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Managing State Trust Lands for Ecosystem Health: The Case of Washington State's Range and Agricultural Lands

By Gregory A. Hicks

I. Introduction

The protection of ecosystem health and wildlife habitat on state trust lands has received increasing attention in public lands literature. This article is meant to contribute to that discussion. It is focused on recently adopted land management policies in Washington state which are intended to restore ecosystem health and wildlife habitat on the 1.1 million acres of range and agricultural trust lands in the upland interior of the state's Columbia Plain. The lands in question are lands originally granted to Washington at statehood by the federal government for the support of the common schools and other public institutions. Those lands have subsequently been dedicated to agricultural and range uses to produce income for the trusts they serve. The Washington legislature has now passed a series of statutes requiring that...
those lands also be managed to protect and
preserve wildlife habitat and the ecosystem
values of the Columbia Plain's shrub steppe
lands.4

This article describes the origins and early
operations of that statutory initiative, offering
a look at the first efforts to adjust state trust
agricultural and grazing land management
practices to improve wildlife habitat and
ecosystem functioning in the Columbia Plain.
The case of Washington trust lands is of partic-
ular interest because of the reputation that the
Washington State Department of Natural
Resources ("Washington DNR" or "DNR")
enjoys in land management circles as a pro-
gressive and responsive trustee of the state's
trust lands.5 The critical question is the extent
to which historical management practices by
Washington DNR will be adapted to improve
habitat conditions and ecosystem functioning
in Washington's upland interior. The main con-
clusion of this article is that the Washington
experience illustrates that the historical com-
mitment of trust lands to agricultural and range
production creates significant challenges to
structuring and achieving an effective program
of ecosystem restoration and protection.

This is the second of a two article series on
efforts by state agencies in Washington to pro-
tect ecosystem integrity and to respond to
wildlife habitat loss in the intensely used farm
and range landscapes of the state's Columbia
Plain. The first article focused on the work of
the Washington Department of Fish & Wildlife
on private farm and range lands of the
Columbia Plain.6 Like the private lands, the
state trust lands have a history of management
and use that has sacrificed wildlife habitat and
ecosystem values for farm and range uses of
the land. The state trust lands are thus part of
a landscape of productive uses where the sur-
vival of wildlife habitat and ecosystem health
depends on a willingness to restore some por-
tion of what has been lost and to forego some
part of the present economic opportunity the

II. Background of Washington's Trust
Lands Habitat and Ecosystem
Restoration Efforts

Much of Washington's Columbia Plain con-
ists of semi-arid shrub steppe land, reshaped
by the agricultural and range land uses that
have defined it for many years.7 Those changes
in the landscape have greatly compromised
habitat values on which important fish and
wildlife species depend. Specifically, Columbia
River salmon, the sharp-tailed grouse, the sage

7. See id. at 14, 20-22.
grouse, and the pygmy rabbit are jeopardized by habitat destruction and land use patterns in the region. The dimming prospects for those species, as well as a general concern with the state of the ecosystems of the Columbia Plain, led the Washington legislature in 1993 to adopt section 79.01.295 of the Revised Code of Washington. The legislature's hope was that the statute would be a component of recovery plans for salmonids and steppe wildlife, and could either avoid listings under federal or state endangered species laws, or soften the impact of any such listings.

The statute provides that the state-owned portions of the remaining shrub steppe lands of the Columbia Plain, together with all state-owned agricultural lands, will be managed to preserve and perpetuate the region's fish and wildlife. The statute requires the implementation of ecosystem standards to accomplish that end, among them the maintenance or restoration of fish and wildlife habitat. The statute directs that the "maintenance and restoration of sufficient habitat to preserve, protect, and perpetuate wildlife and fish shall be a major component" of ecosystem standards developed for the trust lands and that "the ecosystem standards be achieved by applying appropriate land management practices to reach desired ecological conditions." Primary reliance is placed on the development of objective and scientifically sound measures of habitat and ecosystem functioning. Washington DNR is charged with implementing the statute's habitat and ecosystem goals on the state trust lands. The restoration of ecosystem integrity is to be accomplished through both an improvement of land use practices and a fostering of a culture of stewardship among lessees of state trust lands.

The challenge of maintaining and restoring steppe land ecosystems on state trust lands lies in the fact that they have long been managed as range and crop land. From the time of acquisition by the state to the present day, the trust lands in Washington's Columbia Plain have in the typical case been leased to farmers and ranchers, functioning as integrated parts of each lessee's farm and range holdings. Management has focused on the usefulness of the land to lessees and the maintenance of stable relationships between lessees and DNR so that the land might bring a financial return to the trusts.

To this day, the use of the trust lands as range and farm land is seen not only as a direct source of income to the trusts that must be maintained and improved, but as a factor in maintaining the health of the rural economies whose vigor is the basis of the profitability of


9. Wash. Rev. Code § 79.01.295. The specific impetus for taking up the issue of upland ecosystem health in the interior Columbia Basin was the possible listing of Washington salmonids as "endangered." A 1991 American Fisheries Society Report stated that there were numerous Pacific salmonid stocks that might be eligible for classification as threatened or endangered. The Washington legislature was concerned that the report might prompt petitions for threatened or endangered listings of Washington salmonids, including stocks of Pacific salmon, steelhead and bull trout, a species of char. See W. Neilsen, I.E. Williams & L.A. Lichatowich, Pacific Salmon at the Crossroads: Stocks at Risk from California, Oregon, Idaho and Washington, 16 Fisheries 4 (1991).

10. The experience of the economic and social disruptions caused by the listing of the northern spotted owl as endangered in Washington stimulated the creation of a salmon and steelhead Task Force. See Richard King, Speech to the Washington Association of Conservation Districts (Oct. 6, 1993) (on file with author) [hereinafter King Speech]. Mr. King, then a member of the Washington House of Representatives, was a principal draftsman of section 79.01.295 of the Revised Code of Washington. At the time of its adoption, he served as Chair of the Washington House Fish & Wildlife Committee and the Joint Committee on Ocean & Marine Resources.


12. See id.


15. See Wash. Rev. Code § 79.01.295(5).


17. See Wash. Dep't of Natural Resources, Agricultural and Grazing Lands Program Policy Plan 4-1 (1993) [hereinafter Policy Plan].

18. See id.
the trust lands. The resulting dedication of the trust lands to agricultural and range production has destroyed much of the native vegetation of the former steppe lands and diminished the functioning of the pre-development ecosystems of the lands. It has also created expectations among lessees that the lands will continue to be dedicated to farm and range uses.

Washington DNR has, to its credit, been an active participant in the articulation of a vision of trust lands management that includes the preservation and improvement of essential ecosystem values as an element of competent stewardship. But agricultural and range use is the backbone of trust lands management for the unforested lands of the Columbia Plain, as well as the main source of income from those lands. Beneficiaries of the trusts expect that the income historically earned from farm and range lands will continue, and where possible, be increased through management of the lands for agricultural production. These expectations have affected DNR's approach to implementation of the shrub steppe initiative.

DNR's implementation strategy has softened the statute's emphasis on wildlife habitat as such in favor of an emphasis on improving those ecosystem conditions that will at once increase the agricultural and range production value of the land and be of some use in accomplishing goals for wildlife habitat and general ecosystem health. In the case of range lands, that has meant efforts to control patterns of livestock grazing in order to improve the quality and mix of upland vegetation and to protect riparian zones. In the case of farmlands, it has chiefly meant improved soil management practices to better control soil erosion into streams, though there has also been some participation in the United States Department of Agriculture's Conservation Reserve Program, removing some farm land from production in favor of conservation plantings.

These improved land management practices are useful measures, but they represent modest steps toward improved habitat and ecosystem functioning. They are grounded in a traditional vision of the elements of sound range and agricultural land management, not in the aggressive dedication to the maintenance and restoration of wildlife habitat and ecosystem values that RCW 79.01.295 seems to contemplate. Further, there has so far been no provision made for ongoing monitoring of progress toward desired ecological goals. Primary reliance has been placed on the willingness of lessees of state lands to comply with land management policies intended to improve ecosystem functioning, but few resources have been dedicated to oversight of lessee efforts or to the monitoring of results.

The legislature never intended RCW 79.01.295 to foreclose accustomed uses of the trust lands, and the statute would never have passed had it threatened to overturn the farm and range uses of the lands. The statute embodies a compromise in which users of trust lands accepted more supervision over the impact of their management practices on ecosystem and

19. See generally The Committee Report, supra note 5; Wash. Dep't of Natural Resources, Draft Asset Stewardship Plan (1997) [hereinafter Draft Plan].
21. For a flavor of the expectations associated with the trust lands, see Washington Department of Natural Resources, 31 TOTEM 3-16 (1989) [hereinafter TOTEM]. TOTEM is the quarterly bulletin of the Washington DNR. The issue cited presents an overview of the management priorities, policy and history of the agricultural and grazing trust lands.
23. See generally Trusts Report, supra note 2; The Committee Report, supra note 5.
24. Some especially valuable habitat and ecosystem sites have been designated as Natural Area Preserves or Natural Resource Conservation Areas, freeing the land of the requirement that it be managed for revenue and permitting the preservation of extraordinary values. Some such areas have been transferred to the state Department of Fish & Wildlife for management by that agency. Such special protection is not available for the generality of the trust lands, which are managed for revenue generation. For a description of the Natural Areas program, see The Committee Report, supra note 5, at 52-58.
25. Interview with Washington DNR staffer.
26. See infra notes 33-35, discussing the range site assessments.
27. See Joint Memorandum submitted by the President of the Washington Association of Conservation Districts Range Lands Committee, explaining the conditions of the Association's support of the statute and of the ecosystem standards adopted.
habitat conditions, in exchange for recognition that the lands would continue to be dedicated to production use. The statute’s deference to existing use patterns is also reflected in its statement that lessees of state trust lands are to be actively involved in a collaborative, cooperative process for the development of site-specific solutions to ecosystem and habitat issues. Yet, even within the confines of a statute focused on collaborative and cooperative methods and on continuing production use of the trust lands, there was the expectation that the program to be undertaken would be effective in maintaining a place for wildlife and habitat on production-oriented lands. It is just that expectation that seems at present to be captive of the dominant commitment to maintain the production value of the lands. DNR’s embrace of a conservative approach is in part a product of the agency’s conviction that established lessees must be coaxed toward accepting the more demanding land management goals set by the statute and is in part a reflection of the political difficulty of spending agency resources on ecosystem rehabilitation efforts that do not promise sure returns. Both of those constraints seem imposed by DNR’s own sense of how far its management ought to deviate from historic patterns and from the expectations of lessees and trust beneficiaries. The intended program of an active, common effort by lessees of trust lands and DNR to restore a fuller array of habitat and ecosystem values seems to have given way to the notion that modest progress consistent with the use of trust lands as farm and range lands is sufficient.

