refuge,”⁵⁶⁵ it did not repeal the provision of the 1966 Refuge Administration Act that authorizes the Service to issue regulations to open refuges to uses compatible with “the major purposes.”⁵⁶⁶ This creates an ambiguity in the law, which the Service has resolved in favor of the unmodified “purposes” language from the 1997 Act.⁵⁶⁷ This is consistent with the primacy placed on all individual purposes elsewhere in the 1997 Act.⁵⁶⁸ In one respect, the broader scope of the 1997 Improvement Act’s compatibility definition will be easier to implement. This is because the Service will not have to determine which of the establishment purposes are major or primary. However, in another respect, it will be more difficult to implement because the Service will have to evaluate how uses might interfere with a larger number of stated goals in many refuges. Some of these goals may be relatively unimportant but would nonetheless trump the conservation mission of the System in case of conflict.⁵⁶⁹ It is not clear that Congress understood this change it

564. U.S. FISH & WILDLIFE SERVICE, Director’s Order No. 132 *National Wildlife Refuge System Mission, Goals and Purposes* § 14 (2001); U.S. FISH & WILDLIFE SERVICE, *Refuge Compatibility: How to Prepare a Compatibility Determination* 32 (2000) (training guidance).

565. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(5)(1).

566. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4(d)(1), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)); see *supra* note 144 and accompanying text for a discussion of the qualifiers to refuge purposes contained in the 1966 and 1962 Acts.

567. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 64,458, 62,460 (Oct. 18, 2000) (explaining the decision to drop the term “major,” which modified the individual refuge purposes in the draft regulatory definition of compatible use). This modification was entirely appropriate, given the language of the 1997 statute.

568. National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4)(D) (“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, and, to the extent practicable, that also achieves the mission”).

569. U.S. FISH & WILDLIFE SERVICE, Director’s Order No. 132, *National Wildlife Refuge System Mission, Goals and Purposes* § 13 (2001) (more specific purposes take precedence over

made to compatibility. The legislative history does not mention it. To the contrary, the statute and legislative history anticipate that the Service should rely on existing compatibility determinations, made prior to 1997, until the Service develops new comprehensive plans.⁵⁷⁰ However, these existing compatibility determinations should have applied to a narrower range of purposes than the ones required in the 1997 Act. In practice, as discussed below, this may not have been the case.

The Service claimed that its practice prior to 1997 did not distinguish between “major” and other refuge purposes when determining compatibility.⁵⁷¹ In light of the Service’s lax implementation of the compatibility criterion before 1997, as documented in GAO and other reports,⁵⁷² it is not surprising that the Service failed to make the finer distinctions required in its 1962 and 1966 mandates. The new policy, which protects all purposes (major and minor) against incompatible uses, can only increase the likelihood that a proposed use will not meet the compatibility criterion, as compared to the old policy of protecting only major purposes.

Although the 1997 Act bends the conservation mission where it conflicts with establishment purposes, the compatibility standard will usually require that uses interfere with neither. This will be important. Certain recreation, even wildlife-dependent recreation, may clearly be consistent with sporting purposes mentioned in establishment documents. However, so long as those purposes can be interpreted in a way that *could* co-exist with the conservation mission, then conservation remains a benchmark for determining whether a use would detract from the refuge goals. And, the conservation touchstone will likely create greater friction with sporting purposes in a compatibility determination than will many establishment purposes.⁵⁷³ Although Congress littered the 1997 Act and its legislative history with exhortations to promote hunting and fishing, the compatibility standard may yield surprising limits on recreation when applied to the System mission.⁵⁷⁴

general purposes in cases of conflict).

570. National Wildlife Refuge System Improvement Act of 1997 6(3)(A)(iv); H.R. REP. No. 105-106.

571. Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997, 65 Fed. Reg. 64,458, 62,460 (2000).

572. See *supra* Part I(F).

573. For instance, many game management practices, such as the creation of wildlife openings, contribute to habitat fragmentation, which the Service policy regards as incompatible with the System conservation goal. 65 Fed. Reg. 62,486 (Oct. 18, 2000).

574. Don Barry, the former Assistant Secretary of the Interior responsible for the U.S. Fish & Wildlife Service, who served while the department developed and promulgated the compatibility regulations, adds “cooperative farming and timber harvest for wildlife management purposes” to this list of uses that may face new limits under the new compatibility standard. Eric Eckl, *New Policies Revolutionize Refuges’ Relationship with the Public*, FISH AND WILDLIFE NEWS, Nov./Dec. 1999, at 3 (quoting Barry).

2. *Biological Integrity, Diversity, and Environmental Health*

Originating in the 1996 executive order,⁵⁷⁵ the Improvement Act's ecological mandate to ensure the maintenance of "biological integrity, diversity, and environmental health"⁵⁷⁶ catapults the Refuge System to the front lines of conservation biology. This is appropriate given the strong connection between the development of the System and endangered species conservation.⁵⁷⁷ It also takes advantage of the refuges' great habitat value for protecting biological diversity.⁵⁷⁸ No other organic mandate employs such unconditional, specific ecological criteria to constrain management and promote conservation.

Before 1997, the National Forest Management Act was the organic statute providing the most detailed ecological management criteria. The NFMA requires regulations that guide comprehensive plans for national forests to "provide for diversity of plant and animal communities," but softens this mandate by subordinating it to "overall multiple-use objectives."⁵⁷⁹ The NFMA further conditions the requirement of tree species diversity preservation with the "where appropriate" and "to the degree practicable" conditions that are commonplace in public land law.⁵⁸⁰ Indeed, the Improvement Act also conditions the restoration prong of the conservation mission with a "where appropriate" condition⁵⁸¹ and mandates the achievement of the mission of the System only "to the extent practicable"⁵⁸² while protecting the establishment purposes of a refuge. So, the absence of these typical terms preserving proprietary discretion in the mandate to maintain biological integrity, diversity, and environmental health (as well as in the other two prongs of the System mission, conservation and management) is significant in understanding this criterion as a stringent substantive management standard.

However, as the original Forest Service regulations implementing the NFMA diversity provision illustrate, the binding agency policy applying statutory criteria will determine the effectiveness of statutory language. In the case of the NFMA, an implementing regulation required

575. Exec. Order No. 12,996, § 3(e), 61 Fed. Reg. 13,647 (Mar. 25, 1996).

576. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(B), 111 Stat. 1255.

577. See *supra* notes 109-112 and accompanying text. Also, as of 1994, 24% of all species listed under the ESA occurred on refuges. UNITED STATES GENERAL ACCOUNTING OFFICE, NATIONAL WILDLIFE REFUGE SYSTEM: CONTRIBUTIONS BEING MADE TO ENDANGERED SPECIES RECOVERY 1 (1994).

578. Karkkainen, *supra* note 157, at 36.

579. 16 U.S.C. § 1604(g)(3)(B) (2000).

580. *Id.*

581. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(4).

582. *Id.* § 5(a)(4)(D).

Forest Service plans to “provide for adequate fish and wildlife habitat to maintain viable populations of existing native vertebrate species.”⁵⁸³ It was the strength of this regulation, as compared to the text of the statute, that effectively halted the timber program in the Pacific Northwest during the late 1980s and early 1990s.⁵⁸⁴ The new Fish & Wildlife Service Policy implementing the integrity, diversity, and health mandate, though not as stringent as the old Forest Service regulations, significantly advances ecological protection in the Refuge System. It also corresponds closely to the 2000 Forest Service planning regulations, which give top priority to ecological sustainability in management.⁵⁸⁵ Both are part of the larger effort to reinvigorate public land management with the insights of conservation biology. The Improvement Act reverses the prior position of the Service, which was that “[t]he attainment of natural diversity is not an over-riding objective of refuge management,” though it should be an underlying consideration.⁵⁸⁶

The Service biological integrity, diversity, and environmental health policy, incorporated in the U.S. Fish & Wildlife Service Manual, fills in many details for defining planning goals and the conservation mission.⁵⁸⁷ Therefore, the policy is important not only in implementing its own substantive management criterion, but also in providing substance to the compatibility criterion, the conservation stewardship criterion, and the

583. 36 C.F.R. § 219.27(a)(6) (1999); *see also* 36 C.F.R. § 219.19 (1999) (describing the viable population requirement).

584. *See* Seattle Audubon Society v. Moseley, 798 F. Supp. 1473 (W.D. Wash. 1992), *aff'd* Seattle Audubon Society v. Espy, 998 F.2d 699 (9th Cir. 1993) (invalidating Forest Service plans because they failed to maintain viable populations of the northern spotted owl).

585. 65 Fed. Reg. 67,514 (Nov. 9, 2000). The current Bush administration has delayed implementation of the rule in part to identify possible modifications. 66 Fed. Reg. 27,552 (May 17, 2001). *See generally* Andrew Orleman, Note, *Do the Proposed Forest Service Regulations Protect Biodiversity?*, 20 J. LAND RES. & ENVT. 357 (2000); J. Baird Callicott & Karen Mumford, *Ecological Sustainability as a Conservation Concept*, 11 CONSERVATION BIOLOGY 32 (1997).

586. Gergely et al., *supra* note 17, at 114 (quoting 1998 U.S. Fish & Wildlife Service Manual).

587. Like the other policies revised in the wake of the Improvement Act, the Service employed the Administrative Procedure Act's notice and comment rulemaking procedures to establish the policy on maintaining biological integrity, diversity, and environmental health. 66 Fed. Reg. 3,810 (Jan. 16, 2001) (promulgating the final policy on maintaining the biological integrity, diversity, and environmental health of the National Wildlife Refuge System). The Service policy is codified in a new chapter of the U.S. Fish & Wildlife Service Manual, 601 FW 3, available at <http://policy.fws.gov/601fw3.html> (last visited Sept. 10, 2002). The policy's effective date, originally set at Feb. 15, 2001, was delayed by the new Bush Administration until Apr. 16, 2001. 66 Fed. Reg. 9,593 (Feb. 8, 2001). This was the only Refuge System policy affected by the Bush Administration's review period and likely reflects the relative importance of the directives for integrity, diversity, and environmental health. The policy is also described as “ecological integrity” in the new chapter on comprehensive planning in the U.S. Fish & Wildlife Service Manual, 65 Fed. Reg. 33,906 (May 25, 2000). The Service has since abandoned the term “ecological integrity” as shorthand for biological integrity, diversity, and environmental health. 66 Fed. Reg. 3,810 (Jan. 16, 2001) (explaining why the Service abandoned the term in the policy to implement the mission to maintain biological integrity, diversity, and environmental health).

comprehensive planning mandate.⁵⁸⁸ For instance, out of concern for biological integrity, the Service compatibility policy prohibits uses that fragment wildlife habitats.⁵⁸⁹

In addition to prohibiting habitat fragmentation, the mandate to maintain biological integrity, diversity, and environmental health is a basis for limiting farming, haying, logging, livestock grazing, and other extractive activities to situations where they are “prescribed in plans to meet wildlife or habitat management objectives, and only when more natural methods, such as fire or grazing by native herbivores, cannot meet” the goals and objectives.⁵⁹⁰ However, unlike the old Forest Service regulation mandating maintenance of viable populations or the 2000 rule employing focal species as surrogate indicators of ecosystem integrity,⁵⁹¹ there does not appear to be an easily measured bottom line for determining whether the Refuge System is meeting its ecological mandate. This is the greatest weakness of the U.S. Fish & Wildlife Service policy because, as noted above, measured outcomes tend to “drive out work that produces unmeasured outcomes.”⁵⁹²

Though the Service separately defines each of the three components of this substantive management criterion, they are interrelated. The Service defines “biological diversity” in terminology familiar to the federal government since the landmark 1987 Office of Technology Assessment report and 1986 National Academy of Sciences/Smithsonian Institution conference.⁵⁹³ “the variety of life and its processes, including the variety of living organisms, the genetic differences among them, and communities and ecosystems in which they occur.”⁵⁹⁴

Under the Service policy, “environmental health” is the “composition, structure, and functioning of soil, water, air, and other abiotic features comparable with the historic conditions, including the natural abiotic processes that shape the environment.”⁵⁹⁵ Because more

588. The Service facilitates this connection to other policies by employing interchangeable terms. For instance, the definitions of biological integrity, diversity, and environmental health in the planning policy are almost identical to the definitions in the policy on maintaining biological integrity, diversity, and environmental health. *Compare* 65 Fed. Reg. 33,906 (May 25, 2000) *with* 66 Fed. Reg. 3,818 (Jan. 16, 2001).

589. 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000).

590. 66 Fed. Reg. 3,822 (2001). These extractive activities are considered refuge uses and must comply with the compatibility criterion. *See supra* notes 414–417 and accompanying text.

591. National Forest System Land and Resource Management Planning, 65 Fed. Reg. 67,514 (Nov. 9, 2000); *see supra* note 585 and accompanying text.

592. JAMES Q. WILSON, BUREAUCRACY 161 (1989).

593. E.O. WILSON ed., BIODIVERSITY (comprising proceedings of the 1986 conference) (1988); U.S. CONGRESS, OFFICE OF TECH. ASSESSMENT, TECHNOLOGIES TO MAINTAIN BIOLOGICAL DIVERSITY (1987).

594. 66 Fed. Reg. 3,818 (Jan. 16, 2001).

595. *Id.*

than one-third of refuge acreage is wetlands,⁵⁹⁶ an important aspect of environmental health, as applied in the substantive management criterion, is water quality. The “historic conditions” benchmark in the definition of environmental health refers to “the landscape in a particular area before the onset of significant, human-caused change.”⁵⁹⁷

The Service considers “biological integrity” to be the “biotic composition, structure, and functioning at the genetic, organism, and community levels comparable with historic conditions, including the natural biological processes that shape genomes, organisms, and communities.”⁵⁹⁸ On its face, this definition appears to add little not already incorporated into the diversity definition.⁵⁹⁹ The only other significant federal statute to use the term biological integrity is the Clean Water Act.⁶⁰⁰ However, Service policy places under environmental health most of the issues addressed in the Clean Water Act. Therefore, EPA experience interpreting the term has limited relevance to the U.S. Fish & Wildlife Service definition.

Kevin Gergely, J. Michael Scott, and Dale Goble argue that “a principal idea behind biological integrity is that ecological systems are self-perpetuating and fully functioning.”⁶⁰¹ This formulation bolsters the connection between health and integrity. Also, in contrast to diversity, which lends itself to quantitative counts of variety, health and integrity present greater measurement challenges because of their strong qualitative attributes.

Despite the similar definitions and closely related concepts, are there practical distinctions among the three ecological components: biological

596. 1989 GAO REPORT, *supra* note 12, at 10.

597. 66 Fed. Reg. 3,811 (Jan. 16, 2001). The Service notes that it does not expect “to reconstruct a complete inventory of components, structures, and functions for any successional stage occurring during the frame of reference.” 66 Fed. Reg. 3,821 (Jan. 16, 2001). The draft policy had included the specific, post-Pleistocene, pre-European time period of 800–1800 CE to serve as a benchmark containing a range of historic variability in defining the concept of “natural conditions.” The final policy dropped the more specifically defined “natural conditions” and substituted the somewhat more open-ended “historic conditions . . . to provide a standard from which to measure degradation from a condition of environmental health.” 66 Fed. Reg. 3,811.

598. 66 Fed. Reg. 3,818. The issues surrounding the meaning of “historic conditions” in biological integrity are the same as those discussed *supra* note 597, for environmental health.

599. Gergely et al., *supra* note 17, at 113, describe how biological diversity is included within the concept of biological integrity.

600. 33 U.S.C. § 1251(a) (establishing the objective of the Clean Water Act to restore and maintain the chemical, physical, and biological integrity of the Nation’s waters); *see also* 33 U.S.C. §§ 1254, 1255, 1270, 1314, and 1330. Gergely et al., *supra* note 17, at 113, also make the connection between the Clean Water Act’s and the Improvement Act’s use of the term integrity. For a discussion of the relationship between the Clean Water Act’s integrity mandate and protection of biological diversity, *see* Robert L. Fischman, *Biological Diversity and Environmental Protection: Authorities to Reduce Risk*, 22 ENVTL. L. 435 (1992).

601. Gergely et al., *supra* note 17, at 113.

integrity, diversity, and environmental health? The Service policy answers this question, in part, by illustrating situations in which advancing one may impair another. For instance, a refuge might compromise environmental health in order to maintain biological diversity. To eliminate invasive fish from a pond, the Service might use a chemical poison or physically alter the aquatic system in order to restore the composition and functioning of the ecosystem to historic conditions.⁶⁰²

In another example, the Service asserts that maintaining or restoring biological integrity is not the same as maximizing biological diversity. A refuge may focus on maintaining the habitat for a critically endangered species (or migratory waterfowl through an intensively managed feeding or resting area) at the expense of local biodiversity in order to protect biological integrity and national species diversity.⁶⁰³ This example, however, does not show the difference between biological integrity and diversity; rather it is an illustration of how the scale of concern (local, watershed, national) can alter management objectives. The Service policy elsewhere recognizes that biological integrity, diversity, and environmental health cannot be considered solely on the scale of a single refuge. Instead, larger watershed objectives (such as bay restoration), national policies (such as the North American Waterfowl Management Plan or Partners in Flight), and Refuge System goals (such as those established through the Government Performance and Results Act) may influence management decisions.⁶⁰⁴

It is more productive to understand that Congress tried three ways to express its intent to ensure that conservation biology and ecological science are deployed in the Refuge System to protect nature in the long term than it is to distinguish among biological integrity, diversity, and environmental health. Circumstances where the three components align in pointing toward a particular management direction are more likely than occurrences of conflict amongst the ecological components. Many of the refuge management problems, cited repeatedly in GAO and Interior department reports,⁶⁰⁵ such as maintaining high lake levels for boating at the expense of nesting habitat⁶⁰⁶ or permitting overgrazing,⁶⁰⁷ run afoul of

602. 66 Fed. Reg. 3,820 (Jan. 16, 2001). Another example is suggested by the mandate of the Julia Butler Hansen Refuge for Columbian White-tailed Deer, which promotes recovery of this rare sub-species. Refuge System Database, *supra* note 69. In order to provide the interspersed mixture of woodland and grassland that the deer need, the refuge must maintain and promote fragmentation of woodland habitat. This would create a conflict between the biological integrity mandate, which prohibits habitat fragmentation and the biological diversity mandate to recover sub-species on the verge of extinction.

603. 66 Fed. Reg. 3,812, 3,820 (Jan. 16, 2001).

604. 66 Fed. Reg. 3,814, 3,818, 3,819, 3,821 (Jan. 16, 2001).

605. See *supra* notes 174–222 and accompanying text.

606. 1989 GAO REPORT, *supra* note 12, at 22 (Des Lacs National Wildlife Refuge).

all three prongs of the ecological mandate.

Now that the binding policy is in place, the Service is more vulnerable to judicial intervention where it fails to remedy degrading uses of the System. This should embolden Service officials to remove, condition, and deny uses harming refuges. Though the 1997 Act did little to change the compatibility criterion that the Service had been using since the 1980s, the mandate to maintain biological integrity, diversity, and environmental health requires more protective compatibility determinations. Also, refuge management activities, such as water level maintenance, are not subject to the compatibility standard but must nonetheless meet the substantive ecological management criteria.

An important new manual provision states that "refuge managers should address" threats to biological integrity, diversity, and environmental health that originate from actions that occur outside of the refuge boundary.⁶⁰⁸ The manual advises refuge managers to seek redress before local planning and zoning boards, and state administrative and regulatory agencies if voluntary or collaborative attempts to forge solutions do not work.⁶⁰⁹ Though tempered by cautionary language,⁶¹⁰ these are nonetheless bold instructions for a traditionally timid agency.⁶¹¹

The external threat to public lands is one of the most serious challenges facing conservation. Moreover, because so many refuges are at the lower reaches of watersheds, compared to national forests and national parks, the Refuge System faces particularly difficult problems that necessitate work outside of boundaries to stem degradation. For instance, chemical run-off and soil erosion from upstream farm practices threaten refuge conservation in the Upper Mississippi River refuge.⁶¹² The state of Louisiana has issued a fish consumption advisory for the Upper Ouachita National Wildlife Refuge due to mercury levels in the

607. Gergely et al., *supra* note 17, at 108.

608. 66 Fed. Reg. 3,822 (Jan. 16, 2001).

609. *Id.*

610. *Id.*

611. See CLARKE & MCCOOL, *supra* note 14, at 107–25 and *supra* notes 86–87 and accompanying text, for a discussion of the U.S. Fish & Wildlife Service's lack of boldness. Dealing with external threats to federal resources has been a perennial problem even for the Park Service, an agency with somewhat greater political capital to expend on external affairs. See OUR COMMON LANDS: DEFENDING THE NATIONAL PARKS 389–498 (David J. Simon ed. 1988); CLARKE & MCCOOL, *supra* note 14, at 179–210; Joseph L. Sax & Robert B. Keiter, *Glacier National Park and Its Neighbors: A Study of Federal Inter-Agency Cooperation*, 14 ECOLOGY L.Q. 207 (1987); Robert B. Keiter, *On Protecting the National Parks from the External Threats Dilemma*, 20 LAND & WATER L. REV. 355 (1985). Often, local external threats cannot be addressed through local politics alone. The Park Service's losing battle to close a lunchroom in Carlsbad Caverns National Park had more to do with the pressures exerted by U.S. Representative Joe Skeen than they do with local boards or councils. Blaine Harden, *Deep in Carlsbad Cave, Hungry Tourists Prevail*, N.Y. TIMES, Apr. 14, 2002, at A20.

