

Vol. 39, Issue 2  
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# PERCREPORTS

40 YEARS OF FREE MARKET ENVIRONMENTALISM



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**T**he American West is a peculiar place. For new arrivals from the East, the West can seem like an entirely different world. Across the 100th meridian, which roughly bisects the country, crops cannot grow without irrigation. Droughts are common. Winter storms are brutal. And the vast plains and mountain ranges can be both stunning and inhospitable.

As P.J. Hill writes (page 12), to survive on the frontier, early homesteaders like his grandfather had to constantly adapt to the world around them. Agricultural practices had to evolve. New technologies were needed. What worked in the East didn't always work in the West.

Institutions had to change as well. Settlers established new rules to allocate scarce resources, define property rights, and settle disputes. Whether through bottom-up experimentation or top-down decree, these rules reflected the values and understandings of the era in which they were created.

Today, natural resource policy in the West is still dominated by what historian Charles Wilkinson has called "the lords of yesterday"—the 19th-century laws, policies, and ideas that emerged long ago but are in some cases ill-equipped to address new challenges. Too often, the result is conflict and poor management. As before, adaptation is needed.

Now, says Wilkinson, we must "cross a new meridian" by "gaining an understanding of the origins and content of old laws and policies, and then juxtaposing them with the needs of modern society." Only then, he writes, can we "sort out those that work and those that do not" to move beyond the lords of yesterday and chart a course for better management.

This special issue of *PERC Reports*, supported by the M.J. Murdock Charitable Trust, explores several such examples and offers ideas for reform. Whether it's resolving disputes over the use of natural resources, meeting growing demands for outdoor recreation, or reducing the threat of catastrophic wildfires, the ever-changing West once again requires us to adapt. The challenge, from our vantage point, is to do so in ways that respect property rights, encourage voluntary exchange, and promote cooperation to conserve the region's precious resources.





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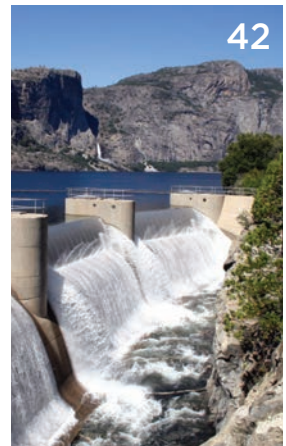
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# Markets Are Agnostic

And could be an answer for a new West and a new administration

**T**he American West has always been a place of allure. For Montana, that's never been the case more than this past year. Several recent national news profiles of the Treasure State have put an exclamation point on what those of us who live here already knew.

One story in *The Washington Post* described how weary city dwellers from the coasts are creating a "property gold rush" in PERC's hometown of Bozeman. The median price of a single-family home here increased by a stupefying \$94,000 in one month this summer. Another story in *The New York Times* discussed the impact those same pandemic-fatigued urbanites are having on Montana's forests and rivers, creating what some have called "Rivergeddon." I saw it myself on the Madison River this past July 4th when a nonstop flotilla of rafters and tubers looked like a human caddisfly hatch all matted together.

Then there is the story of three men who were caught in August boiling chickens—of all things—in one of Yellowstone's thermal hot spring features. It seemed the perfect metaphor for the "Summer of Yellowstone." Even without the annual influx of international tourists, the park set several monthly visitation records. September was up 21 percent from last year, while October visitation was up 110 percent. With Covid-19 surges and social unrest in many American cities, it's hard to tell at this point if this western fascination is an aberration or an acceleration.

But there are other underlying signals that it is the latter. Even before 2020, one of America's top-rated television shows was the series "Yellowstone," featuring Kevin Costner alongside abundant Montana scenery. That was followed this fall by what ABC hopes is its next blockbuster, "Big Sky," also set in Montana. Both serve as modern-day versions of the 19th-century dime store novel, fueling the West's allure at just the right (or wrong) time. Even Kanye West has moved to the windswept outpost of Cody, Wyoming.

The resurgence of the Wild West in pop culture, compounded by recent events, is making for yet another historic wave of emigrants. If you count Texas as part of the West, eight of the 10 fastest growing U.S. cities over the last decade are in this region. Among our nation's small cities and towns, those in the West led with 13 percent growth. One of the primary impacts of this next wave will be, and already is, on the landscape's natural resources.

Wildfires are to our western forests what hurricanes are to the South. According to the analytics firm ClimateCheck, the 27 riskiest counties for wildfire in the United States are in California, Idaho, Oregon, Washington, or Utah. Fueling this risk, newcomers will continue to expand the wildland-urban interface.

As well, these new westerners are not moving to the region to harvest timber, extract oil, or raise cattle. They are moving for outdoor recreation opportunities, which will place a novel kind of strain on the West's public lands and their long-neglected infrastructure. They will also demand less of the Old West's extractive activities, jeopardizing the very sources of funding for conservation. Creative alternatives will be needed.

Finally, while many species of wildlife have made amazing comebacks in the West, growth and development will affect large mammals, including the elk, pronghorn, and mule deer that migrate over the region's vast landscapes. Fragmentation of ranches and other rural lands will prove to be obstacles for the health of these animals.

But the American West is not the only place in transition. As Washington, D.C., prepares for a new administration from a different political party, these emerging issues will find their way to the top of the agendas in the Department of Agriculture, Environmental Protection Agency, and the Department of the Interior, often referred to as the Department of the West.

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These new westerners are not moving to the region to harvest timber, extract oil, or raise cattle. They are moving for outdoor recreation opportunities, which will place a novel kind of strain on the West's public lands and their long-neglected infrastructure.





Bozeman, Montana

In this, there are opportunities for free market environmentalism. After all, markets are agnostic. They are neither Republican nor Democrat. They reflect the time and location preferences of people. And, perhaps counterintuitively for many, they can be a well of solutions for the next administration, especially as the market in the West tilts toward conservation and recreation as uses.

While Washington should not be the first place we look to solve western issues, getting the institutions and policies right at the federal level to enable market-based solutions is an absolute necessity. For example, as Shawn Regan notes (page 16), conservationists for generations have been prohibited from acquiring leases to energy, timber, or grazing resources for conservation purposes. The rules of the game should be changed to better resolve disputes over land use.

And as fossil fuels face an uncertain future, along with the revenue they bring to conservation programs, we should look to a different market—the booming outdoor recreation economy and its participants—to help contribute to the wealth and health of our public lands, much like hunters and anglers do for wildlife. Jack Smith and Tate Watkins offer several ideas to enhance the future of outdoor recreation on public lands (page 34).

Climate change will be a priority for the incoming administration. Climate impacts to our nation's forests should be addressed too. But our forests need to be better managed—now. A forthcoming report from PERC, “Fixing America's Forests,”

will provide a common-sense, bipartisan playbook. As Jonathan Wood explains (page 26), one answer is this: The Forest Service needs greater flexibility, and fewer barriers, to tap private and public partners who can help its efforts with this daunting challenge.

And then there is the incoming president's ambitious plan to conserve 30 percent of America's lands and waters by 2030. Private lands can be an ally here. While not government owned, hundreds of millions of acres of working lands already provide prime conservation benefits and habitats for wildlife. That should not change. But it could be further encouraged through markets. There is great potential to “turn conservation into a crop” for working farms and ranches.

These are just a few frontiers of conservation that free market environmentalists and the next administration could work together to advance. As longtime Montana rancher and PERC senior fellow P.J. Hill rightly points out (page 12), life in the West requires constant adaptation. The same can be said for the policies that impact this noble land.



**Brian Yablonski** is the CEO of PERC. In “Frontiers,” he describes how PERC seeks to advance creative conservation through incentives, innovation, and cooperation.

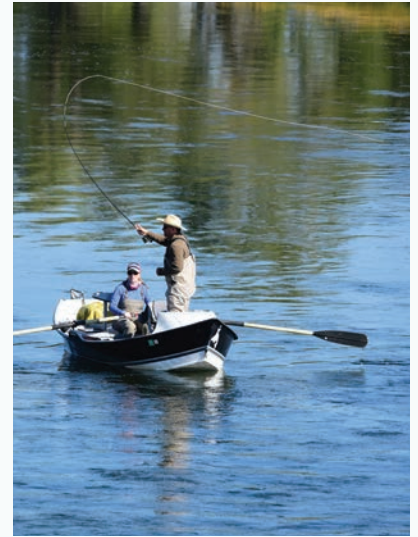




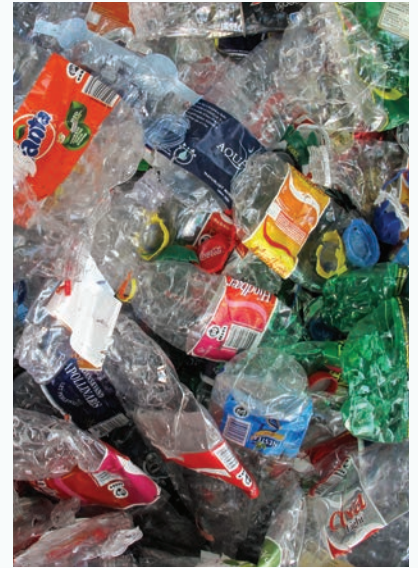
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**Goats for hire.** East of the Lake Tahoe Basin, wildfire fighters come with horns and hoofs. Thanks to a public-private partnership between the Nevada Department of Forestry and regional utility NV Energy, several hundred Spanish goats have been unleashed to reduce wildfire fuel. The goats can tackle virtually any terrain and devour almost any vegetation, including pine needles, shrubs, and cheatgrass—an invasive species that can spread fire rapidly. Their owners at High Desert Graziers are offering a wildfire mitigation service that’s often cheaper and safer than alternatives, giving private companies and government agencies an innovative option to manage fuel loads.

**Access or conservation?** When Dan Perry restored an eroded stream on his New Mexico ranch, the fishery flourished. But that success is coming back to bite him. Anglers are demanding access to his newly enhanced stream, as well as similar ones on other private lands in the state. Now, a legal battle is brewing that pits landowners like Perry against access-driven sportsmen groups. The result is bad for conservation. As Lesli Allison of the Western Landowners Alliance recently wrote in *On Land*, “Demands for public access have dampened landowners’ enthusiasm for restoring habitat” and are “proving a strong disincentive to invest in conserving these lands.”



**Junk munchers.** Scientists have engineered a “super-enzyme” that can rapidly break down plastic, creating new possibilities in markets for reusable materials. The substance was created by linking two enzymes discovered in bacteria that had evolved to eat plastic in a Japanese waste dump. It breaks down polyethylene terephthalate, or PET, a polymer used to manufacture plastic bottles, food containers, clothing, and countless other materials. Leading researchers call it “one of those stories about learning from nature, and then bringing it into the lab.” The team is now tweaking the enzyme in hopes of making it fast enough to revolutionize recycling on an industrial scale.



© Lisa Ritsager



**Sewers finally get their due.** With the passage of the Great American Outdoors Act Congress took a step toward addressing the many deferred maintenance needs on public lands, which include washed-out trails, leaky roofs, and, yes, outdated wastewater systems. One little-known feature of the law: the creation of an endowment-like fund to address the overdue maintenance—an idea PERC has supported in congressional testimony. Land managers now have a dedicated fund to restore park infrastructure, without needing to rely on politicians in Congress, and unspent dollars can be invested for future maintenance projects. While it won’t solve all of our public land problems, the maintenance fund represents progress toward restoring what’s great about the great outdoors.



**Conservation goes commercial in Rwanda.** The African nation has approved legislation that permits communities and individuals to operate businesses engaged in wildlife conservation. Officials believe that allowing citizens to generate revenue from wildlife conservancies, game ranches, safari hunting, and similar operations will align economic incentives with ones to conserve species like the eastern black rhino. In South Africa, a similar framework of harnessing property rights to help manage wildlife has led to the conservation of more than 50 million acres of habitat and the recovery of various endangered species, including the Cape mountain zebra and bontebok.