The modest scale of DNR’s program for habitat and wildlife is not compelled by the agency’s trust duties. Under Washington law, it seems clear that the mandate that state trust lands be managed both to generate income for the trusts they serve and for the preservation and improvement of the value of the lands as capital assets does not preclude the pursuit of compatible habitat and ecosystem goals. The agency may respond to habitat and ecosystem needs where necessary to avoid the imposition of more stringent legal duties that could frustrate the productive use of trust lands. In addition, it may also act to preserve and improve the inherent values of the trust lands, such as pursuant to the statute (July 14, 1995) (on file with author). See also Letter from Norman McClure to Senator Scott Barr, Senator Bob Morton, et al. (Sept. 26, 1993) (on file with author); Interview with Norman McClure, October 29, 1995 (on file with author) [hereinafter McClure Interview]. Mr. McClure was President of the Washington Association of Conservation Districts Range Lands Committee during the period of passage and early implementation of section 79.01.295 of the Revised Code of Washington.

28. See sources cited and accompanying discussion supra note 27.

29. See WASH. REV. CODE § 79.01.295.


31. See supra text accompanying note 27.

32. See id.

33. For a good starting point in understanding Washington’s reconciliation of its duties to manage state trust lands exclusively for the benefit of the trusts and to adopt a management approach that furthers ecosystem health and the prospects for wildlife, see County of Skamania v. State of Washington, 685 P.2d 576 (1984). In Skamania, the Washington Supreme Court made plain that the state cannot use trust assets to pursue state goals other than the interests of the trusts. The Court identified two trust duties: the duty of undivided loyalty and the duty to act prudently on behalf of the trusts for whose benefit the lands were granted to the state. 685 P.2d at 580.

Since Skamania, DNR has taken the position that the duties of undivided loyalty and of prudent management are reconcilable with the pursuit of improved ecosystem health and the restoration of wildlife habitat, at least to the extent that the pursuit of those goals avoids legal liability or serves to protect and improve the asset value of trust lands. DNR has specifically expressed its intention to protect soil, water, wildlife, fish habitat and other public resources, as well as a willingness to accept a reduction in current income or return on investment if necessary to provide this protection, to the extent that such efforts are necessary to preserve future options particularly as those options may generate income for future beneficiaries. See The Committee Report, supra note 5, at 4.7-20, 6.9-11. The Washington Attorney General has since issued opinion letters endorsing DNR’s view. See Attorney General of Washington, letter of September 19, 1995 to the Honorable Jennifer Belcher, Commissioner of Public Lands (on file with author). See also 1996 Ops. Wash. Att’y Gen., No. 11 (August 1, 1996).

The Washington legislature has specifically authorized “multiple use” management of state lands “where such a concept is in the best interests of the state and the general welfare of the citizens thereof, and is consistent with the applicable trust provisions of the various lands involved.” WASH. REV. CODE § 79.68.010.

34. See sources cited and accompanying discussion supra note 33. In the management of state forest lands, for example, Washington DNR has entered into habitat conservation plans and undertaken other mitigation devices to avoid more stringent regulation under the federal Endangered Species Act. See The Committee Report, supra note 5, at 4.17-20.
wildlife and habitat, that might, in the future, be of benefit to the trusts.\footnote{See The Committee Report, supra note 5, at 4.17-20. The outer limits of the capacity to engage in expenditures for habitat and ecosystem recovery have not been clearly established. The Independent Review Commission in its Report to DNR observed, We are persuaded that the stewardship responsibility that derives from the obligation to manage trust lands in perpetuity for the trust beneficiaries fully warrants such a policy. The implementation of this policy, however, presents important challenges to the DNR. Stewardship responsibilities must be exercised as an integral part of the larger trustee responsibilities. The fundamental touchstone of this policy, as with all decisions respecting the trust lands, is the benefits it brings to the trust beneficiaries. Unlike decisions that directly generate revenues it is probably more difficult to evaluate asset protection decisions, particularly in the short run. Given the necessary exercise of judgment involved in such decisions and the apparent sensitivity of the effects they may have on near-term revenue generation for the trust beneficiaries, however, it would be appropriate for the DNR to periodically review with interested parties its asset protection decisions affecting the near-term generation of revenues from trust lands.\footnote{One author has captured neatly the difficulty of pursuing trust lands management objectives in ways that are not colorably consistent with trust responsibilities. Noting that state grant lands are not "public lands in the common sense of collective ownership for common benefit. Whether the land management objectives be timber, grazing, minerals or agriculture, grant land management is a form of proprietary management for specific trust benefit." Thomas R. Waggener, Public Lands, State Lands—Whose Lands? State Forestry on State Lands, 16 W. WILDLANDS 24, 25-29 (1990).}}

The Washington DNR believes that the prudent trustee standard, to which it is held, encompasses the discretion to promote such goals.\footnote{Interview with Washington DNR staffs.} Management decisions such as withdrawing lands from productive use to allow for their recovery, or choosing to protect and improve habitat and wildlife assets of potential future value to the trusts, are consistent with the prudent trustee's duty to the extent that they protect income or capital value for present or future beneficiaries of the trust lands.\footnote{See id.} It is true that there are some constraints on DNR's freedom to pursue goals for habitat and wildlife in its management of trust lands. RCW 79.01.295 itself acknowledges that DNR's obligation to implement practices to meet ecosystem standards must be "consistent with the trust mandate" of the Washington Constitution and the agency's governing statute.\footnote{WASH. REV. CODE § 79.01.295(5).} But saying that there are some constraints on how far the agency might go, does not answer the practical question of just how much DNR might do or what an appropriate level of engagement might be, consistent with the agency's trust mandate. The prudent trustee standard, to which DNR is held accountable in managing the trust lands, could support decisions to undertake an active program of monitoring the condition of the range lands, or to undertake reseeding and replanting programs on range lands and in riparian zones, in the interests of protecting and enhancing capital asset values. Applicable standards of review create substantial leeway to make such decisions in the name of asset protection and for the sake of the future value of the trust lands.

The important question is whether Washington DNR is willing or able to assemble the public and political support needed to use the capacities existing in the prudent trustee standard to press harder for the goals of habitat and ecosystem functioning contemplated by RCW 79.01.295. The historical dedication of the trust lands to production use, and the political difficulty of departing from that mold, have prevented the pursuit of wildlife and ecosystem goals from becoming a commanding management priority in their own right. That history and the policy rationales underlying Washington's uncertain commitment to habitat and ecosystem improvement on its trust grazing and agricultural lands are explored in more detail in Part III.

\section*{III. Washington's Agricultural and Grazing Trust Lands: Trust Principles and Landscape Realities}

\subsection*{A. Origins of the Trust Lands}

More than two-thirds of the land granted to Washington at its statehood is still held by the state as trust land, and is managed for the benefit of various state institutions; chiefly, schools, colleges and universities.\footnote{See generally Trusts Report, supra note 2. That amount includes neither state aquatic lands nor certain forest lands acquired by escheat, purchase or through tax delinquencies over the years. There are 621,359 acres of such forest lands and 2.1 million acres of tidelands, shore lands, harbor areas and beds of navigable waters whose title is based on the Equal Footing Doctrine of the United States Constitution. See id. at 27, 31.} Those grant lands comprise 2.3 million acres, almost half of which are classified as agricultural or...
grazing land.40 Typical of many states in the West, the original federal grants under Washington's statehood enabling act consisted of "in place" parcels. They were sections 16 and 36 of each township, and of "in lieu" parcels selected later by the state as compensation for any sections that might not have been available because of earlier federal grants to other parties.41

The original pattern of grants is especially visible in interior Washington's Columbia Plain where 1.1 million acres of agricultural and grazing land remain in state hands despite vigorous sales efforts in the early years of this century.42 There has been virtually no blocking up or consolidation of the grant lands, and on the official map titled "Major Public Lands of Washington," the "in place" grant lands show up as an even, pink freckling of isolated trust land parcels amidst township-sized areas of private lands.43 The "in lieu" grant lands show up on the map as tighter clusters of pink, often in checkerboard patterns interspersed with private land.44

