



Fall 2004

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Recommended Citation

Eric T. Freyfogle, *The Wildlife Refuge and the Land Community*, 44 Nat. Resources J. 1027 (2004).
Available at: <https://digitalrepository.unm.edu/nrj/vol44/iss4/6>

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The Wildlife Refuge and the Land Community

ABSTRACT

The statutory duty of refuge managers to promote the “ecological integrity, diversity, and environmental health” of refuge lands provides a sound long-term goal for refuges themselves. But because this goal largely deems human change as undesirable, it is inappropriate and even dangerous to employ when assessing how well nearby lands are being used. For this reason and others, refuge managers need an alternative land-use vision when they talk about the ecological conditions of surrounding landscapes. What is needed, when talking about larger landscapes and about the ways well-managed refuges contribute to those landscapes, is a conservation goal that integrates human needs and aspirations into the natural landscape, something akin to the goal of land health that Aldo Leopold crafted in the 1940s and proposed to colleagues as an overarching aim for all conservation work.

A key instruction of the 1997 Refuge Improvement Act (Improvement Act) is for refuge officials to manage refuge lands so as to maintain their “biological integrity, diversity, and environmental health.”¹ The practical meaning of this instruction became clearer in early 2001, when the Fish and Wildlife Service (FWS or Service) defined these terms and resolved some of their ambiguities. According to the 2001 policy guidelines, managers should apply the terms integrity, diversity, and health “in an integrated and holistic manner” rather than as three discrete requirements.² They are to merge or blend the terms, treating them largely as one. When this is done, the 1997 statute in effect requires that a refuge be kept largely the way it was a few hundred years ago, before people changed it significantly. In many refuges it is not feasible to undo human alterations that have already taken place. In addition, the specific statutory aims of each refuge take priority legally,

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1. 16 U.S.C. § 668dd(a)(4)(B) (2000).

2. Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. 3810, 3819 (Jan. 16, 2001). For purposes of this article, I treat this policy statement as an established Fish and Wildlife Service interpretation of the statute and as a legally valid interpretation.

and they sometimes allow or even mandate human change. But the basic idea of the 1997 statute is nonetheless clear: the less human change the better, except when intervention is needed to mimic natural processes or otherwise aid wildlife.

Three important points might be made about this management goal. First, the goal is a splendid one, in the sense that it protects and enhances wildlife populations on the refuges themselves. Wildlife comes first (subject, as always, to refuge-specific exceptions), and the needs of wildlife are determined by science and "best professional judgment," not by guesswork or political expediency.

Second, the goal will be impossible to fulfill, at least not well, unless managers work in concert with surrounding landowners, with political jurisdictions, and with state wildlife officials.³ Refuges are ecologically connected to other lands. Many refuges are badly fragmented geographically. If the lands around a refuge are sick, it is hard for the refuge itself to be healthy.

Third, while this tripartite goal is a fine one for wildlife refuges, it is not, and cannot sensibly be, the goal used to manage these surrounding non-refuge lands, which means it cannot be a goal that governs the larger landscape that refuges help compose.

The first two points are obvious enough and hardly need comment. The third point and what it implies are the subject of this article.

I. PROBLEMS AND DANGERS

When Congress enacted the 1997 law, it made an affirmative decision largely to set refuges aside as natural areas, to be kept as pristine as reasonably possible. The baseline that Congress established, phrased in terms of "biological integrity, diversity, and environmental health," was one that looked backwards in time to the days before humans had made many changes.⁴ The ideal was not an "untouched wilderness" in any pure sense, but it was not far from it. Unless Congress provided otherwise, refuges would not be places where people built homes, grew crops, or raised livestock. They would be places merely to visit.

Outside the refuge are lands where people do live and work. Such lands are managed for a variety of goals: sometimes by individual

3. Coordination is prescribed in 16 U.S.C. § 668dd(a)(4)(E).

4. Cf. 16 U.S.C. § 668dd(a)(4)(B) ("[T]he Secretary shall ensure that the biological integrity, diversity, and environmental health of the System are maintained for the benefit of present and future generations of Americans.").

owners in isolation, sometimes by government regulators who limit what people can do. Only in rare instances are private lands managed to keep human change to a minimum and to promote something like the land's diversity, integrity, and health. More commonly, surrounding lands are intensively used for food, fiber, and shelter.