**Reducing disease risk.** PERC research fellow Catherine Semcer recently testified twice—before the U.S. Senate Committee on Environment and Public Works and the California Senate—about wildlife conservation approaches that can decrease the risk of future zoonotic pandemics. Semcer discussed the role land clearing plays in displacing habitat and promoting the spillover of deadly viruses, emphasizing the importance of strengthening property rights to encourage ecosystem conservation. Her testimony also noted how Africa’s safari hunting industry provides incentives to maintain healthy ecosystems and urged U.S. policymakers not to undermine those benefits with trade restrictions that do nothing to benefit conservation or public health.



**Wet markets.** The Great Salt Lake Advisory Council recently released a report on how to keep Utah’s famous lake from drying up. Its first recommendation is a vital one: Amend state law to define conservation as a “beneficial use” of water. Historically, water rights are based on consumption, and rights holders can have their rights revoked if they don’t divert enough water for approved beneficial uses, such as agriculture or development. As PERC’s Hannah Downey explained in *The Salt Lake Tribune*, if Utah allows rights holders to leave excess water instream, those who benefit from the lake—including conservationists, state agencies, and some local businesses—could pay upstream users to leave water instream, allowing cooperation to prevail over conflict to restore the Great Salt Lake.



#### **Do buckwheat and lithium mix?**

That remains to be seen in Rhyolite Ridge, Nevada. An Australian mining firm wants to open a quarry in the valley to mine lithium for electric car batteries, but a rare plant occupies the area. A petition and lawsuit have demanded the U.S. Fish and Wildlife Service list Tiehm’s buckwheat under the Endangered Species Act. The conflict underlines familiar trade-offs between conservation and green-tech innovation: A listing would derail the quarry plans—which include seeding and relocating buckwheat—and mean the United States remains reliant on other producers of the mineral, since no lithium is mined domestically.







# STRANDED

The economics of inaccessible public lands in the West

## Q&A

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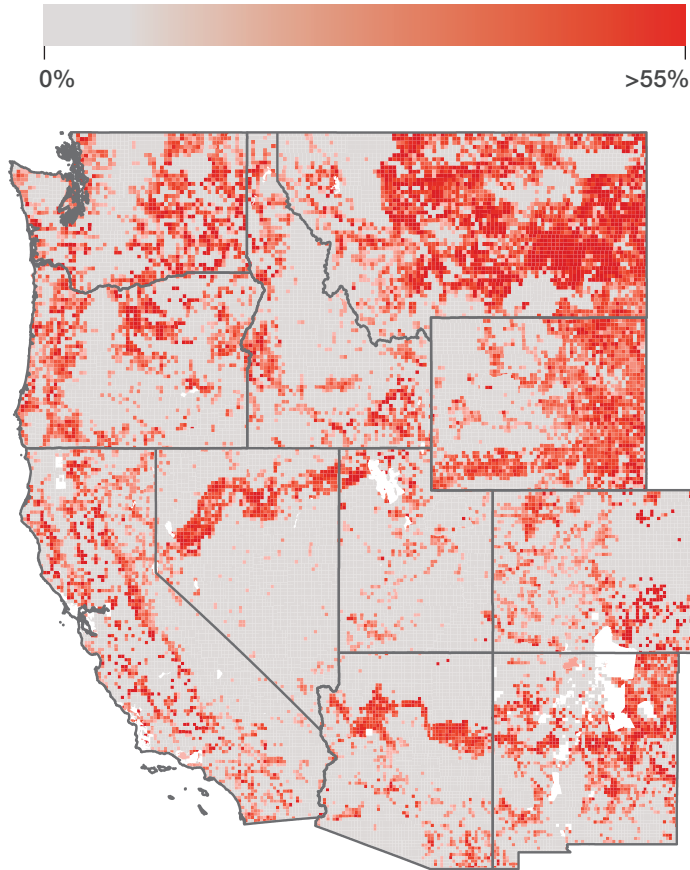
WITH BRYAN LEONARD

**S**pend enough time roaming the American West and you'll likely encounter it: a parcel of land that's labeled as public on a map but is entirely landlocked by private lands. Access to these "stranded lands" is often prohibited without permission from a neighboring landowner, creating obstacles for recreationists and land managers alike. As pressure builds to improve public land management, and enhance access to those lands, debates over stranded lands have been intensifying.

Bryan Leonard, a PERC senior research fellow and economist at Arizona State University, began studying these lands after hiking throughout the West and discussing management challenges with ranchers in Montana. He is the author, along with Andrew Plantinga of U.C. Santa Barbara, of several recent studies examining the effects of stranded lands on local economies, recreational access, and resource management. We asked Leonard about his research and what it means for the West.

## Stranded Lands in the Western United States

Share of all land that is stranded public land, by township



### Q: First off, how much stranded land is there in the West?

**A:** We estimate there are about 6 million acres of inaccessible public land in 11 western states. Most of that land is managed by the Bureau of Land Management (55 percent) and by states as trust lands granted at statehood (40 percent), with the other federal agencies making up the remainder (5 percent). These stranded lands are concentrated in sparsely populated areas such as Eastern Montana, Eastern Wyoming, Northern Nevada, and Northern Arizona. Montana has the most, with 1.9 million inaccessible acres.

### Q: Why is there so much stranded land?

**A:** Unlike national parks and many national forests that were intentionally set aside for specific purposes, most stranded

lands are accidents of history associated with land-disposal policies in the 19th century. The entire West is organized into six-mile by six-mile “townships” in the federal government’s Public Land Survey System, with each township containing 36 sections numbered from 1 to 36. The government often gave away land based on section numbering to avoid favoritism, but the practice resulted in a fragmented mosaic of public and private land. For example, states were typically granted sections 16 and 36 in every township, and settlers could claim title to parcels ranging from a quarter section (160 acres) to a full section (640 acres) under the homestead acts.

Railroad land grants of the 19th century were a major factor as well. To encourage the construction of the transcontinental railroads, the government granted railroad companies every odd-numbered section within 20 to 40 miles of track as it was completed. Many of the even-numbered sections were never disposed of and remain in federal ownership. This created a checkerboard of private and public land that still exists in certain places, especially Wyoming, Eastern Montana, and Northern Nevada.

The result is that public land is scattered amidst private lands across much of the West. Unless these stranded public lands intersect a public road, they are generally inaccessible to the public. And because it’s not possible to “corner cross” from one public parcel to another without illegally trespassing on private lands, access to “checkerboarded” lands is often prohibited.

### Q: Why does strandedness matter? What are the economic implications?

**A:** In general, the effects of stranded lands on local economies may be different than the effects of other public lands, because stranded lands usually cannot be used by the public for recreation. The impact on other land uses likely depends on a variety of factors. A stranded tract of public land encompassed by a large ranch may essentially be treated as if it’s part of the rancher’s property. On the other hand, more intensive uses such as timber harvesting or mineral development may be precluded on stranded lands if developers cannot obtain legal access to them.

In our research, we find that having more stranded land in a county reduces land values. We also find that the net effect



of stranded land is significantly more negative than it is for accessible public land, suggesting that the inability to access land for recreation may be especially important.

### Q: What does this mean for access—both for management and recreation?

**A:** Generally, stranded land cannot be accessed by the public for recreation or by government agencies for management activities. Recreationists usually aren't missing out on opportunities for long hikes because these parcels tend to be relatively small, but other activities like hunting and climbing can be affected because stranded land can harbor wildlife or even mountain summits. On the management side, activities like forest thinning and invasive species control are also impaired by public agencies' inability to access stranded land.

### Q: What about wildfires?

**A:** In more recent work, we've found that fires that start on stranded lands are more likely to escape containment and grow larger than fires that start on comparable, nearby accessible land. There's some evidence to suggest that this is driven in part by a lack of fuel management activities on stranded lands, which are precluded by agencies' inability to access the land. Once a fire starts, landowners are unlikely to bar access for firefighters, but the added hurdle of coordinating with landowners to secure access may also delay response times, creating larger fires.

### Q: What can be done to address the problem of stranded lands?

**A:** The upshot of our research is that even marginal changes in land ownership patterns that improve public access while strengthening private property rights can result in large economic benefits. One way to do this is through "land swaps," where the government consolidates its landholdings by exchanging some of its land for nearby private land, especially in checkerboards. Well-executed land swaps can be a win-win that creates value for the public while also benefiting landowners who previously struggled with trespassers and other management obstacles.

Land swaps can be controversial, though, and some have argued that the government has given away high-value lands

## Stranded Lands in Douglas County, Washington

■ Accessible Public Lands ■ Stranded Public Lands — Public Roads



Scattered parcels of public lands dot the western landscape, a legacy of 19th century land-disposal policies. Today, parcels that do not intersect with a public road are generally inaccessible by the public. Prohibitions against "corner crossing" also prevent legal access to "checkerboarded" public lands.

without receiving comparable land in return. That question is inherently difficult to answer because current law requires in-kind exchanges of land for land—it's essentially a barter system—making it hard for market signals to operate. Federal agencies can also negotiate voluntary access agreements with landowners, as the Forest Service has recently done in Montana's Crazy Mountains, a range that is checkerboarded from the railroad land-grant era.

And let's not forget one other option for unlocking stranded lands: Ask neighboring landowners for permission to access them. Stranded lands may not be accessible by road, but many landowners allow access to respectful sportsmen and -women and hikers who simply ask permission. Sometimes all it takes is simple courtesy and communication with landowners.



**Bryan Leonard** is a senior research fellow at PERC and an assistant professor of environmental and natural resource economics at Arizona State University.

# The Ever-Changing West

The changes my grandfather experienced when he arrived in Montana a century ago required constant adaptation. The same is true today.

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BY P.J. HILL

**I**n the spring of 1892, my grandfather, Pete Jensen, arrived in southeastern Montana, where he lived and ranched for the rest of his life. He had traveled with two other young men by horseback with all of his worldly possessions tied on the back of his saddle. The trip was arduous. A late-season snowstorm left them without food for three days. They were able to survive by cutting limbs from cottonwood trees and feeding them to the horses. Once they arrived in Montana, Jensen got a job as a ranch hand and in 1894 bought enough land to start the P.J. Ranch, which stayed in our family for 98 years.





To Jensen and other new arrivals from the East, the American West was a strikingly different world. Depending on the location and time of year, the West could be drier or wetter, hotter or colder, and more rugged than the eastern United States. Regional variation was also much greater. As economic historians Gary Libecap and Zeynep Hansen describe it, “The Great Plains could either be wet and lush or dry and barren, with no particular pattern,” which presented “unusual learning and adaptation challenges” for settlers from the East. Not only that, the economic demands placed on the region—and the responses of settlers to those demands—were rapidly changing as well.

This meant settlers like my grandfather were constantly adapting to change. Three major forces drove the process. First, new and better information about the realities of the western landscape was continually becoming available, whether from on-the-ground knowledge developed through experimentation with different forms of farming and ranching or from better understandings of regional climate conditions.

Second, technology was ceaselessly advancing: The invention of barbed wire,

the mechanization of haying, the introduction of new cattle breeds that were better adapted to harsh winters and dry summers—all of these were innovations that spurred change. Third, the institutions that governed the use of natural resources were evolving to match the realities of the West, at times formally and other times informally. These institutions included different forms of property rights to resources that, if well defined and understood, enabled settlers to resolve competing demands in mutually beneficial ways—but if left unclear and ill-defined often resulted in political or even physical conflict.

These monumental shifts and westerners’ responses to them demonstrate how new information, technological advancements, and institutional evolution have molded societies in the past. More than a century later, understanding that past helps illuminate the ways that ongoing change continues to shape the West and its inhabitants today.