612. National Audubon Society, *Refuges in Crisis*, at http://www.audubon.org/campaign/refuge_report/index.html (last visited Sept. 17, 2002).

fish.⁶¹³ Oil and gas development, industrial effluent, and contaminated sediment runoff are all likely external sources of the mercury.⁶¹⁴ Upland residential and commercial development threatens the Pelican Island and Great Dismal Swamp refuges.⁶¹⁵ How the Service responds to these external threats will be an early indication of the effectiveness of the strong language in the refuge policy to secure biological integrity, diversity and environmental health.

The manual provision on external threats joins with mandates for planning and other management criteria to strengthen trans-boundary coordination.⁶¹⁶ Though trans-boundary coordination is universally acclaimed as necessary to achieve ecosystem conservation,⁶¹⁷ the statutory provisions for agencies to consult and cooperate seldom amount to more than exhortations. This is as true for the Improvement Act as it is for most other organic legislation.⁶¹⁸ While the policy provision explicitly instructing managers how to deal with external threats could help transform desirable collaboration into real management, when refuge managers set priorities, trans-boundary coordination may continue to languish. For example, the manager of the National Elk Refuge, which protects an elk herd that ranges far outside the borders of the refuge, generally does not seek to influence relevant management decisions on neighboring public and private lands. The reason, in part, is that involvement in external management decisions “would require additional funds and manpower” and it might arouse “the latent anti-federal sentiment that pervades” the region.⁶¹⁹

613. U.S. FISH & WILDLIFE SERVICE, DIVISION OF ENVIRONMENTAL CONTAMINANTS, CONSUMPTION ADVISORY DETAILS – WILDLIFE, at http://ecos.fws.gov/datacall_summary/species_detail.html?module=231&species=wildlife, (last visited Oct. 9, 2001).

614. PAUL J. CONZELMANN & THOMAS W. SCHULTZ, U.S. FISH & WILDLIFE SERVICE, UPPER OUACHITA NATIONAL WILDLIFE REFUGE CONTAMINANTS STUDY iv (1992).

615. Criss, *supra* note 57, at 1, 13; UPPER OUACHITA NATIONAL WILDLIFE REFUGE CONTAMINANTS STUDY, *supra* note 614.

616. See, e.g., National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(C), 111 Stat. 1255 (“complement efforts of States and other Federal agencies to conserve”); § 7(a)(3) (in preparing unit conservation plans, “(A) consult with adjoining Federal, State, local, and private landowners and affected State conservation agencies; and (B) coordinate the development of the conservation plan or revision with relevant State conservation plans . . .”).

617. See, e.g., Robert B. Keiter, *Conservation Biology and the Law: Assessing the Challenges Ahead*, 69 CHI.-KENT L. REV. 911, 929 (1994); R. Edward Grumbine, *Reflections on “What Is Ecosystem Management?”*, 11 CONSERVATION BIOLOGY 44–45 (1997).

618. Compare, e.g., National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4)(E) (“ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States”) and § 7(e)(3) (requiring consultation with adjoining landowners and state conservation agencies, and coordination with state conservation plans) with 16 U.S.C. § 1604(a) (2000) (NFMA) and 43 U.S.C. § 1712(c)(9) (1986) (FLPMA).

619. Anders Halverson, *The National Elk Refuge and the Jackson Hole Elk Herd: Management Appraisal and Recommendations*, in DEVELOPING SUSTAINABLE MANAGEMENT

The Refuge System policy fleshing out the substantive management criterion to maintain biological integrity, diversity, and environmental health describes a broad conservation mission consistent with both the current scientific discourse of conservation biology⁶²⁰ and the Service-wide “ecosystem approach” policy.⁶²¹ The Service’s policy can be seen as part of a larger Clinton Administration effort to bring ecological and conservation sciences to bear on public land management. This effort was evident in the Clinton executive order for Refuge System management.⁶²² Also, the Service policy categorizing fragmentation of habitat as a threat to biological integrity⁶²³ is based on the same principles as the controversial Forest Service roadless rule.⁶²⁴ The Clinton reform of the national forest planning regulations, which placed priority on “the maintenance and restoration of ecological sustainability,” is another example of this effort.⁶²⁵ The tenet that long-term economic prosperity depends on healthy ecosystems and biodiversity is part of the international movement promoting sustainable development.⁶²⁶

The convergence of the national forest planning regulations and the Refuge System management criteria is significant for two reasons. First, the Forest System has had more than two decades to refine its management to the current iteration of its planning rules. The Refuge System has essentially leapfrogged over that gap in experience to the

POLICY FOR THE NATIONAL ELK REFUGE, WYOMING 23, 28 (Yale Sch. of Forestry and Envtl. Stud. Bull. Series No. 104, 2000) (based on personal communication with Barry Reiswig, National Elk Refuge Manager).

620. See R. Edward Grumbine, *Reflections on “What is Ecosystem Management?”*, 11 CONSERVATION BIOLOGY 41 (1997) (describing ecological integrity, among other themes of ecosystem management).

621. U.S. FISH & WILDLIFE SERVICE, AN ECOSYSTEM APPROACH TO FISH AND WILDLIFE CONSERVATION, at <http://www.nctc.fws.gov/library/pubs9/habitatmgmt/concept.html> (last visited Sept. 17, 2002); see Richard Haeuber, *Setting the Environmental Policy Agenda: The Case of Ecosystem Management*, 36 NATURAL RES. J. 1 (1996).

622. Exec. Order No. 12,996, § 3(e), 61 Fed. Reg. 13,647 (Mar. 25, 1996) (directing the Secretary to “ensure that the biological integrity and environmental health of the Refuge System is maintained”).

623. 65 Fed. Reg. 62,484, 62,486 (Oct. 18, 2000).

624. 66 Fed. Reg. 3,244 (Jan. 12, 2001) (rule limiting the construction of new roads and logging on 58.5 million acres of inventoried roadless areas in 120 national forest). The George W. Bush Administration formally announced its intent to revise the rule at 66 Fed. Reg. 35,918 (July 10, 2001) (advance notice of proposed rulemaking and request for comment) and issued interim directives for considering activities in roadless areas at 66 Fed. Reg. 65,796 (Dec. 20, 2001).

625. 65 Fed. Reg. 67,514, 67,517 (Nov. 9, 2000). Similarly, the National Park Service adopted new management policies in the last weeks of the Clinton administration that identified the natural integrity of parks as a key resource protected from impairment under the Park System organic legislation. 65 Fed. Reg. 56,003 (Sept. 15, 2000) (adopting section 1.4 of NPS Management Policies); National Park Service Management Policies § 1.45, available at <http://www.nps.gov/policy/mp/policies.pdf>.

626. See WORLD COMMISSION ON ENVIRONMENT AND DEVELOPMENT, OUR COMMON FUTURE 331 (1987).

cutting edge of management prescriptions. Second, the Forest System is widely regarded as the prototypical multiple-use public land system. The convergence of the National Forest System's ecological management constraints with the Refuge System's dominant-use ecological criteria reflects the convergence of all U.S. public lands systems at the middle of the use continuum described in the introduction to this article. Now that the current Bush Administration has signaled its interest in modifying parts of the Clinton Forest Service rules,⁶²⁷ it may also soon turn its attention to this Refuge System policy.

3. *Water Rights*

Though the 1997 Improvement Act itself creates no new water rights, it does establish a clear duty for the Service to acquire water rights needed for refuge purposes.⁶²⁸ This will be important for the protection of aquatic organisms in all parts of the System. Though healthy water flows are under greater threat in the arid West,⁶²⁹ many rivers and bays in the East also suffer from water deprivation.⁶³⁰ Water can be acquired by purchase or asserted as a reserved right under federal law.

Securing instream water flows for conservation purposes on public land has been a controversial topic at least since the Supreme Court found a federal implied reserved water right to protect the desert pupfish at the Devil's Hole National Monument.⁶³¹ Water rights, like property rules generally, are established under state law. In the arid West, where many reserved refuges require water to conserve waterfowl, fish, and other species, most states apply the doctrine of prior appropriation to allocate scarce water. Prior appropriation requires diversion of water to a beneficial use in order to perfect a water right. In times of drought, water users whose rights are older fill their allocation before more junior holders of rights can get water.

Refuges are often downstream of and junior to irrigators, the main

627. 66 Fed. Reg. 27,552 (May 17, 2001); 66 Fed. Reg. 44,590 (Aug. 24, 2001).

628. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(G), 111 Stat. 1255.

629. See, e.g., NATIONAL RESEARCH COUNCIL, SCIENTIFIC EVALUATION OF BIOLOGICAL OPINIONS ON ENDANGERED AND THREATENED FISHES IN THE KLAMATH RIVER BASIN: INTERIM REPORT (2002), available at <http://www.nap.edu/catalog/10296.html> (last visited Sept. 17, 2002); Rebecca Clarren, *No Refuge in the Klamath Basin*, HIGH COUNTRY NEWS, Aug. 13, 2001, at 1; Michael Milstein, *Klamath Refuges Go Thirsty: Life-Sustaining Wetlands for Migrating Birds Are Drying Up at Alarming Rates*, THE OREGONIAN, July 13, 2001, at 1, 15 (describing the adverse effects on migrating birds and refuges resulting from upstream diversions during times of drought).

630. See, e.g., *James City County v. Environmental Protection Agency*, 12 F.3d 1330, 1336-1337 (4th Cir. 1993) (upholding EPA veto of a permit to construct a reservoir in part because the disruption in water flow would have adverse environmental effects downstream in the Chesapeake Bay through the interruption of nutrients and the destruction of wetlands).

631. *Cappaert v. United States*, 426 U.S. 128 (1976).

water users in the West.⁶³² Refuges, therefore, often find their water unavailable during dry seasons and years. Also, refuges generally put water to non-diversionary uses, such as maintaining for conservation purposes stream flows, wetland moisture, or lake levels. Although some states now permit acquisition of water rights for instream uses, many do not.⁶³³ A 1994 survey revealed that only 98 of the 226 western refuges responding to a questionnaire had adequate existing water rights to provide for refuge needs even during an average year of precipitation.⁶³⁴

The Service may assert a federal reserved water right for instream flows based on a refuge establishment document. The federal right can exist even in states that do not permit instream water rights under state law. Such a right has a priority date of the time that Congress or the President established a reservation for a particular purpose. The amount of the reserved water right is the minimum necessary to prevent the frustration of the primary purpose of the reservation.⁶³⁵ Courts have determined that these federal reserved rights may be created implicitly, even if the establishment document is silent on its intention for water rights.⁶³⁶ As long as the reservation's primary purpose requires water for fulfillment, the federal right is created for that amount at the time of establishment. Courts will assume, absent evidence to the contrary, that when Congress (or the President) reserves federal land for a particular

632. In contrast to the national forests, wildlife refuges tend to be located at lower elevations, below numerous diversions that reduce stream flows. Loomis notes that:

Water diversion and groundwater pumping for irrigated agriculture have often resulted in reducing the natural flows of water to many refuges. Irrigated agriculture often poses an additional threat from the discharge of agricultural drainage water containing toxic trace elements from pesticides and fertilizers. Such contamination made national news in 1984 with the discovery at Kesterson National Wildlife Refuge that agricultural drainage water flowing into the refuge contained many toxic trace elements, such as selenium.

LOOMIS, *supra* note 290, at 400.

633. All prior appropriation states except New Mexico have some provision for protecting instream flows in rivers. David Getches, *The Metamorphosis of Western Water Policy: Have Federal Laws and Local Decisions Eclipsed the States' Roles?*, 20 STANFORD ENVTL. L.J. 3, 30 (2001). However, many states implement this protection through public interest limitations on private diversions or minimum stream flow regulation. Most prior appropriation states that permit acquisition of instream flow water rights limit the privilege to public entities and forbid private ownership of instream rights. A. DAN TARLOCK, *LAW OF WATER RIGHTS AND RESOURCES* § 5:28 (2001); *see also* Covell, *A Survey of State Instream Flow Programs in the Western United States*, 1 WATER L. REV. 177 (1998).

634. WESTERN WATER POLICY REVIEW ADVISORY COMMISSION, *WATER IN THE WEST: CHALLENGE FOR THE NEXT CENTURY* 5-34 (1998), available at <http://www.den.doi.gov/wprac/reports/chapt5.pdf> (last visited Sept. 17, 2002).

635. *United States v. New Mexico*, 438 U.S. 696 (1978) (limiting reserved water rights in the Gila National Forest to the amount necessary to prevent the frustration of the original primary purposes of its establishment).

636. *Arizona v. California*, 373 U.S. 546, 598 (1963) (explicitly applying the reserved water rights doctrine to public lands created by executive order).

purpose, it intends to reserve a federal water right at least sufficient to ensure the purpose can be achieved.⁶³⁷ The courts have yet to determine whether federal reserved rights are limited to reserved refuge lands, or whether they extend to acquired refuge holdings. In general, state courts adjudicating federal reserved water rights have been reluctant to recognize instream flows.⁶³⁸

A refuge has an implied federal reserved water right, therefore, to fulfill only the *primary* purposes of its establishment document, with a priority date of the act of establishment.⁶³⁹ So, even though the 1997 Act removes the need to identify major, or primary, purposes in order to make compatibility determinations, primary purposes remain important in determining the reserved water rights. Where a refuge has grown through multiple reservations that are silent on the issue of reserved rights, different reserved water rights may be established to fulfill different primary purposes with different priority dates.

Because a federal reserved water right can trump state requirements such as diversion and continual use, and because federal courts have ruled that such a property interest may exist by implication, this issue has generated a great deal of controversy in Congress. Congress has recently begun to make explicit statements about its intent with respect to reserving water rights.⁶⁴⁰ For instance, in the California Desert Protection Act of 1994, Congress explicitly reserved "a quantity of water sufficient to fulfill the purposes of this Act."⁶⁴¹ In the Improvement Act, Congress explicitly refused to create a new overlay of 1997 priority-date reserved water rights for all the refuges in order to fulfill the new mission of the System.⁶⁴² However, implied reserved rights continue to exist (even if not

637. The origins of implied federal reserved rights for public lands lie in *Winters v United States*, 207 U.S. 564 (1908), where the Court found that a federal agreement with an Indian tribe implied a water right for the tribe. The Court first extended the *Winters* implied water rights to federal public land reservations in *Arizona v. California*, 373 U.S. 546, *reh'g denied*, 375 U.S. 892 (1963) and *Cappaert v. United States*, 426 U.S. 128 (1976). See generally TARLOCK, *supra* note 633, § 9:37-9:51. The rationale of these cases, as well as *United States v. New Mexico*, 438 U.S. 696 (1978), supports the extension of the doctrine to acquired federal lands, in addition to reserved public domain. U.S. Department of Justice, Office of Legal Counsel, *Federal Non-Reserved Water Rights*, 6 Op. Off. Legal Counsel 328, 38-82 (June 16, 1982).

638. Getches, *supra* note 633, at 32.; see, e.g. *United States v. State of Idaho*, 23 P.3d 117 (Idaho 2001) (no federal reserved instream water right for a national wildlife refuge).

639. *United States v. New Mexico*, 438 U.S. 696 (1978). See generally WESTERN WATER POLICY REVIEW ADVISORY COMMISSION, WATER IN THE WEST: CHALLENGE FOR THE NEXT CENTURY 5-34 (1998).

640. Michael C. Blumm, *Reversing the Winters Doctrine?: Denying Reserved Water Rights for Idaho Wilderness and its Implications*, 73 U. COLO. L. REV. 173, 225 n. 283 (2002); TARLOCK, *supra* note 633, § 9:51.

641. 16 U.S.C. § 410aaa-76.

642. "Nothing in this Act shall-(a) create a reserved water right, express or implied, in the United States for any purpose . . ." National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 8(a)(n)(1), 111 Stat. 1259.

yet adjudicated) on some refuges, based on the establishment documents.⁶⁴³

Nonetheless, the Improvement Act created an important new mandate for securing water rights to sustain the instream flows necessary to fulfill the conservation mission of the System. The Act requires the Service to “acquire, under State law, water rights that are needed for refuge purposes.”⁶⁴⁴ The Act also requires the Service to “assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the System.”⁶⁴⁵ “Assist” is a mandate that incorporates a greater degree of agency discretion than “acquire” because it includes a wider range of consultation and informal procedures. Whether the Service fulfills a mandate to assist is likely to be a matter of degree, of determining whether the agency did enough. In comparing these two mandates, the House committee report characterized the mandate to “acquire” as imposing “a new, more specific, obligation.”⁶⁴⁶ The legislative history clarifies the acquisition mandate as requiring the Service to exercise existing authority to meet new obligations. Among the existing authority that the Secretary could employ is the power to: “acquire water rights with appropriated funds; improve the operations of Federal agencies with respect to the identification and protection of relevant water rights; purchase water; and participate in State water rights adjudications to perfect and defend relevant water rights.”⁶⁴⁷

The water acquisition mandate is nonetheless important because it addresses, with respect to the Refuge System, a fiduciary issue that has been the subject of controversy in public land management for over two decades. Early suits by environmental groups unsuccessfully attempted to compel the Park Service to claim reserved water rights in the Sevier River in Zion National Park, which faced reduced stream flows due to upstream energy development.⁶⁴⁸ Litigation over protection of Redwood

643. The U.S. Supreme Court found federal implied reserved water rights for the Havasu Lake National Wildlife Refuge and Imperial National Wildlife Refuge in *Arizona v. California*, 373 U.S. 546, *reh'g denied*, 375 U.S. 892 (1963). More recently, the Idaho Supreme Court, in reviewing a district court decision involving the massive Snake River Basin Adjudication, found that the establishment documents for the Deer Flat National Wildlife Refuge implied no federal reserved water rights. *United States v. State of Idaho*, 23 P.3d 117 (Idaho 2001). The Deer Flat NWR consists of approximately 94 islands over 110 miles of the Snake River, and was established, like the majority of refuges, to preserve native migratory birds and their breeding grounds. *Id.* at 120–22 (reviewing establishment documents). The Deer Flat NWR decision follows closely on the heels of a politically charged rehearing that reversed a finding of implied reserved water rights for wilderness areas. *Potlatch Corp. v. United States*, 12 P.3d 1260 (Idaho 2000).

644. National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4)(G).

645. *Id.* § 5(a)(4)(F).

646. H.R. REP. NO. 105–106, at 10.

647. *Id.*

648. TARLOCK, *supra* note 633, § 9.52.

National Park in the mid-1970s challenged the Park Service's exercise of its statutory duty to conserve park resources.⁶⁴⁹ Although Congress ultimately resolved the particular conservation issues with respect to Redwood National Park, the court decisions raised the possibility that an affirmative public trust duty might exist on the part of the agency to protect park resources. Subsequent attempts to apply the trust responsibility to force federal land management agencies to assert water rights (or to pursue them more aggressively) have failed.⁶⁵⁰ But, the judicial opinions have not entirely dismissed the idea that there are some circumstances where a court would impose a duty on an agency to assert water rights.⁶⁵¹

The mandate in the Improvement Act to acquire water rights is more specific and stronger than mandates found in the legislation involved in the public trust litigation over federal lands. Therefore, the U.S. Fish & Wildlife Service duty will likely trigger relatively greater judicial scrutiny of agency passivity during proceedings adjudicating water rights.⁶⁵² Even though the Improvement Act fails to create new reserved rights, it does mandate the Service to participate in adjudications to protect and defend water reserved rights arising from establishment documents.⁶⁵³

In addition to asserting reserved rights, the Improvement Act mandates that the Service go further to acquire by state permit or purchase conventional water rights.⁶⁵⁴ Any refuge that has establishment purposes requiring more water than would be necessary to meet just the primary purposes (the limit of the implied federal reserved right) will need acquired water. Acquiring water is especially necessary in two circumstances because the Act does not create reserved rights to meet the needs of the conservation mission. First, refuges that do not have some version of the System's conservation mission as their primary purpose will need to acquire water rights under state law because they do

649. *Sierra Club v. Department of the Interior*, 376 F. Supp. 90 (N.D. Cal. 1974); *Sierra Club v. Department of the Interior*, 398 F. Supp. 284 (N.D. Cal. 1975), *modified* 424 F. Supp. 172 (N.D. Cal. 1976); *see* TARLOCK, *supra* note 633, § 9:52.

650. *Sierra Club v. Andrus*, 487 F. Supp. 443 (D.D.C. 1980), *aff'd sub. nom.* *Sierra Club v. Watt*, 659 F.2d 203 (D.C. Cir. 1981); *Sierra Club v. Block*, 622 F. Supp. 842 (D. Colo. 1985), *recons. den.*, 661 F. Supp. 1490 (1987), *dismissed*, 911 F.2d 1405 (10th Cir. 1990); *see* TARLOCK, *supra* note 633, § 9:52; COGGINS & GLICKSMAN, *supra* note 7, § 8:27.

651. *Sierra Club v. Block*, 622 F. Supp. 842 (D. Colo. 1985), *recons. den.*, 661 F. Supp. 1490 (1987), *dismissed*, 911 F.2d 1405 (10th Cir. 1990); *see* TARLOCK, *supra* note 633, § 9:52.

652. These activities required of the Fish & Wildlife Service to gain water rights are all affirmative duties constitutionally close to the President's core discretionary power to take care to execute the laws. So, despite the mandatory language of the Act, judicial review might be limited. *See* ALFRED C. AMAN, JR. & WILLIAM T. MAYTON, *ADMINISTRATIVE LAW* § 15.4.2 (1995).

