

Western Landscape Conservation: Policies for a Sustainable West



Recommendations for the Next Federal Administration

**Western Landscape Conservation Series
October 2008**

The Western Landscape Conservation Series

This document presents recommendations for urgently needed policy actions targeting the conservation of Western landscapes and the sustainable use of public lands and resources, which rank among our nation's most valued assets. These recommendations are intended to provide insights and suggested actions that will allow the next federal administration to move boldly in addressing some of the most contentious natural resource issues that have slowed development of integrated strategies and equitable partnerships in the region, thereby reducing the effectiveness of environmental management efforts. The recommendations also represent tractable and appropriate steps toward modernizing federal land and resource management in an era of declining federal budgets, rapid population growth, and contested values.

This document summarizes the products from a 4-month series of lectures and workshops at Northern Arizona University that took place in the spring of 2008. Distinguished experts, faculty and graduate students collaborated on a series of public addresses and intensive workshops, all pursued in a non-partisan manner, that incorporated sound science, legal perspectives, public policy expertise, and citizen participation to surface policies that will help sustain the dynamic human communities and extensive natural landscapes that characterize the West. As a result of this breadth of participation, the recommendations found here represent the seasoned thinking of scholars and policy experts, presented through the fresh perspectives of emerging conservation leaders. Series sponsors include NAU's Graduate Program in Environmental Science and Policy, the Doris Duke Conservation Fellows Program, the Grand Canyon Trust, and the Institute for Native Americans at NAU.

Additional information, including longer working papers on the major themes presented in this document, is available at www.westernconservation.org or info@westernconservation.org.



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Introduction: Recommendations for Landscape Conservation in the American West

Our group identified three key issues that must be addressed immediately if landowners and public land managers are to effectively address the “big-picture” issues that will determine the success of future efforts to safeguard Western landscapes.

Anticipating the coming change in national leadership, and acknowledging a shift in Western values and political will, a group of environmental scientists, policy experts, and students assembled at Northern Arizona University during the first six months of 2008 to address key issues facing the West. A diverse program of public lectures and discussion, interactive workshops, and informal gatherings provided the opportunity for creative work to surface new and practical policy recommendations, based on sound science. The intent of the series was to move Western conservation and public lands management forward, as the nation struggles with a host of challenges generated by rapid population growth, increasing demand for natural resources, and strained relationships among public and private actors, all unfolding in the context of climate change.

Conservation and sound stewardship depend on an integrated, landscape-scale perspective to drive appropriate policy. No longer can public lands management proceed in a piecemeal manner, with different states, communities, and public agencies acting independently, limiting their focus to particular resources or jurisdictional boundaries. Water allocation, fire management, and wide-ranging fish and wildlife species demand that people work together, across political and geographic boundaries, to ensure that the West’s iconic landscapes and invaluable resources are protected and wisely managed, that communities prosper, and that biological diversity flourishes. To this end, our group identified three key issues that must be addressed immediately if landowners and public land managers are to effectively address the “big-picture” issues that will determine the success of future efforts to safeguard Western landscapes.



Water: The thirst for water in the arid regions places this issue at the heart of all planning and management. Western landscapes have been and will continue to be managed to ensure adequate water supplies, water quality, and watershed health. By incorporating water into discussions of landscape conservation, we will ensure that links between land stewardship and water supplies are appreciated, and that conservation policies will have relevance as the value of Western water increases.

Forests: Healthy forests protect Western watersheds, provide important aesthetic and recreational values, and constitute important wildlife habitat. Yet undesired consequences of previous forest management and unnaturally severe wild fires place these public values at risk. For over a decade, forest planning and management have been stifled by social conflict and mistrust. Progress will require a rethinking of key ecological and social values, and the subsequent reworking of forest policy.

Tribal Partnerships: America's native peoples were the original stewards of the continent, and their perspectives and practices inform management across large portions of the West, while Indian rights influence management over much of the public domain. In most places, conservation of large landscapes is only possible if carried out in close collaboration with tribal governments, with recognition of their sovereignty, as well as the depth of tribal knowledge and experience. Strengthening linkages among the three sovereign entities that control much of the Western lands — federal, tribal, and state governments — is a necessary step in moving toward an integrated approach to landscape management.

