



A NEW LANDSCAPE

8 Ideas for the Interior Department



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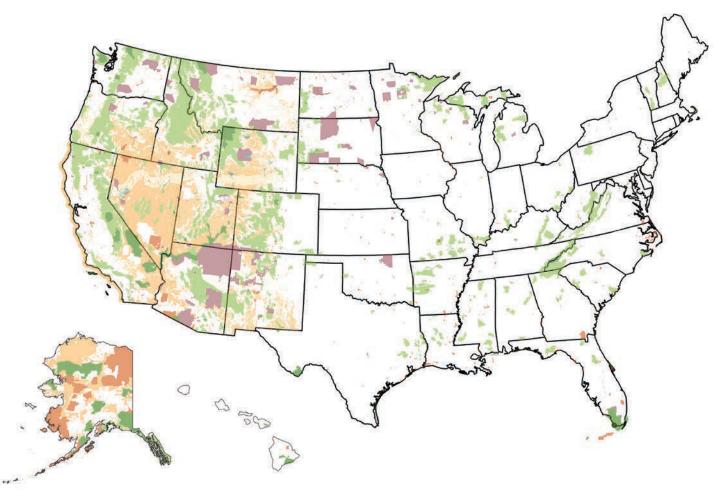
The Property and Environment Research Center is a nonprofit institute dedicated to improving environmental quality through property rights and markets.

2048 Analysis Drive Suite A | Bozeman, Montana 59718 406-587-9591 | www.perc.org | perc@perc.org

TABLE OF CONTENTS

IN	INTRODUCTION	
1.	PUBLIC LANDS MANAGEMENT	
2.	NATIONAL PARKS	
3.	LAND AND WATER CONSERVATION FUND	
4.	ENDANGERED SPECIES	
5.	GRAZING POLICY	
6.	TRIBAL POLICY	
7.	WATER POLICY	
8.	OIL AND GAS Adopt market-based measures to reduce conflict and boost revenues while protecting local environmental values	
N	OTES	

FEDERAL AND TRIBAL LANDS IN THE UNITED STATES



The Department of the Interior manages 500 million acres of federally owned land through five major agencies: the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service, the Bureau of Reclamation, and the Bureau of Indian Affairs. In addition to Interior Department agencies, the Forest Service, a division of the Department of Agriculture, manages 193 million acres of federal land.

Source: National Atlas of the United States, U.S. Geological Survey

- Bureau of Land Management
- Fish and Wildlife Service
- National Park Service
- Bureau of Reclamation
- Bureau of Indian Affairs
- Forest Service

INTRODUCTION

ny time of transition brings new opportunity. As a new administration settles in Washington and A legislators embark upon a new Congress, there is an opportunity to address environmental challenges and economic obstacles related to the management of the nation's land, water, and other natural resources.

When it comes to land management, the U.S. Department of the Interior plays the widest-ranging and most crucial role of any department of the federal government. The Interior Department manages 500 million surface acres of federally owned land—more than one-fifth of all U.S. land—and oversees development of federal oil, gas, and other subsurface mineral resources on more than 700 million onshore acres and more than 1.7 billion offshore acres. In addition, the department's Fish and Wildlife Service exerts significant authority over millions of acres of private land by regulating habitat for endangered species. The department is also responsible for managing Native American lands through its Bureau of Indian Affairs.

Controlling such a vast amount of territory and resources is a major responsibility—and a difficult one given the often competing interests of recreationists, sportsmen, ranchers, local landowners, resource developers, tribes, and others. The policy ideas covered in this report demonstrate how market-based approaches can support sound environmental and economic management and how they can resolve competing demands in an efficient and effective manner.

In this PERC Public Lands Report, we outline eight policy ideas that would harness the power of markets and property rights to deliver environmental and economic improvements for the lands, waters, and other resources under the control of the Department of the Interior. Some of these changes could be implemented by the department itself, while others would require action from Congress. But in every case, these proposals would help align incentives in ways that improve the management and stewardship of federal resources.

PUBLIC LANDS MANAGEMENT:

Adopt new management approaches that allow greater flexibility and freedom while retaining federal oversight and accountability

— by Hannah Downey and Holly Fretwell

Federal land management has always been controversial, and today is no different. Calls for reform come from both sides of the political aisle, and in recent years some have even called for the transfer of many public lands in the West to state control. But while a large-scale land transfer is unlikely, there is broad agreement by most observers on one basic fact: something needs to change.

The Department of the Interior, in its role as manager of the vast majority of federal land and resources, has a prime opportunity to address such concerns by adopting new, innovative approaches to managing public lands while retaining federal control. Targeted reforms to existing management policies could provide local managers with greater freedom and flexibility to implement creative, locally responsive management solutions while remaining accountable to national environmental and economic standards.

One such approach is to institute a charter land management system to govern certain federal lands. These lands would be owned by a federal land agency but managed under a charter system, similar to the way charter schools function within the larger public education system. Charter lands would be governed by a board of directors unique to each charter land unit, such as a grazing district or wilderness area. Boards of directors could be elected or appointed and would be responsible for managing resource and recreation uses within charter area boundaries.

As with charter schools, the core guiding principle for charter lands would be freedom with accountability: Charter lands would be freed from the tight restrictions of one-size-fits-all regulatory mandates—such as land-use planning requirements and restrictive hiring practices—that have produced administrative waste, economic inefficiency, and the politicization of public land management, but they would be held accountable through boards of directors. Federal oversight combined with stringent standards for charter land performance would help weed out failing management practices.²

Each board of directors would also have the authority to set fees for users of a given charter land area and its resources. Individual land boards would be overseen by a national charter board that would in turn oversee and monitor their performance, ensuring accountability even as managers are granted newfound flexibility.

A second strategy is to outsource routine management operations of various public lands to the private sector while maintaining public ownership and oversight. Over the past three decades, these types of public-private partnerships have proven successful for the U.S. Forest Service, which today uses private operators to manage and maintain more than 1,000 of its campgrounds.³

These partnerships would involve performance-based contracts designed so that a managing federal agency defines site rules, parameters for visitor fees, management goals, and maintenance expectations.

The contracted lessee would collect visitor fees, maintain resources and facilities, and pay a portion of receipts back to the managing agency.

Under this approach, private managers have incentives to provide good stewardship and be accountable to visitors to ensure high-quality experiences and maintain stellar reputations. They are dependent upon the revenues they earn to cover costs, while also being held accountable by their contract with the public land agency providing oversight.4

A third management innovation is a national park franchising system. If a proposed park warrants national park status, it could be granted the national park title but be owned and operated under private management. Franchised parks would exist under the National Park Service umbrella but would be individually and uniquely designed and managed by non-profit organizations, businesses, or individuals.