653. H.R. REP. No. 105-106, at 10.

654. *Id.*

not possess sufficient federal reserved rights. A significant problem with this approach is that many states still do not permit acquisition of water rights for application to instream, conservation flows.⁶⁵⁵ On the other hand, an application from the U.S. Fish & Wildlife Service to a state permitting agency for “natural flow” to support wildlife may provide an opportunity for a state to expand its concept of “beneficial use” “to reflect changes in society’s recognition of the value” of new instream uses.⁶⁵⁶ This is what happened when South Dakota issued the U.S. Fish & Wildlife Service a water permit to assure the continued flow of springs providing waterfowl habitat on the LaCreek National Wildlife Refuge.⁶⁵⁷ In upholding the permit against a challenge by neighboring landowners, the South Dakota Supreme Court established an important precedent that may make it easier for others to acquire rights to instream conservation flows. The international interest in migratory bird protection and national interest in national wildlife refuge conservation can provide a strong set of facts for extending the traditional property doctrines of water law.⁶⁵⁸

Second, because federal reserved water rights date back only to the time of establishment, there are many refuges that have relatively junior rights. For those refuges, the Service might have to purchase more senior rights to ensure seasonal instream flows for conservation. This will be the case for the Klamath Basin refuges. A recent drought has created a crisis for migratory birds using the now-dry wetlands in the Klamath Basin refuges, which have junior claims to the little water going to farmers.⁶⁵⁹

Unfortunately, unless Congress substantially increases appropriations for purchasing water rights, the Service will have limited options to meet its duty. The lack of budget monies for water actually

655. Compare MONT. CODE ANN. § 85-2-316 (2001) (permitting federal agencies to acquire instream flow water rights) with IDAHO CODE § 42-1501, 1503 (2002) (only the state Water Resource Board may file applications for minimum flows). See generally Covell, *A Survey of State Instream Flow Programs in the Western United States*, 1 WATER L. REV. 177 (1998). Some states, such as Oregon, have programs that augment instream flows when water is salvaged or transferred. See OR REV. STAT. § 540.510 (2001).

656. *In re* Water Right Claim No. 1927-2, 524 N.W.2d 855, 858 (S.D. 1994).

657. *Id.*

658. *Id.*

659. Rebecca Clarren, *No Refuge in the Klamath Basin*, HIGH COUNTRY NEWS, Aug. 13, 2001, at 1; Michael Milstein, *Klamath Refuges Go Thirsty: Life-Sustaining Wetlands for Migrating Birds Are Drying Up at Alarming Rates*, THE OREGONIAN, July 13, 2001, at 1 & 15 (describing the lack of water going to the refuges and a threatened lawsuit by the Oregon Natural Resources Council to compel the federal government to redistribute water from farmers to the refuges). The Klamath refuges include the Upper Klamath NWR, the Bear Valley NWR, the Lower Klamath NWR, and the Clear Lake NWR. The Department of the Interior allocates water in the Klamath basin for purposes in the following order of priority: 1) species listed under the ESA, 2) tribal trust responsibilities, 3) irrigated agriculture, and 4) National Wildlife Refuges. *Oversight Field Hearing Before the House Comm. on Resources*, 107th Cong. 16 (2001) (prepared statement of Sue Ellen Wooldridge, Deputy Chief of Staff, Dept. of the Interior).

threaten more than just the System's purchasing power. The 1998 report of the Western Water Policy Review Advisory Commission found that the Service lacks funds even to document adequately the water uses and needs on refuges.⁶⁶⁰ The Advisory Commission's recommendations include development of a program to "improve data collection and analysis for use in defense of refuge water rights," and "increase the efficiency and effectiveness of existing water management."⁶⁶¹

Congress missed a critical opportunity in failing to establish new federal reserved water rights for the System with a 1997 priority date. There is no question that conservation of plants and animals is now the primary purpose of the Refuge System. Also, there is little doubt that lack of water would frustrate this mission in many circumstances. By establishing new rights with a 1997 priority date, Congress could have bolstered long-term environmental protection without taking water rights away from any existing users, all of whom would have priority dates earlier than 1997, and without having to rely on states to update their water law regimes to incorporate nature protection concerns. Instead, Congress mandated the U.S. Fish & Wildlife Service to accomplish the goal with a limited set of tools not up to the task at hand.

At the same time, though, Congress deserves credit for dealing directly with the issue of federal reserved water rights. The organic acts for the other federal public lands systems skirt the issue of reserved rights and leave it for the executive and judicial branches to sort out.⁶⁶² The Improvement Act's mandate directing the U.S. Fish & Wildlife Service to acquire water is a path-breaking management mandate that will require vigilance on the part of the federal government to protect instream flows.

4. *Biological Monitoring*

The Improvement Act requires the Service to "monitor the status and trends of fish, wildlife, and plants in each refuge."⁶⁶³ This simple substantive criterion will prove to be important because it is a binding duty for a key, yet chronically missing, element of adaptive management. Adaptive management requires feedback about the consequences of

660. WESTERN WATER POLICY REVIEW ADVISORY COMMISSION, WATER IN THE WEST: CHALLENGE FOR THE NEXT CENTURY 5-34 (1998).

661. *Id.*

662. The most Congress has offered as guidance for reserved water rights in other organic acts is the statement that FLPMA neither expands nor diminishes federal or state rights in water resources development or control. FLPMA, § 701(g), 43 U.S.C. § 1701.

663. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(N), 111 Stat. 1256. This monitoring requirement originated in the Senate bill and entered the Act when the House adopted amendments to reconcile its bill with the Senate's. S. HRG. 105-286, at 2 (1997); 142 CONG. REC. S9092 (Sept. 10, 1997).

decisions in order to adjust them continually.⁶⁶⁴ Public land management, generally, lacks a research component that adequately informs decisionmakers and the public about the success or failure of predictions, such as a prospective finding of compatibility.⁶⁶⁵ Therefore, implementation of biological monitoring is a necessary condition for the success of the Service's policy of employing adaptive management in planning.⁶⁶⁶

One of the problems leading to incompatible uses and environmental degradation on refuges is ignorance about the distribution and needs of non-game species of animals and plants.⁶⁶⁷ Sadly, this is typical of federal lands. The monitoring requirement directly remedies this weakness by forcing reluctant managers to invest in better information, even where it reveals disquieting conflicts. However, monitoring will be an unfulfilled mandate if it remains an unfunded mandate. Congress needs to appropriate adequate money to allow refuges to engage in adaptive management. The Senate sponsors recognized this need and the other important aspects of monitoring when they introduced the monitoring criterion by amendment into the version of the Improvement Act passed by the House and forwarded to the Senate.⁶⁶⁸

664. See *supra* notes 343–345 and accompanying text.

665. See Holly Doremus, *Adaptive Management, the Endangered Species Act, and the Institutional Challenges of "New Age" Environmental Protection*, 41 WASHBURN L.J. 50 (2001); Robert L. Fischman & Vicky J. Meretsky, *Endangered Species Information: Access and Control*, 41 WASHBURN L.J. 90 (2001).

666. 65 Fed. Reg. 33,907 (May 25, 2000). The manual defines adaptive management as "[t]he rigorous application of management, research, and monitoring to gain information and experience necessary to assess and modify management activities. A process that uses feedback from refuge research and monitoring and evaluation of management actions to support or modify objectives and strategies at all planning levels." U.S. FISH & WILDLIFE SERVICE MANUAL, 602 FW 1.6(A), available at <http://policy.fws.gov/602fw1.html> (last visited Sept. 17, 2002).

667. As of 1994, for 13% of the listed species that occur on refuges, the Service did not know whether populations were improving, stable, or declining. 1994 GAO REPORT, at 577. The 1994 GAO Report also describes refuges where managers lamented inadequate funds to conduct studies and surveys necessary for species recovery. *Id.* at 10. An earlier GAO study found that the U.S. Fish & Wildlife Service could not assess the effects of oil and gas operations on refuges because of lack of data. U.S. GENERAL ACCOUNTING OFFICE, ECONOMIC USES OF THE NATIONAL WILDLIFE REFUGE SYSTEM UNLIKELY TO INCREASE SIGNIFICANTLY iii (1984). Most of the reports documenting incompatible uses in the System in the 1980s were based on subjective surveys because the Service lacked monitoring of uses and impacts. See, e.g., U.S. DEP'T OF THE INTERIOR, U.S. FISH & WILDLIFE SERVICE, RESOURCE PROBLEMS ON NATIONAL WILDLIFE REFUGES, NATIONAL FISH HATCHERIES, RESEARCH CENTERS 1 (July 1983) (report based on subjective information only); U.S. FISH & WILDLIFE SERVICE, COMPATIBILITY TASK GROUP, A REVIEW OF SECONDARY USES OCCURRING ON NATIONAL WILDLIFE REFUGES 10 (June 1990) (recommending studies to assess the effects of uses).

668. 143 CONG. REC. S9092 (daily ed. Sept. 10, 1997).

[M]onitoring is often one of the first casualties of budgetary constraints. In addition, given some of the past problems with secondary uses on refuges, monitoring will be

The only other public land system employing a similar monitoring requirement is the National Forest System. Unlike the Improvement Act, the NFMA does not explicitly mandate monitoring. But, courts have nonetheless compelled the Forest Service to monitor wildlife and habitat in response to planning regulations, as well as the resulting plans. For instance, in *Sierra Club v. Martin*, the Eleventh Circuit suspended several national forest timber sales because the agency failed to obtain population trend data for certain indicator species.⁶⁶⁹ The then-governing Forest Service regulation stated, in a requirement similar to that in the Improvement Act, that “population trends of the management indicator species will be monitored and the relationships to habitat changes determined.”⁶⁷⁰ Despite the “great deference” the Forest Service received from the court, the court rejected as inadequate the Forest Service’s claim that it met the monitoring requirement by making site visits and consulting maps to evaluate habitat in the area.⁶⁷¹ The court insisted on actual population surveys. The forest plan’s provisions requiring monitoring bolstered the case for actual population surveys in *Sierra Club v. Martin* and the other recent case that suspended logging for the same reason.⁶⁷²

The refuges, with a more stringent statutory requirement than the NFMA, may well face the same judicial intervention if they fail to gather and consider biological inventory information. With clear statutory language applicable to a broader range of species than the old Forest Service regulation, the Service will likely need to conduct actual population surveys even where its conservation plans lack strong

very important in measuring the success of the recent administrative and legislative changes that we are now undertaking. Lastly, monitoring will ensure that our scientific knowledge regarding wildlife and natural resources continues to grow.

Id. The only significant increase in U.S. Fish & Wildlife Service appropriations President Bush has proposed for Fiscal Year 2003 is \$57 million for the System. This increase would consist of an additional \$30.7 million for refuge maintenance and \$20 million for public use and wildlife protection. The budget would appropriate a total of \$376 million for the System. *Administration Requests More Fire Money; GAO Raps Policy*, PUBLIC LANDS NEWS, Feb. 15, 2002, at 1.

669. 168 F.3d 1 (11th Cir. 1999).

670. 36 C.F.R. § 219.19(a)(6) (1999). Nonetheless, the Improvement Act does not include the word “population.”

671. 168 F.3d at 4.

672. *Utah Environmental Congress v. Zieroth*, 190 F. Supp. 2d 1265 (D. Utah 2002) (invalidating a timber salvage project because the Forest Service failed to gather population data and instead relied on habitat data); *Oregon Natural Resources Council v. U.S. Forest Service*, 59 F. Supp. 2d 1085 (W.D. Wash. 1999) (suspending timber sales because the Forest Service failed to conduct wildlife surveys). *Cf.* *Colorado Environmental Coalition v. Dombeck*, 185 F.3d 1162 (10th Cir. 1999) (upholding approval of a ski area expansion despite the Forest Service failure to compile lynx population data). In addition to lacking a monitoring requirement for the lynx in the actual forest plan, the *Colorado Environmental Coalition* case also involved a species that was not a “management indicator species” under 36 C.F.R. § 219.19 (1999), 185 F.3d at 1170. The court in *Inland Empire Public Lands Council v. U.S. Forest Service*, 88 F.3d 754 (9th Cir. 1996), also failed to compel the Forest Service to acquire quantitative monitoring data.

language.

5. Conservation Stewardship

Despite the statutory and regulatory focus on the compatibility test, which relies on finding that uses will *not* interfere with or detract from the mission and purposes of a refuge, the Improvement Act also contains a broad affirmative mandate.⁶⁷³ The Act requires the Service to manage the System to fulfill the mission of conservation.⁶⁷⁴ The conservation stewardship criterion requires more active, protective management than merely ensuring compatibility.⁶⁷⁵ This “stewardship responsibility”⁶⁷⁶ may be a sleeper mandate⁶⁷⁷ in a manner similar to the affirmative recovery mandate in the Endangered Species Act (“ESA”).⁶⁷⁸ Though less specific than the affirmative duty to acquire water, it nonetheless shares that provision’s fiduciary quality.

The conservation stewardship responsibility may be relegated to the background as mere policy because the Improvement Act contains many more specific requirements designed to advance the mission. Indeed, though in the section of the Act dealing with administration of the System, the subsection containing the conservation stewardship mandate is labeled “policy.” However, the recent U.S. Fish & Wildlife Service “policy” defining biological integrity, diversity, and environmental health as components of the conservation mission, adopted under the procedures of informal rulemaking and incorporated into the agency manual, provides a wealth of specific standards that the Service must meet.⁶⁷⁹

We can expect the Service’s and the public’s initial attention on implementation of the Improvement Act to focus on the compatibility determinations. This parallels the early focus in ESA implementation on determinations that agency actions will not jeopardize species (i.e. interfere with the goals of the ESA).⁶⁸⁰ These determinations are specific

673. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(1), 111 Stat. 1256.

674. *Id.* § 5(a)(3)(A) (“each refuge shall be managed to fulfill the mission of the System . . .”).

675. Tredennick, *supra* note 14, at 98–99, argues, for instance, that the stewardship criterion might limit boating on Deer Flat NWR more stringently than the compatibility criterion.

676. H.R. REP. NO. 105–106, at 10.

677. Professor Rodgers has described sleeper provisions in environmental law as “products of end-of-the-game jockeying . . . with consequences exceeding the formal legislative vision.” William Rodgers, Jr., *Where Environmental Law And Biology Meet: Of Pandas’ Thumbs, Statutory Sleepers, and Effective Law*, 65 U. COLO. L. REV. 25, 57 (1993); see also William Safire, *Ground Zero*, N.Y. TIMES MAGAZINE, Nov. 11, 2001, at 46, 48 (discussing the multifarious meanings of “sleeper”).

678. 16 U.S.C. § 1536(a)(1).

679. 66 Fed. Reg. 3,810 (Jan. 16, 2001); see *supra* notes 575–627 and accompanying text.

680. For a description of how this ESA provision works and the way in which the focus of

written findings that deal with activities that often threaten acute harms. They are rallying points for controversies and litigation.

However, as the program matures, we may witness some growth of substantive detail on the skeleton of the broad affirmative duty. Like the affirmative duty to fulfill the Refuge System mission, the ESA's statutory requirement for affirmative species conservation (recovery) contrasted sharply with its negative partner (avoid jeopardy) in having no procedure or written determination associated with compliance. Therefore, it was a lower priority for agency implementation and citizen oversight in the early years of the ESA program. Although courts consistently hold that fulfilling the duty to conserve requires some action, or some reason why the agency has not acted, they seldom set out precisely what it requires or rely on it as the sole basis for overturning an agency's decision.⁶⁸¹ Therefore, the duty to conserve has not yet played a prominent role in the implementation of the ESA. Although some recent cases show signs of breathing life into the duty to conserve,⁶⁸² it currently remains overshadowed by the overlapping, but separate and more specific, duty of the Services to prepare recovery plans.

The mandate to make affirmative contributions toward the System mission provides a statutory basis for application of the public trust doctrine. This doctrine, rooted in water law, has long held attraction for advocates of federal public land conservation.⁶⁸³ However, non-statutory bases for its application have always proven weak.⁶⁸⁴ This new statutory duty may, then, finally generate a body of public trust case law and practices for the federal public lands.⁶⁸⁵ Even if it is a weak offensive

the ESA program has evolved over time, see Robert L. Fischman & Jaelith Hall-Rivera, *supra* note 295.

681. ROBERT L. FISCHMAN AND MARK S. SQUILLACE, ENVIRONMENTAL DECISIONMAKING: NEPA AND THE ENDANGERED SPECIES ACT 182-83 (3d ed. 2000); see J.B. Ruhl, *Section 7(a)(1) of the "New" Endangered Species Act: Rediscovering and Redefining the Untapped Power of Federal Agencies' Duty to Conserve Species*, 25 ENVTL. L. 1107, 1110 (1995) (describing how the duty to conserve may be used as a shield by an agency or as a sword by an agency's critic).

682. See, e.g., *Sierra Club v. Glickman*, 156 F.3d 606 (5th Cir. 1998); *House v. U.S. Forest Service*, 974 F. Supp. 1022 (E.D. Ky. 1997); *Sierra Club v. Lujan*, 36 Env't. Rep. Cas. (BNA) 1533 (W.D. Tex. Feb. 1, 1993), *appeal dismissed*, 995 F.2d 571 (5th Cir. 1993).

683. See Joseph L. Sax, *The Public Trust Doctrine in Natural Resource Law: Effective Judicial Intervention*, 68 MICH. L. REV. 473 (1970); Joseph L. Sax, *Liberating the Public Trust Doctrine From Its Historical Shackles*, 14 U.C. DAVIS L. REV. 185 (1980); Charles F. Wilkinson, *The Headwaters of the Public Trust: Some Thoughts on the Source and Scope of the Traditional Doctrine*, 19 ENVTL. L. 425 (1986).

684. See, Richard J. Lazarus, *Changing Conceptions of Property and Sovereignty in Natural Resources: Questioning the Public Trust Doctrine*, 71 IOWA L. REV. 631 (1986); James L. Huffman, *A Fish Out of Water: The Public Trust Doctrine in a Constitutional Democracy*, 19 ENVTL. L. 527 (1989); James L. Huffman, *Trusting the Public Interest to Judges: A Comment on the Public Trust Writings of Professors Sax, Wilkinson, Dunning and Johnson*, 63 DENV. U.L. REV. 565 (1986).

685. Most western states have developed bodies of law governing their school trust lands.

weapon for conservationists to compel Service action, the stewardship responsibility serves as a basis for the Service to defend more assertive protection of the refuges, especially when dealing with external threats.⁶⁸⁶ Moreover, the conservation stewardship mandate supports an "ecosystem management" approach to resource conservation.

The Service can clarify and strengthen its stewardship responsibility by establishing procedures that require periodic evaluations of refuges' progress toward fulfilling the Improvement Act's conservation mandate. The manual provisions governing preparation of comprehensive refuge plans would be a logical place to begin. If plans establish specific performance goals for conservation, then the stewardship duty can be measured continually, as progress in meeting those goals. In this way, the comprehensive conservation plans can encourage progress for individual refuges in the same way that annual Government Performance and Results Act reports encourage progress for the Service as a whole.⁶⁸⁷

E. Public Participation

One of the great modern attributes of federal land management is public involvement. Although NEPA opened management decisions to public scrutiny and involvement through environmental impact analysis, the Service remained largely free of any additional requirements until the enactment of the Improvement Act. Public participation improves management because it forces administrators to defend clearly their choices to a critical audience. It also brings more information to bear on the decisions the manager must make. This information is important to answer hybrid questions of refuge management containing both technical and social components: what quantities of goods (*e.g.*, waterskiing areas, game, wetlands flora) to produce, which lands are suitable for which uses, and what conditions should be placed on activities. Public participation provisions recognize that public land management is not simply applied natural science, it is also conflict management.⁶⁸⁸

Public participation takes many forms in organic legislation. Avenues for participation open when agencies are required to set out guidance through notice and comment rulemaking, to provide a process for planning and appeals, to submit to citizen suits, or to consult advisory committees.

Effective public participation is particularly important for the

Those lands, originally part of a package of federal land grants at the time of statehood, are managed by trustees operating under fiduciary constraints. Fairfax, *supra* note 292.

686. See J.B. Ruhl, *supra* note 681. For a more specific policy mandate for Service responses to external threats, see *supra* notes 611–619 and accompanying text.

687. See *supra* notes 326, 439–441 and accompanying text.

688. Bobertz & Fischman, *supra* note 557, at 374.

Refuge System because the ecological goals inevitably require partnerships across jurisdictional boundaries.⁶⁸⁹ However, the Improvement Act requires only passive participation, where the agency presents ideas to which the public responds. Absent in the statute is recognition that cross-boundary ecosystem management requires interactive participation, where the public and the agency share in joint analysis of problems. Interactive participation facilitates active learning through the synthesis of multiple perspectives.⁶⁹⁰

The Improvement Act promotes public participation in System management in standard, unimaginative ways. This is particularly striking when compared with the Act's strong, detailed, and creative provisions in the other hallmarks of modern organic legislation.⁶⁹¹ The Improvement Act does little to advance the cause of public participation beyond what existing law requires and encourages. The Service has come a long way in opening its decision-making to public involvement through written compatibility determinations, comprehensive conservation planning, and notice and comment promulgation of policy. In the absence of organic statutory detail, it still falls short of leadership in public participation.