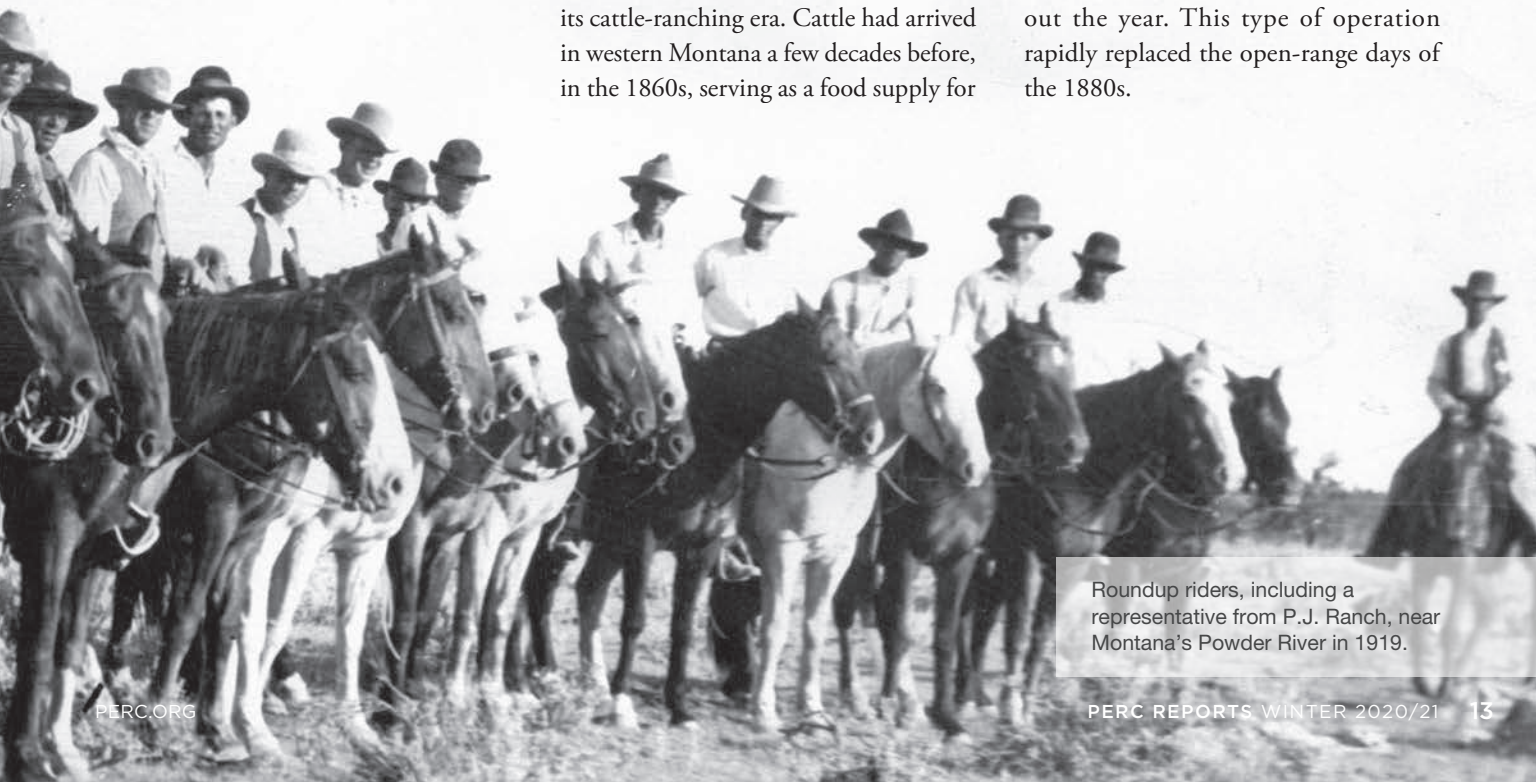
### OLD WEST TO NEW

It’s difficult to grasp the extent of the changes that were afoot when Pete Jensen arrived in Montana in 1892. At the time, eastern Montana was only a decade into its cattle-ranching era. Cattle had arrived in western Montana a few decades before, in the 1860s, serving as a food supply for

hungry miners. Eastern Montana did not see a major influx until the 1880s. One frontiersman, Granville Stuart, reported that in 1880, “thousands of buffalo darkened the rolling plains,” but by “the fall of 1883, there were six hundred thousand head of cattle on the range.”

The early cattle grazing efforts were a process of experimentation and adaptation to new conditions. The first attempts involved turning large numbers of cattle loose on the open range and giving them little attention or care until there were enough four- and five-year-old steers to round up and send to market. Outside investors saw the open plains as a bonanza for beef production when the railroad reached Miles City, Montana, in 1882. Cattle ready for market could be driven to a railhead to be delivered to consumers in the East.

That world was undergoing a major transformation when Jensen arrived. The winter of 1886-87 killed thousands of cattle and put an end to the idea that settlers could simply turn herds loose on the range to mature until slaughter. It was becoming clear that a superior form of organization was owner-operators who put up hay and paid close attention to the condition of their cattle throughout the year. This type of operation rapidly replaced the open-range days of the 1880s.



Roundup riders, including a representative from P.J. Ranch, near Montana’s Powder River in 1919.



Barbed wire, which was first produced commercially in the 1870s, became an important way to demarcate and enforce property rights. Ranchers quickly adopted the new technology, first using it to provide small pastures close to their dwelling places and to protect hay grounds. Extending it to encompass wider grazing areas was often more difficult, in part because of a lack of legal property rights to the open range. But the economic benefits associated with the invention of barbed wire were significant. Economist Richard Hornbeck estimates that between 1880 and 1890, barbed wire caused farmland values in the West to increase by 50 percent, an amount equal to as much as 3 percent of U.S. gross domestic product at the time.

For the most part, the institutional framework faced by early settlers was a relatively open market with clear property rights to many resources. Cattle ownership was straightforward because livestock could be branded, which meant cattle could roam the open range and mix with the livestock of other owners. Each spring, roundups were held involving six to 12 ranches, with newborn calves receiving the brand of their mother. In the fall, another roundup was held, and beef cattle going to market were trailed to a railhead. In 1872, the Montana territorial legislature established a territory-wide brand registration system to record legal proof of cattle ownership. In 1885, this information became even more accessible when the Montana Stockgrowers Association published a brand-registration book, which lowered the costs of establishing ownership of cattle. Inspection facilities were created at the railheads or at the slaughter plants, with monies from cattle sales allocated on the basis of brands.

Establishing property rights to land was more vexing. Early settlers simply recognized informal property rights claims, such as squatters who settled in areas without following a legal process



To Jensen and other new arrivals from the East, the American West was a strikingly different world, which presented unusual learning and adaptation challenges. Not only that, the economic demands placed on the region—and the responses of settlers to those demands—were rapidly changing as well.

to obtain formal title. But as western settlement increased, informal claims often became less clear and more difficult to enforce. The primary mechanism for establishing a clear legal claim was through the various homestead acts. The initial act, established in 1862, granted 160-acre claims to homesteaders who lived on a plot for five years and made appropriate investments. Unfortunately, homesteading was ill-suited for cattle

ranching in arid parts of the West, where 20 to 30 acres were needed to sustain a single cow per year. Even after the size of land claims were expanded to 320 acres in 1909 and then 640 acres in 1916, a homestead was not sufficient for a cattle operation, and ranchers often depended on the use of unclaimed open-range lands for livestock grazing.

By the early 20th century, a span of wetter-than-normal years convinced settlers that 160 or 320 acres was sufficient for an agricultural operation. The droughts of 1917-21 proved otherwise, and many homesteaders failed. Dan Fulton, a Montana cattle rancher and historian, reported that of the 70,000 to 80,000 settlers who homesteaded in Montana between 1909 and 1918, only 22 percent were able to “prove up” their claims and establish full legal ownership. The others, he said, “had starved out or given up.”

As this process of experimentation and learning unfolded, the institutions governing western resources continued to evolve. For example, ranchers made several attempts to address the tragedy of the commons on the public domain. In 1884, the National Cattle Growers’ Association urged Congress to provide a mechanism for leasing public domain lands for grazing. The pressure for maintaining opportunities for homesteaders, however, was politically popular. It was not until 50 years later, in 1934, that the Taylor Grazing Act established formal leases over wide swaths of grazing lands that had not been homesteaded. This created a complex mixture of federal and private lands in the West, often comprising relatively small parcels of private lands surrounded by larger areas of unclaimed federal lands leased for livestock grazing.

## ONGOING ADAPTATION

Change continued in the decades that followed. The Great Depression of the 1930s, accompanied by several years



The author, at age 4, helps with branding on the P.J. Ranch near Miles City, Montana.

of drought, forced numerous changes in ranch and farm operations, including the size of operating units. Mechanization was a major force, with tractors replacing teams of horses for many ranch functions, particularly haying. In conjunction with the reality that many homesteads were too small and eventually failed, mechanization also led to the consolidation of small farms into much larger ranches. As a result, many rural counties saw their populations decline significantly.

Powder River County, where Jensen ranched, reached its peak population of 3,909 in 1930. By 2018, it had fallen to 1,716. Other nearby rural counties peaked in 1920 and lost more than half of their residents over the following century. Improved roads and the arrival of the automobile meant that it was easier to drive longer distances for machinery repairs and groceries. This led to the closing of many retail stores, and medical care in small towns often ceased, with larger population centers building

hospitals and providing a wider range of care. Some communities, previously thriving locations of stores and schools, completely vanished. Towns that served as county seats survived, but with many fewer services than before.

More recently, other changes have emerged, and with them have come both challenges and opportunities. For one thing, there are growing demands on the West's natural resources, not only for their productive uses as commodities but also for "non-use" conservation purposes. Relatedly, demands for outdoor recreation opportunities are also increasing, partly a consequence of significant growth in urban areas that have boomed even as rural counties have dwindled in population.

The economics of ranching have also changed. Innovations like artificial insemination and genetic modification have required continued adaptation to longstanding practices. There has been increased pressure for many cattle ranchers

in the West to sell to larger operations that can capture economies of scale—or, in some parts of Montana, to abandon ranching entirely and subdivide for housing development. Cattle ranching typically earns a low rate of return on invested capital, and there have been repeated attempts by ranchers to find other ways to supplement their income, including hunting leases, energy development, and ranch vacations.

Like my grandfather, westerners live in a landscape of ongoing change. Just as Jensen and other settlers constantly adapted to change, so too must we continue to navigate the ever-changing natural world and shifting human demands placed on the West's natural resources.



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# Why Don't Environmentalists Just Buy What They Want to Protect?

Because it's often against the rules

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BY SHAWN REGAN





**S**top me if you've heard this one before: An environmentalist walks into a federal auction and buys up the drilling rights to thousands of acres of public lands. But instead of developing the leases, he decides to keep the oil and gas in the ground, because to him the landscape is more valuable conserved than developed.

Funny, right?

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Anyone who follows environmental politics knows that environmentalists have a reputation for being more likely to lobby, litigate, or regulate than to simply pay for what they want to protect. Yet when Tim DeChristopher went to protest an energy lease auction by the U.S. Bureau of Land Management in 2008, he tried the more direct approach. DeChristopher walked into the lease sale in Salt Lake City and ended up outbidding developers for more than 22,000 acres of drilling rights on public lands near Moab, Utah. His reward for winning: a prison sentence.

DeChristopher didn't exactly bid in good faith. As a college student at the time, he went to the auction expecting to join a group of other protesters. But when he arrived, the auctioneers asked if he was there to bid.

"They said, 'Are you here to be a bidder?'" DeChristopher later recounted. "And I said, 'Well, yes, I am.'" They handed him a bidder's paddle, and once the auction began, he started bidding for leases. The prices varied. One sold for \$500, or just \$2.25 per acre. Another for a mere \$77. Others went for much more. Soon, DeChristopher won the drilling rights to 14 parcels for a total of \$1.8 million—money he didn't have and had no intention of paying.

Auction officials eventually caught on to DeChristopher's bogus bids, and he was arrested and later sentenced to two years in prison for making false statements and interfering with a federal lease auction. And while DeChristopher became an environmental folk hero for monkey wrenching the process, the event raised a question: Why don't environmentalists just bid for leases on public land?