These three fundamental, far-reaching, and interconnected issues offer direct avenues for improving land, water, and resource stewardship. Interdisciplinary and cross-jurisdictional approaches that bring together different values and perspectives can highlight opportunities for adaptive approaches that allow us to manage entire landscapes and identify pragmatic solutions to the emerging environmental challenges facing the West. The landscape perspective and a commitment to inclusive approaches that link traditional knowledge, sound science, and strong policy can provide considerable clarity and direction at the beginning of our new federal administration.

We have singled out the West as a region in need of federal policy reform for a variety of reasons. Due to rapid land use conversion, rampant water development, and tremendous population growth, Western landscapes are experiencing some of the most dramatic environmental strain of any region in the United States. The West also contains the majority of the nation's public lands, and is thus particularly sensitive to federal policy. Finally, proactive policies from a new federal administration could set the West on a more sustainable course of development, and the new President will, through action or inaction, cast the die for the manner in which the West is affected by and responds to climate change.

The recommendations presented here stem from the careful consideration and deliberation of informed experts, passionate citizens, and committed students of the American West. We invite you to engage in these issues, offer opinions, and join us in working to create a clear and practical agenda for land use and resource management in the West.

Water Issues: Conservation Strategies, New Policy, and the Changing Legal Context for a Warming West



Much of the western states is characterized by arid- and semi-arid landscapes where water scarcity has been a defining feature since the beginning of human habitation. Water scarcity concerns have increased in recent years due to drought and changing weather patterns in the region, supporting evidence of global climate change. Notably, these effects are predicted to intensify, even under conservative models of global change.

The effects of climate change on water scarcity are exacerbated by the high population growth rates in the West, which place increasing demand on water supplies. The vast infrastructure built for storing and moving water to areas for urban and agricultural uses is being strained by this rapid and dramatic rise in land development and population growth. Furthermore, many long-standing Native American claims to water in the region are in dispute, hampering efforts to enact overarching western water policy reform. Until these claims are resolved, allocation of the already scarce water in a rapidly developing West will remain contentious.

For the foreseeable future, water issues will remain in the forefront of the resource management agenda. Therefore, effective conservation of land and water must be integrated at both planning and implementation levels. We must systematically reconsider whether current tax codes, regulations and subsidies incentivize adaptive solutions or impede society's ability to deal with these issues promptly and comprehensively. Policies must promote water management across public lands in the form of actions at landscape and watershed levels that balance ecological and societal water needs.

The following recommendations identify steps that can be taken by the federal government to provide key information and create opportunities to address water scarcity issues through streamlined agency actions that strongly encourage integrated and adaptive management.



Recommendations for the New Administration: Water

Recommendation 1: Assess national water-related vulnerabilities

The federal government should sponsor a national-level assessment of water-shortage related vulnerabilities facing both humans and the environment. This assessment must be followed by federal financial and legislative support for specific solutions developed to address these identified environmental and human water needs.

Recommendation 2: Establish a strategic monitoring program

The current water-monitoring network must be augmented by the development of a water quality and quantity monitoring program for both surface water and groundwater. This system must support adaptive management, support research and data integration, assess trends, and provide this information in accessible forms to aid decision-making.

Recommendation 3: Resolve indigenous claims to water

The federal government should inventory the status of Indian claims to water rights and identify priorities for resolution based on timely opportunities to further tribal, federal and local goals.

Recommendation 4: Reform operations of engineered water infrastructure

The federal government should promote integrated principles to guide management of dams and other engineered water infrastructure. An integrated management regime for this infrastructure should consider ecological and hydrologic factors, as well as consumption needs and sustainability. The licensing and negotiation process of Federal Energy Regulatory Commission (FERC) contracts for water projects provides an opportunity for implementing an integrated management regime.

Recommendation 5: Form a federal interagency working group

A federal interagency group should be established to work with states and local interests to develop principles for water sustainability to guide agency actions, to promote investments and participation in local initiatives, to use finite resources to maximize public trust outcomes, and to fulfill federal mandates and encourage enforcement of existing and future regulations.

Recommendation 6: Allocate federal funding for interagency cooperation

The President should make funding available to compel federal agencies to find efficiencies in building institutional capacity, determining spending priorities, and streamlining regulatory processes across agencies.