This subsection describes four key aspects of public participation in federal land management and the extent to which the Improvement Act addresses them. First, rulemaking provides a process by which the public can help define the standards for system-wide management. Second, administrative appeals can provide an impartial, comprehensive review of management decisions at the behest of the public. Third, citizen suits realign agency direction when it drifts off course. Fourth, though not very important in the past, advisory committees continue to gain greater influence over public land management.

1. Rulemaking

The Service first published guidance in the Refuge Manual for compatibility determinations in 1986.⁶⁹² The Service did not engage the

689. See, e.g., *supra* notes 612–619 and accompanying text (external threats).

690. Tim W. Clark & Garry D. Brewer, *Introduction*, in DEVELOPING SUSTAINABLE MANAGEMENT POLICY FOR THE NATIONAL ELK REFUGE, WYOMING, 2000 at 14–16 (Yale Sch. of Forestry and Env'tl. Stud. Bull. Series No. 104, 2000) (employing the public participation framework of M.P. Pimbert and J.M. Pretty, *Parks, People and Professionals: Putting "Participation" into Protected Area Management* (U.N. Research Institute for Social Development Discussion Paper DP5:1–60 [especially pps. 22–28] 1995)); Tim W. Clark, *Wildlife Resources: The Elk of Jackson Hole, Wyoming*, in DEVELOPING SUSTAINABLE MANAGEMENT POLICY FOR THE NATIONAL ELK REFUGE, WYOMING 171, 181 (Yale Sch. of Forestry and Env'tl. Stud. Bull. Series No. 104, 2000).

691. See, e.g., *supra* parts III(B) (hierarchy of uses), III(D)(2) (biological integrity, diversity, and environmental health), III(D)(3) (water rights acquisition), and III(D)(5) (conservation stewardship).

692. *Review of the Management of the National Wildlife Refuge System: Joint Hearing Before*

administrative procedures of notice and comment rulemaking at that time. The Improvement Act, however, required the Service to invite the greater scrutiny of notice and comment rulemaking for the new compatibility standards.⁶⁹³ This new opportunity for public participation and the resulting increased visibility of regulations will improve the legitimacy and accuracy of compatibility determinations. Also, courts, which often regard manual provisions as non-binding guidance for refuge managers, will enforce regulations.⁶⁹⁴ The Service should continue its current policy of employing the APA informal rulemaking procedure to promulgate policies implementing refuge planning and other mandates of the Improvement Act.⁶⁹⁵

The Act requires the compatibility regulations to provide an opportunity for public review and comment on each individual determination.⁶⁹⁶ This review and comment may be met through the comprehensive planning process.⁶⁹⁷ Therefore, it is incongruous for Congress to require regulations for compatibility determinations but not for comprehensive planning. It is not sufficient for the plans *themselves* to be subject to public notice and comment, as the Act requires.⁶⁹⁸ The Improvement Act should have required planning regulations for the U.S. Fish & Wildlife Service, as the NFMA does for the Forest Service.⁶⁹⁹ Without such a statutory mandate, a future administration might change the current policy of employing notice and comment rulemaking procedures for manual provisions related to comprehensive planning.

the Subcomm. on Env't, Energy, and Natural Resources of the House Comm. on Government Operations, Jointly with the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries, 101st Cong. 178, 328, 403 (1989). The Refuge Manual was not originally promulgated under the APA notice and comment informal rulemaking procedures. *McGrail & Rowley v. Babbitt*, 986 F. Supp. 1386, 1392 (S.D. Fla. 1997). In the latest round of manual revisions designed to implement the Improvement Act, however, the Service has been publishing draft policy, inviting comment, and then responding to comments in promulgating final guidance. The Service asserts that it is now following the APA § 553 informal notice and comment procedures in revising the manual. 65 Fed. Reg. 62,475.

693. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 6(3)(B), 111 Stat. 1257.

694. For instance, in *McGrail & Rowley v. Babbitt*, 986 F. Supp. 1386 (S.D. Fla. 1997), the court rejected the plaintiff's contention that the Service should be bound by provisions in Refuge Manual dealing with public access to coastal island refuges. The court cited the following factors as important in concluding that the provisions were nonbinding: 1) neither the 1966 Act nor the Service regulations referred to the Refuge Manual; 2) the language of the Manual was advisory in tone; and 3) the Service did not employ APA informal rulemaking procedures in producing the manual. *Id.* at 1394. For a similar holding with respect to the Forest Service Manual, see *Western Radio Services Co. v. Espy*, 79 F.3d 896 (9th Cir. 1996).

695. See 65 Fed. Reg. 62,475 (Oct. 18, 2000) (describing the current U.S. Fish & Wildlife Service policy of publishing draft and final policies).

696. National Wildlife Refuge System Improvement Act of 1997 § 6(3)(B)(ix).

697. *Id.*

698. *Id.* § 7(e)(4).

699. National Forest Management Act of 1976, § 14(a), 16 U.S.C. §§ 1600-1614.

Our experience with national forest planning indicates that management improves when the agency is subject to the discipline of an open notice and comment rulemaking to lay out planning measures. This kind of rulemaking is beneficial because it: 1) allows interest groups to leverage their resources to shape the framework for planning generally, even where such groups lack the resources to participate in many individual comprehensive plans; 2) provides enforceable benchmarks to ensure the Service does what it promises to do in comprehensive planning; and 3) ensures greater systemic unity through well-vetted standards.

The Improvement Act requires the Service to use informal rulemaking under section 553 of the APA⁷⁰⁰ only for establishing the process for making compatibility determinations. The Service publishes other implementation guidelines under the Improvement Act as “policy”, such as those regarding the determination of appropriate refuge uses (not all uses that meet the compatibility determination are appropriate for refuges), wilderness stewardship, comprehensive conservation planning, and the maintenance of biological integrity, diversity, and environmental health.⁷⁰¹ These Service “policies” go through the same notice and public participation as regulations under APA section 553. But, instead of appearing in the Code of Federal Regulations, the policies become chapters in the U.S. Fish & Wildlife Service manual. The U.S. Fish & Wildlife Service manual is the comprehensive compilation of policies related to refuge operations. Even the compatibility rule has a counterpart policy written to conform to the manual style.⁷⁰² Like its more celebrated cousin for the U.S. Forest Service, the U.S. Fish & Wildlife Service manual provides mandatory operational instructions for land managers.⁷⁰³ Typically, manuals contain policies that do not directly regulate the public, but instead set out the duties of public officials.⁷⁰⁴ Still, these policies, such as the definition of the principles for maintaining biological integrity, diversity, and environmental health,⁷⁰⁵ frequently determine what resources the public may enjoy in a refuge.

The judiciary generally holds that manual provisions scrutinized through the notice and comment process bind agencies.⁷⁰⁶ As the U.S.

700. 5 U.S.C. § 553 (1996).

701. 63 Fed. Reg. 3,583 (Jan. 23, 1998) (notice of intent to revise the U.S. Fish & Wildlife Service manual).

702. 65 Fed. Reg. 62,484 (Oct. 18, 2000) (compatibility policy accompanying final rule).

703. U.S. Fish & Wildlife Service Manual homepage, *available at* <http://policy.fws.gov/manual.html> (last visited Sept. 17, 2002).

704. *See, e.g.*, 65 Fed. Reg. 33,902 (May 25, 2000) (refuge planning policy).

705. 66 Fed. Reg. 3,818 (Jan. 16, 2001).

706. *Western Radio Services Co. v. Espy*, 79 F.3d 896 (9th Cir. 1996); *McGrail & Rowley v. Babbitt*, 986 F. Supp. 1386 (S.D. Fla. 1997). The U.S. Fish & Wildlife Service declares that it is bound by the promulgated provisions in the manual and will need to employ the same notice

Fish & Wildlife Service posts more chapters of its manual on the internet so that they are almost as easily accessible as the Code of Federal Regulations, the practical distinctions between implementing through policy rather than through regulation dissolve.⁷⁰⁷ However, if future administrations abandon or abbreviate the APA section 553 notice and comment procedure used to promulgate policy, then the manual will revert to an inferior tool for ensuring good management.

2. *Administrative Appeals*

Administrative appeals are an important part of any agency's public participation program. Administrative review allows agencies to correct errors in planning before controversies erupt in political and judicial forums over which agencies have less control. It promotes more efficient third-party examination than litigation and also resolves peripheral or minor issues in order to sharpen important disputes destined for judicial resolution.

In addition, in the Improvement Act context, administrative review would encourage better central oversight of unit planning to ensure uniformity in compliance with System goals.⁷⁰⁸ An internal Service appeals process would allow the agency to minimize adverse spill-over effects from refuges and coordinate activities across refuges. In this way, administrative appeals advance the systemic purpose of organic legislation.

For these reasons, a system of administrative appeals should be viewed as part of good planning and management rather than a separate process that occurs afterward. Currently, administrative process is available only to applicants seeking review of a permit denial.⁷⁰⁹ This is

and comment procedure to amend a policy that it used in original adoption. See, e.g., 65 Fed. Reg. 33,902 (May 25, 2000) (refuge planning policy). An incentive for the U.S. Fish & Wildlife Service to promulgate its manual through notice and comment rulemaking is that courts will then accord the substantive interpretations greater deference than manual provisions adopted without the formality and public participation of notice and comment rulemaking. *Southern Utah Wilderness Alliance v. Dabney*, 222 F.3d 819, 828–29 (10th Cir. 2000).

707. For several months in 2002, the manual was not easy for the public to access because a federal court order suspended the operation of most Department of the Interior web sites. Memorandum from J. Steven Griles, Deputy Secretary of the Interior, to all employees (Dec. 6, 2001), available at <http://www.doi.gov/news/grilesmemo.htm> (last visited Sept. 17, 2002) (disconnecting all computer internet access and external network connections). This interruption of access to the manual underscores the superiority of the Code of Federal Regulations as a more widely disseminated reference source.

708. Bobertz & Fischman, *supra* note 557, at 425–26 (describing the purposes of administrative appeals of national forest land and resource management plans).

709. 65 Fed. Reg. 62,493 (Oct. 18, 2000). For instance, in *McGrail & Rowley v. Babbitt*, 986 F. Supp. 1386 (S.D. Fla. 1997), after the Key West National Wildlife Refuge Manager denied a company a permit to operate a commercial tour boat with landings on Boca Grande Key, the company was able to appeal the decision to the Assistant Regional Director for Refuges and

insufficient. Administrative appeals should be available for citizens challenging compatibility determinations and comprehensive conservation plans as well.

Unfortunately, without a statutory mandate for appeals, the Service has rejected proposals for a system of independent administrative review. Responding to comments requesting that the draft compatibility regulation be modified to provide the public with an opportunity to make administrative appeals of determinations, the Service relied on two aspects of its compatibility determination process. First, the Service argued that the new pre-decisional opportunities for public review and comment would obviate the need for appeals.⁷¹⁰ However, administrative appeals would improve the pre-decisional public participation process. The seriousness with which decisionmakers view public comments increases with the availability of an administrative appeals process. If a refuge manager knows that the public has little recourse short of expensive and likely fruitless litigation, she need not worry very much about dismissing concerns raised in the comment (pre-decisional) phase of decision-making. Likewise, the availability of post-decisional administrative review would attract more participation from a public assured that its views will receive thorough consideration.

Second, the Service argued that another new requirement for compatibility determinations, the concurrence from regional chiefs, would accommodate the concerns that motivated the requests for an administrative review system.⁷¹¹ Though the concurrence requirement will help promote more uniform application of the compatibility standard, it is unlikely to provide the kind of critical evaluation of difficult issues facilitated by impartial adjudicators of administrative appeals. Of course, not all administrative appeal adjudicators are impartial outsiders. The Forest Service, for instance, employs superior officers to decide appeals from lower level officers. The Forest Service appeals regime, like the Refuge System process, uses regional chiefs to decide appeals of unit managers.⁷¹² The use of adjudicators removed from day-to-day agency administration and decision-making, such as those in the Department of the Interior's Interior Board of Land Appeals and the EPA's Environmental Appeals Board, is necessary to realize the potential benefits of administrative review.

Wildlife. *Id.* at 1390.

710. 65 Fed. Reg. at 62,462-63.

711. *Id.*

712. 36 C.F.R. § 219.36 (1982) (defining reviewing officer); Bobertz & Fischman, *supra* note 557, at 431-34 (discussing the problems with line-officer review of Forest Service administrative appeals).

3. *Citizen Suit Provision*

The Improvement Act, like most public land legislation and unlike most pollution control legislation, contains no provision specifically authorizing citizen suits.⁷¹³ Final agency actions, such as compatibility determinations and comprehensive unit plans, are subject to judicial review through the Administrative Procedure Act. If the Service ever institutes a system of administrative appeals, then actions would not be final until the administrative process runs its course.

Members of the public seeking judicial review of refuge management, however, face several familiar hurdles. First, federal litigation is expensive. Second, standing and ripeness doctrines prevent courts from reviewing actions until the Service authorizes a specific activity that causes particular injury to an identified party that can be redressed by a court.⁷¹⁴ Third, the scope of judicial review is limited to determining whether the agency acted in an arbitrary and capricious manner or specifically violated a rule or statute. Courts will not remand merely poor management decisions.⁷¹⁵

Though Congress has lost its enthusiasm for citizen suits in recent years,⁷¹⁶ they remain an important incentive for public land management agencies to be responsive to claims of the public. Compared to the multiple-use regimes, Refuge System management has seldom been subject to citizen suits.⁷¹⁷ With the exception of the 1992 litigation over the widespread incompatible uses,⁷¹⁸ few lawsuits have affected Refuge System management. Of course, the potential for, or threat of, litigation likely has an effect on management, albeit one that is difficult to measure. The Improvement Act's substantive management criteria, along with detailed standards in the new manual, will provide more footholds for citizens seeking judicial review of refuge management. To ensure the availability of judicial review, a better organic act would have a citizen suit provision that makes clear Congress' intent to allow direct judicial review of comprehensive conservation plans, even if the Service has not yet authorized individual projects. It would also "define injuries and

713. Compare National Wildlife Refuge System Improvement Act (16 U.S.C. § 668dd), FLPMA (43 U.S.C. § 1701 et seq.), NFMA (16 U.S.C. § 1600-1614), and NPS Organic Act (16 U.S.C. § 1 et seq.) with citizen suit provisions in CWA (33 U.S.C. § 1365), CAA (42 U.S.C. § 7604), and RCRA (42 U.S.C. § 6972).

714. *Friends of the Earth v. Laidlaw*, 528 U.S. 167 (2000); *Ohio Forestry Ass'n v. Sierra Club*, 523 U.S. 726 (1998).

715. *Citizens to Preserve Overton Park v. Volpe*, 401 U.S. 402 (1970).

716. See, e.g., S. 1253, 105th Cong. § 2(13) (1997) (a finding critical of lawsuits because they delay planning, encumber management, drain resources, and compel Congress to enact emergency provisions to restore land management authority to agencies).

717. For a description of litigation over management of wildlife refuges, see BEAN & ROWLAND, *supra* note 45, at 292-99; COGGINS & GLICKSMAN, *supra* note 7, § 14A:2.

718. See *supra* notes 218-222 and accompanying text.

articulate chains of causation that give rise” to citizen standing.⁷¹⁹

4. *Advisory Committees*

The Federal Advisory Committee Act (“FACA”) sets out procedures that govern how agencies may constitute, convene, and use committees of people who are not agency employees.⁷²⁰ It is designed to ensure that agency reliance on private advisory groups does not result in the application of private solutions to matters that remain public.⁷²¹ Because private uses of refuges in ways that thwart conservation objectives have been a problem for the System,⁷²² and because a few establishment documents call for advisory committees,⁷²³ FACA may play a role in refuge management.

The Improvement Act exempts from FACA any U.S. Fish & Wildlife Service coordination with state agency personnel.⁷²⁴ Otherwise, the 1997 Act does not alter the administrative landscape with respect to advisory committees. Any other group convened to give advice or make recommendations, whether established by statute or administrative document, as long as it is not composed wholly of full time federal or state employees, must comply with the FACA requirements.⁷²⁵

The FACA procedures focus on opening the selection and deliberative process of the advisory group to public scrutiny. So, for instance, a refuge manager who consults a committee of experts and stakeholders for advice on managing water retention facilities on a refuge must make certain that the committee has a charge specifying, *inter alia*, the group’s scope, objectives, and duties.⁷²⁶ All committee meetings must be announced in advance in the Federal Register and be open to the public.⁷²⁷ All committee minutes, reports and working papers must be available to the public.⁷²⁸

As the Service moves toward more collaborative, multi-stakeholder procedures for forging management, FACA will rise in importance. The Service will need to adapt FACA procedures in order to take part in the

719. *Lujan v. Defenders of Wildlife*, 504 U.S. 555, 580 (1992) (Kennedy, J. concurring in part).

720. Federal Advisory Committee Act (FACA), 5 U.S.C. App. I (2000).

721. ALFRED C. AMAN, JR. AND WILLIAM T. MAYTON, *ADMINISTRATIVE LAW*, 736–39 (2001).

722. *See supra* Part I(F); 1989 GAO REPORT, *supra* note 12.

723. *E.g.*, Silvio O. Conte National Fish and Wildlife Refuge, Pub. L. No. 102–212, § 108, 105 Stat. 1655 (1991).

724. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 8(o), 111 Stat. 1256.

725. 5 U.S.C. App. I § 3 (1972).

726. *Id.* § 9.

727. *Id.* § 10.

728. *Id.*

new experiments⁷²⁹ in public resource management. This will require some revision of the Service manual to fold the FACA requirements into the existing steps that lead to plan and project development.

F. Conclusion to Analysis of the Improvement Act

The 1997 Improvement Act is a dramatic step forward for Refuge System management. Viewing it as a paragon of organic legislation allows us to see its key features and to understand it as a manifestation of larger trends in public land law. The Act's new mission will help to sew together a collection of land units created over a century under dozens of different authorities. The purpose of conservation both consolidates the existing strengths of the Refuge System and broadens the extent of ecological protection by including plants for their own sake. This definition of the Refuge System's purpose reflects the larger trend in resource management toward ecosystem sustainability.

The designated uses hallmark shows the vitality of the dominant-use regime in modern conservation management. But, by placing individual refuge purposes at the apex of the dominant-use hierarchy, Congress limited the ability of the 1997 Act to serve as a unifying force to manage refuges as a single large system. The designated uses also display the continued influence of the hunting and fishing lobby in the special, sub-dominant category of wildlife-dependent uses.

Comprehensive planning comes late to the Refuge System, and it will open up important new avenues for public participation and conservation strategies. However, the Improvement Act does not plow new ground in the planning hallmark. It mostly consolidates the existing practice as required by other public land systems.

In contrast to the planning mandate, the Act's substantive management criteria break new ground in statutory detail for federal organic legislation. The compatibility standard is a codification of the principle that has long guided dominant use in the System. However, the Act's connection of compatibility to comprehensive planning, written determinations, and implementing policy significantly strengthens the standard. The U.S. Fish & Wildlife Service policy of placing the burden of proof on the proponent of a use, linking habitat fragmentation with incompatibility, and accounting for cumulative effects promises leadership in ecological protection.

The most stunning substantive management criterion is the requirement to ensure maintenance of biological integrity, diversity, and environmental health. This is far and away the most ecologically

729. See *supra* notes 343-345 and accompanying text for a description of how adaptive management recognizes the experimental nature of resource decision-making.

informed organic mandate for any U.S. public land system. Along with the System purpose and compatibility standard, this criterion puts the power of law behind the ideas of conservation biology. The U.S. Fish & Wildlife Service policy implementing the criterion applies conservation biology principles in highlighting external threats and in the restoration facet of the mission, which is especially important because this facet is weakly phrased in the statutory purpose statement. The mandate for biological integrity, diversity, and environmental health is the strongest counterweight to the pervasive preference for wildlife-dependent recreation in the Improvement Act.

The duty to acquire water rights is the only affirmative trust mandate of its kind in U.S. organic legislation. Because instream flow problems in refuges are generally caused by upstream users outside of the refuge boundaries, this provision supports the commitment to abate external threats stated in the biological integrity, diversity, and environmental health policy. The biological monitoring criterion provides a statutory impetus for the necessary feedback component of adaptive management. This will generate key data to help determine compatibility and revise comprehensive plans. Finally, the affirmative conservation stewardship criterion looks to the future when the System will face problems not specifically addressed in the current law. While it may first be used as a shield by the Service to defend protective actions, it may ultimately be wielded as a sword to advance the restoration goal, the mission, and the substantive management criterion to maintain biological integrity, diversity, and environmental health.⁷³⁰

The fifth hallmark of organic legislation, public participation, is advanced only weakly by the Improvement Act. Though citizen suits and notice and comment procedures for adopting policy are an important aspect of current refuge law, they are not (with the exception of rulemaking for compatibility) recognized or required by the Act. Certainly, the statutory requirement for written compatibility determinations is an important step forward. Moreover, the Service's notice and comment approach to revising the manual is a key implementation improvement. However, to engage the public more actively, the Service will have to move further beyond the required terms of the Improvement Act and experiment with innovative administrative tools to facilitate avenues of collaboration and appeal.

Though the Improvement Act and the Service's new manual policies look great on paper, serious hurdles to successful implementation remain.

730. I borrow the shield and sword images from J.B. Ruhl's study of the ESA's affirmative conservation mandate, a provision the Improvement Act's conservation stewardship duty closely resembles. J.B. Ruhl, *Section 7(a)(1) of the "New" Endangered Species Act: Rediscovering and Redefining the Untapped Power of Federal Agencies' Duty to Conserve Species*, 25 ENVTL. L. 1107, 1129-34 (1995).