All of this, of course, is perfectly well known. But what are the consequences of this familiar knowledge, of this wide discrepancy between the management goals of wildlife refuges and the land-use patterns of surrounding lands? They are several.

Explaining ecological benefits. The first consequence is that refuge managers inevitably encounter trouble when explaining how a refuge benefits the larger landscape, except in the obvious ways of providing a place to hunt, fish, and watch birds. The refuge's ecological goal is simply not the goal embraced by other people. Because it is not, the refuge can appear as just another landowner among many, serving its particular needs. Given that land-use goals vary so much, it would be sheer coincidence, one would assume, for a wildlife refuge to benefit the particular land uses of neighboring landowners.

Where, then, does this leave the refuge manager, who wants to explain to neighboring landowners what the refuge does and why? It is easy for a manager to discuss the purposes of a refuge as an isolated tract. But what about the ways that a refuge might benefit other lands ecologically? How can a manager talk about them, when the goals of landowners are so different?

Talking about threats. Along with the challenge of explaining a refuge's ecological benefits is the problem of knowing what to expect from surrounding landowners in terms of using their lands in ways consistent with refuge purposes.⁵ Adjacent land uses can easily frustrate refuge activities, particularly along the border of a refuge. But to describe the issue that way—to talk about adjacent land uses in terms of the threats they pose—is to pay attention only to the refuge and its goals. It is to imply that the refuge's purposes are more important than those of neighboring lands.

Even to use the phrase "external threats,"⁶ it would seem, is to approach the whole issue in a way that sets up conflict. A neighboring land use is an external threat only from the perspective of the refuge itself. The neighboring landowner, no doubt, would see things

5. The problem is discussed in Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. at 3822-23.

6. *Id.* at 3818 (including, as an objective of the policy, to provide guidelines on dealing with "external threats to biological integrity, diversity, and environmental health").

differently. When we slap the label "threat" on a land use, we presume that neighboring landowners ought to manage their lands just as refuge managers do, to sustain their diversity, integrity, and health. But that is untrue. We need a better way to talk about such conflicts.

Using the refuge as an educational tool. Because of these differences in land-use goals, a refuge manager will also have trouble using the refuge itself as an educational tool for visitors. Neighbors might be personally interested in what a refuge is doing, but they are unlikely to view the refuge as a good example for how they should use their own lands. Inside the refuge, human change is largely unwelcome. Food and fiber are rarely produced there (wild game excepted), nor do ordinary people live there. The refuge is thus not a model of how people might occupy a landscape while respecting nature's ways. Before the goals and lessons of refuges can be applied to surrounding lands, they need translating into some other form.

The danger lurking here is that outsiders will view the refuge as an entirely different kind of place from their own lands. Refuge lands will form a distinct category of land use within a fragmented landscape that includes a variety of land-use types. Within the refuge, ecological interconnection will play a big role in all decisions. Outside the refuge, the fragmentation of lands will remain the norm. Wildlife conservation will be the chief duty of refuges; other landowners, in turn, will address other social needs. The implicit message: You do your job, we will do ours, and we can get along just fine.

This last point, while troubling enough, has an even darker side to it. Because refuge managers view human activities (other than recreation) as degrading, outsiders can see wildlife refuges as places where valuable resources are locked up, with people told to stay away. Thousands of acres are set aside solely as playgrounds, meeting no primary human needs. Yes, recreation is important. But what about food, shelter, and jobs? With rural poverty the way it is, with farm and forest incomes so low, why are we favoring wild animals over people? It is a long-familiar complaint and has not gone away.