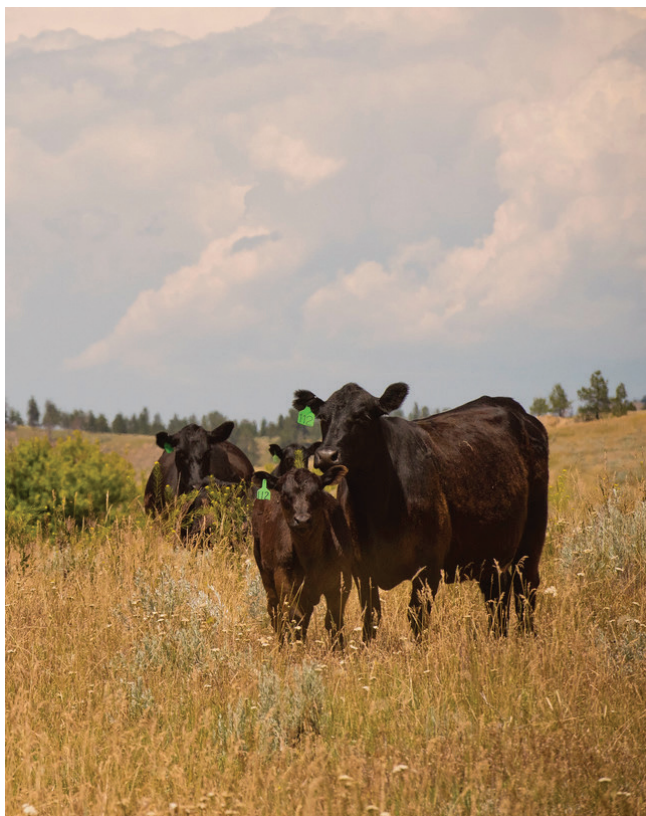
The answer, it turns out, is complicated. Technically, any U.S. citizen can bid for and hold leases for energy, grazing, or timber resources on public lands. But legal requirements often preclude environmentalists from participating in such markets. Federal and state rules typically require leaseholders to harvest, extract, or otherwise develop the resources, effectively shutting those who want to conserve resources out of the bidding process. Energy leasing regulations, for example, require leaseholders to extract the resources beneath their parcels. If they don't, the leases could be canceled.

What would happen if environmentalists did bid in good faith and paid for their leases? In 2016, the well-known author and environmental activist Terry Tempest Williams and her husband, Brooke, attempted something similar. But unlike DeChristopher, the pair paid for their leases and attempted to follow the leasing regulations. While attending a protest of a BLM auction in Utah, they learned that some of the leases that didn't sell could be purchased afterward directly from the agency.

"So we signed up and bought them," Brooke told me. "We paid with our debit card." All it took was \$1.50 an acre (plus an \$820 processing fee) to secure the drilling rights to two leases comprising 1,120 acres near Arches National Park. The couple even created an "energy company," Tempest Exploration Co. LLC, and began paying the annual rental fees associated with the lease.

"We have every intention of complying with the law, even as we challenge it," Tempest Williams later wrote in a *New York Times* op-ed. "We will pay the annual rent for the duration of the 10-year lease and keep whatever oil and gas lies beneath these lands in the ground."

It didn't work. The BLM canceled the leases, alleging that Tempest Williams violated the "diligent development requirement" of the 1920 Mineral Leasing Act, which requires lessees to "exercise reasonable diligence in developing and producing" their energy resources. In an October 2016 letter, the BLM told Tempest Williams that "since you have stated publicly that you intend to keep the oil and gas resources in the ground," referring to her comments in the *Times*, "the lease offers are hereby rejected."





The bids by DeChristopher and the Williamses were widely viewed as gimmicks—and they were. The Williamses sought to promote the burgeoning “keep it in the ground” activist movement, which seeks to fight climate change by stopping fossil fuel extraction, while DeChristopher’s bogus bidding was portrayed as an act of civil disobedience. But the examples also sparked a conversation about the core functions of the federal land leasing systems that determine the use of natural resources throughout much of the nation, and the extent to which they shut out other bidders from participating. After all, shouldn’t preservationists be able to spend money on the things they value, just like anyone else?

### ‘A NO-WIN FOR EVERYONE’

Disputes between environmental activists and developers often have a predictable result: litigation. Environmental activists have perfected a zero-sum game of suing, suing, and then suing some more to halt development projects or other land-use activities they don’t like. An alphabet soup of environmental laws—from the National Environmental Policy Act (NEPA) and the Endangered Species Act (ESA) to the Federal Land Policy and Management Act (FLPMA) and the Equal Access to Justice Act (EAJA)—gives groups ample opportunities to stall projects with legal challenges or to thwart them entirely.

But increasingly, environmentalists are testing the strategy of bidding for the rights to natural resources instead. In recent years, activists have attempted to acquire oil and gas rights in Utah, buy out ranchers’ public grazing permits in New Mexico, purchase hunting tags in Wyoming to stop grizzly bears from being killed, and bid against logging companies in Montana to keep trees standing.

“It’s a market-based approach,” says Judi Brawer of Wild-Earth Guardians, an environmental group that has negotiated several grazing permit buyouts from ranchers in the Gila National Forest in New Mexico. “And it’s way more effective at the end of the day.”

Environmentalists paying to protect landscapes isn’t itself new. Nonprofit organizations such as the Nature Conservancy do it all the time, raising millions of dollars in donations to buy land or easements to protect important landscapes from development. But the extent of these voluntary market-based exchanges is often limited to private lands. On federal and state property—which makes up most of the land in the American West—such deals are much more complicated, if not outright prohibited.

Environmentalists are often not allowed to acquire public land leases to conserve the land—at least not without consider-

Technically, any U.S. citizen can bid for and hold leases for energy, grazing, or timber resources on public lands. But legal requirements often preclude environmentalists from participating in such markets since federal and state rules typically require leaseholders to harvest, extract, or develop the resources.

able difficulty. And it’s not due to a lack of financial resources. As Tempest Williams found out the hard way, federal and state laws typically prevent leaseholders from acquiring such rights for nonconsumptive purposes. For this reason, people who want to conserve lands often have no other option but to lobby for restrictive designations, regulate existing land practices, or file legal challenges to stop extractive activities on public lands they care about.

History helps explain why this is the case. The laws and institutions governing the use of most federal- and state-managed land emerged in the 19th and early 20th centuries for a narrow purpose: to promote the productive use of the nation’s resources. Property rights were established and maintained by actively using the resources. Concepts such as “beneficial use,” “use it or lose it,” and “the rule of capture” undergird the legal history of U.S. land policy and still serve as the basis for many of the rules that determine the use of natural resources.

But nowadays, those institutions are often ill-equipped to accommodate new environmental demands. The typical response has been to add layers of environmental laws and regulations to these pre-existing institutions. Comprehensive land-use planning, environmental analysis, and other forms of red tape are now required for almost every federal land-use decision—all of it ostensibly designed to ensure that everyone’s concerns, coupled with the best available science, are taken into account by agency experts, who will somehow divine the ideal outcome.

In reality, these layers of laws and regulations are more likely to lead to years of litigation and acrimony that leave everyone frustrated. That frustration has led some to look for other possible solutions.

“We’ve really gotten away from grazing litigation because it was a no-win for everyone,” says Brawer of WildEarth Guardians. For decades, her group sued federal land agencies to reduce or rescind ranchers’ grazing permits to protect endangered species and other wildlife. And while it still occasionally litigates, she says the overall approach has shifted to now simply trying to buy ranchers’ permits.

“I think a buyout strategy is way more effective than the litigation approach,” Brawer says, “because a litigation approach doesn’t necessarily leave everyone happy. It probably leaves most people unhappy.” Most of the time, she says, legal challenges result in small reductions in grazing on public lands, whereas a voluntary permit buyout could enable her group to remove cattle entirely from a public land allotment while also paying the rancher for the value of his permit.

That is, if the feds allow it. Like energy lease holders, federal grazing permit holders must meet certain criteria. They must, well, actually graze the land. In addition, permit holders must own a nearby “base property” that can serve as the basis for their ranching operation, and they must be “engaged in the livestock business”—an obvious impediment to any environmental group trying to acquire grazing permits.

Nonetheless, the activists at WildEarth Guardians have occasionally found ways to work around these requirements. The group has negotiated several deals to pay ranchers in New Mexico to relinquish their grazing permits while simultaneously petitioning the U.S. Forest Service to not reissue the unused permits to other ranchers. The process is tenuous—only Congress can retire a grazing allotment—and there is always the risk the agency could simply give the permit to another rancher who will put it to use.

No one understands this better than Jon Marvel, founder of the Idaho-based Western Watersheds Project. Marvel made a name for himself by being the high bidder on state-owned grazing leases as a way to preserve the land for wildlife and recreation, only to repeatedly have his bids rejected by the state, which then granted the leases to ranchers instead.

Marvel says he got the idea while hiking on a small section of state-owned land in central Idaho in 1993. The land was degraded, and the nearby creek—a spawning stream

for salmon and steelhead—was filled with sediment. “It was totally beat out by cattle,” Marvel told me. “It was really ugly.” He decided he wanted to do something about it. So he called the state agency and said he wanted to bid on the lease, which was soon to expire.

An auction was scheduled, and Marvel opened the bidding at \$30. “That’s too damn much, I’m not bidding,” Marvel recalled the rancher who had previously held the permit saying. Marvel was the only bidder, but the rancher appealed the auction to the state land board.

The state awarded the lease to the rancher anyway, setting off a lengthy legal battle over who can bid for state grazing leases. Marvel, who recently retired, ended up devoting the rest of his career to challenging ranchers’ monopoly on public grazing lands.

Marvel’s focus on state-owned lands was, in retrospect, brilliant. State trust lands were granted to western states by Congress at statehood for a singular purpose: to earn money

for schools and other public institutions. States have a constitutional mandate to maximize revenues from trust lands, typically by leasing them for grazing, drilling, or logging. But “the Idaho Constitution does not give an ongoing birthright to public land grazing,” Marvel told local newspapers after the state rejected his initial bids. “Other valuable uses exist on these lands.”

Time and again, Marvel was the high bidder on state leases in Idaho, only to be denied the lease. (After a second auction was

ordered for the initial lease, Marvel outbid the rancher \$2,000 to \$10, yet the state again awarded the lease to the rancher.) The state erected all sorts of barriers to disqualify Marvel, such as establishing “qualified bidder” criteria, designating “preferred” land uses, and requiring bidders to create “grazing plans.” Only after such disputes came before the Idaho Supreme Court did Marvel’s strategy prevail, thanks to the court’s simple logic: If an environmentalist values the land more than ranchers do, then the environmentalist should get the lease.

## SHOOT ‘EM WITH A CAMERA

You’d think that’d be a straightforward proposition. But opponents offer plenty of reasons to exclude environmental

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In recent years, activists have attempted to acquire oil and gas rights in Utah, buy out ranchers’ public grazing permits in New Mexico, purchase hunting tags in Wyoming to stop grizzly bears from being killed, and bid against logging companies in Montana to keep trees standing.





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State trust lands near Bozeman, Montana, where a group outbid loggers to secure a conservation license in 2019.

bidders. How would “non-use” rights work in practice, especially if agencies consider “use” as a form of necessary land management? If non-use bidders were allowed, would they prevent agencies from properly managing natural resources?

Those questions are at the forefront of several debates playing out in my backyard near Yellowstone National Park. In one recent case, a proposed timber sale on state trust lands in the Gallatin Valley near Bozeman, Montana, sparked organized opposition from a group of nearby residents. Since the state is required to generate revenue from its trust lands, the group took a page out of Marvel’s playbook and attempted to bid against timber companies to keep the trees standing.

They did so under a little-known Montana law that allows non-use bidders to acquire a “timber conservation license” on state lands. The license amounts to a temporary deferment of the timber sale. To secure it, the group, known as Save Our Gallatin Front, had to first outbid loggers for the right to cut the trees.

In March 2019, they did just that. The group outbid a logging company \$400,000 to \$376,000 to secure a conservation license that bars timber harvesting on the 443-acre area for the next 25 years. It marked the first time the license had been used to block an entire timber sale in Montana.

“Then we had to decide, how do we raise that much money?” says Brad Webb, a board member of Save Our Gallatin Front.

The group set up a GoFundMe campaign, and the donors began pouring in. Within a few weeks, the residents had raised more than enough to pay for the license.

“I was surprised at how quickly it came in,” Webb told me. “People in Bozeman are attracted here for the natural amenities. So they were really teed up to support this, especially since it was preserving one of the last remaining unlogged areas near town.”