The decades-old problems of under-funding, jurisdictional limitations, and local economic pressures continue to stymie reform of the System. Judicial review of Service compliance with the Improvement Act will remain deferential. The substantive meaning of compatibility, conservation, and maintenance of biological integrity, diversity, and environmental health will continue to resist searching judicial scrutiny. On the other hand, there are strong new footholds for litigation, namely the objectively verifiable duties to make written determinations of compatibility and to monitor the status and trends of wildlife and plants.

Though its provisions are central to refuge management, the Improvement Act does not apply where it conflicts with individual refuge purposes. The supremacy of the individual units resists well-intentioned efforts to put the System on track for comprehensive reform. The next section describes these individual refuge purposes that play such an important, although often unseen, role.

IV. INDIVIDUAL REFUGE PURPOSES

In administering the 1997 Improvement Act, the U.S. Fish & Wildlife Service encounters a fundamental challenge: reconciling the national purposes of systemic management with the individual purposes set out for each refuge. The units of the Refuge System were created and acquired under a diverse array of instruments (establishment documents, which include statutes, executive orders, and public land orders) and authorities (including Article II of the Constitution and federal statutes) for a range of purposes.

This section surveys the hodgepodge of instruments, authorities, and purposes to illustrate the centrifugal forces that resist cohesive, systemic management. Because the Improvement Act defers to establishment documents where they conflict with a provision in the organic legislation, some refuges hew primarily to particular mandates with site-specific application.⁷³¹ Direct conflict between specific refuge purposes and organic legislation is rare;⁷³² often there are ways to reconcile the two in

731. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(a)(4)(D), 111 Stat. 1255 ("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, and, to the extent practicable, that also achieves the mission").

732. Direct conflicts between establishment mandates and the Improvement Act, however rare, are important when they do occur. *See, e.g.*, Fort Peck Game Range, Exec. Order No. 7,509 (Dec. 11, 1936) ("natural forage resources therein shall be first utilized for the purpose of sustaining in a healthy condition a maximum of four hundred thousand (400,000) sharptail grouse, and one thousand five hundred (1,500) antelope"); Fort Peck Game Range, Exec. Order No. 7,509 (Dec. 11, 1936) ("for the conservation and development of natural wildlife resources and for the protection and improvement of public grazing lands and natural forage resources."); Kofa Game Range, 4 Fed. Reg. 438 (Jan. 25, 1939) ("for the protection and improvement of public grazing lands and natural forage resources" and "all the forage resources in excess of that

promoting and limiting activities. However, because austere funding is such an important limiting factor in management of the Refuge System, there remains the problem of setting priorities for refuges when the principal goals of an establishment instrument vie with the System mission for resources.

Many refuges have purposes that derive from more than one type of instrument. Some refuges, such as those created by executive orders relying (in part) on statutory provisions, are born under multiple sources of authority with varying statements of purposes. For instance, the National Elk Refuge owes its establishment to congressional measures⁷³³ as well as executive orders.⁷³⁴ Other refuges grow through accretion of additional parcels, which may be added under instruments different from the original establishment type. For instance, Malheur National Wildlife Refuge derives its current boundaries and purposes from no fewer than a dozen congressional, presidential, and administrative instruments.⁷³⁵ This common situation presents puzzles for managers seeking to determine which purposes should receive priority in refuge management. Therefore, in addition to the tension between organic and establishment or acquisition mandates, there is also a tension in sorting out priorities among establishment and acquisition mandates. Rather than resolve the difficulties of reconciling multiple purposes, this section aims to highlight these sources of tension that contribute to the management conflicts in the System.

The Improvement Act's deference to establishment purposes respects the political compromises that result in establishment instruments. Retrospectively, notions of contractual fairness among the

required to maintain a balanced wildlife population within this range or preserve shall be available for domestic livestock"); Cabeza Prieta Game Range, 4 Fed. Reg. 437 (Jan. 25, 1939) ("for the protection and improvement of public grazing lands and natural forage resources" and "all the forage resources in excess of that required to maintain a balanced wildlife population within this range or preserve shall be available for domestic livestock"); Calhoun Refuge, 11 Fed. Reg. 13,397 (Nov. 9, 1946) (primary purpose to improve navigation and control flooding in the Mississippi River Valley); Spring Lake Refuge, 11 Fed. Reg. 13,397 (Nov. 9, 1946) (primary purpose to improve navigation and control flooding in the Mississippi River Valley); Kuchel Act (establishing Tule Lake, Lower Klamath, Upper Klamath, and Clear Lake National Wildlife Refuges), Pub. L. No. 88-567, 78 Stat. 850 (1964) (designating "the major purpose of waterfowl management, but with full consideration to optimum agricultural use that is consistent therewith").

733. *E.g.*, Appropriations, Agricultural Department, Pub. L. No. 62-261, ch. 284, 37 Stat. 293 (1912); Federal Revenue Sharing Act, Pub. L. No. 62-430, ch. 145, 37 Stat. 847 (1913) (codified at 16 U.S.C. § 501 (2000)); Elk Refuge, Wyoming, ch. 205, 44 Stat. 1246 (1927) (codified at 16 U.S.C. § 673 (2000)).

734. Exec. Order No. 1,814 (Aug. 25, 1913); Exec. Order No. 3,596 (Dec. 22, 1921).

735. *E.g.*, 16 U.S.C. § 715d (Migratory Bird Conservation Act purpose for inviolate sanctuary); Exec. Order No. 929 (1908); Exec. Order No. 5,891 (1932); Exec. Order No. 6,152 (1933); Exec. Order No. 6,910 (1934); Exec. Order No. 7,106 (1935); Public Land Order 1,511 (1957); Public Land Order 4,641 (1969); Public Land Order 6,470 (1983).

stakeholders who negotiated the terms of legislation (or, less commonly, executive or administrative orders) militate in favor of retaining the establishment instrument as the primary guidance document for a refuge unit. Prospectively, legislative interpretation that respects old deals promotes future participation by stakeholders who are able to trade-off with some confidence that subsequent application of organic legislation will not overturn a carefully wrought compromise.⁷³⁶ Greater population, economic activity, and development make refuge establishment today a more difficult task than in the past. For each acre of new refuge land, there are likely to be more existing economic uses than occurred on an acre of refuge land established fifty or seventy-five years ago. Therefore, explicit compromises and trade-offs will continue to condition establishment documents in order to reach an acceptable deal. The concomitant level of detail in refuge establishment documents will rise as it has in establishment statutes for “second generation” national parks.⁷³⁷

The Service distinguishes between establishment purposes, which are included in the source initially creating a refuge, and acquisition purposes, which are included in the sources authorizing additions to existing refuges.⁷³⁸ However, in this article, I use the term “establishment” broadly to include both the creation of a refuge and the addition of land to an existing refuge.⁷³⁹ One of the practical difficulties for the Service in distinguishing between initial establishment and subsequent acquisition is whether purposes in an instrument used to acquire or create only part of a refuge should apply to the entire refuge.⁷⁴⁰

Both the Improvement Act and the compatibility regulations list seven instruments in which individual refuge purposes may be found: law, proclamation, executive order, agreement, public land order, donation document, and administrative memorandum.⁷⁴¹ I divide these sources of refuge purposes into three categories explored in subsections below:

736. Some statutory detail in establishment legislation likely results from necessary political compromises to gain support of the users of some of the resources included within a new refuge. *See, e.g.*, Bayou Cocardie National Wildlife Refuge, Pub. L. No. 101-593, § 108(e)(4), 104 Stat. 2958 (1990) (requiring the Service to permit access to surface mines subject to certain specific conditions); Back Bay NWR, Pub. L. No. 96-315, § 3(a), 94 Stat. 957 (1980) (amending Back Bay NWR to require Service to issue access permits across the refuge); Tensas River NWR, Pub. L. No. 96-285, § 4, 94 Stat. 595 (1980) (requiring the Service to give special consideration to commercial timber production and allowing flood control activity).

737. *See* Fischman, *supra* note 9, at 797-804 (describing the forces that create the pressure for greater statutory detail in national park establishment legislation).

738. *See, e.g.*, U.S. FISH & WILDLIFE SERVICE MANUAL 603 FW 2.12A(3), (4), available at <http://policy.fws.gov/603fw2.html> (last visited Sept. 10, 2002).

739. *See supra* notes 560-574 and accompanying text. Though establishment authorities may be called “enabling” authorities, I believe the latter term is best reserved for laws that provide sovereign or legislative authority to political jurisdictions.

740. *See supra* notes 560-574 and accompanying text.

741. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 5(10), 111 Stat. 1254.

presidential (proclamations and executive orders); congressional (statutes, or law); and administrative (all other instruments). The Refuge System maintains a database listing many of the individual purposes for refuges and categorizing them by instrument.⁷⁴² The purposes in a document expanding or amending an initial establishment purpose can be important even though they may have a limited geographic scope. The U.S. Fish & Wildlife Service files many of these expansions and amendments in its purposes database. Though purposes and priorities for refuges appear in all types of instruments, few specific management mandates occur in sources other than statutes. As the “second generation” problems of modern refuge establishment have intensified, site-specific statutory instruments have become far more common than they were before 1970.

The level of specificity with which the Service defines individual refuge purposes determines how important the centrifugal influences will be in implementing the Improvement Act. The Service has three basic choices for defining individual refuge purposes. It can employ, from most general to most specific, the broad statutory (or, less frequently, presidential) terms, the intent of the basic authorities as revealed through legislative history, or the particular circumstances that lead to the approval for each refuge. The Service’s current practice, though not yet endorsed by the judiciary, is to define establishment purposes in the most general way, through broad statutory terms. For instance, the Service lists in its database the purpose of “conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon”⁷⁴³ for each refuge established under the authority of the Fish and Wildlife Coordination Act (“FWCA”).⁷⁴⁴ It is difficult to imagine a situation where that general purpose would conflict with the organic mission of the System. However, a different and somewhat more specific approach would designate as a purpose for each FWCA-established refuge the more specific goals discussed in the legislative history: public recreation, wildlife preservation, migratory bird protection, habitat conservation, disease control, provision of hunting and shooting areas, and rearing and stocking of wildlife.⁷⁴⁵ The most specific approach would abandon the practice of attaching the same establishment goals to all refuges created

742. Refuge System Database, *supra* note 69.

743. 16 U.S.C. § 664 (2002).

744. 16 U.S.C. §§ 661–667e (2002). The Service lists the FWCA as an establishment document for 47 refuges. For some of the units, such as D’Arbonne NWR, the FWCA is the sole source for the individual refuge purposes. For other units, such as the Charles M. Russell NWR, the FWCA is one of many establishment sources. Refuge System Database, *supra* note 69.

745. See S. REP. NO. 85–1981 (1958), *reprinted in* 1958 U.S.C.A.N. 3446; H.R. REP. NO. 79–1980 (1946); *Hearings Before the House Select Comm. on Conservation of Wildlife Resources*, 73d Cong. (1934); S. REP. NO. 73–244 (1934).

under the same statutory authority and instead would explore the administrative record (decision memoranda, meeting minutes, reports, etc.) to determine the particular rationale for exercising the FWCA authority in each case. Obviously, more specific rationales would present a greater potential for conflict with the overall mission of the System.

The Service may have adopted the general approach for the practical reason that it is easier than interpreting and reviewing legislative history, or researching and sifting through administrative records creating actual refuges. Nonetheless, the general approach is the best approach under the Improvement Act because it most effectively implements the organic principle of unifying the refuges into a dominant-mission system. However, the inclusion of "administrative memorandum" in the Improvement Act as a source of individual refuge purposes suggests that the statute may compel a more detailed accounting of establishment mandates.

The three subsections that follow describe the three different sources of individual refuge purposes: presidential, congressional, and administrative. These subsections provide examples illustrating the interpretive challenges presented by the historical accretion of individual purposes through successive establishment and acquisition documents. The subsections also demonstrate the variety of ways in which individual refuge purposes may sway System management.

A. *Presidential Sources*

From the time of the very first reservations of land for wildlife protection, the president has been a leader in establishing refuges.⁷⁴⁶ Presidential proclamations and executive orders, which differ in name only, are two equivalent instruments that the chief executive can use to establish refuges.⁷⁴⁷ The president has employed proclamations exclusively to establish refuges since 1958. In recent decades the pace of presidential refuge establishment has waned substantially.

The early executive orders and presidential proclamations shaped the enduring features of the Refuge System. They established the precedent for limiting hunting, focusing on wildlife protection, and closing units to uses unless explicitly opened by agency action. The early presidential establishment orders used the term "reservation" rather than

^{746.} See *supra* notes 39–43 and accompanying text.

^{747.} ANNE R. ASHMORE, PRESIDENTIAL PROCLAMATIONS CONCERNING PUBLIC LANDS: JAN. 24, 1791–MARCH 19, 1936 2 (1981) (no difference in effect between proclamation and executive order). Ashmore explains that proclamations generally concern matters of broad interest "that directly affect private individuals" and executive orders typically concern matters directly related to "the conduct of the Federal Government." However, exceptions abound. *Id.*

“refuge” to categorize the units.⁷⁴⁸ This is consistent with the parlance of public land law, which uses the term “reservation” to refer to public land designated for a particular purpose and withdrawn from the domain of one or more resource disposal programs, such as the homesteading or mining laws.⁷⁴⁹ However, beginning with a congressional appropriation in 1913 and an executive order in 1914 for the National Elk Refuge, the term “refuge” arose for most units of the System.⁷⁵⁰ President Franklin Roosevelt renamed many of the early units “national wildlife refuges” in a sweeping order affecting almost two hundred units.⁷⁵¹ The term “refuge” captures the dominant purpose of most of the establishment documents: protection of life from some danger.⁷⁵²

The early presidential establishment documents for refuges cite no legislative basis for the reservation of the lands.⁷⁵³ Indeed, Professor Charles Wilkinson has highlighted the lack of legislative authority for the early refuges as precedent for presidential boldness in protecting federal

748. See, e.g., Pelican Island Reservation, Exec. Order No. 1,014 (Jan. 26, 1909); Stump Lake Reservation, Exec. Order of Mar. 9, 1905; Three Arch Rocks Reservation, Exec. Order of Oct. 14, 1907; Niobrara Reservation, Exec. Order No. 1,461 (Jan. 11, 1912); Mille Lacs Reservation, Exec. Order No. 2,199 (May 14, 1915).

749. Hardrock mining is rare on refuge lands. JOHN D. LESHY, *THE MINING LAW: A STUDY IN PERPETUAL MOTION* 447, n. 67 (1987). Since no organic legislation removes the Refuge System from the operation of the 1872 law, refuges are generally open to prospecting, mineral discovery, and (ultimately) private disposal unless mining is specifically excluded from an area. See 16 U.S.C. § 668dd(c) (2000) (noting that the mining law generally applies to lands in the System to the extent it applied prior to Oct. 15, 1966). Currently, Congress has placed a moratorium on new applications for fee-title land disposal under the General Mining Law, but prospectors may still acquire unpatented mineral rights. Some refuge lands are withdrawn from the operation of the General Mining Law. Though some establishment documents withdraw refuges from the General Mining Law's program of mineral and land disposition, see, e.g., UL Bend National Wildlife Refuge, 34 Fed. Reg. 5,851 (Mar. 28, 1969); Simeonof National Wildlife Refuge, 23 Fed. Reg. 8,623 (Nov. 5, 1958); Michigan Islands National Wildlife Refuge, 12 Fed. Reg. 2,529 (Apr. 18, 1947); Tewaukon National Wildlife Refuge, 10 Fed. Reg. 8,559 (July 10, 1945); Columbia National Wildlife Refuge, 9 Fed. Reg. 11,400 (Sept. 15, 1944); see also ANILCA § 304(c) (2000) (withdrawing from location, entry and patent the Alaska refuges), most do not. However, the Secretary of the Interior may subsequently withdraw refuge lands from the operation of the General mining law. Acquired refuges, like most acquired federal land, are excluded from the 1872 law's disposal scheme. 16 U.S.C. § 668dd(a)(5) (2000). See generally *Oklahoma v. Texas*, 258 U.S. 574 (1922) (acquired lands are open to disposal under the general mining law only if expressly authorized by the acquisition statute).

750. Following the first congressional appropriation for an elk “reserve” (Appropriations for the Department of Agriculture, ch. 284, 37 Stat. 293 (1912)), subsequent legislation (Federal Revenue Sharing Act, ch. 145, 37 Stat. 847 (1913)) and Exec. Orders Nos. 1,814 (Aug. 25, 1913), 2,047 (Sept. 15, 1914), and 2,417 (July 8, 1916), *inter alia*, used the term elk “refuge.”

751. Presidential Proclamation No. 2416 (July 25, 1940) (converting the “reservations,” “bird refuges,” “migratory waterfowl refuges,” “migratory bird refuges,” and “wildlife refuges,” to “national wildlife refuges”).

752. See *THE AMERICAN HERITAGE COLLEGE DICTIONARY* 1148 (3d ed. 1993).

753. See, e.g., Pelican Island Reservation, Exec. Order No. 1,014 (Jan. 26, 1909); Stump Lake Reservation, Exec. Order of Mar. 9, 1905; Three Arch Rocks Reservation, Exec. Order of Oct. 14, 1907; Pine Island Reservation, Exec. Order No. 939 (Sept. 15, 1908); Niobrara Reservation, Exec. Order No. 1461 (Jan. 11, 1912).

lands.⁷⁵⁴ The constitutionality of presidential establishments remained uncertain until 1915, when the Supreme Court upheld the longstanding practice of the president to withdraw a tract of federal land from the application of disposal laws and designate a special purpose for the reserve, especially where Congress acquiesced to the designation.⁷⁵⁵

Beginning with Wilson's 1913 proclamation designating lands for the National Elk Refuge, presidential instruments increasingly relied on statutes, at least in part, as a basis for establishing refuges.⁷⁵⁶ Like the statutes cited in Wilson's Elk Refuge order, the legislation cited in presidential instruments falls into two categories. One type of legislation is a general grant of authority to the President for withdrawal of lands, such as the Pickett Act of 1910.⁷⁵⁷ The other type of legislation provides authority more specifically for the reservation of a particular area or the expenditure of funds for the purchase of refuge land.⁷⁵⁸ After Congress enacted the Migratory Bird Hunting Stamp Act of 1934, making funds available for refuge land purchase,⁷⁵⁹ the proportion of presidential instruments citing some legislation to support establishment rose dramatically.⁷⁶⁰

Today, there are two factors that cause presidential instruments establishing refuges to rely on legislation as a basis for their authority. First, the 1976 Federal Land Policy and Management Act purported to revoke Congress' acquiescence to the President's longstanding practice of relying on inherent executive power to make public land reservations.⁷⁶¹ Second, there are now so many statutory authorities on which to base an order establishing a new refuge, or expanding an existing one, that there is little need for a claim of inherent executive power.⁷⁶²

754. Charles Wilkinson, *Clinton Learns the Art of Audacity*, HIGH COUNTRY NEWS, Sept. 30, 1996; see *supra* notes 48–50 and accompanying text on Roosevelt's precedent-setting proclamation for Pelican Island.

755. *United States v. Midwest Oil*, 236 U.S. 459 (1915). See generally PETER SHANE & HAROLD BRUFF, SEPARATION OF POWERS LAW 130–31 (1996) (citing a number of articles on the inherent authority of the President to issue orders).

756. Exec. Order No. 1,814 (Aug. 25, 1913).

757. See, e.g., Pickett Act, ch. 421, 36 Stat. 847 (1910), as amended by Mining Entries in Withdrawn Lands, ch. 369, 37 Stat. 497 (1912) (cited in Exec. Order No. 1,814 (Aug. 25, 1913)), repealed by FLPMA.

758. See, e.g., 37 Stat. 497 and 847 (cited in Exec. Order No. 1,814 (Aug. 25, 1913)).

759. Duck Stamp Act, Pub. L. No. 73–124, ch. 71, 48 Stat. 451 (1934); see *supra* notes 65–69 and accompanying text.

760. See, e.g., Killcohook Migratory Bird Refuge, Exec. Order No. 6,582 (Feb. 3, 1934); Red Rock Lakes Migratory Waterfowl Refuge, Exec. Order No. 7,023 (Apr. 22, 1935); Lake Andes Migratory Waterfowl Refuge, Exec. Order No. 7,292 (Feb. 14, 1936).

761. Federal Land Policy and Management Act of 1976, 43 U.S.C. §§ 1701–1702 (1994 & 1999 Supp. V); COGGINS & GLICKSMAN, *supra* note 7, § 3, 3:22 and 10D:11. FLPMA also prohibits modification or revocation of any withdrawal that added lands to the Refuge System. 43 U.S.C. § 1714(j) (1994 & 1999 Supp. V).