The bottom line, it would appear, is this: Refuge managers are going to have trouble with their diversity-integrity-health mandate, particularly in dealing with neighbors, unless they come up with a new way to talk about it, one that better conveys a refuge's widespread benefits. What refuge managers need, to put it briefly, is an overall landscape goal to which refuges contribute. For various reasons, refuge managers need an ecologically grounded vision of the larger landscape, one that includes the refuge as well as the human-occupied lands that refuges help sustain.

If such a vision or overall goal did exist, refuge managers could then approach their neighbors carrying a friendlier message. By managing refuges as we do, refuge managers could tell them, we are not just protecting wildlife, and not just providing recreational opportunities. We are also promoting the ecological welfare of the larger landscape of which we, and you, are a part. That is, we are doing our share to sustain natural processes essential to the health and long-term welfare of all of us who live here. Indeed, refuge managers might assert, this could be the most significant human benefit that our refuges provide: Because of the ways we use *refuge* lands, *private* lands become healthier.

This line of reasoning, of course, presumes that there is, or ought to be, an overall ecological goal that we can use to measure landscape conditions. And at present there is not. There is no widely supported, landscape-level goal in terms of sustaining a landscape's ecological processes or biological diversity. Indeed, the whole idea of ecological processes, the core idea that the health of one land parcel is linked to the health of another, is not at all well known.

To the average American, land parcels are viewed as distinct places. Yes, we can see how land parcels are related aesthetically: when one landowner's house or yard is ugly, it diminishes the enjoyment of surrounding land parcels. And yes, we know also that pollution, odors, and noise can cross boundary lines; here again, what one landowner does can visibly disrupt neighbors. But a person could notice such connections and still be far from appreciating ecological processes as such. Visible transboundary problems can be solved by some combination of the moral precepts "do-no-harm" and "live-and-let-live." They can be solved, that is, without forcing people to revise their assumptions that land parcels are basically discrete places, manageable in isolation. To the average American, it simply is not clear that the long-term health of one land parcel is linked somehow to the natural conditions of other parcels.

This returns us to the wildlife refuge, and to the plight of the refuge manager who wants to meet neighboring owners on common ground. If everyone shared an overall ecological vision, then the manager could talk about the ways a healthy refuge contributed to that larger goal. But without such a larger goal, how can this be done? Do we simply ignore the issue, and point only to the hunting, fishing, and birding? Do we simply not talk about the larger ecosystem?

II. THE LANDSCAPE CONTEXT

To move ahead with this conundrum, it may help to return to the 1997 Improvement Act and its implementing guidelines. Interspersed here and there are numerous comments about ecological interconnections and the ways that a well-managed refuge can benefit other lands. These comments do not add up to a coherent vision for large landscapes, but they move us in that direction.

The primary goal of wildlife refuges as a system is to conserve and nourish "the fish, wildlife, and plant resources and their habitats within the United States."⁷ The goal is a broad one, encompassing the full range of wild species in the United States, not just those found on designated refuges. Living fish and wildlife regularly disregard refuge boundaries. Wildlife managers, in their concerns about wildlife, are supposed to disregard boundaries as well. Even more explicit is the idea that the refuge system is to maintain *habitats*, not just individual organisms and species. A habitat is an ecologically integrated community of life, not merely a collection of wild things.

Also relevant here is the 1997 statute's integrity-diversity-health language itself. Under it, the FWS is to maintain the "biological integrity, diversity, and environmental health" of the system as a whole, not of individual refuges in isolation.⁸ Again we find that the Service's interests cross property boundaries. More importantly, we have Congress's implicit recognition that ecological processes are best thought about at spatial scales much larger than the individual refuge. That recognition is repeated in the Service's mandate to plan its geographic expansion so as "to contribute to the conservation of the ecosystems of the United States."⁹

When we turn from the 1997 statute to the longer 2001 implementing guidelines we find considerable detail added. Wildlife refuges, the policy says, are supposed to conserve "all species of fish, wildlife, and plants that are endangered or threatened with becoming endangered."¹⁰ Again, jurisdictional boundaries are irrelevant. The refuge system should also "perpetuate migratory bird, interjurisdictional fish, and marine mammal populations,"¹¹ without regard for land boundaries. Moreover, the entire system is supposed to "conserve and

7. 16 U.S.C. § 668dd(a)(2).