But from the outset, many questions surrounded the conservation option: How long should the license last? Ten years? Or maybe 100 years—the estimated time it would take the forest to regrow? The law provided no guidance, but the state eventually settled on 25 years, at which point the timber could go back up for auction. There were also management concerns. The state argued that logging is necessary to reduce wildfire risk, and that the forest will be prone to insect infestation and disease if it isn’t harvested soon. Would a conservation license prevent much-needed forest management?

Save Our Gallatin Front’s victory rankled some Republicans in the state, who argued that it was a threat to the timber industry. Soon after the group won its bid, the GOP-controlled state legislature voted to repeal Montana’s conservation license provision. In May 2019, Democratic Gov. Steve Bullock signed the repeal into law, prohibiting any future use of conservation licenses on state lands in Montana.



Wildlife watchers in Yellowstone National Park

Webb thinks the law's repeal was shortsighted and anti-competitive. "Some of the people that put this forward were less concerned about the state's fiduciary responsibility to maximize revenues," he says. "The state made more money from us than they did from the timber industry, because we won the bid. It was more, 'Let's subsidize the timber industry.'"

An ongoing debate over grizzly bear hunting near Yellowstone raises related concerns. In 2018, Wyoming implemented a controversial lottery to issue licenses to hunt grizzlies, which had been recently removed from the endangered species list. Some environmentalists were outraged, and a campaign called "Shoot 'Em With a Camera—Not a Gun" emerged. The group enlisted nonhunters to pay to enter the lottery and, if awarded one of 22 bear hunting tags, to refrain from using it, thus preventing bears from being killed.

Thomas Mangelsen, a well-known wildlife photographer and outspoken critic of grizzly bear hunting, was one of the lucky few who drew a tag. His plan: "I'm going to go hunt bears with a camera," he told a local paper. "I'm going to try to get a few good pictures, and do what I applied for."

In the end, the hunt itself was shelved after a federal judge restored endangered species protections for the bears just days before hunting season began. But the idea of using hunting tags to *prevent* animals from being hunted had raised many

concerns: If nonhunters could acquire hunting tags, would they thwart the state's ability to control wildlife populations, which is often done through managed hunting? Would allowing nonhunters to participate diminish hunters' longstanding influence over state fish and wildlife agencies?

There are other objections to non-use bidding. Public grazing leases are often interconnected with private ranchlands, and some fear opening those to environmental bidders would threaten the viability of rural ranching communities. And royalties derived from oil and gas extraction often provide lucrative revenue streams to federal, state, and local coffers, including public schools. Some are concerned that non-use bidders, to the extent they are allowed to prevail, could jeopardize those revenues.

### A MARKET OPPORTUNITY

The trouble is, no one is happy with the status quo either. Constant conflict and litigation are not exactly favorable to traditional land users. Livestock grazing on federal lands has declined more than 50 percent since the 1950s, in part due to environmental regulations that have weakened ranchers' grazing privileges and pitted them against environmentalists in zero-sum legal fights. Likewise, timber harvests on federal lands have fallen nearly 80 percent since the 1980s.



“The bottom line is that if a rancher gets all their cows kicked off the land [through litigation], he or she is screwed,” says Brawer of WildEarth Guardians. “Buyouts provide an opportunity for ranchers.”

They are also a pragmatic solution to today’s grazing challenges, says Kit Fischer of the National Wildlife Federation, which has negotiated permit buyouts in the Yellowstone region using an approach similar to WildEarth Guardians’. Fischer’s group, unlike some others, is not anti-livestock. It pursues buyouts in areas where ranchers frequently come into conflict with large carnivores such as grizzlies and wolves and aims to reduce the spread of disease from domestic sheep herds to wild ones.

“If we can shuffle the deck in terms of how and where grazing is done, then we’re good with that,” Fischer told me. “We think there’s plenty of room on the landscape for livestock grazing, but it takes a market solution to create those changes.”

The current leasing system is not a clear win for taxpayers either. The federal government spends more money administering its grazing and timber programs than it earns from grazing leases and timber sales. And although energy development does often yield a net positive return, in some places it is likely that environmental bids could help generate even more revenue. A 2017 BLM oil and gas lease in Utah’s West Desert, for instance, earned the feds less than \$15,000 in revenue, with some parcels leasing for just \$2 an acre. The leases occurred in prime habitat for sage grouse, a species of considerable conservation interest, leading many environmental groups to formally protest the sale.

What if those environmental groups could have directly bid on the leases instead? Surely they could have afforded it—they likely spent more in time and resources protesting the auction. Bidding would have generated more revenue while also giving environmentalists the protections they desired. But that wasn’t an option.

There is widespread cynicism and skepticism about markets in environmentalist circles. And there may be legitimate concerns about how to best accommodate environmental bidding within current leasing structures. But much of the opposition is likely rooted in a desire to limit competition.

The lesson is not that energy development, logging, or livestock grazing is bad, or that every effort to stop such activities should prevail. Rather, it’s that environmental values are real and legitimate, and they are best expressed in ways that acknowledge existing property rights, seek an honest bargain, and reflect the opportunity costs of the other forgone values associated with the land.

The lesson is not that energy development, logging, or livestock grazing is bad, or that every effort to stop such activities should prevail. Rather, it’s that environmental values are real and legitimate, and they are best expressed in ways that acknowledge existing property rights, seek an honest bargain, and reflect the opportunity costs of the other forgone values associated with the land.

“I don’t think most people are opposed to logging when it’s done correctly,” says Webb from Save Our Gallatin Front. “Most of us live in a house made of wood, and that wood has to come from somewhere.” But Webb says there are places where other values—recreation, conservation, or natural amenities—may dominate. “If somebody loves something and wants to protect it,” he says, “then let’s put up the money. People value things like open space and are often willing to pay to support it.”

He’s right. It’s clear that many people value conservation and are willing to spend their own money to get it. The only question is whether those resources will be channeled through zero-sum political means or through positive-sum market mechanisms. In any case, if competing groups cannot directly acquire or trade rights through markets, whether for use or non-use purposes, the only option is to fight it out in the political and legal arenas.

So the next time you hear environmental activists saying we need to save the trees or keep energy resources in the ground, you might wonder what’s preventing them from paying to do so right now. The answer, often, is not that they won’t, but that they can’t.



**Shawn Regan** is the vice president of research at PERC and executive editor of *PERC Reports*. A version of this essay first appeared in *Reason* and is reprinted here with permission.



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# A Forest

Wildfires engulf the West year after year. Private partners have shown they're willing to fund projects that reduce fire risks—as long as regulation and litigation don't snuff them out.

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BY JONATHAN WOOD





# Fix

In 2020, California experienced the largest wildfire in its history. The August Complex fire burned more than one million acres and laid waste to hundreds of structures. Across the West this year, wildfires have torched 9.5 million acres, destroyed thousands of homes, and caused dozens of fatalities.

As fires have become more intense, the U.S. Forest Service has spent more money fighting them, often at the expense of other programs. Today, the costs of fire suppression have ballooned to roughly half of the Forest Service's total budget, including more than \$3 billion in fire-fighting costs in 2020.

With fire demanding the agency's attention and resources, forest health has declined. According to the Forest Service, 80 million of the 193 million acres managed by the agency are in need of restoration, which can include mechanical thinning, prescribed burns, erosion control, and replanting. Forest restoration addresses excess fuels, increases resilience to disease and insect infestation, and mitigates the effects of past fires and infestations. Sixty-three million of the acres in need of restoration are at high or very high risk of wildfire.



Addressing the daunting backlog is essential to tackle the wildfire problem. But the Forest Service's capacity to complete this work is constrained by limited funding, bureaucratic obstacles, and litigation risks. At the Forest Service's current pace of fuel reduction and forest restoration, it will take decades to work through the backlog.

Fortunately, states, local governments, industry, and conservation groups that benefit from healthier forests have incentives to contribute funding, manpower, and other means of support. Innovative public-private partnerships have demonstrated an ability to increase and expedite needed restoration, while promoting collaboration among diverse interests; however, these innovative solutions are the exception, not the rule.

Expanding public-private partnerships to the extent necessary to address such a large backlog requires greater flexibility for the Forest Service to enter into these partnerships along with fixes to the bureaucratic obstacles, litigation risks, and other barriers that can delay or derail forest restoration projects. Addressing these barriers would allow market forces to facilitate collaborative restoration that increases forest resilience and decreases wildfire risk.

## It's getting hot in here

Fire, both natural and human-induced, can play an important role in maintaining a healthy forest. It can clear underbrush, aid in forest transition, and improve wildlife habitat. But, as we all know, fire can also be devastating. Extreme wildfires destroy habitat, jeopardize water quality, and threaten communities. They are also more difficult for forests to recover from, as hotter fires can damage topsoil, cause erosion, and make revegetation more difficult.

Large wildfires also release significant amounts of carbon dioxide into the atmosphere, converting a forest from a carbon sink into a carbon source. According to scientists at the National Center for Atmospheric Research, "large wildfires in the western United States can pump as much carbon dioxide into the atmosphere in just a few weeks as cars do in those areas in an entire year."

These environmental costs are also human costs. An ecosystem destroyed by fire may also be a favorite spot for outdoor recreation. A polluted stream or reservoir may be the drinking water source for a nearby community. Smoke and air pollution may contribute to adverse health effects for people up to hundreds of miles away. And, of course, fires may burn homes and neighborhoods, displacing residents and causing significant economic harm.

During the early decades of the Forest Service, the agency sought to suppress all fires in national forests. But this had an

unfortunate side effect: It allowed dangerous fuel loads to accumulate. Prior to these fire suppression efforts, underbrush and diseased or insect-infested vegetation would have been consumed through frequent, smaller fires. Without these routine fires, forests became more vulnerable to catastrophic fires, with the most drastic increases in western states where federal land ownership is highest.

Fighting these larger, hotter fires sapped agency resources, as Congress and the agency responded to incentives to prioritize visible fire suppression efforts. To pay for these efforts, the Forest Service engaged in "fire borrowing," cannibalizing other programs to pay for fire suppression. As a consequence, a backlog of forest restoration projects built up. Although recent legislation is intended to end "fire borrowing," the backlog persists. Forty-two percent of the land managed by the Forest Service is in need of restoration, and nearly a third is at high or very high risk of extreme wildfire due to fuel buildup and climate factors.

The Forest Service has recently averaged 1.4 million acres of fuel reduction work and less than 4 million acres of forest restoration per year. While this is an increase over earlier rates, reflecting the Forest Service's increased commitment to forest restoration, the pace remains low compared to the overall need. Given that it will take decades to clear the backlog at the current rate—never mind the additional restoration needs that will arise in that time—forests and communities will continue to face extreme wildfire risks in the interim.

More must be done to restore the nation's forests, reduce extreme wildfire risks, and mitigate post-fire damage. Given the scope of the challenge and the incentives to prioritize fire fighting over forest restoration, innovative solutions are needed.

## Private investment in public forests

Public-private partnerships could help close the gap, and some already are. National forests provide numerous benefits for neighboring communities, industry, conservationists, and other groups who may be willing to defray the costs and provide other valuable assistance. In recent years, several public-private partnerships have been developed to pursue forest restoration, with notable success.

The Northern Arizona Forest Fund was established by the National Forest Foundation, a congressionally chartered non-profit, and the Salt River Project, a utility company, to fund restoration work on five national forests. The fund is also supported by the Arizona Department of Fish and Wildlife, the cities of Scottsdale and Phoenix, Coca-Cola, outdoor recreation businesses, a local brewery, and conservation groups.

These diverse interests have many incentives to contribute to the effort. For the Salt River Project, reducing wildfire





Aerial view of the Forest Resilience Bond project site in Tahoe National Forest.  
© National Forest Foundation

risks helps to keep the water utility's treatments costs low and preserves its water storage capacity, both of which are threatened by post-fire erosion. SanTan Brewing Company has developed a marketing campaign to promote its participation in the fund and draw attention to the connection between forest health, water quality, and beer brewing.