Franchise parks would work as follows: The National Park Service would set franchise requirements, and interested parties would create management plans that align with those requirements. Some franchise parks could also be required to be financially self-sufficient, whether funds were acquired through user fees, partnerships, or donations. A franchise could give park units the flexibility to manage for local priorities as determined by on-the-ground managers, the protection and status provided by the national parks brand, and the incentives to meet visitors' desires at low cost.5



Located in the Flint Hills of Kansas, the Tallgrass Prairie National Preserve is a national park unit managed through a public-private partnership between The Nature Conservancy and the National Park Service. The Nature Conservancy is the primary landowner, but the preserve is co-managed with the National Park Service in accordance to its standards. This collaborative approach has preserved native prairie habitat, established more than 40 miles of hiking trails, and even reintroduced bison to the preserve. While not exactly a park franchise, as described in this section, this public-private partnership demonstrates how private entities can successfully manage land in accordance with National Park Service standards.6

These proposals could be most feasibly applied to new federal land acquisitions that do not already have management structures in place, such as those made through the Land and Water Conservation Fund. (See Section 3 on the Land and Water Conservation Fund.)

Policy Reforms:

- Adopt new, innovative federal land management models that allow greater freedom and flexibility while requiring accountability to predetermined management objectives.
- Create several pilot projects for charter land management areas that would be managed by local land boards and overseen by a national charter land board.
- Outsource routine land management operations to the private sector where appropriate and feasible.
- Create a national parks franchise system in which new parks would be owned and operated by private
 entities under standards and parameters established by the National Park Service.

- "Charter Forests: A New Management Approach for National Forests," by Robert H. Nelson. *PERC Policy Series* No. 53 (June 2015).
- "Breaking the Backlog: 7 Ideas to Address the National Park Deferred Maintenance Problem." *PERC Public Lands Report* (February 2016).
- "The NPS Franchise: A Better Way to Protect Our Heritage," by Holly Fretwell. The National Park Service Centennial Essay Series, *The George Wright Forum*, Vol. 32 No. 2 (2015).

NATIONAL PARKS:

Make the National Park Service less reliant on politically driven Congressional appropriations — by Shawn Regan and Reed Watson

At his confirmation hearing in January, Interior Secretary Ryan Zinke pledged that the National Park Service's deferred maintenance backlog will be one of his top priorities. Estimated at \$12 billion, the Park Service's maintenance backlog refers to the total cost of all maintenance projects that were not completed on schedule and therefore have been put off or delayed. The backlog is now nearly four times higher than the agency's latest budget from Congress, and it has emerged as one of the major issues facing the Interior Department.8

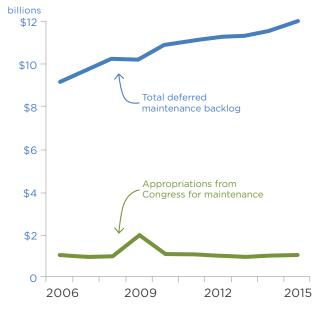
If Secretary Zinke wants to fix the national park maintenance problem, he is going to have to look beyond Congress for solutions. Decades of neglect and misplaced priorities have made it clear that relying on Congress is hardly the solution; in fact, it's the root of the problem.

For obvious reasons, Congress has not prioritized maintenance in national parks. Fixing a leaky sewer system or crumbling road is not the type of ribbon-cutting project that politicians are eager to fund. Hence, funding for the deferred maintenance backlog makes up only a fraction of the annual appropriations the National Park Service receives from Congress each year.

Over the past decade, Congress allocated approximately \$1 billion on average each year for maintenance projects in national parks. That amounts to a drop in the bucket of the total backlog, which has grown by 31 percent over that same time period.

Merely increasing the Park Service's budget, however, is unlikely to solve the issue. In fact, an overreliance on Congress for funding will likely only make the problem worse because Congress would rather create new parks or acquire more land than fund routine maintenance projects. The number of park units managed by the Park Service has grown significantly over the past decade—from 390 in 2006 to 417 today. Meanwhile, the agency's overall budget, as well as the amount of funding devoted to maintenance projects, has remained relatively constant. With more parks but little or no additional funding, the agency's resources are stretched thinner and thinner. Unless changes are made, the National Park Service estimates the backlog will continue to increase as new units are created and its existing assets continue to deteriorate.¹⁰

CONGRESSIONAL APPROPRIATIONS TO MAINTENANCE IN NATIONAL PARKS



Source: Government Accountability Office Congressional Research Service.

To address the root of this issue, the National Park Service will have to become less dependent on politically driven Congressional appropriations. That means relying more on park visitors, instead of Congress, for revenue. Today, most park user fees can be retained where they are collected, rather than being sent back to the U.S. treasury, allowing local park managers to address critical maintenance needs without relying entirely on Congress for appropriations.

But more could be done to give park managers flexibility in setting fee schedules. For example, park superintendents could be given the discretion to charge higher fees during holiday weekends and other popular times. This would allow them to collect more revenue for maintenance and use prices to limit congestion. Other ideas, such as harnessing public-private partnerships and tapping the private sector to help with park operations and maintenance, could also help—as long as park leaders are willing to think entrepreneurially about maintenance.

Policy Reforms:

- Allow park managers to charge recreation fees and retain the revenues for maintenance and other critical projects by permanently reauthorizing the Federal Lands Recreation Enhancement Act.
- Allow park managers to set their own fee programs or establish new, flexible fee-based services, such as dynamic or congestion pricing, as needed without having to obtain additional approvals from Congress.
- Harness public-private partnerships to address unfunded infrastructure projects.
- Outsource routine park operations, such as campground management and facility maintenance, to the private sector while maintaining public ownership and oversight.

Further Reading:

 "Breaking the Backlog: 7 Ideas to Address the National Park Deferred Maintenance Problem." PERC Public Lands Report (February 2016).

LAND AND WATER CONSERVATION FUND:

Reform the LWCF to address critical needs on existing public lands

— by Robert H. Nelson, Shawn Regan, and Reed Watson

Congress created the Land and Water Conservation Fund (LWCF) in 1965 to help "preserve, develop, and ensure access to outdoor recreation facilities to strengthen the health of U.S. citizens."11 The program is set to expire in 2018, and its potential reauthorization has been the subject of recent debate in Congress.

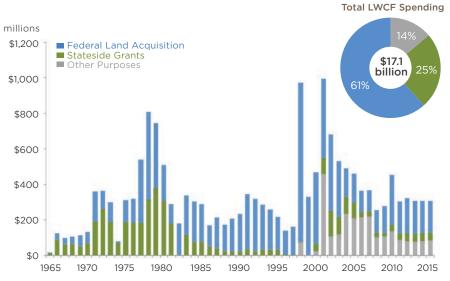
Each year, Congress devotes \$900 million to the LWCF, largely derived from offshore federal oil and gas lease revenues, although any actual spending under the program must be appropriated by lawmakers. The funds are appropriated for three general purposes: federal land acquisition, state-level matching grants for outdoor recreation projects, and a third catch-all category referred to as "other federal purposes." 12

The annual funds appropriated through the LWCF for these multiple purposes have varied substantially over time. Overall, the majority of the appropriations (61 percent) has gone toward federal land acquisition, totaling \$10.5 billion and resulting in an expansion of the federal estate by more than 5 million acres—an area equal to the size of New Jersey.¹³

This federal portion of LWCF funding can only be used for land acquisition by federal land agencies; it cannot be used for routine maintenance or operations, or to enhance access opportunities on existing public lands. So while the LWCF allows the federal government to purchase more land, it provides no means of taking care of those lands—nor does it address the critical needs that exist on the hundreds of millions of acres the federal government already owns.