8. *Id.* § 668dd(a)(4)(B).

9. *Id.* § 668dd(a)(4)(C).

10. Draft Policy on National Wildlife Refuge System: Mission, Goals, and Purposes, 66 Fed. Reg. 3668, 3671 (Jan. 16, 2001).

11. *Id.*

restore where appropriate representative ecosystems of the United States, including the ecological processes characteristic of those ecosystems."¹² The term "ecosystem," we know, is notoriously vague since we can define it at varying scales. Still, an ecosystem is an integrated natural whole defined by its natural characteristics. It is not an arbitrarily defined tract of land that abruptly ends at a legal boundary.

In the FWS guidelines dealing with the "biological integrity, diversity, and environmental health" mandate, we find the most extensive comments about transcending refuge boundaries. The policy's overall aim, we are told, is to promote not just "fish, wildlife, and habitat resources found on refuges" but also those on "associated ecosystems."¹³ The terms "biological integrity, diversity, and environmental health" are themselves to be described "at various landscape scales from refuge to ecosystem, national, and international."¹⁴ "Individual refuges," the policy makes clear, "contribute to biological integrity, diversity, and environmental health at larger landscape scales."¹⁵ Indeed, the desirability of promoting these goals at larger scales can sometimes justify actions within a refuge that might "compromise elements of biological integrity, diversity, and environmental health at the refuge scale."¹⁶ Although satisfying these goals within refuges ordinarily will come first, the system's goals also include restoring "lost or severely degraded elements of integrity, diversity, [and] environmental health" at much larger landscape scales.¹⁷ Indeed, a specific direction that the guidelines give refuge officials (including individual refuge managers) is to consider a refuge's "importance to refuge, ecosystem, national and international scales of biological integrity, diversity, and environmental health."¹⁸ A particular possibility, emphasized in the agency policy, is that a manager might modify the "frequency and timing of natural processes at the refuge scale...to contribute to biological integrity at larger landscape scales."¹⁹

What these various legal provisions make clear is that Congress and system officials expect individual refuge managers to look over the fence. They should do so not simply so that refuges can be healthy but because a refuge's health is integrally linked to that of nearby lands.

12. *Id.*

13. Policy on Maintaining the Biological Integrity, Diversity, and Environmental Health of the National Wildlife Refuge System, 66 Fed. Reg. 3810, 3818 (Jan. 16, 2001).

14. *Id.*

15. *Id.*

16. *Id.*

17. *Id.*

18. *Id.* at 3819.

19. *Id.* at 3820.

Indirectly, the health of surrounding lands is also important. Beyond that, the FWS has *direct* interests itself in the physical conditions of larger landscapes. It is expressly charged with enhancing ecological conditions on a wide variety of non-refuge lands.

Having reached this point, seeing the ways refuges are linked to surrounding lands, we are still short of having a coherent goal to use in evaluating and managing landscapes that encompass refuges. Nonetheless, we can see that ecological processes and interconnections carry great weight at law. To some significant degree, Congress expects the FWS (including individual refuge managers) to do what they can to promote ecological conditions on these larger landscapes. Implicit here—and this brings us to the crux—is that *larger landscapes can be better or worse in terms of their ecological condition*. Congress, it seems, wants landscapes to get better. And it has told the FWS to help improve them.

“Getting better,” to be sure, is not a clear land-use vision. About all we can say, looking at Congress’s language identified thus far, is that a landscape gets better (i) when it rates higher in terms of its biological integrity, diversity, and environmental health; (ii) when it has high-quality habitats for the nation’s “fish, wildlife, and plant resources”; and (iii) when it conserves rare species. By no means did Congress expect these biological elements to become the sole management goals for human-occupied lands; it hardly envisioned pushing people off their lands and undercutting their ability to live and work on them. Instead, Congress was groping toward something else, something that it could not or would not define very clearly. It was backing its way into an ecologically grounded vision of humans living on land in ways that could endure.