B. Early Expectations

Whether loosely scattered or tightly gathered, the trust lands in Washington's Columbia Plain exist in a rural landscape dominated by private holdings. This phenomenon is a natural consequence of the pattern of "in place" land grants and of the state's approach to selecting "in lieu" parcels. The first purpose of the grant lands was always that they serve the trusts and their beneficiaries. The isolation of the trust parcels amidst private farms and ranches meant, however, that that value would have to be realized as part of the range and agricultural economy of Washington's plateau interior.45

Those expectations are especially evident in how the "in lieu" selections were made. Washington made most of its "in lieu" selections in the early years of this century with the guidance of influential stockmen and farmers.46 By that time, settlers and the railroads had made entries on the best available federal lands.47 During the first decade of this century, the state typically selected from the best of the leftovers. Many of the lands available for selection lay on parcels of thinner soils and rougher topography, or in the drier parts of the Columbia Plain. Lands with deeper soils, more regular topography, or with better access to water were already taken. Further, much of the land still available for state selection had been degraded by its use as common grazing land.48 With those constraints, the state needed to select land that could still produce some financial return to the school trusts through lease or sale.49 Given the limited choice of lands, and the requirement that they be sold or leased for profit, it was perhaps a natural development that the selections would be situated near the ranchers and farmers who were willing and able to lease or buy the lands from the state.50

The expectation that the trust lands, whether leased or sold, would become useful as farm or ranch land, has proven to be an

40 See TRUSTS REPORT, supra note 2, at 27, 31.
41 See William Prince, HISTORY OF PUBLIC LAND LAW DEVELOPMENT 313 (1968); TRUSTS REPORT, supra note 5, at 2-3.
42 Between 1889 and 1920, over 500,000 acres of trust lands were sold in eastern Washington alone. TRUSTS REPORT, supra note 2, at 8-9, 25.
44 See TRUSTS REPORT, supra note 2, at 8-11; TOTEM, supra note 21, at 3-4.
45 See Alexander Campbell McGregor, COUNTING SHEEP: FROM OPEN RANGE TO AGRIBUSINESS ON THE COLUMBIA PLATEAU 102 (hereinafter McGregor). In many of the western states, the selection of trust lands has been carried out in the interests of stockmen. This is partly explained by the fact that grazing represented the most profitable immediate use of the land, and partly by the political importance of the livestock operators. See Sanford A. Mosk, LAND POLICY AND STOCK RAISING IN THE WESTERN UNITED STATES, 17 AGRIC. HIST. 14 (1943), reprinted in VERNON CARSTENSEN, THE PUBLIC LANDS 411 (1968) (hereinafter Mosk).
46 See TRUSTS REPORT, supra note 2, at 8-11.
47 See generally McGregor, supra note 46.
48 See TRUSTS REPORT, supra note 2, at 8-11.
49 See TRUSTS REPORT, supra note 2, at 8-11.
50 See generally McGregor, supra note 46. This tendency to make land selections with a view toward their value to prospective lessees is described as typical of the western experience. Mosk notes that in many of the western states selections were made for their grazing value to a particular stockman. See generally Mosk, supra note 46. He goes on to observe that such selections were not necessarily unwise. "On the contrary, assurance that the state would have an immediate lessee or purchaser for a particular piece of land was an important consideration from the revenue standpoint." Id. at 428.
important factor in Washington’s ability to realize habitat and ecosystem health goals. Where the trust lands were valuable as crop land, they were cleared and prepared for the bare earth farming characteristic of the region. Habitat values were largely destroyed as a byproduct of the clean farming and intensive crop management that is prevalent not only on trust lands, but everywhere in the Columbia Plain. Where the chief value of the trust lands was grazing, the land was turned over to lessees for them to manage as they saw fit. Little attempt was made to regulate grazing. The scattered distribution of the grazing lands and slender agency staffing precluded active management. Instead, DNR relied upon the self-interest of the lessees, who were virtually guaranteed continued use of their grazing allotments, to prevent degradation of the range lands.

C. Custodial Management

Because the lands were of little interest to anyone but the farmers and ranchers who leased them and because the trustees of the land had rather modest expectations of the revenue they might be expected to generate, there were long years of quiescent management of the trust agricultural and range lands. For a long time, promotion of the stability of relations with lessees and promotion of the interests of the trusts were perceived as largely congruent goals. The uses to which the trust lands were put remained largely unchanged from year to year. Because there was little capacity to monitor the condition of far-flung holdings, staying with proven lessees whose fees produced a modest, but assured, return seemed a sensible management option.

Long continued leaseholds became common. A grazing or agricultural lease might pass along within a family for forty or fifty years and, in some cases, for more than a century. In localities where state trust lands were more tightly clustered as the result of “in lieu” selections, much of the land was leased by members of a single family or by families related by marriage. The practice of routine renewal in time created expectations among lessees that the land would be dedicated to purposes useful to the lessees, and the agency came over the years to celebrate long-continuing leaseholds as evidence of stability and of good stewardship on the land. Range land lease properties were sporadically and infrequently visited by DNR officials. The slight returns from these lands meant that negligible staff resources were allocated to management of range land and dry land farm properties. Managers typically renewed leases over the phone or by written correspondence. The procedures for bidding for leases also favored the continuation of incumbent lessees, thus promoting continuity and creating significant barriers to new would-be lessees.
D. Active Management

The commitment to the stability of lease tenures is, at present, only one element of a land management policy whose chief focus is improving the asset value and profitability of the trust lands. While there remains great stability in lease tenures, DNR is now seeking better performance in land management from its lessees and higher returns from its grazing and agricultural trust lands, largely in response to the better opportunities created by conversion of grazing land and unirrigated crop land to irrigated cultivation.

The agricultural and range lands have historically contributed a very small fraction of total returns on trust assets. Only about three percent of the total trust revenue of $264 million is attributable to agricultural and grazing lands, despite the fact that they account for almost thirty percent of trust lands acreage.

And, within the category of agricultural and grazing lands, there are great income disparities. For example, orchards, constituting little more than one percent of all agricultural and grazing lands, produce almost sixteen percent of the total revenues. Irrigated crop land is next in income generation per acre, followed by unirrigated crop land. Grazing lands, which generate a positive return over and above their cost of administration only when their capital appreciation is taken into account, are last in income generation per acre.

The slight returns on the range lands, and the difficulty of effectively managing such scattered holdings, call into doubt whether the long-established practice of leasing trust assets lands for negligible returns is consistent with trust duties. Trust beneficiaries and environmental advocates both have asked the question whether livestock grazing in particular, with its demonstrated low returns and sometimes harmful impacts on the trust lands, represents a prudent management policy. The trust beneficiaries see the desired solution as

When a lease is about to end, its availability is published. Any would-be bidders wishing to challenge the present lessee's renewal can then bid in a publicly conducted auction of the lease. To have a good chance of success, however, bidders must also offer a bid premium (a bonus bid) which the bidder is prepared to pay over and above the price per acre that the lease commands in the public auction. The amount of the "bonus bid" is within the discretion of the contesting bidder and must be deposited in full with DNR in advance of the public auction of the lease. The auction usually takes place some six months following submission of the bonus bid.

By auction day, DNR will have set a floor price per acre based on its appraisal of the value of the land. In the actual bidding, if the incumbent lessee is willing to match the best bid of any challenger, a challenger can only prevail if the bonus bid amount has earlier been placed on deposit with DNR exceeds a bonus amount the incumbent is willing to offer on the auction day. If the holder of the lease is able to match the last best of any would-be takers, and is willing to exceed the bonus bid, he or she will hold onto the lease. What this means for would-be challengers is that they must not only bid a premium price in the open auction but also put up a bonus amount that is higher than the then-holder of the lease is willing to match. For would-be contestants it is a hostile structure where the full cash amount of the bonus bid must be deposited in advance and where one's best shot may not succeed in the face of a lessee determined to hold the property.

In practice, there have been few instances where a contestant has been willing to face such uncertainties, or been able to offer a winning bonus bid, while still allowing for profitable operation of the lease. For the prevailing bidder, the amount of the bonus bid must be amortized over the duration of the lease and any renewals of the lease, and must be paid over and above the per acre bid price. It is rarely possible to offer a bonus bid high enough to be sure of winning the lease while still ensuring that the lease will be profitable to the lessee.

DNR is required by statute to obtain "fair market rental return to the state." Wash. Rev. Code § 79.01.242. In 1995, DNR's rate for grazing leases was $6.50 per animal unit month ("AUM"), plus a leasehold tax of 12.84 percent, for a total of $7.34 per AUM. For permit ranges, the rate is $4.04 per AUM, plus leasehold tax for a total of $4.53. By contrast, the grazing fee for federal land during the same period was $1.61 per AUM. See The Committee Report, supra note 5.

64 See generally Trusts Report, supra note 2; The Committee Report, supra note 5.
65 See Wash. Dep't of Natural Resources Annual Report (1997); Trusts Report, supra note 2; Wash. Dep't of Natural Resources, Agricultural Resources Program, Agreement, Acreage & Revenue Summary (1997) (hereinafter Acreage & Revenue Summary).
66 See sources cited supra note 65.
67 See generally Acreage & Revenue Summary, supra note 65. DNR manages about 199,500 agricultural acres, dominated by 116,000 acres of dry farmland. There are 28,000 acres of irrigated farmland, and another 8,400 acres are orchard land. Almost 15,000 acres have been included in the U.S. Department of Agriculture's Conservation Reserve Program and have been retired from active production. A further 30,000 acres is designated as "non-use" land, or land not currently in production due to geographical or other factors. See id.
68 There are almost 565,000 acres of trust grazing land, not including 331,000 acres of forest land where grazing under DNR permits is a secondary use. Revenues from the grazing land have usually been less than one dollar per acre per year. See Acreage & Revenue Summary, supra note 65, at 68.
70 See sources cited supra note 69.
either disposition of the scattered grazing lands in favor of more lucrative and easily managed assets or, where feasible, conversion of the grazing lands to more intensive uses, such as orchard and vineyard uses. Environmental advocates suggest the abandonment of grazing as a primary use, as well as the substitution of a management regime that protects and improves the land's inherent asset value for future generations. Indeed, it is on the range lands and in the grazable woodlands, where salvageable riparian zones and remnants of the original shrub steppe plant communities survive, that the best prospects for preservation and improvement of habitat values exist. Especially where trust grazing parcels are situated among other grazing land and not isolated amidst cleared farm land, there is good potential for landscape-wide improvement in ecosystem and habitat conditions.