Today, the LWCF is in need of reform if it is going to address the challenges of the 21st century, rather than simply expand the federal estate. Federal land agencies already lack sufficient funds to meet their basic statutory duties or perform their necessary management and maintenance functions. The maintenance backlog for the National Park Service alone, for example, is \$12 billion. (See Section 2 on national parks.)

LWCF APPROPRIATIONS, FY1965-FY2015



Source: Congressional Research Service

The Land and Water Conservation Fund should be reformed if it is going to fulfill or advance its original purpose. Popular misconceptions about the LWCF—including the supposed lack of costs to American taxpayers—warp the political process of federal priority setting, and for overall government expenditures as well. 4 And acquiring more federal lands when we cannot adequately maintain our existing public lands is irresponsible conservation.

Although wholesale reform of the LWCF is unlikely, incremental changes could be made to improve the program and update it for the challenges of the 21st century. Even without modifying the LWCF authorizing legislation, policymakers could implement much-needed changes by simply altering the types of appropriations Congress authorizes under the LWCF.

Policy Reforms:

- Sharply reduce the level of federal land acquisitions. If additional land acquisitions are made, Congress should ensure they are done in a way that does not place additional financial burdens on alreadyoverburdened land agencies. (See Section 1 on public lands management.)
- Redirect LWCF appropriations to address critical needs on existing federal lands, including deferred maintenance, habitat restoration, management shortfalls, and legally acquired access across private land. This could be done by clarifying the criteria for appropriating LWCF funds to the "other purposes" category to include such needs.
- Negotiate easements or land exchanges to improve public access for recreationists and sportsmen, instead of acquiring land outright. Where improved public access to federal land is needed across private lands, easements or land exchanges—voluntarily negotiated with private landowners—should be the primary means of providing this access.

Further Reading:

• "5 Myths about the Land and Water Conservation Fund," by Robert H. Nelson, Shawn Regan, and Reed Watson. PERC Policy Brief (April 2016).

ENDANGERED SPECIES:

Harness economic incentives to enhance wildlife assets

— by Reed Watson

Critics of the Endangered Species Act (ESA) routinely point out that only 2 percent of all species listed as endangered or threatened have recovered and been delisted. While that recovery rate is abysmally low, it reflects the law's structure more than its performance. To wit, the ESA is designed to stem the loss of species, not to actively encourage their proliferation.

Aside from provisions allowing for habitat banking, the act provides no mechanism by which private landowners can actually benefit from investing in species conservation.¹⁵ As Sam Hamilton, former U.S. Fish and Wildlife Service director, said, "The incentives are wrong here. If a rare metal is on my property the value of my land goes up. But if a rare bird is on my property the value of my property goes down."

Functioning more as a stick than a carrot, the ESA imposes wide-sweeping prohibitions on activities that constitute a "take" of species found to be in danger of extinction. Because those take prohibitions often have significant economic consequences and create perverse incentives for landowners with endangered species or habitat on their property, the ESA's greatest potential may lie in its ability to spur innovation and cooperation aimed at avoiding a species becoming listed in the first place. 16

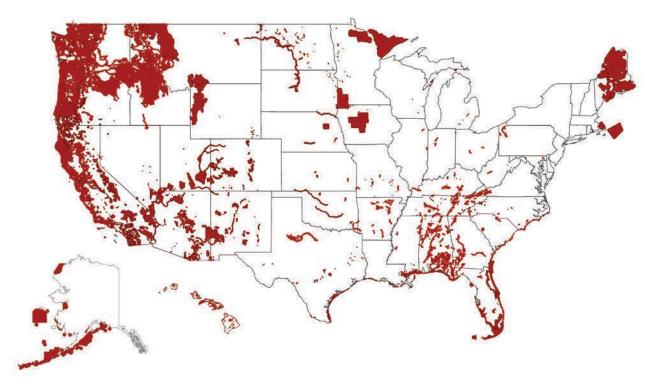
While legislative reform of the Endangered Species Act has proven politically untenable, the law is not an effective tool for recovering endangered species.¹⁷ The Interior Department has several opportunities within the existing law to truly encourage species conservation on private land.

First, the department can participate in the development of range-wide management plans to proactively keep species of concern from needing the act's formal protections. To take one example, a working group of the Western Association of Fish and Wildlife Agencies is developing a range-wide conservation plan to increase the population of the lesser prairie chicken. The group functions in partnership with federal agencies, private landowners, and the states of Colorado, Kansas, New Mexico, Oklahoma, and Texas.¹⁸

To encourage similar efforts for other species, the department could articulate species-specific thresholds, such as population counts or minimum range areas, which would automatically trigger listing. Setting such thresholds would require a significant investment in scientific study and likely be the subject of litigation. Nonetheless, articulating objective listing criteria would help guide the conservation activities and investments of state wildlife agencies and conservation groups.

Second, and on a similar note, the Department of the Interior can articulate reasonable and clearly defined delisting criteria for species currently on the list. Providing state wildlife agencies and private landowners with objective recovery targets allows them to invent new recovery approaches and invest their resources in the most productive manner possible. Currently, listing and delisting decisions are the subject of frequent

LAND DESIGNATED AS CRITICAL HABITAT BY THE U.S. FISH AND WILDLIFE SERVICE



Source: U.S. Fish and Wildlife Service

and protracted litigation, often with final implementation not occurring until years after department decisions. Setting objective, conservative listing and delisting criteria would likely diffuse some of this controversy or, at the very least, accelerate its resolution before a listing or delisting decision is made.

Third, the department can engender the cooperation of more landowners by walking back several regulatory expansions that discourage private conservation investments. Specifically, it can repeal the 2016 regulation that permits the Fish and Wildlife Service to designate critical habitat for endangered species on private lands that are not only unoccupied by a given species, but also unsuitable for that species. 19 To create a positive incentive for species conservation, the department could also offer tax or regulatory relief in the form of habitat rental agreements with private landowners who implement habitat conservation or species management plans.

Fourth and finally, the department can create an incentive for private landowners to invest in the survival and propagation of exotic endangered species. Two actions would promote such husbandry: streamlining the issuance of import permits for foreign-born animals listed by the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES) and issuing permanent exemptions for captive-bred animals. When landowners can legally possess and profitably foster exotic endangered animals, they have a strong incentive to invest in the husbandry and propagation of such species. By contrast, when import permits are practically impossible to obtain, and when exemptions for captive-bred wildlife are revoked by the department, this conservation incentive disappears.