Since it was established in 2015, the Northern Arizona Forest Fund has raised more than \$6.2 million for forest restoration projects. That money has enabled the fund to undertake 27 forest restoration projects, including reducing fuel loads on 13,600 acres in three national forests, improving 2,600 acres of wetlands, planting 90,000 trees, and reducing erosion along 170 miles of roads and trails.

One challenge for public-private partnerships like the Northern Arizona Forest Fund is that money must be spent today based on expected benefits years into the future. For cash-strapped communities, businesses, and conservation groups, significant upfront expenses can be a challenge. Private capital, however, can help them overcome this challenge.

Recently, Blue Forest Conservation and the World Resource Institute developed a private investment vehicle—the Forest Resilience Bond—to fund forest restoration. A Forest Resilience Bond is a contract between investors, who fund the bond, and beneficiaries of forest restoration, who pay the investors back plus a reasonable rate of return as benefits are achieved. This allows projects to be funded even if the beneficiaries lack immediate capital or are wary of any risk that the project may not achieve

National forests provide benefits for neighboring communities, industry, conservationists, and other groups who may be willing to defray the costs of forest restoration and provide other valuable assistance. In recent years, several public-private partnerships have been developed to pursue such work, with notable success.

its intended benefits. In effect, the Forest Resilience Bond allows local governments, utilities, and private businesses to borrow against the future benefits they'll receive from healthier forests, rather than having to raise significant funds upfront.

The first Forest Resilience Bond was developed in 2018 to fund a forest restoration project in the Tahoe National Forest. That project had already undergone all of the required environmental reviews and permitting but, solely due to a lack of funding, had not been implemented.

The State of California and Yuba Water Agency, a utility company, signed onto the contract, agreeing to pay back the bond as restoration work is completed and benefits are achieved. The Yuba Water Agency, for instance, expects reduced risk of





© Pacific Southwest Forest Service



wildfire to protect the watershed and utility infrastructure and increase water yield. Tahoe National Forest staff is providing in-kind support for planning, development, and execution, but appropriations rules prevent the forest unit from making an ongoing financial commitment.

This Forest Resilience Bond raised \$4 million from four investors to finance restoration projects on 15,000 acres. Those investors are two nonprofit foundations, an impact-investing firm, and an insurance company. In addition to the promised return, these investors were motivated to contribute to improve forest health and to reduce risks to insured properties.

Under an agreement with the Forest Service, the fund will pay for the Forest Service and the National Forest Foundation to remove invasive species, small-diameter trees, and brush and implement prescribed burns. The Forest Service credits the pilot bond with allowing forest restoration to be completed in only 4 years, rather than the 10 to 12 years the agency had projected. In a world where nearly 10 million acres can burn in a single year, expediting projects so much is a significant benefit.

Although the Forest Resilience Bond is in its infancy, it is a well-timed innovation. Investors are showing increased interest in environmental issues, not only taking them into account when making investment decisions but also using shareholder power to nudge companies in greener directions. Corporations are increasingly embracing initiatives that may reduce profits marginally in the short term but appeal to investor' and consumers' environmental preferences.

By tapping into this growing interest, forest bonds can raise capital despite uncertain returns on investments. Blue Forest Conservation, for instance, has told investors to think of these initial experiments as a mix of investment and donations. Once the idea is proven, returns may be more predictable, allowing money to also be raised from investors who are not necessarily motivated by environmental considerations.

## Clearing obstacles to restoration

These and other innovations hold great promise for reducing the forest restoration backlog and tackling the wildfire threat. And these novel experiments have, shrewdly, avoided some of the thorniest obstacles that hinder many other forest restoration efforts. The first Forest Resilience Bond, for instance, did not depend on a financial commitment by the Forest Service and was developed for a “shovel-ready” project, avoiding red tape and the litigation it can spawn. Realizing the full potential of these and other innovations, however, will require solutions to persistent obstacles that hinder projects, including red tape, litigation, and limits on the Forest Service's ability to financially commit to public-private partnerships.

## Allow longer-term commitments

To make these true partnerships, the Forest Service must be able to financially commit to projects for their full length. Federal agencies, however, are generally prohibited from committing funds beyond the current appropriation cycle. This is a significant challenge because forest restoration projects can take more than a few years to implement and, to be financially feasible, may depend on assurances that the work will proceed on a reliable schedule.

One of the difficulties for many forest restoration projects, for instance, is that the small diameter trees, brush, and other vegetation that may need to be removed is of limited commercial value. Building a mill to process this material is, therefore, a risky proposition in the best of circumstances. The agency's inability to make a firm financial commitment over a sufficient term makes the investment riskier still.

Many of these novel experiments have, shrewdly, avoided some of the thorniest obstacles—including red tape and litigation—that hinder many other forest restoration efforts.

There is some evidence that longer-term commitments from the Forest Service, if allowed, could bolster restoration efforts. Since 2009, Congress has authorized the agency to enter into 10-year stewardship contracts for restoration projects under the Collaborative Forest Landscape Restoration Program. Although the program does not permit the Forest Service to obligate funds beyond its current appropriations, it is authorized to receive up to \$40 million per year in funding from Congress. This at least creates some expectation that the Forest Service will be able to contribute to certain projects over a longer contract term.

Twenty-three projects were developed over the program's first 10 years, raising \$470 million in private funds and in-kind contributions and enabling restoration work on 5.7 million acres. Based on these promising results, Congress renewed the program in 2019. But the program is arbitrarily capped at 10 projects per year, and the Forest Service remains unable to commit to cost-sharing over the life of these contracts. Lifting this cap and establishing a continuous fund from which the agency could commit to cost sharing would enable more public-private partnerships to benefit from long-term planning and collaboration.

If the Forest Service is going to expand public-private partnerships to the extent needed to tackle such a large backlog, it needs greater flexibility to develop and support partnerships that fit local needs.

### **Simplify red tape**

Another obstacle to forest restoration is cost and delays associated with red tape. The National Environmental Policy Act requires federal agencies to analyze the environmental impacts of their activities. Although well-intentioned, this requirement can tie up for years even environmentally beneficial projects. According to the Forest Service, completing NEPA reviews takes an average of two or three years, depending on whether the project is expected to have significant environmental impacts. For the top quintile of forest restoration projects—those likely to be of sufficient scale to put a dent in the restoration backlog—NEPA reviews take an average of five years.

Bureaucratic obstacles are heightened further in forests that are home to species listed under the Endangered Species Act. That statute prohibits activities that incidentally harm listed species and requires federal agencies to consult with the Fish and Wildlife Service if their activities may affect such species—a process that can take years to complete. For those national forests within the Ninth Circuit Court of Appeals, the Forest Service must consult again anytime a new species is listed or critical habitat is designated within the area covered by a forest plan, holding up all projects being developed or implemented under that plan.

Although years-long delays and uncertainty may frustrate Forest Service personnel, they can be even more discouraging for private partners and investors. Raising private contributions is difficult enough without uncertainty whether a project will proceed, when on-the-ground work might begin, or what additional conditions will be imposed on that work.

To better balance the need for robust environmental analysis with the need to avoid protracted delays, Congress and the Forest Service have developed several “categorical exclusions”—categories of projects that have been shown not to have significant adverse environmental impacts and, therefore, can proceed under a streamlined NEPA analysis. While these reforms have helped, low acreage limits and vague standards limit their effectiveness. Simplifying standards and increasing acreage limits could make categorical exclusions a more useful

tool for promoting needed forest restoration. More predictable standards could also encourage private parties to help carry out the NEPA process, as they have done in some cases, reducing delays and expenses for the Forest Service.

Obstacles under the Endangered Species Act could also be reduced if the Fish and Wildlife Service revised its regulations for species currently listed as threatened to encourage beneficial forest restorations efforts, subject to appropriate conditions, as it does for newly listed threatened species under a recent reform. Congress could likewise require consultation only for projects with on-the-ground impacts to species, as the Tenth Circuit Court of Appeals interprets the statute, thereby avoiding the possibility of endless consultation requirements.

### **Cut the Gordian knot of litigation**

Jack Ward Thomas, a former chief of the Forest Service during the Clinton administration, described the threat of litigation as putting the agency in a “Gordian knot.” While litigation serves an important role in ensuring government accountability, it can also have a significant downside. The tendency for forest management decisions to be tied up in litigation creates a “vicious cycle of increasing costs, time delays, and [an] inability to carry out management actions.”

For the Forest Service, forest restoration projects are significantly more likely to be challenged than other types of projects. However, this problem is not evenly distributed. For some regions, litigation is only an occasional concern; for others, it is omnipresent. In fact, nearly half of the challenges to forest restoration projects filed between 2007 and 2017 were filed in just two federal district courts: the District of Montana and the Eastern District of California.

A project in the Custer Gallatin National Forest near Bozeman, Montana, represents the worst-case scenario for red tape and litigation interfering with needed forest restoration. In 2005, the Forest Service developed the Bozeman Municipal Watershed Project to address the high risk of catastrophic wildfire outside of Bozeman, which threatened 80 percent of the city’s water supply. After four and a half years of NEPA review, the agency determined that the project should go forward. That decision was challenged, leading to one and a half years of additional environmental analysis that likewise concluded the project should proceed. That decision too was challenged, further delaying implementation of the project until the decision was upheld earlier this year—15 years after the project was developed.

Congress could help the Forest Service avoid such protracted delays, without sacrificing environmental litigation’s important role, by adopting reforms that clarify how courts should decide whether to block projects while legal errors are





Fuels reduction in the Forest Resilience Bond project area.  
© Tahoe National Forest

fixed, expedite review of cases concerning forest restoration projects, and encourage collaboration over conflict.

When a court determines the environmental analysis supporting a project is deficient, it must then decide whether to block the project or allow it to proceed while the agency corrects the deficiency. Congress could clarify how courts should weigh wildfire risks and other public interest factors when making this determination. It could also limit the time that a preliminary injunction can remain in place to encourage courts to expedite review of forest restoration projects.

Congress could reduce disruption and uncertainty by requiring challenges to forest restoration projects to be filed soon after the project is approved. Currently, lawsuits can be filed up to 6 years after project approval. However, California has adopted a far shorter statute of limitations—30 days—for its state-analog to NEPA without unduly interfering with the ability to file challenges. A shorter deadline would let the Forest Service, private partners, and investors know early on whether a project will proceed or will likely be tied up in litigation, enabling them to better allocate their resources.

A shorter statute of limitations could have the added benefit of encouraging collaboration over conflict. If challenges can be filed long after a project is approved and an environmental analysis is released, there can be an incentive for litigants to initially offer vague objections and develop more specific after-the-fact objections by flyspecking the agency's analysis. A shorter statute of limitations can encourage project opponents to develop

detailed objections in advance of the agency's decision, when there's still time for the agency to address them.

## Breaking the backlog

After years of raiding forest management programs to fund fire suppression efforts, the Forest Service faces a substantial backlog of needed forest restoration projects. States, local governments, industries, and conservation groups derive substantial value from healthy national forests and, therefore, are potential partners for tackling this challenge. Assisting the Forest Service's restoration efforts offers a means for these private groups to achieve healthier forests and reduce wildfire risks.

But if the Forest Service is going to expand public-private partnerships to the extent needed to tackle such a large backlog, it needs greater flexibility to develop and support partnerships that fit local needs. Congress and the Forest Service must also address the bureaucratic obstacles, litigation risks, and other barriers that can delay or derail important projects. Making it easier for the private sector to contribute to forest restoration can reduce fire risks while improving wildlife habitat, watershed health, and air quality.



**Jonathan Wood** is a research fellow at PERC and senior attorney at Pacific Legal Foundation. This essay is based on a forthcoming PERC report with Holly Fretwell on fixing America's forests.





# *The Future of the* Great American Outdoors

Recent legislation will help tackle long-overdue maintenance on public lands. It also reveals underlying issues that demand creative solutions.

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BY JACK SMITH AND TATE WATKINS

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Grand Canyon National Park needs roughly \$100 million to replace the outdated and unreliable Transcanyon Pipeline. © NPS



**O**ne Wednesday in July, a water pump failure at Grand Canyon National Park put the Transcanyon Pipeline out of commission yet again, leaving the South Rim of the canyon without a reliable source of potable water. Park officials were forced to implement conservation measures, asking visitors to purify their own water and scale back toilet flushing. This wasn't a first. The pipeline, which supplies water to more than 6 million annual visitors and 2,500 year-round residents, breaks five to 30 times each year.