In response to such concerns, DNR has needed to make plain why trust ownership of agricultural and range lands, and of range lands in particular, makes sense. Through an Asset Stewardship Program begun in November 1994, the agency has begun to examine the configuration and management of its agricultural and grazing lands in order to determine whether to sell or exchange existing holdings and whether to acquire other lands to improve the asset value of existing trust lands. Through this program, the agency has also begun to evaluate the potential for more intense utilization.

From this process, several important themes and important implications for the protection and improvement of habitat and ecosystem values have begun to emerge. First, the agency ought to pursue all good opportunities to convert grazing lands to more intensive and profitable uses. Second, because the highest yielding lands within the agricultural portfolio, orchard and vineyard lands, have come into being as the result of the conversion of grazing lands, DNR should be cautious about divesting any of its land holdings without a careful consideration of their potential. Third, the core of the agency's duties lie in managing the trust lands, a unique patrimony whose inherent value should be protected and enhanced in the interests of the trusts and their future beneficiaries. Fourth, DNR should inventory and determine the inherent values of the lands as they exist, including the inventorying of lands with high biodiversity values, to develop management options for those lands. All of these themes emphasize retention and improved management of the trust lands as a prudent management choice. In addition, the agency has argued that the rapid growth of population throughout the state, and the resulting demands on a finite land base, justify the decision to hold many currently low yielding lands for potential future uses.

In the years before restoration of habitat in the Columbia Plain had become an issue, it had become clear that retention of the agricultural and range trust lands as trust assets could continue to make sense only to the extent that their profitability or inherent asset value justified retention. Improvement of their profitability might occur through conversion of twenty-five percent, the portion of trust revenue that is allocated to DNR for trust land management. See id. The additional five percent of revenue has been used to make improvements on some lands, including the expansion of Irrigation and the dedication of some monies to conservation efforts. See id.

Since 1970, 34,000 acres of dry land have been converted to irrigated land through well drilling and acquisition of surface water rights. See id. DNR continues to seek opportunities for orchard and vineyard land. See id. DNR continues to seek opportunities for orchard and vineyard land. See id.
the land to more intensive uses. Improvement of inherent asset values might occur through the better protection of the long-term productive capacities of soil and range or through capital improvements such as irrigation systems. While lands of extraordinary natural value might be managed to preserve those values for their own sake or to avoid the creation of environmental flash points, most of the trust lands can be expected, in the future, to be managed more intensively and with greater attention to the improvement of revenues.

The focus on habitat values and ecosystem recovery that were embodied in RCW 79.01.295 arose soon after these policy positions began to solidify. DNR would pursue its duties under the new habitat and ecosystem statute in a climate where increasing the productive value of the trust lands and protecting their asset values had become insistent management priorities. In such a climate, environmental goals are likely to be pursued either to the extent that they are compelled by law or dovetail with the desire to maintain the resource value of the lands and promote its long term capacity to generate revenue. The balance of this article explores how DNR’s asset management strategies and its goals for future relationships with lessees of trust lands have shaped its approach to fulfilling the habitat and ecosystem mandates of RCW 79.01.295.

IV. The Steppe Lands Ecosystem Initiative

A. Origins

RCW 79.01.295 is the successor to legislation originally proposed in 1991, and again in 1992, to improve ecosystem health and habitat values on state public lands. The first purpose of these proposals was the protection of salmon habitat on the inland tributaries of the Columbia and Snake rivers, but the declining prospects for upland wildlife caused the 1993 legislative proposal to focus also on the health of steppe land habitat. These earlier salmon bills had failed because of opposition by producer groups who viewed a shift in management priorities for state lands as a threat to the historical uses of the trust lands as grazing and farm land. These groups also worried that the bills were an effort to bring more environmental pressure to bear on farming and ranching practices in general. The proposal in the earlier salmon habitat recovery bills was revived in the 1993 legislative session. The impending listings of fish and wildlife in the Columbia Plain, under both the state and federal endangered species acts, made it necessary for the state to have in place a recovery strategy in order to avoid drastic restrictions on established farm and ranch operations.

The legislature’s goal was to develop a bill that would win the support of both environmental advocates and users of the public range, as well as substantively respond to the
need to initiate habitat protection and recovery in the steppe lands. The proposal called for a statute that would establish clear, quantitative criteria for evaluating habitat and ecosystem conditions, and that would clearly define the desired endpoints for habitat and ecosystem functioning. The bill's other objective was to emphasize cooperative progress toward desired ecological conditions, as well as primary reliance on negotiated solutions when land management practices needed to be altered to satisfy ecosystem standards. The statute would adopt measurable goals for habitat and ecosystem functioning toward which all land management must strive. The statute would also insist on progress toward the articulated goals, leaving open the question of satisfactory rates of progress. The statute was also meant to require state land managers to develop solutions in order to realize habitat and ecosystem goals for specific sites, but only in consultation with users of the land and with due respect for the legitimacy of established uses.

Washington DNR supported the effort, viewing the prospect of more directive standards for the use of trust grazing and agricultural lands as altogether consistent with the objectives of its asset management strategy. Effective ecosystem standards would allow the agency to improve management, respond to pressures to protect and improve the asset value of the grazing and agricultural lands, and overcome the impression that the fate of the grazing lands was committed to their lessees, with little agency involvement.

The main rationale offered for the marriage between the scientifically-based evaluation of habitat and ecosystem conditions and the coaxing, prodding approach to habitat and ecosystem improvement was the notion that cooperation between users of the trust lands was needed not only to pass a statute, but to implement it effectively. There was a conviction that the scattered distribution of the trust lands, and their long association with particular private holdings, not only made the cooperation of the lessees a practical necessity, but created an opportunity for more effective protection of habitat and ecosystem values on associated private lands. Only state land would be made subject to the bill's basic requirement that fish and wildlife habitat be preserved through the achievement of certain ecosystem standards, but it was hoped that the new management regime for the state lands would encourage improved practices on adjacent private land as lessees came to see the long term benefits of management practices compatible with improved habitat and ecosystem health. If lessees of state lands could successfully be enlisted to improve the management of the trust lands they used, voluntary improvements in range conditions beneficial to fish and wildlife might follow on private lands, producing landscape-wide benefits that would not occur if improved management were restricted to state lands alone. In some cases, the effectiveness of the improved management of state lands might depend upon parallel management reforms on private land, perhaps creating habitat units of sufficient size or shape to function properly or protecting riparian corridors along their length.

The legislation, containing those elements, was signed into law in September, 1993. The statute mapped out a rapid timetable for the development of ecosystem standards for the recovery and protection of

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89. See King Speech, supra note 10.
90. See McClure Interview, supra note 27.
91. See id.
92. See id.
93. Interview with Washington DNR staffers.
94. See id.
95. See King Speech, supra note 10; McClure Interview, supra note 27.
96. See McClure Interview, supra note 27. See also Wash. Rev. Code §§ 79.01.295(3), (4).
97. See McClure Interview, supra note 27.
98. See id.
99. See id., Interview with Washington DNR staffers.
It provided that by 
December 31, 1993, the state department of 
wildlife and department of fisheries would each 
develop goals to preserve, protect and perpetu-
ate wildlife and fish on shrub habitat and on 
agricultural lands, range lands and grazable 
woodlands, consistent with the maintenance of 
a healthy ecosystem.101 By July 31, 1994, the state 
conservation commission was to appoint an 
advisory committee consisting of technical 
experts that represented different natural 
resources interest groups.102 The committee was 
to develop ecosystem standards that would 
achieve the goals developed by the fish and 
wildlife agencies.103 The committee would also 
develop the standards to establish meaningful 
and measurable criteria for evaluating the 
responsiveness of land management to the pri-
mary goal of sustaining and perpetuating 
wildlife and fish, riparian areas, soil, water, tim-
ber, and forage.104 The statute required that the 
technical advisory committee develop the 
ecosystem standards by December 31, 1994, 
and that the standards then be disseminated 
both to DNR and the public as a resource for 
land management planning.105 The statute 
charged DNR with implementing practices nec-
essary to meet the ecosystem standards on 
department-managed agricultural and grazing 
lands, consistent with the trust mandate of the 
Washington state constitution, and other rele-
ant state law.106 
The tasks set by the new statute were 
promptly undertaken. The Washington Depar-
tment of Fish & Wildlife developed goals for fish 
and wildlife,107 and a highly competent and

100. See Wash. Rev. Code § 79.01.295 (West 1998). The 
revised code provided as follows: 

(1) By December 31, 1993, the department of wildlife 
and the department of fisheries shall each develop goals for 
the wildlife and fish that these agencies respectively man-
age, to preserve, protect, and perpetuate wildlife and fish on 
shrub steppe habitat or on lands that are presently agricul-
tural lands, rangelands, or grazable woodlands. These goals 
shall be consistent with the maintenance of a healthy 
ecosystem. 