Policy Reforms:

- Publish species-specific listing and delisting criteria that state wildlife agencies and private landowners can use to direct their conservation investments.
- Facilitate the use of voluntary agreements, such as conservation easements and habitat rental agreements, whereby private landowners are financially rewarded for enhancing species habitat.
- Walk back regulatory expansions that discourage private conservation investments, such as the designation of critical habitat on private property that is inhospitable for protected species.
- Streamline the issuance of import permits for exotic foreign-born endangered species and issue permanent exemptions for captive-bred animals.

- Smoking Them Out: The Theft of the Environment and How to Take It Back, by Greg Walcher. American Tradition Institute (2013).
- Rebuilding the Ark: New Perspectives on Endangered Species Act Reform, by Jonathan Adler. AEI Press (2011).
- "When the Endangered Species Act Threatens Wildlife," by Terry Anderson. *The Wall Street Journal*. October 20, 2014.

GRAZING POLICY:

Resolve rangeland disputes with contracts, not armed conflicts

— by Shawn Regan

As Interior Secretary, Ryan Zinke will inherit a vast system of federal rangelands in the western United States—one that has brought about significant conflicts in recent years.

The Bureau of Land Management (BLM) administers nearly 18,000 grazing permits across 155 million acres of public lands in the West.²⁰ In 2015, these lands provided 8.6 million animal unit months (AUMs) worth of forage for livestock while also being managed for recreation, conservation, and other multiple-use purposes.²¹

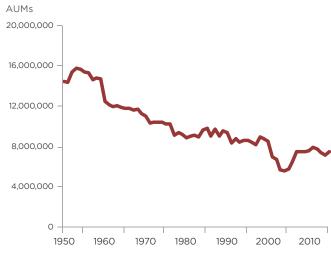
Today's grazing policies, however, encourage conflict rather than negotiation among competing interest groups. Ranchers have gradually had their grazing permits revoked as public-land policies have shifted toward conservation and recreation and away from grazing, timber harvesting, and other forms of resource extraction. Today, the BLM authorizes half the amount of grazing on federal rangelands as it did in the 1950s, and this decline has often pitted ranchers and environmentalists against each other in a zero-sum battle over the western range.²²

At their core, such conflicts are the result of poorly defined grazing rights and restrictions on trading them. Current policies do not recognize grazing permits as a secure property right, nor do they allow grazing permits to be transferred for non-grazing purposes. This means that environmental and other competing interest groups have little or no way to bargain with ranchers to acquire grazing permits, and as a result, disputes must be resolved through litigation or political battles instead of through negotiation or cooperation.

The framework of today's grazing policy dates back to the Taylor Grazing Act of 1934.²³ The act requires that grazing permits be attached to specific "base properties"—private properties that the government deems qualified for public-land grazing privileges. As a result, a grazing permit can have a significant effect on the value of a rancher's property. When these properties are bought and sold, the new owner pays for the grazing permit, which is capitalized into the value of the base property.²⁴

The law, however, never clarified whether grazing permits are secure property rights. Instead, it refers only to "grazing privileges" while also stating, somewhat vaguely, that those privileges "shall be adequately safe-guarded."25 The result has been a decades-long fight over the nature and security of

GRAZING AUTHORIZED WITHIN BLM GRAZING DISTRICTS



Source: Bureau of Land Management

grazing rights in the West. And because grazing permits are attached to private properties, and restrictions on those permits can have a direct impact on the value of a ranch, it's no surprise that ranchers feel threatened by actions that reduce grazing on public lands.

To address these points of contention, grazing policies should be reformed to encourage contractual solutions instead of litigation or armed conflicts. Specifically, Congress should clarify that a grazing permit constitutes a secure property right (or a permanent-use right) to a portion of the federal rangeland. In addition, it should make those rights transferable, even for non-grazing purposes such as conservation or recreation.

Several changes would help make this possible. First, under the current system, ranchers are required to graze livestock on their allotments at their permitted levels or they risk losing their grazing privileges—in other words, it's "use it or lose it." If a permittee abandons grazing activities on a significant portion of an allotment, the BLM can transfer the permit to another rancher willing to use the allotment for grazing.²⁶

Second, the base-property requirement raises the cost of trading grazing permits and restricts who can hold grazing permits. Groups seeking to acquire grazing rights must purchase or already own qualifying base properties to which grazing privileges can be assigned. Removing these requirements would allow permits to more easily be transferable to their highest-value uses, whether that's grazing, conservation, or recreation.

When property rights are secure, enforced, and transferable, disputes among competing users are more likely to be resolved peacefully, cooperatively, and in a mutually beneficial manner. Clarifying grazing rights and making them transferable for non-grazing purposes would go a long way toward encouraging more trading and less raiding on the western range.

Policy Reforms:

- Establish permanent, negotiable grazing permits as secure property rights. This could be done by selling the rights to current permit holders. Proceeds from the sale of grazing permits could be used to purchase and maintain areas of high value for recreation or preservation.
- Make grazing rights transferable, even to non-ranchers. Remove the the use-it-or-lose-it requirement, the base-property requirement, and any requirements that permit holders must be in the livestock business.
- Clearly define ecological standards necessary for maintaining these permanent-use rights, such as the conditions for access, fire and weed control, livestock wildlife protection, and water rights. Remove or curtail rigid requirements of stocking rates and season-of-use requirements to give permit holders the flexibility to meet these ecological standards however they best can, whether by grazing or non-grazing means. Establish penalties for failing to meet permit conditions.

- "Managing Conflicts over Western Rangelands," by Shawn Regan. PERC Policy Series No. 54 (January 2016).
- "How to Reform Grazing Policy: Creating Forage Rights on Federal Rangelands," by Robert H. Nelson. Fordham Environmental Law Journal. 8:645-690 (1997).
- "Sailing the Sagebrush Sea," by Gregg Simonds. *Environmental Policy in the Anthropocene*. PERC (2016).

TRIBAL POLICY:

Give tribes more authority over their natural resources

— by Terry L. Anderson and Shawn Regan

Although the federal government often pays lip service to tribal sovereignty and self-determination, Native Americans still lack the same rights and freedoms as other Americans. It's time for that to change.

Tribes and individual Indians, for instance, generally cannot own their land on reservations. Instead, reservations are managed in trust by the federal government in a manner that Chief Justice John Marshall famously described in 1831 as resembling "that of a ward to his guardian." As a result, nearly every aspect of Native American land use is still controlled by federal agencies.

Even the most basic land-use decisions in Indian Country require review and approval by the Bureau of Indian Affairs (BIA). But by all accounts, the federal government has not been a good manager of Native American assets. A 2015 report by the Government Accountability Office found that poor management and bureaucratic delays by the BIA hinder energy development on tribal lands, resulting in "missed development opportunities, lost revenue, and jeopardized viability of projects."28

The consequence is that the majority of tribal natural resources remain undeveloped, even when tribes want to develop them for the benefit of their families and their communities. In one case, it took eight years for the BIA to review energy proposals from the Southern Ute tribe in Colorado, costing the tribe \$95 million in lost revenues.²⁹ In another, the BIA took 18 months to review a single proposal to develop wind energy on the Rosebud Indian Reservation in South Dakota, causing a deal with the developer and the local utility to fall through.³⁰

Regulatory obstacles are often so burdensome that many potential non-tribal development partners simply look elsewhere. On Indian lands, companies must go through as many as 49 steps and at least four federal agencies just to acquire a permit for energy development, compared to as few as four steps for projects not on reservations.³¹ Tasks that should be straightforward, such as completing title search requests, often result in significant delays. Not surprisingly, these barriers raise the cost of doing business with tribes or individual Indians.