Congress has done this before. In the National Environmental Policy Act of 1969, it set as a national goal the vision of “man and nature” existing “in productive harmony.” Humans would “fulfill the responsibilities of each generation as trustee of the environment for succeeding generations,” while all Americans would enjoy “safe, healthful, productive, and esthetically and culturally pleasing surroundings.”²⁰ A few years later, Congress set the more ambitious goal of restoring “the chemical, physical, and biological integrity” of the nation’s waters.²¹ In other statutes over the years, as Professor Robert Fischman has usefully catalogued,²² Congress has offered further comments and instructions on how we as a people ought to live in

20. National Environmental Policy Act of 1969, 42 U.S.C. § 4331 (2000).

21. 33 U.S.C. § 1251(a) (2000).

22. Robert Fischman, *The Meanings of Biological Integrity, Diversity, and Environmental Health*, 44 NAT. RESOURCES J. 989 (2004).

nature. Were we to list these statutes and then piece them together, insofar as this could be done, we would no doubt make progress toward a sensible land-use goal for human-occupied places. We would still end up short of where we want to be; we would end up with a blurred rather than clear land-use vision. But the basic elements would be in place.

III. OUR CURRENT PREDICAMENT

My belief is that refuge officials cannot sensibly do their work well unless they fill in the gaps that Congress has left. They need to seize the pieces and clues that Congress has strewn along the way and construct with them something that is now urgently needed: an overall guideline or vision of people living in harmony with nature. Refuges would work better if managers could draw upon such a guideline. And there is no particular reason why managers should not be the ones to construct it. Who better to take on the job than the land managers best informed about wildlife and ecological processes?

What might such a goal look like? The question is hard to answer and will require a good deal of reflection, beginning with (but extending well beyond) Congress's legal pronouncements. Even before that work, however, a few key points can be made.

First, the larger landscape goal will not be merely a variant of "biological integrity, diversity, and environmental health," for the reasons already mentioned. This goal views humans as harmful, at least when they want to grow food, build houses, or otherwise use land intensively. It simply will not do.

Second, a sound goal must draw upon ecological science but it must include far more than just science. The chief aim of science in studying land is to understand how the land works—to identify its parts and processes and to see how they interact. Science standing alone has no normative content to it; it has no way of evaluating the goodness or badness of a land use or land condition. Without supplementation, science alone is woefully inadequate for coming up with a normative vision of right living.²³

To produce such a vision, we need to back up and ask more generally, What is good land use? When are people living on land in ways that are deemed good, under an all-things-considered analysis, an analysis that incorporates both human utility (defined as broadly as possible) and our ethical obligations (for instance, to protect rare

23. The issue is considered in Eric T. Freyfogle & Julianne Lutz Newton, *Putting Science in Its Place*, 16 CONSERVATION BIOLOGY 863 *passim* (2002).

species)?²⁴ Science can help in constructing a vision of good land use. But it can hardly do the job alone. The moral imperative to protect rare species, for instance, is not a scientific principle. Science is also not involved when we decide, as a normative matter, that we want to use landscapes in ways that meet our needs today without degrading the land ecologically (although science, of course, could help figure out how to accomplish such a goal).

Third—and in tension with this second point—an overall landscape goal can work only if we condense it into a single term or short phrase. Like it or not, we live in a sound-bite, bumper-sticker age. Behind the short version needs to lie a longer, well-considered explanation of what the phrase means. Nonetheless, the many land-use factors and elements need to come together into an easily remembered expression.