(2) The conservation commission shall appoint a 
technical advisory committee to develop standards that 
achieve the goals developed in subsection (1) of this sec-
tion. A member of the conservation commission shall 
chair the committee. 

(3) The committee shall develop standards to meet 
the goals developed under subsection (1) of this section. 
These standards shall not conflict with the recovery of 
wildlife or fish species that are listed or proposed for listing 
under the federal endangered species act. These standards 
shall be utilized to the extent possible in development of 
coordinated resource management plans to provide a level 
of management that sustains and perpetuates renewable 
resources, including fish and wildlife, riparian areas, soil, 
water, timber, and forage for livestock and wildlife. The 
maintenance and restoration of sufficient habitat to pre-
serve, protect, and perpetuate wildlife and fish shall be a 
component included in the standards and coordinat-
ed resource management plans. Application of standards to 
privately owned lands is voluntary and may be dependent 
on funds to provide technical assistance through conserva-
tion districts. 

(4) The conservation commission shall approve the 
standards and shall provide them to the departments of 
natural resources and wildlife, each of the conservation dis-
tricts, Washington State University cooperative extension 
service, and the appropriate committees of the legislature. 
The conservation districts shall make these standards 
available to the public and for coordinated resource manage-
ment planning. Application to private lands is voluntary. 

101 See Wash. Rev. Code § 79.01.295 (1). Although the term 
"ecosystem" was not defined in the legislation, a definition was 
later adopted by the Ecosystem Standards Advisory Committee 
charged with implementing standards to give effect to the 
statute. The term was defined as a "community of living organ-
isms (plants and animals) interacting with one another and with 
their physical environment, such as a watershed or other land 
area. A change in any part of a complex system may affect the 
whole." ESAC Report, supra note 30, at 62. Importantly, the term 
was not defined in a way that introduces a concern with human 
economic and social preferences, diluting the focus on the 
integrity of natural systems as such. See Oliver A. Hauck, On the 
Law of Biodiversity and Ecosystem Management, 81 Minn. L. Rev. 869, 
923-25, 936-38 (1997) (discussing non-biological conceptions of 
ecosystems and ecosystem management). 

102 See generally ESAC Report, supra note 30. 

103 See id. 

104 See Wash. Rev. Code § 79.01.295 (3). 

105 See id. 

106 See Wash. Rev. Code § 79.01.295 (5). 

107 Ecosystem Standards Advisory Committee, Ecosystem 
Standards for State-Owned Agricultural and Grazing Land, 
Exhibit B ("Sub-Goals for Aquatics Resources," "Sub-Goals for 
Terrestrial Resources") (1994).
diverse technical advisory committee was chosen to develop appropriate ecosystem standards. After a year's work, and within the statutory deadline, the technical advisory committee had established twenty-two ecosystem standards, consisting of nineteen land management standards and three aquatic evaluation standards, to address ecosystem health and habitat functioning on crop land and range land, as well as in riparian areas and associated waters.

Approximately half of the twenty-two standards are focused on problems of soil stability and watershed functioning, addressing soil and stream bank erosion, water quality, protection of stream morphology and maintenance of instream flow levels, siltation, and water discharge and runoff. The remaining standards are focused on plant species diversity, native plant protection, the realization of site potential for vegetative cover in upland and riparian zones, as well as a provision for protected movement by wildlife along vegetated corridors and the avoidance of habitat fragmentation. Each standard consisted of four components: (i) a concise statement of the desired ecological condition to be realized by achievement of the standard; (ii) a set of strategies to guide land managers and users in the selection of management practices to achieve the standard's desired ecological condition; (iii) a brief statement on how the specific ecosystem standard would benefit fish and wildlife, describing the linkage between the standard and the restoration or preservation of ecosystem and habitat functioning; and (iv) suggested management practices that might be undertaken to achieve the standard.

The Committee included representatives of range cattle constituencies, public utilities, wheat growers, Indian nations, state and federal natural resource agencies, as well as representatives of environmental advocacy groups such as Trout Unlimited, the Audubon Society, the Washington Wildlife Federation and the Washington Environmental Council. The composition of the Committee is striking for its balance and for the capacity of the individuals filling the chairs. See ESAC Report, supra note 30, at 2. Selection criteria for membership, the committee's ground rules for doing its work and a goals statement for the committee are set out in Exhibit C, Exhibit D and Exhibit E, respectively, to the ESAC Report.

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108. See ESAC Report, supra note 30, at 31-57.
109. See id. at 25, 31-34, 39, 43-47, 51, 57.
110. See id. at 23-24, 26, 35-38, 40-42, 48, 55-56.
111. See id. at 16-17. Most of the ecosystem standards are focused on measures of sound soil and water functioning typical of traditional range management and farm land soil and water conservation methods. The standards include measures that go beyond those traditional measures of assessing the health and functioning of range land and farm land. Three standards are quoted here to give the reader a feel for some of the more ambitious standards included in the Washington scheme and also as examples of the four part structure of all of the standards.

**Ecosystem Standard B9: Plant Community Connection**

**DESIRED ECOLOGICAL CONDITION** Plant communities are adequately connected to allow for movement of wildlife between plant communities with minimum exposure to predators or weather.

**STRATEGY** 1. In rangelands and grazable woodlands, provide and maintain vegetated connection between the riparian plant community and the natural upland plant community along most of their lengths. 2. In croplands, provide or maintain corridors, which connect riparian and upland communities. 3. Improve road right of ways to maintain connection between riparian and upland areas. 4. Avoid decreasing or eliminating the connection between riparian and upland plant communities when initiating new developments, such as building structures or modifying roads and agricultural fields.

112. See id. at 16-17. Most of the ecosystem standards are focused on measures of sound soil and water functioning typical of traditional range management and farm land soil and water conservation methods. The standards include measures that go beyond those traditional measures of assessing the health and functioning of range land and farm land. Three standards are quoted here to give the reader a feel for some of the more ambitious standards included in the Washington scheme and also as examples of the four part structure of all of the standards.

**Ecosystem Standard B11: Native Plant Species**

**DESIRED ECOLOGICAL CONDITION** Native plant species dominate uplands and riparian areas. Non-native plant species, not classified as noxious weeds, which provide habitat benefits to fish and wildlife comparable to native plants are acceptable.

**STRATEGY** 1. In uplands (excluding cropland) and riparian areas, maintain existing native vegetation where it exists. 2. Native vegetation should be used for the restoration of damaged sites. 3. Non-native plant species may be used in reclamation provided that equal or greater long-term benefits to fish and wildlife result.

**RATIONALE/DISCUSSION** Native plant species are an essential part of habitat for native fish and wildlife. The introduction of non-native plant species has contributed to the disappearance of native wildlife by changing the natural biological and structural habitat diversity which the native plants provided. This ecosystem standard is intended to maintain existing native plant species and encourage the use of native plant species in restoration of damaged sites.

The strategy gives land managers the flexibility to use non-native plant species, even if it is feasible to use native plant species, if the non-native species provide equal or greater long-term benefits to fish and wildlife.
The statute requires that a major component of the ecosystem standards provide for "the maintenance and restoration of sufficient habitat to preserve, protect, and perpetuate wildlife and fish." Indeed, a good number of the standards are focused on the achievement of a general improvement in ecosystem functioning through the control of soil erosion and the improvement of water flows, as well as on the specific requisites of well-functioning fish and wildlife habitat. The statute was expected to guide DNR in modifying its land management practices to meet habitat standards by establishing ecosystem standards and suggesting management practices to achieve those standards.

It was the linkage between broad ecosystem standards and specific management practices for achieving those standards that offered the best leverage for DNR to move its lessees in the direction of better management for wildlife habitat and general ecosystem conditions. The threat, however, that DNR might begin to use the ecosystem standards and their suggested management practices to direct changes in land use produced an immediate and sharp reaction from a key user group, the Washington Cattlemen's Association, focused on one particularly controversial ecosystem standard.

The ecosystem standard at issue was a two-part standard for riparian zones. The standard provides:

**POSSIBLE MANAGEMENT PRACTICES** Deferred Grazing, Range Seeding; Planned Grazing System.

**Ecosystem Standard B21: Plant Community Status/Condition—Uplands**

**DESIRED ECOLOGICAL CONDITION** Upland plant community structural complexity, vegetative cover and plant species diversity approximate site potential for native plant species and/or equivalent in non-native plants that provide comparable or greater habitat benefits to fish and wildlife.

**STRATEGY 1.** The desired plant community should consist of primarily perennial grasses and forbs, shrubs, and trees depending on site potential, and contain a minimum of introduced annual forbs, grasses and noxious weeds. 2. Maintain or manage for site factors that are characterized as "Healthy" using the [rangeland health criteria and matrices developed by the Committee on Rangeland Classification of the National Research Council of the National Academy of Sciences and published in Rangeland Health: New Methods to Classify, Inventory and Monitor Rangelands (1994)].

**RATIONALE/DISCUSSION** The health of rangeland plant communities directly impacts the health of upland wildlife as well as indirectly impacting downslope riparian areas and fish and wildlife habitat by minimizing erosion and contaminants. This ecosystem standard is intended to result in the restoration of vegetative structure, vegetative diversity, and herbaceous cover important to upland and riparian fish and wildlife habitats.

**POSSIBLE MANAGEMENT PRACTICES** Deferred Grazing; Proper Grazing; Planned Grazing System; Range Seeding.

Id. at 35-48.