Tribes have demonstrated time and again that they can succeed when the federal government grants them authority over their natural resources.³² Consider, for example, what has happened when tribes such as the Confederated Salish and Kootenai Tribes in Montana have gained control over forestry management on their reservation. A 2009 study by PERC found that the tribes managed their timber far better than the federal government managed the neighboring national forest, in terms of both economic and environmental performance.³³

Much more should be done to give Native Americans the same rights and freedoms that other Americans have to manage their natural resources. This could involve a variety of policy reforms that give tribes more authority to manage their own affairs, govern themselves, and control their land and resources.

Tribes should not have to develop their natural resources if they choose not to. But if they do desire it, the federal government should not make it overly costly or burdensome to do so. It's time to give tribes the dignity they deserve by allowing them to make their own decisions about the land and resources in Indian Country.

Policy Reforms:

- Give tribes and individual Indians the option to exert broad authority over the use of their land and natural resources. For those wishing to exercise such authority, clarify and grant jurisdiction over all natural resources within reservation boundaries.
- Allow tribes and individual Indians to enter into long-term leases, such as 99-year leases, without BIA approval.
- Make it easier for willing tribes to reduce BIA oversight over natural resource management by developing their own management policies and procedures for tribal property and assets.
- Expand policies aimed at streamlining federal approval of certain tribal affairs, such as the Helping Expedite and Advance Responsible Tribal Homeownership (HEARTH) Act of 2012. The HEARTH Act currently allows tribes to create their own surface-land leasing regulations for certain limited purposes. Once a tribe's plan is approved by the Secretary of the Interior, the act allows tribes to enter into leases without further approval. The act should be expanded to apply to subsurface energy leasing as well.
- Streamline the approval process for tribes to enter into Tribal Energy Resource Agreements (TERAs), which would give tribes the authority to make energy development plans without requiring BIA approval for each leasing decision. The current TERA process, established in 2008, is so costly and complex that no tribe has yet entered into such an agreement.

- "Two Forests Under the Big Sky: Tribal v. Federal Management," by Alison Berry. PERC Policy Series No. 45 (2009).
- "Unlocking the Wealth of Indian Nations: Overcoming Obstacles to Tribal Energy Development," by Shawn Regan. PERC Policy Perspective 1 (February 2014).
- Unlocking the Wealth of Indian Nations, by Terry L. Anderson (ed). Lexington Press (2016).

WATER POLICY:

Harness markets to make the most of scarce water resources

— by Reed Watson

Water scarcity characterizes the West, but it is acute water scarcity—or drought—that reveals how valuable water is to the region's environment and economy.

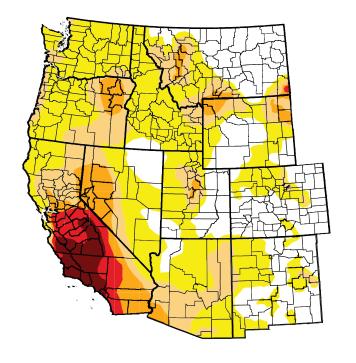
Before an unusually wet winter, more than 30 percent of the region was suffering drought conditions. Hardest hit was the irrigation-dependent agricultural industry, which in 2016 lost an estimated \$603 million and 4,700 jobs in California alone.³⁴ As abysmal as these figures are, they were far worse in 2014 when the drought was most severe and cost the state's agriculture industry \$2.2 billion and 17,000 jobs.³⁵

Aside from the economic impacts, the recent drought exacted a significant environmental toll. Reduced stream flows, dewatered rivers, and high water temperatures all deteriorated fish habitat.³⁶ In 2014, for example, 95 percent of Chinook salmon eggs and young died because water temperatures in the upper Sacramento River got too warm.³⁷

Water scarcity threatens western economies and ecosystems, as the most recent drought proves, yet many of our nation's policies and laws actively discourage conservation and exacerbate water conflicts.³⁸ Subsidized rates, burdensome transfer restrictions, and unsettled water claims combine to worsen the environmental and economic impacts of drought.

U.S. DROUGHT MONITOR - WEST

Drought conditions as of September 27, 2016



INTENSITY:

- D0 Abnormally Dry
- D1 Moderate Drought
- D2 Severe Drought
- D3 Extreme Drought
- D4 Exceptional Drought

The Drough Monitor focuses on broad-scale conditions. Local conditions may vary.

Author: Chris Fenimore NCEI/NESDIS/NOAA http://droughtmonitor.unl.edu/









As the largest wholesaler of water in the country, the Bureau of Reclamation delivers water to more than 31 million people and provides one in five western farmers with irrigation water. The 10 million acres of farmland served by the bureau produce approximately 60 percent of the nation's vegetables and 25 percent of the country's fruits and nuts.³⁹

Unfortunately, bureau policies often exacerbate water shortages by pricing water far below its opportunity cost and restricting transfers outside a given project service area. Whether by lengthening the payback period for project contractors, allocating disproportionate costs to non-agricultural users, or reducing the cost to irrigators on the basis of "ability to pay," the bureau has for decades made scarce water available to agriculture operations at below-market rates. By some estimates, as little as 15 percent of all Reclamation project costs are repaid when interest costs are included.⁴⁰

During times of drought the bureau reduces deliveries, but by subsidizing water and restricting its transferability outside project service areas, Reclamation has effectively decoupled consumption rates from water availability. Even though irrigation subsidies have long been incorporated into agricultural land prices, and eliminating those subsidies would unsettle expectations about land values, it is unrealistic to expect agricultural water users to align their consumption with the relative scarcity of water until those subsidies are eliminated.

Aside from eliminating subsidies and burdensome transfer restrictions, the Interior Department can further encourage water marketing by working to clarify unsettled water rights and enforce those rights when scarcity-driven disputes inevitably arise. The uncertainty surrounding federally reserved water rights for Indian reservations are a prime example. Pursuant to the Winters doctrine of 1908, sufficient quantities of water were set aside to "fulfill the purposes of the reservation," but those rights were not clearly denominated or adjudicated,⁴¹ nor were they made expressly transferable.⁴²

Clarifying tribal water rights through negotiated settlement is preferable over costly litigation because settlements not only clarify rights to water, but they can also establish tribe-specific provisions as to transferability. As of 2014, 29 tribes had resolved rights issues through the settlement process. 43 The department, and especially the Bureau of Indian Affairs, could facilitate more of such resolutions.