If we asked people what our overall land-use goal is today, the most common answer would likely be “sustainability” or “sustainable development.” Sustainability, though, is notoriously vague about what is being sustained and who and what is doing the sustaining. Among its deficiencies is its lack of a clear grounding in ecology. Although individual commentators have proposed particular definitions for it, some with admirable clarity, the definitions are so numerous and so conflicting that the term has little common meaning. Sustainable development is even more troubling, given that it explicitly proposes tradeoffs between development aspirations and the maintenance of the land’s basic processes. Neither term has drawn public attention; neither term seems to inspire.²⁵

Writing in the 1930s and 1940s, pioneering ecologist and wildlife manager Aldo Leopold was convinced that the conservation movement writ large (including government agencies) needed to join together to support a single goal. Leopold lamented the fragmentation and weakened effort that came because the movement lacked one. The problem was not just that conservation efforts often undercut one another. A social movement without a goal had no coherent message to present to society.²⁶

When Leopold gave conservation talks in the years before his death in 1948 he recited a well-considered litany of messages that the

24. I discuss the issue in *What Is Good Land Use?*, in ERIC T. FREYFOGLE, *TAKING CONSERVATION SERIOUSLY: NATURE, INTELLECT, AND THE HUMAN PROSPECT* (forthcoming Yale University Press 2005).

25. I consider the problems in *Back to Sustainability*, in FREYFOGLE, *supra* note 24.

26. ERIC T. FREYFOGLE, *THE LAND WE SHARE: PRIVATE PROPERTY AND THE COMMON GOOD* 144–47 (2003).

American people in his view needed to hear. Defined broadly—to include plants, animals, soils, rocks, waters, and people—the land was an integrated community of life, Leopold said, not a collection of discrete natural resources. That community could be more or less healthy in terms of its basic functioning. Conservation, in turn, was about promoting the health of that community, for the benefit of people as well as other life forms. Land health, then, should be the much-needed goal for all conservation.²⁷

Late in life Leopold proposed “land health” as a conservation goal. He called upon his fellow conservationists to help give the idea greater detail. Leopold identified what he viewed as the major symptoms of land that was sick, and distilled from them the characteristics of healthy land. Science played a key role in this work, and Leopold drew extensively upon his own understandings of how the land functioned. But land health as a goal went beyond science. People were part of the land. They, too, needed to thrive for the whole community to possess health.²⁸

Leopold’s many writings on land health, along with the critical writings on sustainability and on other proposed goals, provide a useful place to start in constructing clearer visions of good land use. Leopold’s own brief term, land health, has much to commend it. Whether or not it is the best—and setting to one side how we might define it—it is important to recognize why some such goal is needed if conservation is to flourish. Some such goal is required to provide a focal point for discussions about how we might best share our landscapes for the good of people and of nature.

Part of this discussion needs to examine the various ethical and religious obligations that relate to good land use. Congress enacted the Endangered Species Act largely in response to the widely held view that people today should protect all wild species for future generations to enjoy. Public support for such an ethical duty remains strong.²⁹ Given this support, and given Congress’s firm statements on the issue, it is entirely fitting for refuge managers to speak openly about the link

27. Leopold’s goal of land health and his mature conservation thought generally are ably assessed in Julianne Lutz Newton, *The Common Weal of Life: Aldo Leopold and Land Health* (2004) (unpublished Ph.D. dissertation, University of Illinois at Urbana-Champaign).

28. Eric T. Freyfogle, *A Sand County Almanac at 50: Leopold in the New Century*, 30 ENVTL. L. REP. 10,058, 10,063–67 (2000).

29. WILLETT KEMPTON ET AL., ENVIRONMENTAL VALUES IN AMERICAN CULTURE 109–14 (1995) (showing 87 percent public support for the idea that “all species have a right to evolve without human interference” and 90 percent support for the idea that “preventing species extinction should be our highest environmental policy”).

between wildlife conservation and ethical living. Refuges are a key means by which we collectively carry out our felt duty to protect wild species. It is one of the ways that wildlife refuges benefit people who never set foot within them.

No matter how we fill in the details on our landscape conservation goal, wild species should play a key role in it. They possess intrinsic value, and they play critical roles in sustaining ecological processes. Within the federal government, the locus of knowledge on wild species and ecosystem processes resides within the FWS. Surely, then, the Service might take the lead on this issue, drawing upon Congress's injunctions, making use of good science, and otherwise using its best professional judgment—all to forge a conservation vision for human-occupied lands.