It's hard to imagine these steps don't significantly affect the experience of park visitors—public bathrooms can be rough even when toilets flush at peak capacity—but park staff had little choice. The measures were the consequence of a water system that has exceeded its useful life and should have been replaced years ago. In that sense, the pipeline is emblematic of public land infrastructure across the country: timeworn, overused, and in desperate need of repair.

It's no secret that U.S. public lands are riddled with maintenance needs. Wear-and-tear has outpaced budgets for decades. By the latest count, nearly \$20 billion of deferred maintenance projects have accumulated across all federal land agencies, with more than \$12 billion in the National Park System alone. This immense need is spread across thousands of miles of dilapidated roads, countless washed-out trails, numerous outdated water and sewage systems, and a multitude of run-down structures and campgrounds. Grand Canyon needs roughly \$100 million just to replace the leaky Transcanyon Pipeline.

What made the latest pipeline failure at the Grand Canyon notable is the day it happened. As the South Rim went without water, Capitol Hill buzzed with news that overdue maintenance on public lands might finally be addressed—the Great American Outdoors Act had just passed in Congress and would soon be headed to the president's desk. A few days later, with the bill signed into law, legislators celebrated the act's intent and scope. Senator Steve Daines, a co-sponsor, called it “the greatest achievement in 50 years for conservation.” President Donald Trump redoubled the praise, describing it as “the most significant investment in our parks since the administration of the legendary conservationist President Theodore Roosevelt.”

Perhaps they're right. The Great American Outdoors Act will devote significant resources to public lands, first by mandating full annual funding of \$900 million for the Land and Water Conservation Fund, which funds most federal land acquisition and provides grants to states for outdoor recreation purposes.

While the Great American Outdoors Act will provide much-needed dedicated funding for public lands, solving several foundational issues is the only way to assure a solid future for conservation and recreation on federal lands.

The act also creates the National Parks and Public Land Legacy Restoration Fund, a program to address deferred maintenance on public lands that's authorized to receive up to \$9.5 billion over the next five years. But over the long run, the legislation seems to get the conservation-funding issue backward: It mandates perpetual funding for land acquisition through the LWCF but provides only temporary funding for maintenance on public lands. More acquisition will eventually mean a larger federal estate, and the act provides no way to pay for the upkeep of it—all at a time when it's clear that federal agencies cannot properly maintain their existing assets.

Moreover, the act does not address the fundamental issue that spawned the maintenance backlog: a neglect of routine maintenance. When infrastructure and assets are not serviced on time as part of today's routine maintenance, they become tomorrow's deferred maintenance, ultimately costing federal agencies, public land users, and taxpayers even more. If routine maintenance continues to go undone, deferred maintenance will continue to accrue, even as the restoration fund addresses the current list of overdue projects.

The act also relies on a potentially uncertain and fraught funding source. Both the LWCF and the restoration fund are entirely funded by revenues from energy development on federal lands and waters, which predominantly come from oil and gas. But several factors threaten the viability of relying on these revenues for conservation and recreation programs.

In a series of new policy briefs published by PERC, we explore these issues in detail and make several recommendations for how to improve federal land management. These reports, which we summarize here, demonstrate that while the Great American Outdoors Act will provide much-needed dedicated funding for public lands, solving several foundational issues is the only way to assure a solid future for conservation and recreation on federal lands.

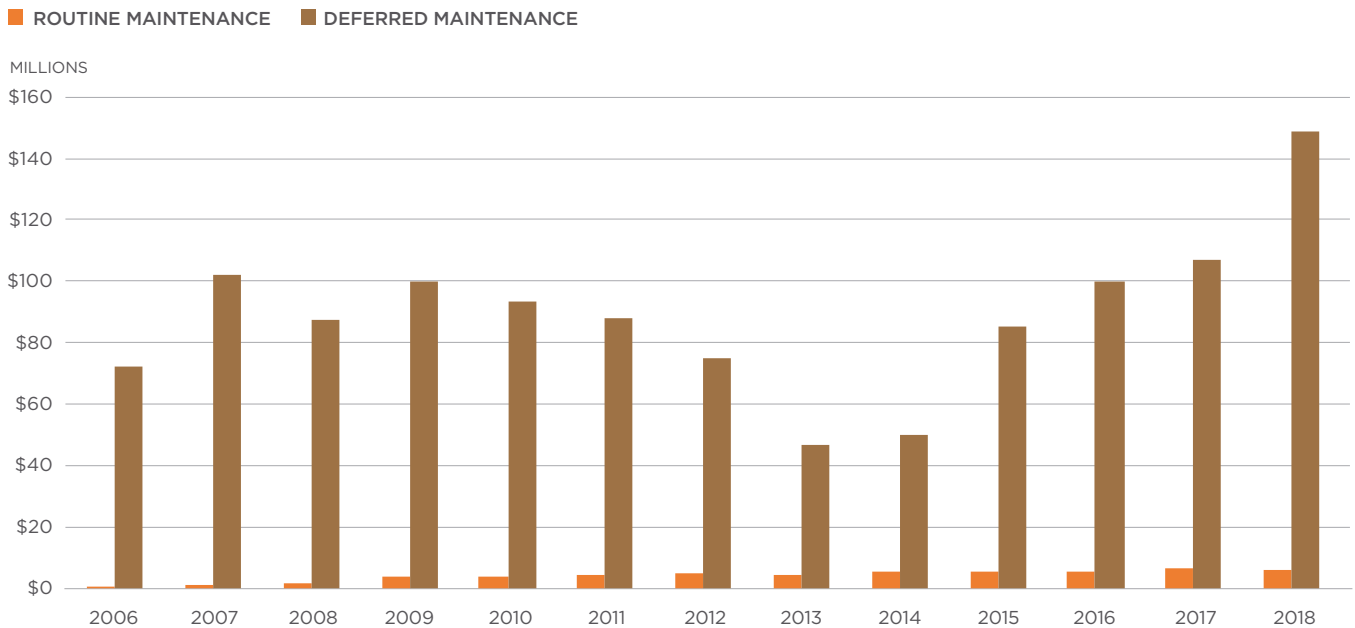
## Issue #1: Addressing overdue maintenance is vital, but the root of the problem is a lack of attention to routine maintenance

The National Parks and Public Land Legacy Restoration Fund will certainly help address deferred maintenance, but public lands need sound fiscal strategies for routine maintenance so that they avoid ending up saddled with another backlog in the future.

Take national parks, for example. For years, funding for parks has not been sufficient to keep up with the maintenance needs of aging assets and infrastructure. Part of the neglect can be chalked up to the fact that the majority of park funding comes from congressional appropriations, an inherently political process. “It’s fun and sexy to add a new unit to the Park Service,” Utah Representative Rob Bishop has said in acknowledging the issue. “It’s not fun or sexy to talk about fixing a sewer system.” Over time, agency budgets have continuously stretched thinner as the number of new parks and assets has grown, and the maintenance problem has compounded. As a result, many public land users encounter eroded trails, dilapidated campgrounds, pot-holed roads, and leaky water systems.

Agency policy has also created a perverse incentive to put off routine maintenance by restricting the way local park managers can use revenues from recreation fees. As one example, the National Park Service directs superintendents to spend at least 55 percent of fee revenues on deferred maintenance, rather than allowing them to decide which on-the-ground needs to prioritize. But this can exacerbate the problem, according to some park managers. Denali National Park Superintendent Don Striker has noted that the policy encourages managers like him to defer maintenance, which he describes as an “expensive, nonsensical choice.” The internal directive means that growth in fee revenues has generated more funding for overdue repairs but contributed much less to regular upkeep such as care of visitor facilities, road work that can prevent long-term damage, or the hiring of permanent employees to conduct routine maintenance. Statute mandates that fee receipts must be used in ways that benefit visitors, but local managers have the best knowledge and context to decide how to accomplish that, whether by

### MAINTENANCE ALLOCATIONS FROM RECREATION FEE REVENUES



The National Park Service has directed superintendents to prioritize using revenues from recreation fees on deferred maintenance. Much fewer fee receipts have been spent on the type of routine maintenance whose neglect spawned the backlog of overdue repairs.



addressing deferred projects, performing routine maintenance, or otherwise.

Overcoming these issues and properly caring for public lands over the long run will require rethinking several of these existing approaches. At the fundamental level, maintenance of existing parks ought to take priority over adding new units to the system. Nearly three decades ago, National Park Service Director James Ridenour worried about the “thinning of the blood” that occurs when more parks are created without the means to maintain them. Yet since then, the number of park units has steadily grown without corresponding increases in appropriations. Legislators and the agency should recognize that adding

more units to the park system—or expanding existing units—will only make it more difficult to address the underlying maintenance issues.

Lastly, giving land managers more authority in how they can spend fee revenues—while holding them accountable for their decisions—can harness those funds more efficiently. For instance, park superintendents have good information about their maintenance needs and how to meet them, but they need resources and flexibility to address them. Removing internal policies such as the directive to spend 55 percent of fees on deferred maintenance is one way to empower them.



© Bob Wick, BLM



## Issue #2: Visitors can help public lands flourish by contributing revenues that support recreation, but reforms can improve the system

Revenues from visitors have become a significant funding source for some sites in recent years, generating additional revenue that goes right back into enhancing the visitor experience. Clarifying that local managers may use fee revenues for operations that benefit visitors is now more important in light of the Great American Outdoors Act, which provides dedicated funding for deferred maintenance, but not for operations.

The Federal Lands Recreation Enhancement Act authorizes federal land managers to charge recreation fees for activities like entry to a wildlife refuge or national park or rental of a campsite in a national forest. Under the act, combined fee revenues from all federal land agencies have risen by 40 percent over the past five years, from \$316 million to \$442 million. In fact, several national parks now generate as much revenue from visitors as they receive in discretionary funding from Congress.

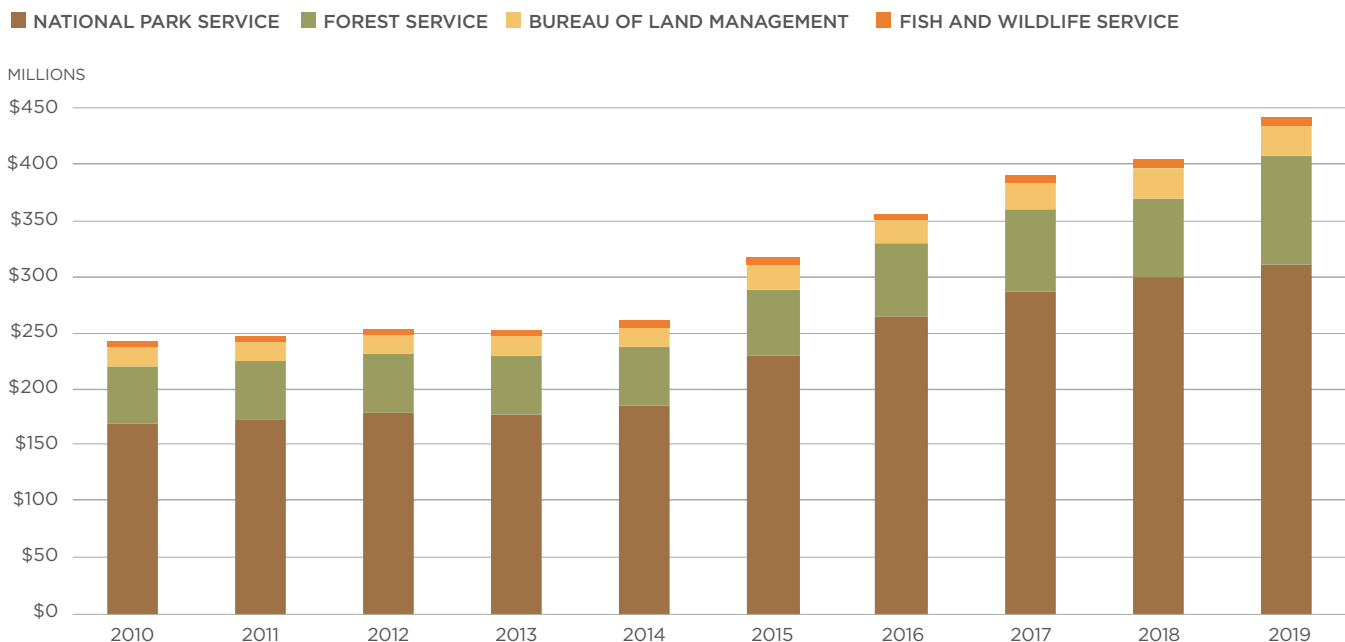
Visitor revenues collected under the act are retained by the site where they were collected to be spent in ways that directly benefit visitors. That means visitor revenues are not subject to many of the political considerations that influence

congressional appropriations, which still provide the majority of funding for public land management.