Regarding enforcement, the Interior Secretary has a unique set of responsibilities in resolving disputes between conflicting water users. Most notably, the Secretary serves as watermaster of the Lower Colorado River, and in the likely event that the Lower Basin faces water reductions from the Colorado River, he would find himself in the unenviable but crucial role of enforcing interstate compacts and international agreements that prioritize water claims. 44 Departing from the explicit terms of those negotiated agreements in the name of equity, due to changed conditions, or in response to myriad political pressures would invalidate the rights those agreements purport to establish and thus any basis for future water trades.

Remembering the adage that "Nature makes a drought, but Man makes a shortage," the incoming Interior Secretary should explore ways to make the most of the West's scarce water resources. Although water is predominantly a state issue, the Department of the Interior and, in particular, the Bureaus of Reclamation and Indian Affairs can take proactive steps to minimize the environmental and economic impact of future droughts by harnessing water markets.

Policy Reforms:

- Eliminate water subsidies in the form of reduced or delayed payment obligations and harness market prices to encourage conservation.
- Remove unnecessary barriers to water trading such as service area transfer restrictions that mask the opportunity cost of water and slow the responsiveness of markets to changing conditions.
- Clarify and enforce water rights, especially between the tribes and states, to preserve the legal certainty that is essential to future water trades.

- Tapping Water Markets, by Terry L. Anderson, Brandon Scarborough, and Lawrence R. Watson. Routledge (2012).
- "Hearing to Receive Testimony on the Status of Drought Conditions throughout the Western United States." Testimony of Reed Watson before the Committee on Energy and Natural Resources, United States Senate. June 2, 2015.
- "Tapping Water Markets in California: Six Policy Reforms," by Reed Watson. PERC (October 2016).

OIL AND GAS:

Adopt market-based measures to reduce conflict and boost revenues while protecting local environmental values

Michael Giberson and Shawn Regan

In addition to managing 500 million acres of surface land in the United States, the Interior Department oversees mineral development on vast amounts of federal subsurface lands. These underground resources span more than 700 million acres onshore and more than 1.7 billion acres offshore, all falling under the department's purview.⁴⁵ Production of oil and natural gas from these lands generates billions of dollars for national and state treasuries and constitutes 21 percent of U.S. oil production and 16 percent of natural gas production.46

The department is charged with responsibly developing energy resources on federal lands to best meet the present and future needs of the public while also ensuring that taxpayers receive a fair return on energy production from federal lands. But uncertainty and delays arising from agency processes, as well as conflicting values with respect to energy extraction and the environment, have contributed to a relative decline in the development of federal oil and gas resources. While oil and gas development on private and state lands has been booming over the last decade, oil production on federal lands has increased only slightly, and natural gas production on such lands has declined.⁴⁷

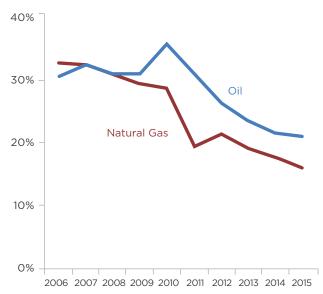
Given that federal lands containing oil and gas sometimes also offer significant grazing, cultural, recreational, and other environmental values, a main cause of the relative slowdown in federal development has been conflicts over resource use.

Market-based approaches, however, offer the promise of reducing such conflicts, bringing local environmental values more directly into the oil and gas leasing process and promoting cooperation between energy developers and environmental groups.

The most direct market-based approach to resolve such competing demands would be to open oil and gas lease auctions to recreational, environmental, and conservation interests. 48 Lease terms could explicitly allow individuals or groups seeking to withhold resources from development to hold a lease on terms similar to those that apply to energy developers.⁴⁹ When development threatens local environmental values, such groups could coordinate to purchase and hold the development rights to a given property.

OIL AND NATURAL GAS PRODUCTION ON FEDERAL LANDS

Share of total U.S. production



Source: Congressional Research Service

Current policies discourage this cooperative approach by requiring that leaseholders must intend to develop their energy leases. Consider the recent case of environmentalist-author Terry Tempest Williams, who in 2016 sought to purchase a federal oil and gas lease on 1,120 acres in southern Utah.⁵⁰ Williams acquired the lease rights on standard terms at a Bureau of Land Management (BLM) auction but did not intend to develop the oil and gas; instead, she sought to block development.⁵¹ The BLM ultimately denied Williams' lease and returned her money, arguing that since she was not planning to develop the resources, she was in violation of the bureau's lease requirements.⁵²

This example illustrates the legal barriers that prevent environmental groups from acquiring federal oil and gas leases and then choosing not to develop them. If a leaseholder does not intend to develop oil and gas, they in essence forfeit their lease rights. This means that under BLM's current policies, environmental and other non-development-related interests have few options but to seek administrative delays and further promote the politicization of public land management.

Enabling such a market-based approach to protect important local environmental values would reduce conflict and help ensure energy resources are developed only when they are likely to be more valuable to the public than other competing values. Moreover, such an approach has some precedent on federal lands. In 2013, the conservation group Trust for Public Land bought out an energy company's federal oil and gas lease rights to 58,000 acres in Wyoming's Hoback Basin for a total of \$8.75 million.⁵³ The deal was possible thanks to a provision in the Wyoming Range Legacy Act that allows groups to purchase and retire federal oil and gas lease rights if the lease rights were voluntarily acquired from willing sellers.⁵⁴ The provision, however, currently only applies to certain federal lands in Wyoming.

Challenges to developing oil and gas on federal lands are also motivated by concerns over climate change. Here, however, conflict is seemingly unavoidable as "keep it in the ground" activists seek to halt all fossil-fuel development rather than promote efficient development while respecting local environmental values. In this case, the administration should not accede to what would be a costly, but largely symbolic, way to address climate change.

A supply-side "keep it in the ground" policy for federal minerals would have at most a slight effect on carbon dioxide emissions, and consumers' energy needs would simply be met by resources from state or private lands or imports.⁵⁵ Such alternatives may also be worse for the environment overall, as rules governing their development may be less restrictive than those that apply to development on U.S. federal lands. Moreover, to the extent that development of natural gas is discouraged, the result may be higher carbon emissions due to greater use of coal in electric power generation.

Policy Reforms:

- Open federal oil and gas lease auctions to individuals or groups who wish to hold property out of development, including environmental, conservation, or recreation groups.
- Remove the expectation of development as a condition for holding federal energy leases, and make other regulatory changes necessary to allow leaseholders to hold rights out of development on terms comparable to those provided for developers.

- Allow lessees to voluntarily transfer or sell their lease rights to environmental or conservation groups, who could then choose to hold the leases for non-development-related purposes.
- Exercise caution with respect to largely symbolic climate policies related to keeping oil and gas resources in the ground, which are unlikely to result in meaningful or cost-effective reductions in carbon emissions.

- "Public Interest Comment in response to U.S. Department of Interior's Advanced Notice of Proposed Rulemaking," by Michael Giberson and Shawn Regan. Comment submitted in response to 80 Federal Register 22148 (June 5, 2015).
- "DeChristopher case begs question: What if enviros were allowed to bid on oil leases?," by Shawn Regan. Grist, July 29, 2011.