IV. REFUGES IN THE LEAD

To sum up: For the Wildlife Refuge System to do its job well it needs to come up with good ways to talk about how refuges benefit surrounding landscapes. To do that, system leaders should take the time to produce a shorthand term to depict healthy, beautiful, human-occupied lands. They should craft and settle upon something akin to Aldo Leopold's land health for use as an overall conservation goal. Having done that, they then ought to put their conservation vision to work. It should operate at the center of all public educational efforts. It should appear in the first few sentences that refuge managers utter whenever they explain what they are doing and why.

If this were done—and assuming, for illustration, that the FWS turned to a goal such as land health—what messages and actions would come next? How might such a goal be put to good use?

First, a sound goal would give refuge managers a way to talk about the larger landscape and the roles of the refuge within it, without drawing upon the refuge-specific goal of integrity, diversity, and environmental health. Refuges are beneficial because they help sustain land health. When lands are healthy, the people on them are better able to thrive in the long term. The issue is not just about the flow of natural resources with market value. The full range of human utility is taken into account, as are the limits on human knowledge. Thus, the key message that needs repeating is this: Refuges play critical roles in sustaining land health, thereby benefiting countless people who might never think about hunting or fishing.

Second, a goal such as land health gives managers a way to talk about the goodness and badness of the land-use activities of neighbors, without judging them by an inappropriate standard. Land health is

suitable for governments and communities of all types to endorse and promote. It is an aspiration to use when evaluating how well private owners are doing on their own lands. A goal such as land health could thus provide a bridge or common language to help wildlife refuges and adjacent landowners manage their lands cooperatively. When Aldo Leopold in his now-classic work, *A Sand County Almanac and Sketches Here and There*, explained to readers the need for a "land ethic," he meant that ethic to be the tool that translated land health into a duty for individuals and communities. As he put it in the closing pages of his book: "A land ethic, then, reflects the existence of an ecological conscience, and this in turn reflects a conviction of individual responsibility for the health of the land. Health is the capacity of the land for self-renewal. Conservation is our effort to understand and promote this capacity."³⁰

Ethics-talk, of course, needs to be used with care, particularly to avoid the appearance of preaching. Still, Americans have a deep hunger for moral guidance. They are prone to talk about public issues in terms of right and wrong. Refuge managers need to be careful about criticizing particular people. They can be more forceful when talking about the attributes of good land use and about how people collectively ought to live. In Leopold's view, conservation would succeed only if it built upon an ecological vision of land as community. People were part of that land community, and dependent in the long term on the community's healthfulness and beauty. Good land use upheld the land's overall health, even as it met the needs of the individual landowner.

No ethical issue deserves more emphasis by the FWS than the duty of people living today to protect rare species for future generations to enjoy. Every refuge ought to have educational displays on this subject, expressly covering the following points: (i) an ethical idea such as this is supported by a high proportion of all Americans, (ii) Congress has responded by enacting the Endangered Species Act and various other laws, and (iii) wildlife refuges are one of the key ways that Americans carry out this obligation. By supporting refuges, Americans honor and implement their ethical and aesthetic ideals.

If refuge leaders consistently proclaimed a goal such as land health, teasing out its ecological and land-use implications and reminding the public of the duty to protect species, perhaps wildlife refuges could then rise to a higher level of public service, in terms of promoting a national culture of conservation. In statute after statute, the

30. ALDO LEOPOLD, *A SAND COUNTY ALMANAC AND SKETCHES HERE AND THERE* 221 (1949).

Interior Department is charged with taking the lead in conserving key elements of nature, wherever found. To do that, the Department needs to explain its work, to remind people of its importance, and otherwise to encourage their support. In the long run, conservation cannot succeed unless American culture shifts to favor it more strongly. Well-run wildlife refuges can foster that cultural change.

If the American people are going to take conservation seriously, conservation's leaders need to think deeply about its core aims and messages. Leaders of the wildlife refuge system, as they implement the 1997 Improvement Act, have a chance to encourage and assist that work. If refuge managers can effectively explain how refuges benefit the American people, they can also explain how all conservation benefits people. If they accomplished that, they would give the American people what they now so very much need: a vision of good living on the land.