114. See ESAC REPORT, supra note 30, at 5-9.
115. Id. at 40-41.
excludes cattle and the use of deferred and rotation grazing to reduce impacts on riparian zones.\textsuperscript{116} The Association argued that the forage available to cattle in riparian zones often constitutes the most valuable grazing ground within allotments and that the closing of access to that terrain to grazing use would compel a reduction in grazing fees, violating DNR's trust duties to maximize the value of trust assets.

The Association's argument is not sound. The protection of riparian zones on state trust lands, and the foregoing of lease fees, is quite consistent with trust duties. The state is charged with protecting and improving the asset value of trust lands so as to fulfill the trust duty of intergenerational equity, and DNR can choose as a prudent trustee to forego present income in order to protect assets and to fulfill the duty of intergenerational equity.\textsuperscript{117} Despite the flawed argument, however, the Association's absolute opposition to one of the most important of the proposed ecosystem standards created great awkwardness because it indicated the probability of continuing resistance by user groups to implementation of the ecosystem standards. The Association's opposition revealed a fundamental mistrust of how the ecosystem standards would be implemented, and it became a focal point for a more general concern about the effect that RCW 79.01.295 might have on accustomed uses of the trust lands.\textsuperscript{118}

A major theme running through the statute is the expectation that the implementation of management changes would occur through a collaborative process with lessees of state land, and for that reason the defection of the Cattlemen's Association was especially troubling.\textsuperscript{119} The legislation specifically adopted "coordinated resource management planning" ("CRMP") as the procedural technique for combining established productive uses with the new commitment to wildlife and habitat values.\textsuperscript{120} Well-established as a tool for accommodating grazing use and the protection of wildlife and habitat values, CRMP represented, for an important segment of the grazing community, an approach to resource management decision-making that was essential to their willingness to support the new legislation.\textsuperscript{121} A number of those stockmen, who had chosen to support the steppe lands ecosystem recovery statute because of their belief that it represented the best hope for grazing-friendly reform, remained committed to the process set in motion by the ecosystem standards advisory committee. In their view, such measures as the riparian zone ecosystem standard could be accommodated to reasonable grazing access. But the official opposition of the Cattlemen's Association placed this group in an awkward position and threatened to undermine the goal of a collaborative approach to site-specific habitat and ecosystem solutions for the state's grazing lands.\textsuperscript{122} The reform group of stockmen feared that a collapse of the ecosystem standards process would lead to a more prescriptive statute in the future, compelled by the Endangered Species Act, and that in any new round of legislative proposals, the Cattlemen's Association opposition to reasonable reforms would make it difficult for stock grazers to resist the passage of more stringent limitations on

\textsuperscript{116} See id. at 3; Letter from Kent Lebsack, Executive Vice-President, Washington Cattlemen's Association, to Mick Hanson, Chair of the House Environmental Affairs Committee, Washington House of Representatives (Sept. 21, 1994) (on file with author).

\textsuperscript{117} See supra text accompanying notes 33-35.

\textsuperscript{118} See McClure Interview, supra note 27.

\textsuperscript{119} See sources cited supra note 27.

\textsuperscript{120} See WASH. REV. CODE § 79.01.295(3). The statute provides that the standards developed by the Committee "shall be utilized to the extent possible in development of coordinated resource management plans to provide a level of management that sustains and perpetuates renewable resources, including fish and wildlife, riparian areas, soil, water, timber, and forage for livestock and wildlife." Id.

\textsuperscript{121} See sources cited supra note 27. The distinguishing feature of CRMP in the universe of multiple stakeholder consensus processes is its focus on management units that are defined by their ecological interdependence and, therefore, cross boundaries of ownership and management authority. The object is to involve major stakeholders in an integrated plan focused on the sound functioning of the entire planning area, consisting of both private and public lands. The heart of the process is collaborative and cooperative and its ends are accomplished through the development of a coordinated resource management plan. See WASHINGTON COORDINATED RESOURCE MANAGEMENT HANDBOOK 1-4 (1999) (on file with author). For examples of CRMPs, see generally BUREAU OF LAND MANAGEMENT, COORDINATED RESOURCES MANAGEMENT PLANS, WASHINGTON STATE 1994 STATUS REPORT (1994).

\textsuperscript{122} See McClure Interview, supra note 27.
grazing on the trust lands. The question of "cows in the creeks" had been a contentious one throughout the process of drafting the ecosystem standards, and the Cattlemen's Association remained doubtful that compromises, which were satisfactory to stockmen, could ever be worked out in developing management plans for particular leases. In the development of the ecosystem standards, there had been substantial disagreement between those who viewed cattle grazing as incompatible with the statute's goals and those who were less willing to place the blame on one specific type of land use. Those who cheered "cow-free in '93" believed that grazing use was inconsistent with restoring ecosystem values, and that the scant revenues produced by grazing lands could scarcely justify continuing livestock use rather than shifting to management that would improve the inherent value of the land. While the threat that grazing use might cease altogether was never real, the great pressure to address ecosystem integrity and habitat loss made it likely that grazing use might be reduced or selectively ended in some parts of the steppe lands. Lessees of state lands were particularly concerned that the content and operation of ecosystem standards that would measure rangeland health under the new statute could make range lands and riparian areas less available to them, and they sought to prevent this from happening.

The Ecosystem Standard Advisory Committee ("ESAC") had dedicated itself to reaching full consensus on all ecosystem standards adopted, providing for minority reports as a vehicle for dealing with lack of consensus. In the committee's final report, the proposed standard for riparian zone management produced the only instance where consensus could not be reached, and resulted in the filing of a minority report. In the end, most doubts by all parties were shunted aside and the ecosystem standards adopted, with the objection of the Washington Cattlemen's Association to standard B-14 officially noted. The ESAC left to DNR the development of specific management strategies for achieving the desired ecological conditions of each standard. In the weeks following adoption of the ecosystem standards, DNR began its work of developing those strategies.

The Cattlemen's Association was not alone in its skepticism of the process contemplated by the new statute. While they and other historic users of the trust lands feared that the consultative process might be abandoned in favor of compulsory management directives from DNR, environmental advocates worried that the process of consultation and accommodation in working out site-specific recovery programs would produce solutions too tolerant of existing use patterns. The ecosystem standards define "desired ecological conditions," that are to serve as targets for recovery efforts. The standards do not insist upon best progress toward desired ecological states, nor do they force the termination of production uses that might retard the achievement of ecosystem standards. Rather, they are meant to be guidelines for developing on-ground solutions responsive to the requirement of real progress toward goals for fish and wildlife. There is ample room for continuing grazing and farming, so long as production methods are consistent with progress toward the desired ecological condition.

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123. See id.
124. See id.
125. See Comments and Response Summary, supra note 30, at 17.
126. See McClure Interview, supra note 27.
127. See id.
128. See sources cited supra note 27.
129. See id.
V. Implementation of the Ecosystem Standards

The implementation of the statute has reflected the same tensions that accompanied development of the ecosystem standards. Historic users of the trust lands have continued to insist that the statute's emphasis on collaborative solutions prevents DNR from compelling changed management of the trust lands to accomplish goals for habitat and ecosystem recovery. In fact, those users were successful in 1996 in winning passage of an amendment to RCW 79.01.295 to emphasize and clarify the statute's commitment to collaborative solutions. The concern that just such a reaction to the statute might occur, and indeed that users might completely balk at efforts to manage trust lands with a view to habitat and ecosystem values, caused DNR to adopt an accommodating approach to its pursuit of the statute's goals. Throughout this period of implementation, DNR has found itself in the awkward position of wishing to use the shrub steppe habitat initiative as a means of pursuing its fundamental asset management strategy of increasing asset values and improving the management of leased lands, while needing to assure lessees that the agency's new directions in land management philosophy will not impose unachievable demands and are consistent with the goals that lessees have for the lands they lease. This section describes DNR's implementation efforts and the responsiveness of those efforts to the statute's substantive goals for habitat and ecosystem recovery.

A. The Mechanics of Implementation

DNR's implementation strategy is based on a program of evaluating range land and agricultural land conditions to recommend changes in management to achieve the statute's ecosystem standards. The evaluations are being conducted in conjunction with lease renewals, and are intended to serve as the basis for developing site-specific solutions to habitat and ecosystem problems on leased lands. The methodology for the evaluations conforms to range assessment techniques that have long been used by professional range managers. The technique used is to evaluate how closely a specific site approximates its ecological potential, and then to determine whether there is an observable trend of the site—static, improving, or deteriorating—with respect to that ecological potential. The on-ground manager who conducts the assessment then selects specific management options that respond to identified and remediable deficiencies in the condition and trend of the site.

With that approach, DNR has developed evaluation matrices to record, for each of its leased properties, the condition and trend of soil erosion, vegetative vigor, composition of vegetative cover, riparian zone health, water flows, and the presence of habitat elements of limited distribution. Each resource component

136. See Comments and Response Summary, supra note 30, at 3.
137. See id.
139. See Wash. Rev. Code § 79.01.295 (2).
141. See sources cited supra note 140. For excellent descriptions of range evaluation models, their biases and limitations, see Committee on Rangeland Classification, National Research Center, Rangeland Health: New Methods to Classify, Inventory and Monitor Rangelands (1994), and W.K. Lauenroth & W.A. Laycock, Secondary Succession and the Evaluation of Rangeland Condition (1989).
is then graded on a scale from "A" to "D" to rate the present condition ("condition") and also the trend of the resource ("trend"). Once that evaluation has been performed, land managers are to develop a resource management plan ("RMP") for each site. The RMP is to be responsive to the findings in the site evaluation and calculated to protect favorable trends in ecosystem functioning and to correct unfavorable trends or static conditions. Adherence to the terms of RMPs by lessees is mandatory, and failure by them to comply can result in lease default.