NOTES

- 1. Major land management agencies housed within the Department of the Interior include the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service, the Bureau of Reclamation, and the Bureau of Indian Affairs. The Bureau of Ocean Energy Management oversees offshore oil and gas development on the outer continental shelf under federal jurisdiction. See "Introduction to Interior Acquisitions: A Guide for Small Businesses." U.S. Department of the Interior. June 2010. Available at https://www.doi.gov/sites/doi.gov/files/migrated/pmb/ osdbu/upload/dbwdoi.pdf.
- 2. For detailed discussion of applying a potential charter land management system to forests, see "Charter Forests: A New Management Approach for National Forests," by Robert H. Nelson. PERC Policy Series No. 53 (June 2015).
- 3. "A Tale of Two Parks," by Warren Meyer. PERC Case Study. (September 2013). Available at http://www.perc.org/ articles/tale-two-parks.
- 4. For detailed discussion of outsourcing routine management operations in national parks, see "Breaking the Backlog: 7 Ideas to Address the National Park Deferred Maintenance Problem." PERC Public Lands Report (February 2016).
- 5. For more detail on a potential national park franchising system, see "The NPS Franchise: A Better Way to Protect Our Heritage," by Holly Fretwell. The National Park Service Centennial Essay Series, The George Wright Forum, Vol. 32 No. 2 (2015).
- 6. For more background on the Tallgrass Prairie National Preserve, see "Last Stand of the Tallgrass Prairie," National Park Service. Available at https://www.nps.gov/tapr/index.htm, and "Kansas: Tallgrass Prairie National Preserve," The Nature Conservancy. Available at http://www.nature.org/ourinitiatives/regions/northamerica/unitedstates/ kansas/placesweprotect/tallgrass-prairie-national-preserve.xml.
- 7. "Nomination hearing of the Honorable Ryan Zinke to be the Secretary of the Interior." U.S. Senate Committee on Energy and Natural Resources. January 17, 2017. Available at https://www.energy.senate.gov/public/index. cfm/2017/1/nomination-hearing-of-the-honorable-ryan-zinke-to-be-the-secretary-of-the-interior.
- 8. "NPS Deferred Maintenance Reports, FY 2015." National Park Service. Available at https://www.nps.gov/subjects/ plandesignconstruct/defermain.htm.
- "National Park Service: Process Exists for Prioritizing Asset Maintenance Decisions, but Evaluation Could Improve Efforts." Government Accountability Office. December 2016. Available at http://www.gao.gov/assets/690/681581.pdf.
- 10. "Deferred Maintenance Backlog." National Park Service, Park Facility Management Division. (September 24, 2014). Available at http://www.nps.gov/transportation/pdfs/DeferredMaintenancePaper.pdf.
- 11. Land and Water Conservation Fund Act of 1965, 16 U.S.C. § 4601-4.
- 12. "Land and Water Conservation Fund: Overview, Funding History, and Issues," by Carol Hardy Vincent. Congressional Research Service Report RL33531. June 17, 2015. Available at https://fas.org/sgp/crs/misc/RL33531.pdf.
- 13. Ibid. See also "Land and Water Conservation Fund." Department of the Interior. Available at https://www.doi.gov/ lwcf/land-and-water-conservation-fund.
- 14. For further discussion of these misconceptions, see "5 Myths about the Land and Water Conservation Fund," by Robert H. Nelson, Shawn Regan, and Reed Watson. PERC Policy Brief (April 2016).
- 15. While the Endangered Species Act provides for Safe Harbor Agreements and Candidate Conservation Agreements with Assurances, these arrangements do not offer any financial reward for private landowners to invest in species conservation, only occasional cost-sharing and a reduced likelihood of future regulation.

- 16. "Preemptive Habitat Destruction under the Endangered Species Act," by Dean Lueck and Jeffrey Michael. Journal of Law & Economics 46:27-60 (2003).
- 17. Rebuilding the Ark: New Perspectives on Endangered Species Act Reform, by Jonathan Adler. Washington, D.C.: AEI Press (2011).
- 18. See "Range-wide Conservation Plan." Western Association of Fish and Wildlife Agencies. Available at http://www. wafwa.org/initiatives/grasslands/lesser_prairie_chicken/range-wide_conservation_plan.
- 19. Federal Register Vol. 81 No. 28. 50 CFR Part 424. February 11, 2016. Available at https://www.gpo.gov/fdsys/pkg/ FR-2016-02-11/pdf/2016-02680.pdf.
- 20. "Fact Sheet on the BLM's Management of Livestock Grazing." Bureau of Land Management. Available at https:// www.blm.gov/wo/st/en/prog/grazing.html. The U.S. Forest Service also administers a federal grazing program in the agency's national forests and grasslands, comprising more than 95 million acres of land with nearly 6,000 permittees.
- 21. Ibid. An animal unit month refers to the amount of forage needed for one animal unit (one cow and calf, one horse, or five sheep or goats) for one month.
- 22. Ibid.
- 23. The Taylor Grazing Act. U.S. Bureau of Land Management. 1934.
- 24. "Public Land Policy and the Value of Grazing Permits," by L. Allen Torell and John P. Doll. Western Journal of *Agricultural Economics.* 16(1): 174-184 (1991).
- 25. Ibid.
- 26. While allotments can be "rested" for short periods under some conditions, permittees cannot end grazing altogether or transfer permits for non-grazing purposes.
- 27. Cherokee Nation v. Georgia 30 U.S. 1 (1831).
- 28. "Indian Energy Development: Poor Management by BIA Has Hindered Energy Development on Indian Lands." Government Accountability Office. GAO-15-502, (2015). Available at http://www.gao.gov/products/GAO-15-502.
- 29. Ibid.
- 30. Ibid.
- 31. "The Energy Wealth of Indian Nations," by Shawn E. Regan and Terry L. Anderson. LSU Journal of Energy Law and Resources, Vol. 3 No. 1 (Fall 2014).
- 32. See, for example, "Can Tribes Manage Their Own Resources? The 638 Program and American Indian Forestry," by Matthew B. Krepps in What Can Tribes Do? Strategies and Institutions in American Indian Economic Development, (eds) Stephen Cornell and Joseph P. Kalt. Los Angeles, CA: University of California, 179-203 (1992).
- 33. "Two Forests Under the Big Sky: Tribal v. Federal Management," by Alison Berry. PERC Policy Series No. 45, (2009).
- 34. "Economic Analysis of the 2016 California Drought on Agriculture: A report for the California Department of Food and Agriculture," by Josué Medellín-Azuara et al. University of California, Davis, Center for Watershed Sciences. 2016. Available at https://watershed.ucdavis.edu/files/DroughtReport_20160812.pdf.
- 35. "Economic Analysis of the 2014 Drought for California Agriculture," by Richard Howitt et al. University of California, Davis, Center for Watershed Sciences. 2014. Available at https://watershed.ucdavis.edu/files/biblio/ DroughtReport_23July2014_0.pdf.
- 36. "Sacramento: Drought Information." U.S. Fish and Wildlife Service. Available at http://www.fws.gov/refuge/ Sacramento/Drought.html.
- 37. See "The drought's effect on California's native fish," by Kyle Kim. Los Angeles Times. August 23, 2015. Available at http://www.latimes.com/visuals/graphics/la-me-g-drought-fish-20150811-htmlstory.html, and "Final reports of information derived from Juvenile Salmonid Monitoring at RBDD." Red Bluff Fish and Wildlife Office. U.S. Fish and Wildlife Service. Available at https://www.fws.gov/redbluff/RBDD%20JSM%20Biweekly/2014/rbdd_jsmp_2014.html.
- 38. Tapping Water Markets, by Terry Lee Anderson, Brandon Scarborough, and Lawrence R. Watson. New York, NY: Routledge, (2012).
- 39. "Bureau of Reclamation: About Us." Bureau of Reclamation. Available at http://www.usbr.gov/main/about.