762. In addition to the acquisition authorities, such as the Endangered Species Act and the

Where an executive order provides specific, individual refuge purposes, they may dictate management priorities at variance with systemic legislation. The *Schwenke* litigation over the relative priority of livestock grazing and wildlife protection on the Charles M. Russell National Wildlife Refuge illustrates this problem.⁷⁶³ President Franklin Roosevelt created the Fort Peck Game Range, now the Charles M. Russell National Wildlife Refuge, in a 1936 executive order.⁷⁶⁴ The order established a limited priority for sustaining populations of game (with a ceiling of 400,000 grouse and 1500 antelope), beyond which access to forage should be equally shared between livestock and wildlife.⁷⁶⁵ In *Schwenke*, the court rejected the Service's position that 1976 legislation,⁷⁶⁶ which transferred game ranges and other conservation lands from shared jurisdiction with the BLM to the U.S. Fish & Wildlife Service alone, heightened wildlife priority, pursuant to refuge organic legislation (at the time, principally the 1966 Act).⁷⁶⁷ The court found that the 1976 statute, considered alone, did heighten the priority of wildlife over livestock in access to forage on the refuges subject to the transfer.⁷⁶⁸ However, because the 1976 law failed to revoke expressly the 1936 executive order creating the refuge, the individual purposes set out in the presidential document continued to control management of the refuge.⁷⁶⁹ The court held that the limited priority scheme established by the 1936 executive order still bound the Service despite "congressional intent to dictate a different priority."⁷⁷⁰

Professors Coggins and Glicksman question this holding on the grounds that Congress, not the President, has superior constitutional power to set priorities for public lands.⁷⁷¹ While the Property Clause⁷⁷² might provide a constitutional basis for an alternative rule of interpretation that would favor congressional instruments over presidential ones, there is another reason to criticize the *Schwenke*

Duck Stamp Act, FLPMA retained the withdrawal authority of the Fish and Game Sanctuaries Act, 16 U.S.C. § 694, and created a new basis for the President, through the Interior Department, to make withdrawals and reservations. See David Getches, *Managing the Public Lands: The Authority of the Executive to Withdraw Lands*, 22 NAT. RES. J. 279 (1982). However, FLPMA did repeal many withdrawal statutes, such as the Pickett Act, which had been widely used by presidents to establish refuges.

763. *Schwenke v. Secretary of the Interior*, 720 F.2d 571 (9th Cir. 1983).

764. Exec. Order No. 7509, 3 Fed. Reg. 227 (1936). The refuge became the Charles M. Russell National Game Range in 1963, Public Land Order 2,951 (Feb. 25, 1963), and the Charles M. Russell National Wildlife Refuge in 1978, Public Land Order 5,635 (Apr. 25, 1978).

765. Exec. Order No. 7,509, 3 Fed. Reg. 227 (1936); 720 F.2d at 574-75.

766. Wildlife Refuge Act Amendments, 16 U.S.C. § 668dd (2000).

767. 720 F.2d at 576-77.

768. *Id.* at 576.

769. *Id.* at 577.

770. COGGINS & GLICKSMAN, *supra* note 7, § 10D:6 (citing 720 F.2d at 577).

771. *Id.* § 10D:6.

772. U.S. CONST. art. IV, § 3.

decision. Courts should employ rules of construction that favor more systemic rather than individualistic goals. A proper understanding of organic legislation would support a canon of interpretation that required less than express revocation of old establishment documents in order to consolidate refuge management under systemic goals. The strengthening of organic legislation in the 1997 Act should now tip the scales toward this mode of centripetal interpretation. Such an interpretation of refuge management mandates would respond not only to the accumulation of individual refuge purposes in executive instruments, but also to the more widespread phenomenon of statutory detail in establishment laws.

B. Congressional Sources

Refuges with purposes derived from “law”⁷⁷³ have statutory establishment authorities. The Refuge System database includes fifteen different general statutory provisions authorizing refuge establishment, including the Migratory Bird Conservation Act,⁷⁷⁴ the Fish and Wildlife Act of 1956,⁷⁷⁵ the 1966 Refuge Administration Act,⁷⁷⁶ and the Endangered Species Act.⁷⁷⁷ So, for example, if the Service establishes a refuge under the land acquisition provision of the Endangered Species Act,⁷⁷⁸ then the Refuge System database will list recovery of threatened and endangered species as a purpose of the refuge.⁷⁷⁹ The establishment purposes derived from general authorizing statutes employ broad terms to promote conservation.⁷⁸⁰ They will not conflict with the 1997 Improvement Act’s mission and mandates except in the most extraordinary circumstance.

In addition to general statutes that authorize multiple refuge acquisitions for a particular purpose or set of purposes, Congress also

773. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 3(a)(10), 111 Stat. 1253; 50 C.F.R. § 25.12 (2001) (listing the sources from which refuge purposes derive).

774. 16 U.S.C. § 715d (2000).

775. *Id.* § 742f(b).

776. *Id.* § 668dd.

777. *Id.* § 1534.

778. *Id.*

779. *See, e.g.*, Kakahaia National Wildlife Refuge and Attwater Prairie Chicken National Wildlife Refuge in Refuge System Database, *supra* note 69.

780. *E.g.*, Migratory Bird Conservation Act, 16 U.S.C. § 715d (“for use as an inviolate sanctuary, or for any other management purpose, for migratory birds”); Fish and Wildlife Act of 1956, 16 U.S.C. § 742f(b)(1) (“for the benefit of the United States Fish & Wildlife Service, in performing its activities and services”); Emergency Wetlands Resources Act of 1986, 16 U.S.C. § 3901(b) (“the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions”). For a discussion of alternative approaches to defining individual refuge purposes established under these statutes, *see supra* notes 743–745 and accompanying text.

enacts site-specific statutes creating individual refuges or authorizing the Secretary to establish a particular refuge. These special statutes are more likely to have particular purposes and mandates that dominate management of the unit at the expense of the overall System mission. Since 1970, the site-specific statutes have proliferated in number and detail.

The first part of this subsection will describe the rise in statutory detail for refuge establishment law and highlight the management problems that result. This subsection then addresses in greater detail how multiple purposes and mandates in specific legislation demand choices in refuge management. In many cases, the Improvement Act can be used to interpret ambiguities in order to conform to systemic goals. In a few cases, establishment statutes will exert a centrifugal pull on the coherence of the Refuge System.

The early site-specific establishment statutes follow the path blazed by the early executive proclamations in designating refuge units for breeding and protection of animals.⁷⁸¹ For instance, the first specific statute establishing a refuge outside of the Pribilof Islands, which were long a subject of conservation lawmaking to maintain the fur seal skin industry,⁷⁸² designated the Wichita Forest Reserve (now the Wichita Mountains Wildlife Refuge) for “the protection of game animals and birds and be recognized as a breeding place therefor.”⁷⁸³ The Wichita statute also prohibited direct takes of game animals and birds in the new reserve except where expressly permitted under the land manager’s (then the Department of Agriculture) regulations.⁷⁸⁴

Over time, the establishment purposes display a trend of broadened concern to protect a wider variety of biological resources. Early purposes focused on particular animals, such as elk or bison,⁷⁸⁵ or relatively narrow categories of animals, such as game and native birds.⁷⁸⁶ Though more

781. The terms “breeding place” and “refuge” or “reserve” were frequently paired in early establishment statutes and presidential instruments. *See, e.g.*, Upper Mississippi River Wild Life and Fish Refuge, ch. 346, 43 Stat. 650 (1924) (codified at 16 U.S.C. § 722 (2000)) (“refuge and breeding place for migratory birds”); Bear River Migratory-Bird Refuge, ch. 413, 45 Stat. 448 (1928) (codified at 16 U.S.C. § 690) (“refuge and feeding and breeding grounds for migratory wild fowl”).

782. *See, e.g.*, Res. No. 22, 40th Cong., 3d Sess., 15 Stat. 348 (1869); Act of Apr 6, 1894, ch 57, 28 Stat. 52, 53.

783. Game Preserve, Wichita Forest Reserve, Pub. L. No. 23, ch. 137, 33 Stat. 614 (1905) (codified at 16 U.S.C. § 684 (2000)).

784. *Id.*

785. *See, e.g.*, National Bison Range, ch. 192, 35 Stat. 267 (1908) (codified at 16 U.S.C. § 671 (2000)) (bison); National Elk Refuge, Exec. Order No. 1,814 (Aug. 25, 1913) (elk).

786. *See, e.g.*, Pelican Island Reserve; Stump Lake Reservation, Exec. Order of Mar. 9, 1905; Huron Islands Reservation, Exec. Order of May 11, 1906; Wichita Forest Reserve, ch. 137, 33 Stat. 614 (1905) (game and birds); Lower Klamath Refuge, Exec. Order No. 924 (Aug. 8, 1908) (native birds).

recent refuges display a broader ecological concern than early units, single species conservation continues to be an important purpose for refuges.⁷⁸⁷

The Upper Mississippi River Wild Life and Fish Refuge establishment instrument is the first, and one of the only, to explicitly include plants (“wild flowers and aquatic plants”) as resources to be protected in and of themselves, rather than merely as habitat for animals.⁷⁸⁸ More recently, Congress has incorporated the Improvement Act’s plant conservation purpose into establishment legislation.⁷⁸⁹ The recent inclusion of plant conservation illustrates the way in which new organic legislation can influence subsequent establishment statutes by highlighting new concerns. One effect of the inclusion of plant protection in the organic mission of the System will be a greater likelihood that areas containing significant floral resources will enter the Refuge System. Though plants are certainly included within broader purposes to protect ecological resources or biological diversity, their explicit inclusion in an establishment statute is an important spur for the Service, which after all, has a “wildlife first” policy.⁷⁹⁰

The inclusion of plant protection in the 1924 Upper Mississippi River Wild Life and Fish Refuge is an anomaly. It did not create a precedent for subsequent establishment purposes. Plant protection is absent in establishment purposes outside of the Upper Mississippi Refuge until the early 1970s, when ecological concerns haltingly emerged. The 1972 establishment statute for the Tincum National Environmental Center, administered as a unit of the System, marked the first time

787. See, e.g., Hart Mountain Antelope Refuge, Exec. Order No. 7523 (Dec. 21, 1936) (a range and breeding ground for antelope and other species of wildlife); National Key Deer Refuge, 71 Stat. 412 (1957) (codified at 16 U.S.C. § 696 (2000)); Attwater Prairie Chicken National Wildlife Refuge (1972), available at <http://refuges.fws.gov/databases> (last visited Sept. 9, 2002) (established primarily through gift and purchase); Julia Butler Hansen Refuge for Columbian White-tailed Deer (1972), available at <http://refuges.fws.gov/databases> (last visited Sept. 9, 2002) (established primarily through purchase).

788. Upper Mississippi River Wild Life and Fish Refuge Act, Pub. L. No. 268, ch. 346, 43 Stat. 650 (1924) (codified at 16 U.S.C. § 722 (2000)). Though minutes of the Migratory Bird Conservation Commission meeting provisionally approving acquisition of the Okefenokee National Wildlife Refuge make reference to protecting the last big stand of cypress, the Service does not use the material as a source of refuge purposes. Minutes of the Meeting of the Migratory Bird Conservation Commission 11 (Jan. 14, 1936). Instead, all refuges approved by the Commission have the same general purposes, provided by the Migratory Bird Conservation Act, “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. § 715d (2000); Refuge System Database, *supra* note 69.

789. See Cat Island National Wildlife Refuge, Pub. L. No. 106-369, 114 Stat. 1417, 1418 (2000) (purpose includes protection of “fish, wildlife, and plant species”); Red River NWR, § 3(b), 106 H.R. 4318 (2000) (purpose includes “restoration and conservation of native plants and animal communities”); Cahaba River NWR, H.R. 4286, 106th Cong. § 6 (2000) (mandate to “conserve, enhance, and restore the native aquatic and terrestrial community characteristics of the Cahaba River (including associated fish, wildlife, and plant species”).

790. See *supra* note 339 and accompanying text.

Congress included protection of “ecological features,” which include plant communities, as a purpose.⁷⁹¹ This new purpose may have been inspired by the Leopold Report’s 1968 recommendation to add a “natural ecosystem” conservation element to refuge management.⁷⁹² Subsequently, the 1973 Seville National Wildlife Refuge (“NWR”) and the 1980 Tensas River NWR establishment instruments employed ecological terminology.⁷⁹³ While the rise in the natural or biological diversity conservation purposes in the 1980s establishment instruments did not substantially change the wildlife focus of the refuges,⁷⁹⁴ some 1980s and 1990s establishment statutes did explicitly include plants within diversity purposes, presaging the systemic missions in the Executive Order and the Improvement Act.⁷⁹⁵

Beginning in the 1970s, another, stronger trend in establishment statutes emerged that helped lay the foundation for the Improvement Act. This was the inclusion of wildlife-oriented recreation and

791. Tincum National Environmental Center Establishment Act, Pub. L. No. 92-326, 86 Stat. 391 (1972) (establishing the Tincum National Environmental Center to preserve “from imminent destruction, the last remaining true tidal marshland in the Commonwealth of Pennsylvania, with its highly significant ecological features . . .”).

792. See *supra* notes 175-177 and accompanying text.

793. Seville National Wildlife Refuge, quit claim deed, dated Dec. 28, 1973, cited in Refuge System Database, *supra* note 69 (“to preserve and enhance the integrity and the natural character of the ecosystems of the above property by creating a wildlife refuge managed as nearly as possible in its natural state, employing only those management tools and techniques that are consistent with the maintenance of a natural ecological process”); Tensas NWR, Pub. L. No. 96-285, 94 Stat. 595 (1980) (finding that the forests protected in the refuge “constitute a unique ecological, commercial, and recreational resource”).

794. Most of the 1980s establishment statutes employing a diversity purpose follow the formula for the ANILCA refuge establishments, which limited its scope to animal species. Alaska National Interest Lands Conservation Act, §§ 302, 303, 16 U.S.C. § 3101 (2000); see, e.g., Bon Secour National Wildlife Refuge, 94 Stat. 484 (1980) (“to conserve an undisturbed beach-dune ecosystem which includes a diversity of fish and wildlife”); Falls of the Ohio National Wildlife Conservation Area, Pub. L. No. 97-137, 95 Stat. 1710 (1981) (including purpose “to protect wildlife populations and habitats in their natural diversity”); Protection Island National Wildlife Refuge, Pub. L. No. 97-333, 96 Stat. 1623 (1982) (including purpose “to provide habitat for a broad diversity of bird species”); Stewart B. McKinney National Wildlife Refuge, 98 Stat. 2774 (1984) (including purpose “to encourage natural diversity of fish and wildlife species”); Bayou Sauvage Urban National Wildlife Refuge, Pub. L. No. 99-645, 100 Stat. 3590 (1986) (including purpose “to encourage natural diversity of fish and wildlife species”).

795. See, e.g., Wallkill River National Wildlife Refuge, Pub. L. No. 101-593, 104 Stat. 2956 (1989) (conservation of “the natural diversity of fish, wildlife, plants, and their habitats”); Great Bay National Wildlife Refuge, Pub. L. No. 102-154, § 319(d) (1992) (“to encourage the natural diversity of plant, fish, and wildlife species”); Rocky Mountain Arsenal National Wildlife Refuge, 106 Stat. 1961 (1992) (“to conserve and enhance the land and water of the refuge in a manner that will conserve and enhance the natural diversity of fish, wildlife, plants, and their habitats”); Silvio O. Conte National Fish and Wildlife Refuge, Pub. L. No. 102-212, § 104, 105 Stat. 1656 (1991) (“to conserve, protect, and enhance the natural diversity and abundance of plant, fish, and wildlife species”). Other establishment instruments embracing plant protection include Pinckney Island National Wildlife Refuge, deed of donation dated Dec. 4, 1975 (cited in Refuge System refuge purposes database) (“a nature and forest preserve for aesthetic and conservation purposes, without disturbing the habitat of the plant and animal populations”).

environmental education as *purposes*.⁷⁹⁶ Though these two activities are commonly included in establishment statutes as *uses* that the Service may develop,⁷⁹⁷ where they are designated as *purposes* they raise difficulties in reconciling the systemic mission with the deference to establishment purposes.⁷⁹⁸

With the 1976 establishment of the Minnesota Valley National Wildlife Refuge, Congress began exerting greater control over management through statutory detail.⁷⁹⁹ The Minnesota Valley Act is indicative of a style of establishment best exemplified (though more dramatically) by the detail pervading recent legislation creating units of the National Park System.⁸⁰⁰ First, the Minnesota Valley establishment act includes a section containing definitions, which is indicative of modern, complex legislation.⁸⁰¹ Second, the Act requires the Service to develop a “comprehensive plan for the conservation, protection, preservation, and interpretation” of the refuge within three years.⁸⁰² Though the Improvement Act now requires all refuges to develop such plans, the Minnesota Valley Act is significant in setting the precedent for requiring planning on individual refuges. Subsequent establishment statutes, such as for the Alaska refuges⁸⁰³ and Grays Harbor,⁸⁰⁴ mandate specific procedures and content for the unit plan. Third, the Minnesota

796. See, e.g., San Francisco Bay NWR, Pub. L. No. 92-330, 86 Stat. 399 (1972) (purposes include “wildlife-oriented recreation and nature study”); Protection Island NWR, Pub. L. No. 97-333, 96 Stat. 1623 (1982) (purposes include providing “wildlife-oriented public education and interpretation”); Bayou Sauvage Urban NWR, Pub. L. No. 99-645, § 502, 100 Stat. 3590 (1986) (purposes include providing environmental education and “opportunities for fish and wildlife oriented” recreation); Pettaquamscutt Cove NWR, Pub. L. No. 100-610, § 202, 102 Stat. 3176 (1988) (purposes include providing opportunities for “environmental education, and fish and wildlife-oriented recreation”); Bayou Cocodrie NWR, Pub. L. No. 101-593, § 108(d), 104 Stat. 2956 (1990) (purposes include “fish and wildlife-oriented recreational activities”).

797. See, e.g., Tensas River NWR, Pub. L. No. 96-285, 94 Stat. 595 (1980) (outdoor recreation and interpretive education); Bogue Chitto NWR, Pub. L. No. 96-288, 94 Stat. 603 (1980) (outdoor recreation and interpretive education); Bandon Marsh NWR, Pub. L. No. 97-137, 95 Stat. 1709 (1981) (outdoor recreation and interpretive education).

798. See *supra* notes 370-372 and accompanying text

799. Minnesota Valley National Wildlife Refuge Act, Pub. L. No. 94-466, 90 Stat. 1992 (1976).

800. Fischman, *supra* note 9. Another, more recent, statute typifying this trend is the establishment act for the Silvio O. Conte National Fish and Wildlife Refuge, Pub. L. No. 102-212, 105 Stat. 1655 (1991), which contains definitions and specific purposes. It also contains a mandate for the Service to create an advisory committee to assist “on community outreach and education programs that further” the refuge purposes. *Id.* § 108. This detailed mandate for a committee, in which Congress specified membership terms, types of members, and how the committee should act, remains rare in the Refuge System but is now common in National Park System unit establishment statutes.

801. Minnesota Valley NWR Act § 3.

802. *Id.* § 6(a).

803. ANILCA, § 304(g), 16 U.S.C. § 3101 (2000).

804. Grays Harbor National Wildlife Refuge, Pub. L. No. 100-406, § 5(c), 102 Stat. 1041 (1988).

Valley Act requires the Service to construct an interpretation/education center in the refuge.⁸⁰⁵ Congressional promotion of development within refuges of such capital projects as visitors' centers, boardwalks, and parking facilities can be coupled with planning mandates through content requirements.⁸⁰⁶ Capital improvements are also popular mandates in national park establishment legislation.⁸⁰⁷

The trend toward more detailed legislation on refuge management is unsurprising given the overall movement toward greater congressional involvement in public lands.⁸⁰⁸ Whether manifest in similar growth in statutory detail in national park establishment legislation, or in more specific systemic guidance in organic legislation, one of the most notable developments in modern environmental law is the increased interest of Congress in closely controlling agencies.⁸⁰⁹ Nonetheless, the level of substantive management requirements, the numbers of required studies, and the numbers of mandated advisory committees is much lower for refuge establishment statutes than for national park establishment statutes. Indeed, Congress remains capable of establishing refuges with no special conditions that deviate from the systemic legislation.⁸¹⁰

Still, the Service needs to address multiple purposes that compete for priority with the System mission. Whether designated specifically for bison,⁸¹¹ elk,⁸¹² or game generally,⁸¹³ game protection will sometimes conflict with the broader ecological mission of the System. For instance, maintaining high densities of elk at the National Elk Refuge reduces woody vegetation that is valuable habitat for other species of native wildlife, including trout and many bird species.⁸¹⁴ Maximizing deer habitat

805. Minnesota Valley National Wildlife Refuge Act, Pub. L. No. 94-466, § 4(c), 90 Stat. 1992 (1976).

806. See, e.g., Bayou Sauvage Urban NWR, Pub. L. No. 99-645, § 502(c), 100 Stat. 3590 (requiring the Service to prepare a master plan for development of the refuge); Grays Harbor NWR, Pub. L. No. 100-406, § 5(c), 102 Stat. 1041 (1988) (requiring the Service to prepare a plan for development that must include the construction of a year-round visitor center, boardwalks, and parking facilities); Red River NWR, § 4(c), H.R. 4318 (2000) (requiring the Service to construct a wildlife interpretation and education center).

807. Fischman, *supra* note 9, at 791-93.

808. The more detailed, modern establishment legislation makes early refuge establishment instruments appear "enigmatic" and "vague." Gergely et al., *supra* note 17, at 107, 108.

809. The trend is also apparent in pollution control law. See Fischman, *supra* note 9.

810. See, e.g., Egmont Key NWR, Pub. L. No. 93-341 (1974); Bandon Marsh NWR, Pub. L. No. 97-137, 95 Stat. 1710 (1981); Ten Thousand Islands NWR, 102 Stat. 4579 (1988).