Recommendations for the New Administration: Water

Recommendation 7: Offer states financial incentives

State agencies should be encouraged to achieve water quality objectives, conduct maintenance, and improve existing infrastructure via incentives based on conditional federal investments. These monies should support activities such as integrated water management, conjunctive management, and incentives for integrated supply planning at the state, watershed and utility levels.

Summary

The issue of water scarcity is a primary concern in the West that impacts both humans and the environment. As a matter of national security, prompt action is necessary to combat the issues already arising from global climate change, population growth and development, and over-allocation of an already limited resource. Implementation of the above recommendations will enhance cooperation and encourage more informed decisions about managing Western water for societal and environmental benefits. While these actions will not solve the problem of water scarcity, they will help us adapt to it, minimizing negative repercussions.



Forest Issues: Breaking the Gridlock on Forest Management

Public forests provide a range of social, economic, and ecological benefits, and forest policy should reflect the essential balance among these factors. The benefits provided to the American people by our public forests are many, far exceeding the cost of their sustainable management. Yet for over two decades, forest policy has been mired in a contentious debate that has undermined efforts to modernize management. Climate change is rapidly changing both forest ecology and fire regimes across the West, and responsible and proactive management is urgently needed. Recommendations for breaking the gridlock on forest management include:



Recommendations for the New Administration: Forest Issues

Recommendation 1: Redefine forest management priorities

Public opinion regarding forests has evolved over time and it is important that the mission of our land management agencies reflect current needs and values. National Forests have traditionally been managed under a multiple use and sustained yield mandate that has often led to conflicting forest uses. We recommend that forest policy be improved by adopting a vision of integrated use rather than multiple use. This would involve reestablishing management priorities based on economic, social and ecological sustainability, rather than extractive uses based on sustained yield. U.S. Forest Service policy, including the Organic Act, the Multiple Use Sustained Yield Act, and the National Forest Management Act (NFMA), contain both the flexibility needed for agencies to reinterpret priorities and the mandate of sustainability as the primary goal of public forests. At this critical time in history we need to reassess the current state of our forests, as well as public perceptions regarding them. In 1902 President Theodore Roosevelt created a Public Lands Commission to conduct a similar assessment. Such a commission, if reconvened today, could assist in the evolution of this initiative.

Recommendation 2: Rewrite National Forest Management Act regulations

Most National Forest management plans are overdue for revision. Updated forest plans will guide forest management for the next 20 years, a period that will be crucial for maintaining functioning ecosystems and preserving biodiversity. Ongoing legal debate about the regulations that guide implementation of the National Forest Management Act has contributed to the delays in needed revisions. The new federal administration should place a high priority on implementing new regulations that reflect the necessary balance between social, economic and ecological values that will allow our forests and our society to prosper, well into the future. Revisions to the standards governing forest plans should be informed by the Forest Service's past efforts to evaluate new approaches to forest planning, including the most recent report by the Forest Service's Committee of Scientists, published in 1999. The following elements should be incorporated into new forest planning regulations, in order to better reflect current conditions:

Recommendations for the New Administration: Forest Issues

- ♦ Management plans must consider the cumulative effects of actions at a landscape scale. This will require that Forest Service plans be coordinated at the district and forest-wide levels, in addition to the project level. This should occur through implementing National Environmental Policy Act assessments on various spatial scales, resulting in a comprehensive “nested” or tiered NEPA assessment.
- ♦ Reintroduce the viability clause. The importance of wildlife to ecological integrity should be emphasized in the NFMA regulations through the reintroduction of a strong population viability clause. The clause should contain accompanying language that clearly and measurably addresses acceptable levels of risk to viability and ensures that populations will be well distributed as suggested in the 1982 regulations. In considering acceptable risk and population viability, we also must consider that climate change will continue to increase risk for many species.
- ♦ Adaptively manage forests through a Scientific Advisory Board. A program of adaptive management, informed by effective monitoring, must be the foremost strategy employed to achieve integrated management in forest ecosystems. The looming impacts of climate change must also be considered in adaptive management plans. Following the EPA model, a board consisting of National Academy of Science researchers and other respected scientists should be convened to guide decision-making; the program should be supported by agency scientists whose work focuses on adaptive management strategies.
- ♦ Develop an Administrative Code of Ethics. To preserve the integrity of the science informing our forest management, we need of a code of ethics applicable to both Forest Service managers and scientists that will prevent political tampering and preserve the integrity of scientific research and monitoring efforts that inform forest management.