- 40. "Market for Federal Water: Subsidies, Property Rights, and the Bureau of Reclamation," by Richard Wahl. Resources for the Future. 1989.
- 41. Winters v. United States. 207 U.S. 564. 1908.
- 42. "How Federal Policies Affect the Allocation of Water." Congressional Budget Office. August 2006. Available at http://www.cbo.gov/publication/18035.
- 43. "Indian Water Rights: How Arizona v. California left an Unwanted Cloud over the Colorado River Basin," by A. Cordalis and D. Cordalis. April 17, 2015. The University of Arizona. Available at http://www.ajelp.com/articles/ indian-water-rights-how-arizona-v-california-left-an-unwanted-cloud-over-the-colorado-river-basin.
- 44. "Lower Colorado Region: About Us." Bureau of Reclamation. Available at https://www.usbr.gov/lc/region/ aboutus.html.
- 45. The Department of the Interior, through its Bureau of Land Management, administers mineral leasing on the 258 million surface acres managed by the BLM, 57 million surface acres in which the minerals are federally owned but the surface is in non-federal ownership, as well as another 385 million acres whose surface is managed by other federal agencies. The BLM, for example, also administers the leasing of minerals beneath lands managed by the U.S. Forest Service, which is housed under the Department of Agriculture. "Leasing of Onshore Federal Oil and Gas Resources." Bureau of Land Management. Available at https://www.blm.gov/wo/st/en/prog/energy/oil_and_gas/leasing_of_ onshore.html. The Bureau of Ocean Energy Management oversees offshore oil and gas development on the outer continental shelf under federal jurisdiction. As of February 2017, BOEM reported 16.9 million acres are under active oil and gas leases, primarily in the Gulf of Mexico. "Combined Leasing Status Report." Bureau of Ocean Energy Management. Oil and Gas Energy Programs. Available at https://www.boem.gov/Combined-Leasing-Report.
- 46. "U.S. Crude Oil and Natural Gas Production in Federal and Nonfederal Areas," by Marc Humphries. Congressional Research Service Report R42432. June 22, 2016. Available at https://fas.org/sgp/crs/misc/R42432.pdf.
- 47. Data come from various U.S. government websites, including the U.S. Extractive Industries Transparency Initiative website, available at http://useiti.doi.gov, and the DOI Office of Natural Resources Revenue, available at http:// www.onrr.gov.
- 48. For additional discussion see "Public Interest Comment in response to U.S. Department of Interior's Advanced Notice of Proposed Rulemaking." Michael Giberson and Shawn Regan. Comment submitted in response to 80 Federal Register 22148. June 5, 2015.
- 49. A number of policy decisions and revisions to standard lease documents may be required to accommodate groups seeking to hold leases for non-development. Expiration of the lease after ten years, should the property remain undeveloped, would allow for reoffering the lease. Such periodic reoffering of leases would allow for a rebalancing of interests in response to changing policy needs and market conditions.
- 50. "Auction of Utah oil & gas leases spurs author Terry Tempest Williams to (legally) buy lease," by Brian Maffly. *The Salt* Lake Tribune. February 16, 2016. Available at http://www.sltrib.com/news/3544161-155/auction-of-utah-oil-gas.
- 51. "Keeping my fossil fuel in the ground," by Terry Tempest Williams. The New York Times. March 29, 2016. Available at https://www.nytimes.com/2016/03/29/opinion/keeping-my-fossil-fuel-in-the-ground.html.
- 52. "BLM pulls back oil and gas leases bought by Utah activist, author Terry Tempest Williams," by Brian Maffly. The Salt Lake Tribune. October 19, 2016. Available at http://www.sltrib.com/news/4467584-155/blm-pulls-back-oil-gas. The "diligent development requirement," which dates to the Mineral Leasing Act of 1920, states that "lessees must exercise reasonable diligence in developing and producing" leased energy resources. Likewise, environmentalist Tim DeChristopher offered winning bids in a 2008 BLM auction in an effort to disrupt the leasing of federal resources. After refusing to pay a \$1.8 million bid, DeChristopher was convicted of violating an onshore oil and gas leasing act and making a false statement and subsequently spent two years in federal prison. "Activist Timothy DeChristopher sentenced to 2 years in prison: Police arrest 26 protesters as emotions run high," by Amy Joi O'Donoghue. Deseret *News*. July 26, 2011.

- 53. "Hoback Drilling Leases Acquired from PXP." The Trust for Public Land. January 2, 2013. Available at https:// www.tpl.org/media-room/hoback-drilling-leases-acquired-pxp#sm.0001ch500kl3segbsrc2e3y46zd37.
- 54. Although the Hoback example resulted in the retirement of federal oil and gas leases from future development, the policy reform ideas briefly described in this section would not necessarily require permanent retirement of leases. The standard 10-year lease term period could continue, allowing land-use—or non-use—decisions to reflect the current conditions and relative values.
- 55. Peter Erickson and Michael Lazarus observe that approximately 75 percent of the carbon sequestered by a policy of halting new leases of federal oil resources would be replaced by carbon emissions from alternative sources, significantly reducing the climate effects of the policy. "How would phasing out U.S. federal leases for fossil fuel extraction affect CO2 emissions and 2°C goals?," by Peter Erickson and Michael Lazarus. Stockholm Environment Institute. Working Paper 2016-02 (2016). Available at http://sei-us.org/Publications_PDF/SEI-WP-2016-02-US-fossilfuel-leases.pdf.

ABOUT THE AUTHORS

Terry L. Anderson is the William A. Dunn Distinguished Senior Fellow at PERC and a senior fellow at the Hoover Institution, Stanford University.

Hannah Downey is a research assistant at PERC.

Holly Fretwell is a research fellow at PERC and adjunct faculty of economics at Montana State University.

Michael Giberson is an energy economist at the Rawls College of Business at Texas Tech University.

Robert H. Nelson is a professor in the School of Public Policy at the University of Maryland and a former senior economist in the Office of Policy Analysis of the Office of the Secretary of the Interior.

Shawn Regan is a research fellow and the director of outreach at PERC.

Reed Watson is the executive director of PERC.