811. See, e.g., National Bison Range, ch. 192, 35 Stat. 267 (1908) (codified at 16 U.S.C. § 671 (2000)); and Wind Cave National Game Preserve, ch. 284, 37 Stat. 293 (1912) (codified at 16 U.S.C. §§ 141-146 (2000)).

812. See, e.g., National Elk Refuge, ch. 284, 37 Stat. 293 (1912) (codified at 16 U.S.C. § 673 (2000)).

813. See, e.g., Wichita Forest Reserve, ch. 137, 33 Stat. 614 (1905) (codified at 16 U.S.C. § 684 (2000)).

814. Noah P. Matson, *Biodiversity and its Management on the National Elk Refuge, Wyoming*, in DEVELOPING SUSTAINABLE MANAGEMENT POLICY FOR THE NATIONAL ELK

in the Julia Butler Hansen Refuge for Columbian White-tailed Deer requires maintenance of interspersed grassland and woodland, which fragments habitat in derogation of the Service's compatibility policy under the Improvement Act.⁸¹⁵ Managing refuges to maintain high populations of waterfowl is associated in some areas with farming activities and impoundment management to the detriment of native ecosystems.⁸¹⁶

Different purposes set out in unit-specific legislation can also raise questions about priorities within refuges. For instance, some refuges have legislative authorities (either original or amending some earlier instrument) contained in appropriations measures.⁸¹⁷ Should purpose and management language in appropriations law receive lower priority than language in authorizing statutes? Appropriations riders usually receive less scrutiny from the congressional committee system of hearings and reports, and are generally written to be transient authorities, expiring in relevance after a short period of time. On the other hand, appropriation measures often have contained important delegations of authority, such as the 1897 "organic act" for national forests, and are constitutionally binding through the same bicameral and presentment processes that create other statutes.

A similar problem of interpreting individual purposes arises from piecemeal additions to refuges. Should an initial statute establishing a refuge receive higher priority for its purposes than subsequent legislation amending or expanding the refuge? The Improvement Act's legislative history makes clear that refuge purposes can be derived from documents expanding a refuge.⁸¹⁸ However, the Committee Report does not speak to relative importance or scope of purposes in expansions as compared to initial purposes. These questions about priorities will set the terms of the debate over how dominant the Improvement Act's mission and purpose will be in shaping the System. In this respect, the clear ecological conservation mission of the Improvement Act can be helpful and should be used as an interpretive tool to reduce seeming conflicts.

In addition to sorting out priorities between different pieces of legislation, the Service also must evaluate the relative importance of multiple purposes listed within single establishment statutes. For

REFUGE, WYOMING, *supra* note 619, at 101, 107–09, 115; Tim W. Clark, *Wildlife Resources: The Elk of Jackson Hole, Wyoming*, in DEVELOPING SUSTAINABLE MANAGEMENT POLICY FOR THE NATIONAL ELK REFUGE, WYOMING, *supra* note 619, at 171–73.

815. 65 Fed. Reg. 62,486 (Oct. 18, 2000) (finding incompatible all uses that managers "reasonably may anticipate to . . . fragment habitats").

816. Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. 3,810, 3,812 (Jan. 16, 2001).

817. See, e.g., National Elk Refuge, ch. 284, 37 Stat. 293 (1912) & ch. 145, 37 Stat. 847 (1913) (codified at 16 U.S.C. § 673 (2000)); Great Bay NWR, Pub. L. No. 102–154, § 319(d) (1992).

818. H.R. 1420, 105th Cong., at 7 (1997); 1997 U.S.C.C.A.N. 1798–11.

instance, the Upper Mississippi River Wild Life and Fish Refuge legislation states that the refuge:

shall be established and maintained (a) as a refuge and breeding place for migratory birds included in the terms of the convention between the United States and Great Britain for the protection of migratory birds, concluded August 16, 1916, and (b) to such extent as the Secretary of Agriculture may by regulations prescribe, as a refuge and breeding place for other wild birds, game animals, fur-bearing animals, and for the conservation of wild flowers and aquatic plants, and (c) to such extent as the Secretary of Commerce may by regulations prescribe as a refuge and breeding place for fish and other aquatic animal life.⁸¹⁹

This 1924 statute raises the issue of whether the purposes in part (a), for the protection of birds specifically named in a cited treaty, are of greater importance than those in parts (b) or (c), which broaden the purpose of the refuge for conservation of most animals and plants in the aquatic area.⁸²⁰ On its face, the statute does not prefer one purpose over any other; it lists three purposes joined by the conjunction “and.” But, the first purpose uses the then-standard terminology for refuge designation, “a refuge and breeding place,” and creates a binding requirement that cannot be altered by administrative action. In contrast, purposes (b) and (c) depend on administrative action. They are purposes that can ebb and flow depending on regulatory decisions made in the management agency. Again, application of the Improvement Act’s mission to resolve this kind of ambiguity is an appropriate function of organic legislation.

Other establishment statutes *explicitly* set out a “major purpose” followed by subsidiary uses. For instance, the Kuchel Act established for the Tule Lake, Lower Klamath, Upper Klamath, and Clear Lake refuges the “major purpose of waterfowl management, but with full consideration to optimum agricultural use that is consistent therewith.”⁸²¹ Another version of ranking purposes is found in the establishment statute for Grays Harbor National Wildlife Refuge, which lists four purposes.⁸²² However, the statute conditions the fourth purpose, “to provide an opportunity . . . for wildlife-oriented recreation, education, and research,” on its consistency with the prior three (conservation-oriented)

819. Upper Mississippi River Wild Life and Fish Refuge, Pub. L. No. 268, ch. 346, 43 Stat. 650 (1924) (codified at 16 U.S.C. § 722 (2000)).

820. Congress created two categories in (b) and (c) because in 1924 the Agriculture Department’s Bureau of Biological Survey had yet to merge with the Commerce Department’s Bureau of Sport Fisheries to create the U.S. Fish & Wildlife Service.

821. Wildlife Resources on Pacific Flyway, Pub. L. No. 88-567, § 2, 78 Stat. 850 (1964) (codified at 16 U.S.C. § 695k (2000)).

822. Grays Harbor National Wildlife Refuge, Pub. L. No. 100-406, 102 Stat. 1041 (1988).

purposes.⁸²³

Recall that the 1997 Improvement Act departs from prior legislation in measuring a proposed activity's compatibility with the establishment purposes of the refuge without qualifying which purposes count.⁸²⁴ So, unlike the compatibility determinations conducted under the 1962 Recreation Act, which measure a proposed activity against only "primary" purposes,⁸²⁵ or the 1966 Administration Act, which measure a proposed activity against only "major" purposes,⁸²⁶ the 1997 law introduces a wider scope of analysis to the compatibility determination. Still, the Service will continue to identify primary refuge purposes in order to determine the extent of reserved water rights.

Even though compatibility determinations now need not distinguish among purposes, the Service must distinguish between true purposes and subsidiary, conditional, or discretionary goals of the instrument. Because the Improvement Act yields only to "purposes" in establishment documents, defining subsidiary goals of a refuge as something other than "purposes" would allow the Service to tip the balance toward more consistent System management. It would also require a searching analysis of the legislative intent of an establishment act, as interpreted through the lens of the organic mission.

C. *Administrative Sources*

The Improvement Act lists agreements, public land orders, donation documents, and administrative memoranda as additional sources from which individual refuge purposes may be derived.⁸²⁷ These administrative sources present some difficult interpretive questions for determining priority purposes and uses. However, in practice the Service correctly downplays the influence that these derivative sources exert on refuge management. While the Secretary of the Interior has authority to withdraw public land for refuge establishment, he may not modify or

823. *Id.*; see also Tetlin National Wildlife Refuge, Pub. L. No. 96-487, § 302(8), 94 Stat. 2388 (1980) (conditioning purpose of providing opportunities for environmental interpretation and subsistence uses on consistency with conservation purposes); Kenai National Wildlife Refuge, Pub. L. No. 96-487, § 303(4), 94 Stat. 2388 (1980) (codified at 16 U.S.C. § 1132 (2000)) (conditioning purpose of providing opportunities for scientific research, interpretation, and environmental education uses on consistency with conservation purposes).

824. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 3(a)(1), 111 Stat. 1253 (1997).

825. Refuge Recreation Act, Pub. L. No. 87-714, § 1, 76 Stat. 653 (codified at 16 U.S.C. § 460k-k4 (2000)).

826. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 4(d), 80 Stat. 926 (1966) (codified at 16 U.S.C. § 668dd(d)(1)(a) (2000)).

827. National Wildlife Refuge System Improvement Act of 1997 § 3(a)(10); 50 C.F.R. § 25.12 (2000).

revoke most existing withdrawals that added land to the system.⁸²⁸

The administrative sources are derivative in the sense that they are exercises of specific delegated authority under some executive or congressional establishment instrument. Public land orders, secretarial orders, and wildlife orders are all forms of administrative action authorized by statute that have been used to establish refuges. The secretarial order has been used only once for establishing refuges since 1974.⁸²⁹ Administrative establishment documents have not been important sources of particularized management mandates for refuge units. They generally contain little detail on refuge purposes or management mandates.

As the number of executive orders and presidential proclamations establishing refuges diminished after World War II, the number of administrative establishment orders increased. These orders make the Federal Register an important collection of establishment purposes.⁸³⁰ However, many informal administrative orders establishing refuges are not published in the Federal Register. Such refuge acquisition authority as the 1956 Fish and Wildlife Act is written so broadly as to permit the Secretary of the Interior to purchase whatever land he deems appropriate for the System.⁸³¹

The Improvement Act lists the "administrative memorandum" and "agreement" as sources of individual refuge purposes, but does not define the terms. The legislative history and the Service regulations fail to clarify to what the terms refer. These terms likely describe types of documents not published in the Federal Register and not readily accessible to the public. If administrative memoranda were pre-decisional documents not authoritatively incorporated by reference in some kind of record of decision, then they would be weak sources for individual refuge purposes because they would not otherwise be binding in administrative law. Most agreements relevant to refuge management are cooperative agreements with other federal or state agencies.⁸³² In practical effect,

828. 43 U.S.C. § 1714(j).

829. Refuge System Database, *supra* note 69; see Secretarial Order 3210 (Dec. 3, 1999) (establishing Navassa Island NWR).

830. Presidential establishment documents are also published in the Federal Register. Indeed, volume 1, number 1, page 1 of the premiere Federal Register began with a notice of an executive order expanding the Cape Romain Migratory Bird Refuge in South Carolina. 1 Fed. Reg. 1 (Mar. 13, 1936).

831. 16 U.S.C. § 742f(a)(4) (2000) ("for the development, advancement, management, conservation, and protection of fish and wildlife resources"); 16 U.S.C. § 742f(b)(1) ("for the benefit of the United States Fish & Wildlife Service, in performing its activities and services"). Congressional approval, however, is generally required in the form of appropriation. Tredennick, *supra* note 14, at n. 37.

832. A commonly cited authority in the Refuge System Database for cooperative agreements is 16 U.S.C. § 664 (2000) (a section of the Fish and Wildlife Coordination Act). However, like donations, cooperative agreements are authorized by many parts of the U.S.

administrative memoranda and agreements contribute little to refuge purposes for compatibility analysis. The Service does not include administrative memoranda in its database of refuge purposes, an omission that reflects the practical difficulty of complying with this aspect of the Improvement Act. The Service seldom recognizes an individual agreement as the source of a refuge purpose.⁸³³

One could interpret administrative memoranda to include the records of meetings of the Migratory Bird Conservation Commission during which refuge acquisitions are approved. Under the 1929 Migratory Bird Conservation Act, the Commission must approve all proposals for refuges established under this authority.⁸³⁴ However, the U.S. Fish & Wildlife Service refuge purposes database assigns Commission-approved refuges the general purposes set out in the Migratory Bird Conservation Act, which created the acquisition mechanism for the Commission.⁸³⁵ The Service database does not look into the specific goals of the Commission in approving a particular acquisition. This is a wise policy that resists the aggregation of individual purposes and rationales discussed in the record of Commission meetings, many of which may have been phrased casually, that might confound systemic management. The Commission may approve individual tract acquisitions for reasons having little to do with the purpose of the refuge, or even the Migratory Bird Conservation Act. For instance, the Commission has approved acquisitions for protection of fish and big game.⁸³⁶

Though the System's statutes and regulations make reference to donation documents, these grants of land, specifying particular intents of the donator to the System, are not easily accessible. They are not recorded in the Service database. The extent to which the Service can accept purposes in a donation document that are not authorized by a statute or executive order is not clear.⁸³⁷ However, the Fish and Wildlife

Code.

833. A rare example of a refuge purpose derived directly from an agreement was found at the entry for the Stillwater NWR in the 1999 Refuge System Database ("purposes of conservation, rehabilitation and management of wildlife, its resources and habitat, and for the purpose of operating and maintaining a public shooting ground and a wildlife refuge"), citing Cooperative Agreement, dated Nov. 26, 1948. The U.S. Fish & Wildlife Service has since removed this agreement for the list of purposes in its database. Refuge System Database, *supra* note 69.

834. 16 U.S.C. § 715 (2000).

835. *Id.*

836. *See, e.g.*, Minutes of the Meeting of the Migratory Bird Conservation Commission 6-13 (Jan. 14, 1936) (discussing the acquisition of the Okefenokee swamp for purposes of providing big game habitat, cypress stand conservation, and primitive area maintenance in addition to the waterfowl production goals).

837. Tredennick, *supra* note 14, at n. 37 (observing that there is little oversight of refuge establishment by donation) (citing U.S. GENERAL ACCOUNTING OFFICE, FISH & WILDLIFE SERVICE: AGENCY NEEDS TO INFORM CONGRESS OF FUTURE COSTS ASSOCIATED WITH LAND ACQUISITIONS 4 (GAO/RCED-00-52 2000)). However, donated lands comprise less than one

Act of 1956 authorizes the Secretary to accept gifts of real property for the general benefit of the Service “in performing its activities and services.”⁸³⁸ The 1956 law authorizes the Service to accept gifts “subject to the terms of any restrictive or affirmative covenant, or condition of servitude, if such terms are . . . compatible with the purpose for which acceptance is sought.”⁸³⁹ It is conceivable then, that some acquired areas of refuges could be conditioned on certain management purposes, such as maintaining a particular population of animals.

D. Conclusion to Analysis of Individual Refuge Purposes

Presidential sources of individual refuge purposes are important for creating the key terminology and management strictures later adopted more widely in legislation. Though seldom exercised today, the presidential authority to establish refuges remains broad and can be revived to exert leadership in conservation. The litigation over the Charles M. Russell National Wildlife Refuge illustrates the continuing vitality of old executive orders that can drive management on individual refuges decades after presidential proclamation.

Administrative sources of refuge purposes are important for their sheer numbers. Particularly through acquisition, but also through the Secretary of the Interior’s delegated authority to withdraw public lands, administrative additions to the Refuge System continue to accumulate at a substantial pace. Without the existing narrow interpretation of what constitutes an individual refuge purpose, administrative considerations could undermine the systemic operation of the Improvement Act.

Congressional sources of individual refuge purposes create the most difficult conflicts and competing priorities for systemic management. This is due in part to the power of statutes, their authoritativeness in delegating tasks to the Service, as well as to their specific detail in defining refuge purposes and management obligations. Establishment legislation has experienced an increase in statutory detail similar to organic legislation. Ultimately, a better theory of organic legislation would help resolve the interpretive challenges created by individual refuge purposes. Recognition of the special status of organic legislation would support relatively less deference to anything but explicit commands in establishment statutes. It would also guide the drafting of

percent of the System. *Id.*

838. 16 U.S.C. § 742f(b)(1) (2000). Donation of lands for refuges, however, dates back at least to 1912. 1976 FINAL EIS, *supra* note 26, at 11-38; REED & DRABELLE, *supra* note 31, at 21, 24. It continues to occur. In 2002, the Richard King Mellon Foundation announced a 33,805 acre donation to the Alaska Peninsula National Wildlife Refuge. Dan Berman, *Mellon Donation Adds 34K Acres to Alaska Refuge*, LAND LETTER, Oct. 10, 2002.

839. *Id.*

new establishment statutes that better conform to the framework of the Improvement Act.

V.
CONCLUSION

In this paper I have been concerned with the Improvement Act both as the key new charter for the Refuge System and as the most recent manifestation of the trends shaping public land organic legislation. In conclusion, I first evaluate the Improvement Act in terms of the management challenges facing the national wildlife refuges. After discussing the legal and institutional needs of the Refuge System in part A, this section then steps back and takes a broader perspective. Part B considers how the Improvement Act's scheme of dominant use and substantive management criteria may offer a promising model for other conservation efforts.

A. *Evaluation of the Improvement Act*

Though one may argue whether the 1966 Administration Act provided organic legislation for the Refuge System, there is no question that the 1997 Improvement Act is an organic act in the modern sense of the term.⁸⁴⁰ The Act sets forth a clear, affirmative conservation purpose statement,⁸⁴¹ details a hierarchy of use preferences for the System,⁸⁴² requires periodic, comprehensive resource planning for each unit,⁸⁴³ and establishes several binding, substantive management criteria.⁸⁴⁴ In all of these respects, the Improvement Act is an exemplar of the modern public land law meaning of the term "organic act."

However, the impetus for the 1997 Act was not to provide the Refuge System with a modern organic act merely because the other major federal land systems had them. The drive to revise the Refuge System law responded both to the continuing interests of hunters and to the real ecological protection problems raised in the reports of the 1970s and 1980s. These problems centered on the persistence of uses incompatible with a variety of conservation goals. Therefore, in evaluating the Act's effectiveness in reaching these goals, we must ask: how well do the Act and the Service's early stages of implementation address these concerns?

The greatest hope for reducing harmful refuge uses is the written compatibility determination, with periodic re-evaluation folded into

840. See *supra* Part II.

841. See *supra* Part III(A).

842. See *supra* Part III(B).

843. See *supra* Part III(C).

844. See *supra* Part III(D).

comprehensive planning. The Improvement Act's concrete mandate to protect wildlife, plants, and the environment will strengthen the Service's resolve to "just say no" to incompatible, non-priority uses such as grazing, off-road vehicles, airboats, and waterskiing.⁸⁴⁵ Moreover, we can expect better conservation management through the monitoring requirement, the duty to acquire water rights, and the policy to maintain biological integrity, diversity, and environmental health. These substantive management criteria do not depend on use approvals to trigger written determinations, and they limit the discretion of the Service to base compatibility determinations on wishful thinking or political expedience.

As with almost all modern public land law, considerable discretion remains with the managing agency. Therefore, the executive branch will continue to set the pace of progress in achieving conservation goals. The first batch of final policies designed to implement the Improvement Act continue that tradition of leadership. The new Refuge System policy prohibiting uses that fragment habitat binds the Service to strict application of the compatibility criterion and the biological integrity mandate.⁸⁴⁶ The new implementing policy also calls for less Service passivity in the face of external encroachments.⁸⁴⁷

There are limitations, however, to the Improvement Act's response to incompatible uses. For instance, in 1989, refuge managers considered waterfowl hunting to be harmful in a quarter of the refuges in which it occurred.⁸⁴⁸ Yet, the 1997 Act grants hunting a priority status in the hierarchy of uses and facilitates its expansion. The immunity of hunting from restrictions applicable to many other uses that can harm conservation goals is unsurprising given the history of hunting and refuges.⁸⁴⁹ There has been a steady increase in the influence of hunters over the Refuge System, traceable at least as far back as the 1934 Duck Stamp Act. Hunters shape refuge policy directly through their interest groups and indirectly through state game or natural resource agencies that derive much of their revenue from the sale of hunting (and fishing) licenses. The historic role that hunters have played in promoting conservation initiatives and the funds they have provided for property acquisition do justify some special treatment. However, the Service

845. See 1989 GAO REPORT, *supra* note 12, at 20–21.

846. See *supra* notes 548–552 and accompanying text.

847. See *supra* notes 608–619 and accompanying text.

848. 1989 GAO REPORT, *supra* note 12, at 20; see also Barry Meier, *Refuges Feel Strain as Wildlife and Commerce Collide*, N.Y. TIMES, Dec. 1, 1991, at 38 (describing the rejection by top agency officials of the suggestion of managers at 14 refuges in the South to curtail temporarily waterfowl hunting in order to address waterfowl population decline); *Human Activity Is Found to Harm Wildlife Areas*, N.Y. TIMES, Sept. 13, 1989, at A21 (response of David Olsen, assistant director of the Service, to the 1989 GAO REPORT).