Recommendations for the New Administration: Forest Issues

Recommendation 3: Provide adequate funding for forest management

In order to accomplish these stated goals, adequate funding must be provided to forest management agencies. Funding levels should focus on developing capacity for research and management of forest ecosystems. It should be adequate to manage beyond fire, reflecting the importance of the services our forests provide, such as clean water, clean air, carbon sequestration, and wilderness values. Current funding mechanisms that link fire fighting to the proceeds from salvage logging should be eliminated and replaced by a comprehensive budget that funds forest management needs proactively, rather than sacrificing long-term stewardship goals to meet immediate fire suppression needs. The Forest Service should reinvest in facilities and personnel to stem the erosion of opportunities for the public use and enjoyment of national forests in a manner compatible with protection of forest resources. Carbon offsets and proceeds from carbon sequestration payments may be an important source of additional funds for sustainable forest management.

Recommendation 4: Maintain wilderness and roadless areas

Wilderness areas provide a unique opportunity for the type of primitive recreation sought by many Americans. Additionally, due to their size and relatively untrammled state, these areas have the capacity to sustain important ecosystem services and are crucial for researching ecological processes in a relatively pristine state. As private lands and many public forests continue to be bisected with roads and developed, the maintenance of wilderness and roadless forest areas will play an increasingly important role in protecting biodiversity. As the impacts of climate change continue to unfold, these areas will offer relatively untouched areas for migration and the ongoing adaptation of species.

Summary

Successful forest management over the coming decades necessitates the bold reform of national forest management policies, such that science and adaptive management characterize our approach to forest stewardship. Climate change and the increasing value of healthy watersheds, biodiversity, and recreational opportunities call for refocusing forest policy around resource and ecosystem sustainability.





Tribal Issues: The Leadership Role of Native American Tribes in Western Land Conservation

American Indian land holdings in the eleven Western States total over 37 million acres, which represent 83 percent of all tribal lands in the lower 48 States. In addition, Alaska holds 40 million acres of Native lands. A majority of these lands remain relatively wild and unspoiled, and provide habitat for some of the nation's most important fish and wildlife resources. They also serve as essential living space, sacred and cultural sites, and harvesting grounds for tribes. Therefore, lands under tribal management are significant in Western landscape conservation, writ large.

Over the last quarter century, Native American capacity to manage natural resources across these landscapes has increased dramatically. A scant 33 years since the passage of the Indian Self-Determination and Education Assistance Act, before which most Native Americans lacked the opportunity for self-governance, 562 recognized tribes do business as land-based sovereign nations in the United States. Today there are more than 70 tribal governments operating nation-wide which contain 300 or more employees, in addition to hundreds of smaller governments.

This increase in tribal sovereignty has led to rapid development of capacity in the management of natural resources, often resulting in well-managed and restored forests, fisheries, native plant communities and wildlife populations. In some cases the tribal agency workforce and expenditures on natural resource issues exceed those of their state and federal partners. In the Pacific Northwest, many salmon runs have increased under science-based co-management programs, and captive breeding and reintroduction programs led by tribes have been instrumental in the recovery of endangered species.

Tribal contributions to natural resource and landscape conservation are worthy of increased support by national policy-makers. Specific opportunities exist for the new federal administration to promote tribal leadership and co-management of natural resources and public lands, which will enhance cooperation and increase conservation success across Western landscapes.

Recommendations for the New Administration: Tribal Issues

Recommendation 1: Encourage tribal sovereignty

The President, through an executive order or address to Congress, should support tribal sovereignty as one of the three sources of sovereignty in America in the area of land management and conservation.

Recommendation 2: Provide adequate funding for resource management

Federal funding to tribes for land management and conservation should be provided on an equitable basis, compared with federal and state agencies, and tribes should be declared eligible for funding under federal conservation statutes where tribes are currently ineligible.

Recommendation 3: Co-manage natural resources

Federal agencies, such as the National Oceanic and Atmospheric Administration, the U.S. Fish and Wildlife Service, the Environmental Protection Agency, the National Park Service, the U.S. Forest Service, and the Bureau of Land Management should create mechanisms to support tribal co-management of natural resources, where appropriate. These bilateral agreements should focus on cross-jurisdictional efforts and provide adequate and equitable funding.