Effective work for habitat and ecosystem recovery depends upon site-specific analysis. Much can be accomplished through the use of such site-specific analyses, but site analysis can be no more effective than the aptness of the evaluation criteria, the application of those criteria by field evaluators to observed conditions, and the effectiveness of actions taken to improve conditions inconsistent with desired goals for habitat and ecosystem functioning. Thanks to the generosity of DNR field staff, I was able to walk along during the conduct of a sample evaluation of a parcel of leased range land to observe how the site criteria developed by DNR are to be applied. That sample evaluation reveals something of the contingent relationship between formal evaluative standards and the actual process of achieving management reforms.

B. A Sample Range Assessment

The assessment was conducted by a DNR range conservationist and by a range specialist seconded to DNR by the Washington Department of Fish & Wildlife to train DNR land managers in the procedures for implementing the habitat and ecosystem standards mandated by the statute. I had asked to see a reasonably representative piece of ground, perhaps containing a riparian zone, and to look over the site as if we were conducting a site evaluation of the property in connection with the lease renewal.

We visited Grazing Lease No. 56221 on Chase Draw above Banks Lake, seven miles north of Coulee City. The site was an intact section, bordered on the east and north by wheat fields and on the west and south by private range land. An extensive area in the northeast corner of the site had received a large amount of sloughed-off topsoil from the adjacent upslope wheat fields. The resulting depth of soil in that area supported grass and brush to a degree that would not have occurred without the sloughed soil. The balance of the site was typical of the upland range country of central Washington—a rough tumble of basalt uplands dominated by sage brush and grasses. There were two fenced springs on the property, lying along a draw, and the water from the springs flowed into a small seasonal creek. The springs had been fenced to exclude cattle, but the area outside the fence around the lower spring showed extensive damage from livestock over about one quarter acre, the ground being thoroughly trampled and compacted. The varied topography and different levels of water availability on the site produced striking differences in vegetation. In some places, there were good growths of basin wild rye, a native bunch grass species. Along the course of the creek, salt grass, a native succession plant that comes in after heavy grazing, was very prevalent. Cheat grass was abundant throughout the site, sometimes intermingled with growths of tumble mustard and purslane, all succession plants indicative of a range reduced by excessive grazing. On the crumbled basalt uplands, away from the water course, there were extensive patches of rigid sage, in association with sandburg bluegrass, as well as miscellaneous lichens and mosses, a native community characteristic of thin-soiled portions of the Columbia Plateau. Where soils were a bit deeper, we saw good amounts of blue bunch wheat grass and some introduced bluegrass. We flushed a covey of quail and there were songbirds in the vicinity of the lower spring. The vegetation in the spring compounds was healthy.

Although the abundant cheat grass and the evidence of heavy animal use in places indicated a site in need of rest and remediation, a number of solid values prevailed, and the site was graded "B" by the professionals, with
respect to its existing condition and the trend created by recent management by the holder of the grazing lease. There were zones of the property graded "D" with respect to condition ("deteriorating") and to trend (management practices "may be degrading site condition"), but the totality commanded a higher grade in the view of the range specialists.

I asked what recommendations the land manager ought to make with respect to such a site. My guides said that the probable approach would be for the lease manager to describe his sense of the property to the lessee, and to make recommendations to reduce grazing impact, but to leave to the lessee the development of an approach to grazing management calculated to improve the condition and trend of the land. There seemed to be a definite reluctance to give orders to the lessee whose site had received no worse a grade than "B" overall. That view reflects, in part, a sensible deference to the lessee's understanding of how best to manage a lease whose long term health matters to the lessee, but it is also indicative of DNR's strategy to draw lessees along gradually. The Resource Management Planning Procedures give land managers discretion to prescribe specific grazing management techniques, such as fencing to exclude cattle, adjustments in stocking rates, and seasonal prohibitions of grazing. But DNR's policy is to allow managers to tread softly, implementing the new requirements for habitat and ecosystem health in a non-confrontational manner, and ordering specific solutions only in cases of very poorly managed properties.

There are some respects, however, in which DNR's approach may not encourage the changes in habitat conditions that are intended by RCW 79.01.295 First, the A to D grading system for condition and trend allocates a grade of B to "condition" when conditions are "moving toward" the desired condition described by the ecosystem standards. A grade of B is allocated to the "trend" of the site when current management "moves or changes" the condition of the land toward conditions described by the ecosystem standards. In practice, this means that a site's condition and its management trend can receive relatively high marks of "B" as long as some progress is evident in condition and trend. Because the assessment of condition and trend in specific field situations is inevitably in the eye of the field evaluator, and because no systematic baselines exist to act as points of departure in assessing trends, the conclusion that "some progress" is being made might be arrived at even when it is not warranted, or even when the progress being made is slow and fitful. The assessment form does provide for a second tier of resource analysis whenever more than half of the evaluative criteria under any resource category (stream, riparian zone, rangeland or grazeable woodland, cropland) are graded C or D. However, that higher level of scrutiny would be brought to bear only when the observer determined that conditions and management trends were deteriorating or static, and therefore tending to maintain an unsatisfactory status quo.

C. A Further Accommodation to User Concerns

The need for such delicate handling of lessees had been clear from the time DNR first communicated its implementation strategy to its lessees. From the outset, many producers expressed concern that the specific management techniques available to lease managers for possible inclusion in lease RMPs would become mandatory elements, not optional. One reason for that fear was DNR's statements that, in spite of its commitment to a consultative process, management plans would in the end need to conform to the agency's determination of what the land required. Resolution of true impasses between lessees and the agency would have to yield to the agency's determination of the best interests of the resource.

Those statements immediately triggered concern by lessees that the agency was not committed to the collaborative and non-coercive approach that was the basis of the

142. See sources cited supra note 27.  
143. See McClure Interview, supra note 27.
Producer advocates were ultimately successful in 1996 in causing RCW 79.01.295 to be amended, making clear the importance of the consultative process. The statute was amended, in part, to give fresh emphasis to the fact that the ecosystem standards developed under the statute were not intended to prescribe specific practices, but rather to serve as guidelines in the development of appropriate practices to realize its ends. The staff’s clear unwillingness to be direct during our sample assessment in 1994 was a true reflection of the compromises that allowed the statute to be passed in the first place. In some sense, it foreshadowed the 1996 amendments that drove home the point that the statute intended that any improvements in habitat and ecosystem conditions be achieved wherever possible through cooperative consultation with lessees of the trust lands.

Returning to Lease No. 56221 and the ground we stood on, it is easy to understand why the range specialists were guarded in their statements about what the lessee might be required to do. The insistence on consultation and accommodation in the statute meant that, even if the agency were inclined to put more pressure on its lessee to follow a prescribed course of remediation of conditions, such pressure might be viewed as inconsistent with the statute’s intended operation. Beyond that consideration, however, such pressure may have limited effectiveness on a reluctant lessee in an environment where the agency has inadequate staffing to monitor and enforce compliance. Such pressure might be warranted in a case where a lease property was particularly poorly managed and where the bad conditions would trigger follow-up and monitoring, but in the ordinary case of so-so conditions, undistinguished from the mine run of lease properties, DNR is pursuing a course of persuasion and education.

D. What Can Be Done Within the Constraints of the Existing Statute and Atmosphere

DNR has come to see its obligation under the steppe land habitat and ecosystem statute as promoting changes and counseling management in order to stabilize conditions and, eventually, reverse downward trends. On Lease No. 56221, the presence of cattle was clearly causing harm that could be controlled by appropriate cross fencing that would keep the animals out of the battered areas. However, unless the removal of cattle was immediately followed by reconditioning of the soil, replanting of grasses, and extensive intervention to control the weeds that would flourish without grazing pressure, exclusion of cattle from the worst areas might produce only a slight benefit. Better management of cattle and planting of desirable grass types might be helpful, but had been invited by the land management agencies to promote CRM as the tool for arriving at consensus on resource management questions, but that neither the United States Forest Service, the National Resource Conservation Service, nor the state agencies had stayed with it. As their budgets have been contracted, it seems that the first things to be sacrificed are public communication and public involvement in policy. As chair of the rangelands committee, Mr. McClure found himself in the position where he could not go out again and encourage others to commit themselves to a process which seemed to have such soft commitment from the public agencies whose participation would be vital. In Mr. McClure’s view, each of the agencies, and especially DNR in the case of the ecosystem standards, needs to think through what true commitment to CRM means and how that translates into staffing and policy. That understanding should then be embodied in operating policies at all relevant levels of the departments. CRM is a voluntary process for all concerned, including the agencies, and everyone must be committed to doing their best to make the process succeed. Each wants to develop standards consistent with a DNR coordinated resource management process, and to be participants in a process where there is a strong feeling of common cause in working hard on tough questions.

144. See id.

145. The statute was revised in 1996 to bring this orientation into the foreground. The new provisions made clear that the ecosystem standards promulgated by the Ecosystem Standards Advisory Committee were to be used as benchmarks for the realization of improvements to habitat, and not to be understood as prescribing particular management practices on grazing land. The amendments also included language making explicit the requirement that collaborative processes involving state land managers and private lessees be used to prescribe needed management changes for public range land and to implement those changes. See WASH. REV. CODE §§ 79.01.291, 2959.1

"To be an advocate for the standards, I have to be convinced that they will be applied in a way that does not undo the producers, and for that to occur and for the standards to be applied in the public interest, [Coordinated Resource Management] needs to be the facility for accomplishing the statute’s objectives." McClure Interview, supra note 27. Mr. McClure went on to say that although Coordinated Resource Management ("CRM") has been in place as a technique for fifteen years, it has not reached its potential because of wakening agency commitment. As an example of this wakening support, Mr. McClure noted that while he was chair of the Washington Association of Conservation Districts he
for problems such as the cheat grass invasion permitted by historical overgrazing, there are no easy solutions. For there to be significant improvements in the condition of the range, cattle management alone would not accomplish the job, and the agency is reluctant to prescribe, as a routine matter, the types of intervention that might make a difference. There is also the consideration that the established lessee may offer better prospects for working with the site than anyone else willing to bid on the land. Therefore, the agency might be reluctant to make demands that could cause the lessee to leave.