849. See Tredennick, *supra* note 14, at 104–8.

should strive to resist pressures for continual expansion of hunting (and other wildlife-dependent recreation) by remaining faithful to the higher statutory priority of conservation. The new substantive management criterion for the maintenance of biological integrity, diversity, and environmental health should strengthen the Service's notoriously weak resolve in this area. Also, the decline in hunting (and, to a lesser extent, fishing) as a recreational activity in the U.S. may portend a weakening of hunting interests.⁸⁵⁰

The National Park Service's famous dual mandate for (1) conservation and (2) other uses that leave resources unimpaired creates a tiered system for management similar to that of the Refuge System.⁸⁵¹ With the missions of the National Park System and the National Wildlife Refuge System now so closely aligned, the weaker agency's system may succumb to a merger with the more widely respected and better-funded National Park Service.⁸⁵² The greatest difference between the Park System and the Refuge System is that hunting is more common in refuges. Indeed, by regulation, the National Park Service prohibits hunting in most national parks. However, national preserves (part of the Park System), which typically adjoin flagship national parks, generally are open to hunting. While proposals to consolidate public land systems have a history of failure,⁸⁵³ the low profile of the Refuge System, coupled with the administrative proximity of the National Park System in the same cabinet department, make a merger of the two agencies more likely to succeed. The National Audubon Society proposes that the Refuge System be managed by a new agency that, unlike the U.S. Fish & Wildlife Service, would not have any responsibilities other than land

850. Public participation in outdoor recreation in the United States is increasing in almost every category except hunting and fishing. Hunting, in particular, has experienced the sharpest drop in recent years. In a survey of 29 outdoor recreational activities, all but hunting (declined 12.3%), horseback riding (declined 10.1%), sailing (declined 9.4%), fishing (declined 3.8%), and ice skating (declined 0.9%) showed an increase from 1982-83 to 1994-95 in the numbers of people participating. Bird watching (increased 155.2% to 54.1 million participants), hiking (increased 93.5% to 47.8 million participants), and backpacking (increased 72.7% to 15.2 million participants) showed the greatest percentage increases in participation. In absolute numbers of people participating in 1994-95, hunting (18.6 million) ranked 21st out of the 29 categories. Walking is the most popular outdoor recreational activity, with 133.7 million participants in 1994-95. U.S. DEP'T OF AGRICULTURE FOREST SERVICE, RPA ASSESSMENT OF FOREST AND RANGE LANDS 64-66 (2000).

851. 16 U.S.C. § 1 (2000).

852. CLARKE & MCCOOL, *supra* note 14, at 113 (describing the weak character of the U.S. Fish & Wildlife Service and the strength of the NPS).

853. See, e.g., GATES, *supra* note 8, at 579; ALBRIGHT & CAHN, *supra* note 267, at 285-86 (describing the failure of both President Hoover and, later, Franklin Roosevelt's Secretary of the Interior, Harold Ickes, to consolidate most public lands in a single department); PUBLIC LAND LAW REVIEW COMMISSION, ONE THIRD OF THE NATION'S LAND 281-86 (1970) (recommending a merger of the Forest Service with the Department of the Interior into a new Department of Natural Resources).

management.⁸⁵⁴ In this era of government downsizing, if the Refuge System is removed from the U.S. Fish & Wildlife Service, it is more likely to be placed in the National Park Service than it is to be reborn as an independent agency. The failure of the effort to create an independent biological services bureau within the Interior Department offers a cautionary tale to proponents of Refuge System secession.⁸⁵⁵ Consolidation of the public lands into fewer management systems would reduce opportunities for experimentation and innovation.⁸⁵⁶ What we most desperately need in the field of conservation is a wider range of case examples of sustainability. Diversity in management regimes best serves that end.

Elevating wildlife-dependent recreation to a priority category for uses makes sense from the perspective of building on the attributes of the Refuge System that distinguish it from other public lands. The provisions

854. National Audubon Society, *America's Hidden Lands: A Proposal to Discover Our National Wildlife Refuge System*, available at <http://www.audubon.org/campaign/refuge/actalert4.html> (last visited Sept. 9, 2002). Not surprisingly, the Service and the Interior Department responded negatively. Rebecca Clarren, *An Agency in Need of Refuge?*, HIGH COUNTRY NEWS, Feb. 26, 2001, at 5; *DOI Cool to Complaints About Refuge Management*, PUBLIC LANDS NEWS, vol. 25, no. 2 (Jan. 21, 2000). The National Audubon Society proposal reprises a movement in the 1970s to place the System under the management of a new bureau in reaction to the Interior Department decision to terminate U.S. Fish & Wildlife Service participation in joint management of several units. See *Wildlife Refuges and Organic Act: Hearing Before the Subcomm. on Fisheries and Wildlife Conservation and the Env't of the House Comm. on Merchant Marine and Fisheries* (94th Cong., 1st Sess. 1975); *National Wildlife Refuge System: Hearing Before the Subcomm. on Env't of the Senate Comm. on Commerce, Science, and Transportation* (94th Cong., 1st Sess. 1975). In response to the recent Audubon Society criticism, the Service has sought to give greater prominence to the System within the agency. Under the Director of the U.S. Fish & Wildlife Service, there is now a Chief of the System, instead of an Assistant Director. Similarly, the regional officials formerly Assistant Regional Directors who were responsible for overseeing refuge management are now called Regional Chiefs. See Tredennick, *supra* note 14, at n. 199.

855. Secretary Bruce Babbitt created The National Biological Survey ("NBS") by secretarial order on Oct. 1, 1993, reassigning hundreds of scientists from seven Interior Department agencies. The U.S. Fish & Wildlife Service lost the most scientists of any agency. Frederic H. Wagner, *Whatever Happened to the National Biological Survey*, 49 BIOSCIENCE 219 (1999). In the wake of the Republican congressional election victory of 1994, debate over dissolving the NBS began in the House Committee on Resources and ultimately led to a 1996 compromise with those supporting a return of NBS scientists and employees to their original agencies. *Id.* This compromise reduced the NBS budget by 15% and transferred the scientists into the Interior Department's U.S. Geological Survey, creating a Biological Resources Division ("BRD"). *Id.*

856. Former Forest Service Chief, R. Max Peterson, observes that "[l]arger agencies tend to be less responsive, more difficult to manage, more politically controlled and directed, and less effective in carrying out their missions." Peterson, *supra* note 245, at 200 (citing the former Department of Health, Education, and Welfare, and the General Services Administration as examples of ossified conglomerates). *But see* Fred B. Samson & Fritz L. Knopf, *Archaic Agencies, Muddled Missions, and Conservation in the 21st Century*, 51 BIOSCIENCE 869 (2001) (arguing that a single Department of Natural Resources, consolidating all four federal public land systems under "a single, inclusive statute," would be better able to reform conservation management).

of the Improvement Act that give preeminence to wildlife-dependent recreational uses over other forms of recreation are sound, dominant-use, tiered management mandates. However, strong statutory counterweights, such as the inviolate sanctuary provision of the Migratory Bird Conservation Act and the adequate funding determination required by the Recreation Act, historically have limited use preferences.

The exemption for wildlife-dependent recreation from the Recreation Act funding determination is a serious flaw in the Improvement Act. Rather than convey the message that Congress prefers some uses over others, this provision goes further to undermine the compatibility principle. The legislative history of the Improvement Act urges that "availability of resources" be one element in the Service's judgment in making compatibility determinations.⁸⁵⁷ But this is a weak counterbalance to the numerous statutory provisions and the strong interest-group pressure encouraging greater wildlife-dependent recreation. Retaining the application of the Recreation Act's extraordinary fiscal criterion⁸⁵⁸ would have better ensured that refuge managers seriously consider their resource constraints.⁸⁵⁹ Separating the budgetary concern out of the larger conservation consistency analysis and retaining it as a separate test for recreational uses would highlight its importance.

The refuges are notoriously understaffed and underfunded.⁸⁶⁰ While abstract analysis will often show consistency between wildlife-dependent recreation and conservation, actual implementation may fall short for lack of personnel to ensure compliance with limits, to reevaluate limits adaptively, and to maintain the refuge in such a way as to minimize incidental damage from the recreation. Rather than reduce the uses subject to the funding determination, Congress should have broadened the applicability of the test to all permitted uses, not just recreation. This would have been more responsive to the real problems in refuge management revealed by the 1989 GAO report, which found political and local economic pressures to be a driving force behind harmful uses of

857. H.R. 1420, 105th Cong., at 12 (1997). The Committee report stated that the "sound professional judgment" exercised by refuge managers in making compatibility determinations "is intended to allow the manager to consider whether adequate financial, personnel, law enforcement, and infrastructure exists or can be provided in some manner by the USFWS or its partners to properly manage a public use." *Id.* The Service policy incorporates this aspect of the compatibility determination at 65 Fed. Reg. at 62,468 (Oct. 18, 2000).

858. See *supra* notes 95-98 and accompanying text.

859. The Improvement Act did not, however, repeal the Recreation Act. The Recreation Act's fiscal criterion continues to apply outside of the national wildlife refuges to approvals of recreational activities in many other fish and wildlife conservation areas managed by the Department of the Interior, such as coordination areas and fish hatcheries. See *supra* notes 410-413 and accompanying text.

860. See, e.g., S. HRG. 105-286, at 38; CLARKE & MCCOOL, *supra* note 14, at 112; Tredennick, *supra* note 14, at 64-65.

refuges.⁸⁶¹ The same political pressures that prompted Congress to splash approval of hunting and fishing over almost every section of the Improvement Act will make it difficult for refuge managers to resist or restrict those activities without strict statutory shields, such as the funding criterion.⁸⁶² On the other hand, the 1962 Recreation Act's requirement had been on the books for 35 years without strict compliance, so mere retention of the funding criterion may not have prompted any shift in management practices. An effective funding criterion would require written determinations subject to citizen challenge. A 1999 survey of refuge managers found a vast majority believing that their refuges were not adequately staffed to meet the core conservation mission.⁸⁶³ Until Congress better addresses funding and staffing for refuge conservation programs, and not merely facilities maintenance, organic act reform will have little impact on the ground.

The 1997 Improvement Act failed to alleviate the problems in refuges created by divided jurisdiction.⁸⁶⁴ As highlighted by many of the commentators and government reports in the 1980s,⁸⁶⁵ the Service's lack of control over sub-surface mineral rights (mining), navigable waters (dam and river management), and easements (roads/power lines) will continue to threaten the mission of the System. Military overflights remain a problem in several refuges, and the Service has inadequate political clout to respond.⁸⁶⁶ An outright statutory prohibition on public uses other than wildlife-dependent recreation would resolve some of these issues with the political will and legal authority that the Service lacks. Other problems with divided jurisdiction will require revision of establishment instruments and real property acquisitions.

The boilerplate language in the Improvement Act exhorting the Service to coordinate with other property owners and agencies, and to encourage public participation, hardly promotes innovative collaboration. With the exception of the biological integrity, diversity, and environmental health policy provision on responding to external threats, the Service's implementation of the Act's tired language in this

861. 1989 GAO REPORT, *supra* note 12, at 4-5, 24-32 (1989). The GAO study was concerned with all harmful secondary uses, not just wildlife-dependent recreation.

862. See *supra* Part I(C) for a discussion of the importance of hammers and the funding criterion in discussion of the 1962 Act.

863. Public Employees for Environmental Responsibility, *1999 Survey of Refuge Managers of the National Wildlife Refuge System* at #3, at <http://www.peer.org/refuge/survey.html> (last visited Sept. 9, 2002). Nonetheless, the same survey found more refuge managers agreeing than disagreeing with the statement that passage of the Improvement Act made a positive difference for their refuge. *Id.* at #15.

864. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 1257, § 6(4), 111 Stat. 1257.

865. See, e.g., 1989 GAO REPORT, *supra* note 12, at 28-29.

866. National Wildlife Refuge System Improvement Act of 1997 § 6(4).

area has been unimaginative. Here is an opportunity where vigorous leadership within the Service can make a big difference for landscape-level conservation. Still, funding remains a tight constraint on creative collaboration.

Finally, the Improvement Act's priority for establishment purposes limits the legislation's ability to exert a strong centripetal force to unify the Refuge System. Though the Act displays all of the hallmarks of modern organic legislation, it neglects to harmonize the underlying discord among the various units of the System. The fallacy of the "systemic" mandates is that they apply only where they do not conflict with establishment mandates. Congress should not allow widely variable establishment terms, some almost a century old, to trump automatically the unifying organic purpose of the Improvement Act. Some bargains struck to enact refuge establishment laws must be respected out of fairness and to provide ongoing incentives for new unit additions to the System. Congress needs to commission a thorough study of the establishment instruments to determine which particular purposes and mandates continue to serve those bargains and which reflect outdated views of the ecological value of refuges. Courts need to adopt rules of interpretation that favor systemic goals over individual refuge purposes in otherwise close cases.⁸⁶⁷

B. *The Refuge System as the Future of Public Land Conservation*

Just as developments in the late 1960s and early 1970s heightened the standards for what qualified as an organic Act, our experience with the 1997 Improvement Act should raise the bar yet higher for a new round of revisions to legislation governing other public land systems. In particular, the 1997 Improvement Act substantially advances three of the five hallmarks of modern organic legislation: purpose statements, designated uses, and most significantly substantive management criteria.

The history of attempts to define the purpose of the Refuge System is a lesson in the evolution of how we value nature. When President Franklin Roosevelt described the System in a 1940 proclamation standardizing the names of refuge units, he characterized the purpose in strict utilitarian terms: "conservation and development of the natural wildlife resources [so they] may contribute to the economic welfare of the Nation and provide opportunities for wholesome recreation."⁸⁶⁸ The 1966 Act explicitly included restoration in the mission of the consolidated system and dropped "development."⁸⁶⁹ Though "development" was an

867. See discussion of *Schwenke v. Sec. of Interior*, 720 F.2d 571 (9th Cir. 1983), *supra* notes 766-772 and accompanying text.

868. Proclamation No. 2,416, 54 Stat. 2,717 (1940).

869. National Wildlife Refuge System Administration Act, Pub. L. No. 89-669, § 1(a), 80

important aspect of New Deal conservation, the term fell out of favor with the rise of the wilderness ethic in the mid-1960s. The 1968 Leopold Committee Report sought to add “natural ecosystem” concerns in order to inject an ecological science component into the systemic mission.⁸⁷⁰ The 1996 Executive Order used the term “network of lands and waters”⁸⁷¹ to highlight the interconnected ecological concerns of island biogeography.⁸⁷²

The 1997 statute retains a utilitarian tone (but phrased in more modern jargon), justifying conservation “for the benefit of present and future generations.”⁸⁷³ Its definition of the mission connects strongly to conservation biology by explicitly incorporating “methods and procedures associated with modern scientific resource programs.” Broadening the purpose of the Refuge System to include plants transforms the mission from wildlife protection to true ecological conservation as we understand it today.⁸⁷⁴ It brings the Refuge System to the forefront of current ideas about how public lands best contribute to our welfare.

The most important aspect of the designated uses hallmark manifested in the 1997 Improvement Act is the complex hierarchy of priorities. No other U.S. organic act establishes such an elaborate system of preferences. As implemented by the Service, a refuge manager cannot evaluate a use until he first categorizes it to determine where it falls in the hierarchy. Under the System’s use hierarchy,⁸⁷⁵ the evaluation will vary depending on whether the use is: an individual refuge purpose,⁸⁷⁶ conservation,⁸⁷⁷ wildlife-dependent recreation,⁸⁷⁸ a refuge management activity,⁸⁷⁹ an economic use,⁸⁸⁰ or some other use. In making management decisions on public lands, it is appropriate to discriminate among types of uses based on historical and cultural judgments. Also, categorical choices frequently enable managers to make progress toward goals without demanding an effects analysis that may be beyond the reasonable predictive powers of current science.⁸⁸¹ However, the framework under

Stat. 926 (1966).

870. LEOPOLD REPORT, *supra* note 16, at W-4.

871. Exec. Order No. 12,996 at § 1.

872. See WORSTER, *supra* note 79, at 375–78.

873. National Wildlife Refuge System Improvement Act of 1997, Pub. L. No. 105-57, § 4, 111 Stat. 1254.

874. Will explicit Congressional recognition of the importance of fungus to terrestrial ecosystems be far behind?

875. See Figure 2.

876. National Wildlife Refuge System Improvement Act of 1997 § 5(a)(4)(D).

877. *Id.* § 4.

878. *Id.* § 3(a)(2).

879. 50 C.F.R. § 25.12 (2001).

880. *Id.* § 29.1.

881. This justification for categorical approaches over performance measures is well

the Improvement Act relies too much on categorical determinations and not enough on uniform performance standards. As a harbinger of revisions to other organic acts, the Improvement Act's hierarchy of uses is a troubling sign. The issue of properly categorizing uses is likely to generate many disputes and litigation that will divert attention from core conservation needs.⁸⁸² The hierarchy of uses is simply too complex to serve as a promising model for other land management systems.

Finally, the single most important aspect of the 1997 Improvement Act is the level of statutory detail for substantive management criteria. This hallmark of modern organic legislation shows considerable movement toward increased congressional involvement in public land management. Though the 1976 NFMA still stands out as having the most detailed substantive management requirements for a single category of concern (timber management),⁸⁸³ the 1997 Improvement Act has a more broadly applicable array of congressional mandates.

The mandate to maintain biological integrity, diversity, and environmental health establishes a path-breaking precedent for public land management. Congress now conditions even the priority uses on the performance requirement that they not impair ecological structure and processes. This is an overdue statutory recognition that public lands play central roles in providing the ecosystem services (such as pollination and nutrient cycling) on which humans are utterly dependent.⁸⁸⁴ The mandate is also a recognition of the value of natural diversity and ecological health as ends in themselves, even if we cannot trace their direct benefit to our welfare. As a substantive management criterion supporting the Refuge System mission, this mandate reflects a change in the relative importance that the functioning of nature plays in our public land use decisions. The 2000 Forest Service attempt to effect this change through revisions to planning regulations is another indicator of this shift in thinking.⁸⁸⁵ The subsequent reversal of the regulatory reforms by the Bush Administration illustrates the importance of establishing substantive criteria in statutes, which better resist frequent revisions.

developed in the pollution control area. See Oliver Houck, *Of BATs, Birds, B-A-T: The Convergent Evolution of Environmental Law*, 63 MISS. L.J. 403 (1994).

882. An analogous pattern emerged in the implementation of the Resource Conservation and Recovery Act ("RCRA") in pollution control law. 42 U.S.C. §§ 6901-6992k (1994). In RCRA, the categorization of a substance as both a solid and hazardous waste carries with it such important consequences that the implementing agency expends a great deal of implementation and enforcement effort on justifying categorical distinctions. Marcia E. Williams & Jonathan Z. Cannon, *Rethinking the Resource Conservation and Recovery Act*, 21 *Env'tl. L. Rep. (ELI)* 10063 (1991).

883. 16 U.S.C. §§ 1604(g), 1604(m), 1611 (2000).

884. See GRETCHEN C. DAILY, *NATURE'S SERVICES: SOCIETAL DEPENDENCE ON NATURAL ECOSYSTEMS* (1997).

885. 65 *Fed. Reg.* 67,514 (Nov. 9, 2000).

The duty to acquire water rights for refuge purposes is also a significant precedent for making explicit the federal government's trust responsibility for public land resources. Rather than simply maintain current conditions or prevent harm, the Service now has an affirmative responsibility to seek water rights necessary to fulfill refuge purposes. This specific fiduciary obligation is important for two reasons. First, the issue of providing instream flows of water to maintain healthy ecosystems is particularly important given the junior and downstream circumstances of many refuges. Second, water has been the subject of heated debates over the public trust to protect public lands, and Congress' decision to establish this explicit duty reflects a new assertiveness in organic legislation. It commands federal agencies to play a more active role in securing protection. The more general conservation stewardship mandate is another (broader but weaker) provision reflecting the increased role of statutory trust language. The conservation stewardship mandate eliminates any question about the executive branch's prerogative to innovate for conservation on refuge lands.

The Refuge System's history tracks the development of conservation concerns in the United States. Early focus on hunting stock and migratory birds gradually shifted to broader endangered species protection. The Improvement Act continues the tradition of leadership of the Refuge System in biological conservation. Protections for animals have now expanded to include habitat and, ultimately, plants themselves. A park preserve attitude toward achieving conservation is giving way to the recognition that land reserves alone cannot maintain biological integrity, diversity, and environmental health; instead, the System must work outside as well as within its boundaries to create a network of lands and waters to achieve its conservation mission.⁸⁸⁶

Ultimately, the task of ecological conservation will require a change in the way we view private property. The compatibility principle, which favors some uses but allows a wide variety of activities so long as they do not materially interfere with or detract from conservation goals, can serve as a standard for public control of private land use in protective zones. Compatibility, along with the policy principles prohibiting habitat fragmentation and requiring coordination to respond to external threats, is a conservation tool that the federal government can demonstrate for the benefit of other jurisdictions struggling to achieve sustainable development.⁸⁸⁷

886. 66 Fed. Reg. at 3,822 (601 FW 3.20); Exec. Order No. 12,996 at § 1 (purpose of the System "to preserve a national network of lands and waters for the conservation and management of fish, wildlife, and plant resources").

887. The seminal book-length treatment of sustainable development explicitly included maintenance of ecological processes and biological diversity as key elements in the legal tools to achieve sustainable development. WORLD COMMISSION ON ENVIRONMENT AND

In addition to refining standards applicable to private land as well as public reserve conservation, the Improvement Act establishes a management framework that will be helpful abroad. With the 1997 legislation, the Refuge System has become the premier public land conservation network applicable to other countries experimenting with ecological protection strategies. Although we in the United States tend to regard the National Park and National Wilderness Preservation Systems as the pinnacles of federal conservation, both these Systems grew out of peculiarly American visions of monumental, pristine, uninhabited nature that are not widely shared by the rest of the world. In contrast, the Refuge System's mandate is founded on more globally accepted principles of ecology (e.g., biological integrity, diversity, and environmental health criteria) and sustainable development (e.g., permit uses compatible with the conservation mission). Therefore, the Refuge System deserves special attention and support as a model for conservation. The Improvement Act organizes the world's largest network of lands managed principally for nature protection. The coming decades will test whether the System fulfills the promise of its new law.