Recommendations for the New Administration: Tribal Issues

Recommendation 4: Implement the Joint Secretarial Order

The U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration-Fisheries should faithfully implement the 1997 Joint Secretarial Order on the Endangered Species Act and use this model for resolving natural resource based conflicts between federal and tribal governments.

Recommendation 5: Protect sacred sites

Federal agencies should welcome and faithfully support tribal access to sacred sites and tribal gathering needs on public lands, in full compliance with the letter and spirit of the 1978 American Indian Religious Freedom Act, Presidential Executive Orders, Treaties, and other laws. They also should restrict activities that would interfere with traditional use and refrain from defacing or damaging sacred sites.

Recommendation 6: Support tribal land acquisition

The Department of the Interior, Department of Agriculture, Army Corps of Engineers, Department of Commerce, and Department of Defense should support tribal land acquisition that promotes the integrity and efficiency of tribal land management and conservation.

Summary

Tribal lands comprise a significant portion of the West, and tribal experience and expertise in land stewardship, conservation, and natural resource management is an important national asset. These recommendations make evident that support for tribal sovereignty is a prerequisite to the deeper engagement of tribes in the co-management of natural resources. Stronger cooperation among federal, state, and tribal land and resource managers will create new efficiencies, increase capacity, and generate more successful efforts to conserve the West's large landscapes and preserve the benefits they provide to the nation as a whole.



Western Landscape Conservation Series

Visiting Experts

Jaime Pinkham, a member of the Nez Perce Tribe, works for the Columbia River Inter-Tribal Fish Commission. He has been instrumental in efforts to reintroduce wolves to Idaho, regain ancestral lands, and restore salmon in the Columbia River Basin.

Charles Wilkinson, Moses Lasky Professor of Law at the University of Colorado, is recognized as one of the nation's top authorities on the legal and policy history of Native American and environmental struggles throughout the 20th century.

Kathy Jacobs is the Executive Director of the Arizona Water Institute, a consortium of Arizona's three universities. With over 20 years of water management experience, she focuses on the use of scientific information in policy and decision-making.

Brent Haddad is an environmental economics and policy expert from the University of California at Santa Cruz. He investigates the use of market-based methods to manage water scarcity. He is the author of *Rivers of Gold: Designing Markets to Allocate Water in California*.

David Getches, Raphael J. Moses Professor of Natural Resource Law and Dean of the University of Colorado School of Law, is a national authority on federal environmental policy, Western water law and governance, and Native American law.

Dan Rohlfs, Professor of Law at Lewis and Clark Law School, is the Director of the Pacific Environmental Advocacy Center, and is an expert in endangered species law, forest and wildlife policy, and ecosystem management. He is the author of *The Endangered Species Act of 1973: A Guide to Its Protections and Implementation*.

Barry Noon, Professor of Wildlife Ecology at Colorado State University, is a national authority on forest science, conservation biology, and natural resources management. He has served on several advisory committees charged with developing science-based forest management policies, including the US Forest Service's Committee of Scientists (1997–1999).

Organizing Committee

Thomas D. Sisk is Professor of Ecology at the Center for Sustainable Environments and directs the Graduate Program in Environmental Sciences and Policy at Northern Arizona University.

Eli Bernstein, Doris Duke Conservation Fellow (2007), is a graduate student in Environmental Sciences and Policy studying grassland restoration and grazing policy.

Michelle DelaCruz, Doris Duke Conservation Fellow (2007), is a graduate student in Environmental Sciences and Policy studying invasive species and riparian restoration.

Ryan Drum, Doris Duke Conservation Fellow (2007), is a recent graduate of the Environmental Sciences and Policy program where he studied forest management and wildlife conservation.

Graduate Student Participants, Northern Arizona University

Rachael Brown, Environmental Sciences and Policy, water management.

Moran Henn, Environmental Sciences and Policy, traditional ecological knowledge.

Chris Holcomb, Environmental Sciences and Policy, forest ecology and management.

Hillary Hudson, Environmental Sciences and Policy, invasive species.

Lauren Mork, Environmental Sciences and Policy, fire and grazing ecology.

Larissa Sommers, Environmental Sciences and Policy, traditional communities and climate change.

Theresa Spang, Environmental Sciences and Policy, protected areas management.

Jared Travis, Environmental Engineering, sustainable development and water management.

Karin Wadsack, Environmental Sciences and Policy, renewable energy policy.

Notes

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