The agency's approach to the statutory requirement that progress be made toward a desired ecological condition has thus far focused largely on the management of livestock. As such, the chief management tools that the agency has adopted are stocking rates, seasons of grazing, control of cattle access to riparian zones, and intensity of grazing of given ranges. At present, there is little impetus for the re-establishment of plant communities or other steps toward rehabilitation of damaged range, other than hoping for recovery through better livestock management.

As a result, it is imperative that the agency institute a focused program for monitoring progress. If monitoring of all sites is not feasible, monitoring ought to be undertaken on selected sites, representing a mix of sites whose condition and prospects merit close oversight and sites chosen, not because they are worse than others, but precisely because they are typical of conditions on the trust range lands. Careful notation of observed conditions and of the effects of given management practices could then be used to develop a set of expectations to which all lessees could be held accountable. The present difficulty is that there is not enough staff to support the monitoring of trends on a systematic basis at intervals more frequent than the ten-year schedule of lease renewals, and that the evaluation criteria seem to invite field staff to arrive at conclusions that "some progress" is being made even when progress is negligible or difficult to substantiate. The breadth of country that must be covered and the number of leases due for renewal each year creates a great temptation for cursory assessment.

Photographic monitoring, well-established as a range evaluation tool, would seem to offer good prospects for conducting the baseline information structure necessary to assess conditions on a consistent basis, but there has been no provision for such monitoring. Neither has there been mapping of DNR parcels to correlate such relevant information as site type, identity of lessee, and the habitat potential of the site. There already exists mapping information that needs to be synthesized and correlated. The raw materials are available in DNR's tract books, in Natural Resources Conservation Service county soil maps, and in the resource assessment forms for particular lease sites, but synthesis awaits the application of GIS mapping to data that is scattered. Sound policy planning depends upon the conduct of such mapping and analysis.

DNR does hope to log the result of its assessments of individual lease sites into a computer and to develop a tickler system to monitor progress, but at this point there have been no steps taken because of costs. The assessments that have been conducted are isolated in individual lease file jackets, and no structure has been created to use the data to develop a more comprehensive understanding of the condition of trust grazing lands.

The agency hired three new range specialists in 1997 to undertake the work of range assessment, but the value of that expertise has, to some extent, been diluted. Two of the specialists have been reassigned to lease management to address chronic staffing shortages. While their expertise can be brought to bear at the stage of lease renewals, their regular line management responsibilities mean that their time and energies cannot be focused exclusively on the problems of rangeland recovery. The third specialist works as a range consultant with lease managers, helping in the on-ground

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146. See sources cited supra note 140-141.
147. Interview with Washington DNR staffer.
148. See id.
149. Interview with Washington DNR staffer.
assessment of land conditions at the time of lease renewal. The demands of performing those tasks in a seven county area, however, leaves virtually no time for conducting the land condition inventories necessary to develop a baseline understanding of conditions from which the effects of management decisions could be monitored.

These constraints on monitoring and enforcement may mean that the new regime created by RCW 79.01.295 will not be successful unless the lessees themselves become actively engaged in improving conditions.150

VI. Agricultural Lands Management Initiatives

Agricultural lands offer less opportunity for significant impact on upland habitat conditions, and this portion of the article is correspondingly short, consisting of a general description of efforts now going forward. Agricultural, orchard and vineyard properties under DNR's management have been cleared of their native cover as a consequence of their conversion to production use. Thus, the main benefits from management response to ecosystem integrity and habitat needs are usually avoidance of harm to off-site conditions, chiefly through control of soil erosion and the protection of streams that might be affected by agricultural run-off.

The planting of slopes and other field areas subject to erosion with grasses and shrubs can create some incidental habitat for wildlife in the midst of the bare fields, and DNR has begun to order that erosion-prone areas be maintained in permanent cover. The agency has also begun to participate actively in the land retirement program of the United States Department of Agriculture’s Conservation Reserve Program (“CRP”), particularly on dry land wheat properties. Yields on dry land farms are low enough that the crop value is usually equivalent to compensation paid under CRP, so that USDA payments offset the value of the lost crop opportunity. The protection of trust asset values serves as an additional reason to include some croplands in CRP, protecting the land from soil loss and weed infestation by maintaining a permanent cover of grasses.

CRP participation has been most successful for lands which DNR leases in exchange for a share of the crop grown on the land. The arrangement works because of the structure of a sharecrop lease. Under sharecrop agreements, the lessee and the agency divide the crop, with the agency typically receiving fifteen percent of the crop as the lease fee for the land. When that same land is removed from production and placed into the CRP, the lessee must forego its share of the crop that would have been produced in exchange for a portion of the CRP payment. In areas of relatively low yields there may be no, or very little, sacrifice by the lessee. Only in the case where the per acre returns are significantly higher than the CRP payment might the lessee potentially balk. Participation in CRP has also been attractive for lessees and for DNR when the land proposed to be retired from production lies along so-called “blue lines,” the field creases that carry erosional run-off downhill to coulees and streams. Blue lines, because of their extreme vulnerability to erosion, are awarded a higher "conservation score" in the computation of CRP bids and are eligible for inclusion in CRP at any time and not simply during defined bidding periods. DNR now has about 15,000 acres of its dry farming in CRP.151

A major limitation on what can be accomplished for habitat in the agricultural drylands seems to be cultural, a product of cultivation methods typical of Eastern Washington. In contrast to grain farms in parts of the Great Plains, where the practice of planting shelter belts along field edges to control wind erosion has created substantial wildlife habitat and cover, Washington grain farmers tend to plow to the road edge. Although weed control is sometimes offered as an explanation for the practice, a more likely explanation lies in the ethic of total control of field areas and a desire to use every bit of ground for crop production. In fact, weeds do flourish at field edges, and the professed goal of weed control might be

150. See id.

151. See id.
better accomplished by planting those areas in permanent cover that could produce benefits for wildlife.

DNR has, therefore, adopted as a goal the cultivation of an awareness among its lessees that their traditional concerns with yields, weed control, and soil conservation can be accommodated with some goals for wildlife habitat and improved ecosystem functioning. The approach agency staffers have adopted is incremental, and focused on the goal of promoting reforms that can be accommodated to existing cultivation methods: promote CRP planting, leave adequate residual stubble to control wind erosion and retain soil moisture, coordinate with the Washington Department of Fish & Wildlife’s Upland Wildlife Habitat Program to introduce bands of shrub and grass cover for wildlife in crop areas, and control run off of soil and dirty water into streams to protect the integrity of stream flows and stream channels.

VII. Conclusion

Concern with habitat and ecosystem functioning is relatively new in state trust lands management in Washington, impelled in large part by the operation of state and federal wildlife and habitat protection laws, like the ESA, but also shaped by public sentiment and evolving values within DNR itself. The pursuit of the goals underlying RCW 79.01.295 is occurring against the background of a landscape chiefly dedicated to production use. That use continues to constrain realization of the statute’s goals.

At its best, what the statutory process can do is preserve portions of the trust lands that retain good biological potential from further degradation, and promote a habit of stewardship that produces management consistent with the protection and improvement of wildlife habitat and ecosystem functioning. Success has thus far been limited not only by the present uses of the trust lands, but by the resistance of trust lands management to a more complete integration of the values of habitat and ecosystem function.
Appendix A — Department of Natural Resources Trust Land

The Department of Natural Resources grant lands are the small black dots in individual townships or the dots grouped checkerdash style in the central to eastern part of the state.
Resource Guide

Managing State Trust Lands for Ecosystem Health:
The Case of Washington State's Range and Agricultural Lands

Discusses the application of public trust principles to private lands.

Discusses how in the western public lands and elsewhere, biodiversity conservation is acquiring legitimacy as a central natural resource management principle, while ecosystem management is being touted as the managerial strategy of choice. Suggests that the ecosystem management concept holds promise as a way to integrate biodiversity conservation goals into public land management at a regional scale.

Provides a discussion of case law analyzing the Federal Advisory Committee Act (FACA). Contends that FACA has had a chilling effect on ecosystem management.

Provides a discussion of the need for ecosystem-based management of public lands. Describes the way in which concerned entities must work together in order for such an approach to succeed.

Highlights the manner in which some of the arguments and assertions made in connection with the debate over land use regulation and inter-governmental roles may shape our perspectives on ecosystem management.

Washington State Department of Natural Resources
http://www.wa.gov/dnr/base/dnrhome.html
Provides general information about the Washington Department of Natural Resources.

Washington State Library Natural Resources Links
http://www.statelibrary.wa.gov/refdesk/subject/natres.htm
Contains a listing of links pertaining to fisheries, wildlife and forestry.
This we know . . . the earth does not belong to man, man belongs to earth. All things are connected, like the blood which connects one family. Whatever befalls the earth befalls the children of earth. Man did not weave the web of life—he is merely a strand in it. Whatever he does to the web, he does to himself.

Chief Seattle, 1864