Because local managers can spend fee revenues they generate, decision-making authority over these funds rests with the people managing recreation sites rather than far-away legislators. The model empowers park superintendents, forest supervisors, and other local managers to make decisions about how to best serve visitors, and it removes a degree of political influence from spending decisions. And now that the Great American Outdoors Act has passed, this user-funded model could be an even more important tool to enable park managers to address routine upkeep of repaired infrastructure, thereby protecting investments made under the act.

Several reforms to the recreation fee system, however, are needed to do so. First, Congress should permanently reauthorize the Federal Lands Recreation Enhancement Act, which is set to expire in October 2021. Making the program permanent would give agencies more certainty about future revenue streams from visitors.

### RECREATION FEE REVENUES BY AGENCY



Recreation fee revenues have increased by 40 percent over the past five years and now total \$442 million. The National Park Service and Forest Service account for the vast majority of receipts.



Second, park superintendents, forest supervisors, and other public land managers should be given more authority to set fees and spend the revenues they generate. Local managers should be able to easily adjust fees, whether to better compete with other outdoor recreation options, keep pricing in line with inflation, or otherwise. More flexibility in setting fees would promote experimentation in fee structures that could yield useful data, increase revenue that can support visitor services, and result in more equitable pricing by incorporating discounts for locals or other tweaks. Agencies should also consider implementing a surcharge for visitors from overseas, a common practice in other countries that could increase revenues appreciably.

When it comes to spending fees, agencies should trust local management. Oversight is imperative, and managers must be held accountable for their spending decisions. But increasing flexibility will allow the people closest to visitors to decide how to serve them. In some cases, that could mean that managers still decide to prioritize overdue maintenance. Yet clarifying that they may use fees for recurring expenses and permanent employees that enhance visitor enjoyment would also enable them to better use their local knowledge to benefit public land users—a clarification that’s even more important now that the Great American

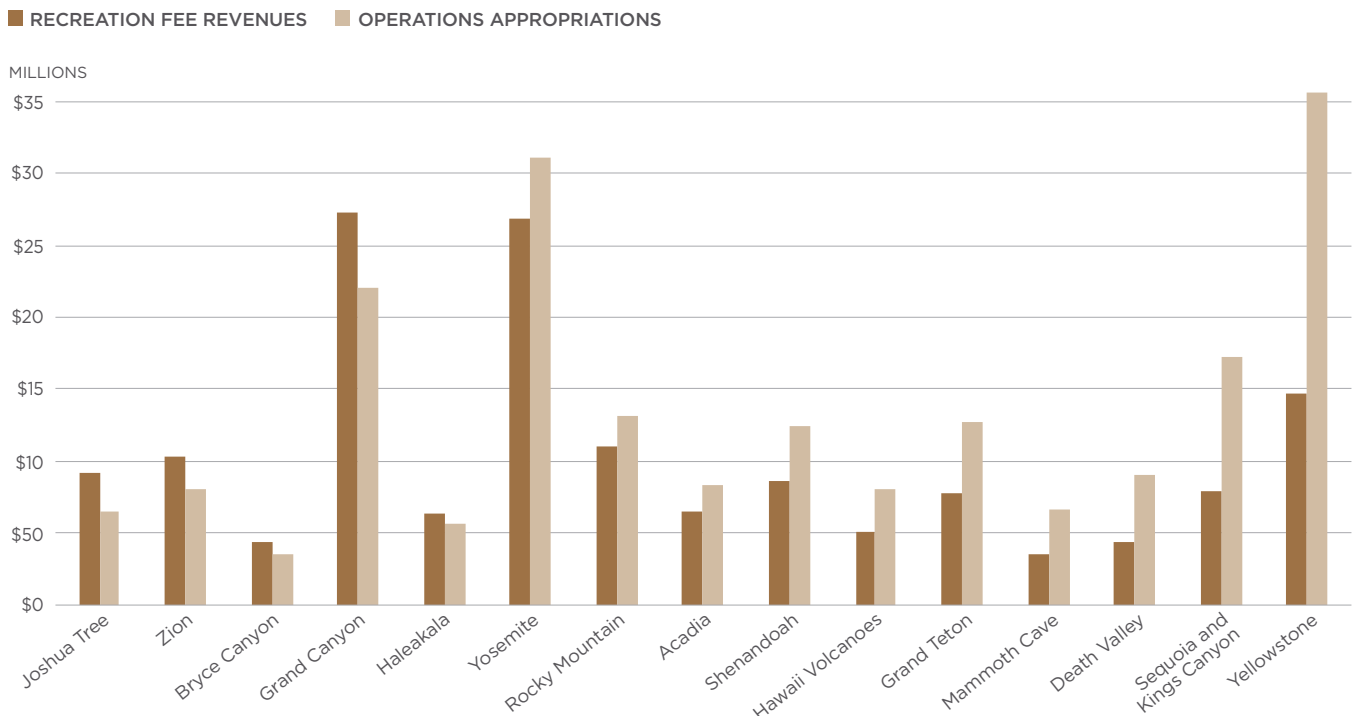


© Chris Moran, Travel Nevada

Outdoors Act will provide dedicated funding for overdue maintenance but will not support operational needs.

With public land visitation showing no sign of decline—even amidst the coronavirus pandemic Yellowstone National Park recently had its busiest September and October on record—fee revenues look to be a reliable source of funding for many federal sites in the decades ahead.

### RECREATION FEE REVENUES AND OPERATIONS APPROPRIATIONS AT SELECTED PARKS



In 2019, several parks generated more funding from fees than they received in congressional appropriations for operations.

### Issue #3: Energy revenues are not a reliable source to fund conservation and recreation in the 21st century

Federal energy revenues have long provided significant funding for conservation and recreation on public lands. Indeed, all of the funding for the Great American Outdoors Act comes from energy development on federal lands and offshore waters. Several factors, however, threaten the viability of relying on energy revenues to support such programs, demonstrating the need for alternative funding sources.

When it was established in 1965, the logic of the Land and Water Conservation Fund was to direct a portion of the revenues from extracting publicly owned resources—specifically offshore energy revenues—back into conserving public lands. Now, in addition to mandating full funding for the LWCF, the Great American Outdoors Act has created yet another program to draw down energy revenues: the National Park and Public Land Legacy Restoration Fund. For the next five years, the fund is authorized to receive up to \$1.9 billion per year from energy revenues that previously would have gone to the U.S. Treasury. The money will be devoted exclusively to deferred maintenance projects on public lands.

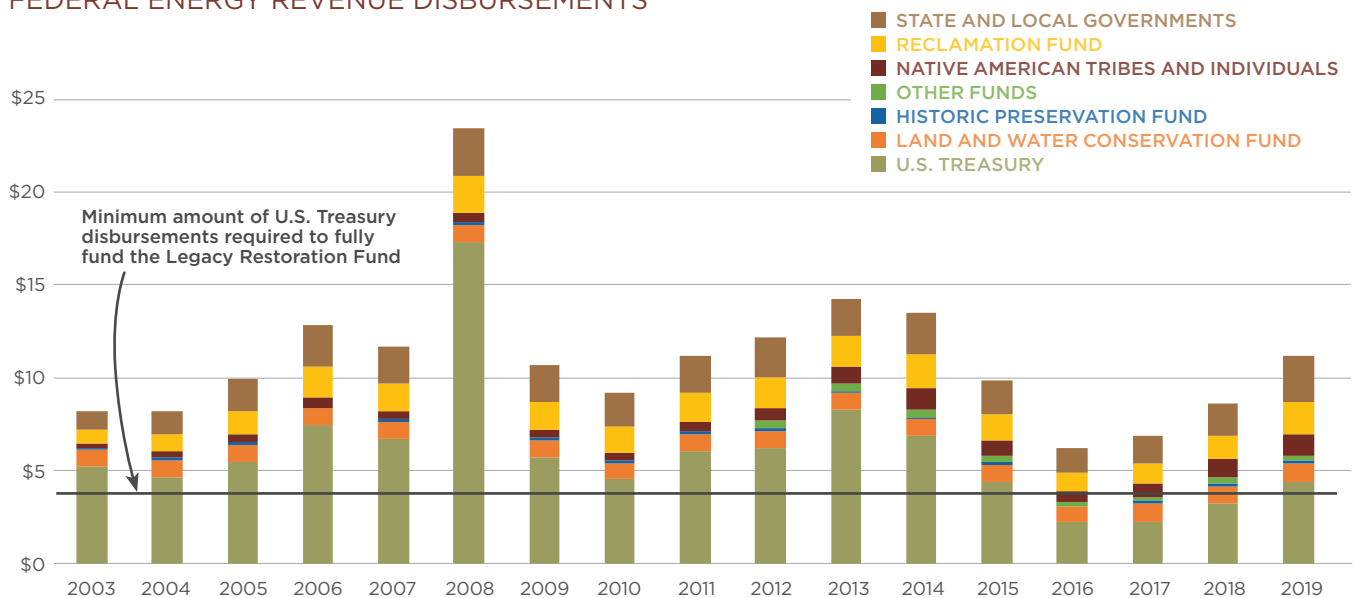
Beyond the LWCF and restoration fund, various federal programs and state and tribal governments already receive federal energy revenues, and more competition over the funds could

threaten the programs reliant on them. Other recipients include state and local governments, Native American tribes, the Reclamation Fund, and the Historic Preservation Fund. Additionally, legislators from Gulf States have pushed to keep more of the revenues generated in waters off their coasts. As long as federal energy revenues are flowing, legislators and interest groups seem likely to fight for them to fund their own priorities.

With such competition over the use of federal energy revenues, volatility in energy markets can have big effects on conservation funding. Case in point: Recent trends suggest it's possible energy revenues could be too meager to devote maximum funding to maintenance projects under the Great American Outdoors Act. According to our analysis, federal energy revenues in three of the past four years would have been insufficient to fully top up the restoration fund, primarily due to low oil prices. Low prices over the coming years could hamper its ability to address deferred maintenance on public lands.

Moreover, many policymakers have called for an end to new oil and gas leasing on public lands and waters, creating obvious challenges for the future of energy-funded conservation and recreation programs. In particular, recent calls to ban offshore oil and gas drilling—which generates roughly half of all federal

#### FEDERAL ENERGY REVENUE DISBURSEMENTS



In three of the last four years, unobligated receipts from federal energy revenues would not have been enough to fully fund the National Parks and Public Land Legacy Restoration Fund.



energy revenues—threaten the Land and Water Conservation Fund. Every major Democratic candidate for the 2020 presidential primary pledged to ban new fossil fuel drilling on federal property. As the eventual nominee, Joe Biden was clear on his stance: “No more drilling on federal lands,” he said in a March debate. “No more drilling, including offshore.”

Banning new fossil fuel energy leases would not immediately decimate energy revenues, but once existing leases expire, the effects on federal energy revenues would be significant. When it comes to offshore energy in particular, the National Ocean Industries Association estimates that if new offshore drilling were banned in 2022, it would reduce average offshore energy revenues by 61 percent by 2040, from \$7.0 billion to \$2.7 billion. If offshore revenues were to fall that drastically, then funding for the LWCF would be under threat.

Those who oppose fossil fuel development might point to revenues from renewable energy as an attractive way to replace the oil and gas money. But while renewables are poised to grow federal revenues in coming decades, even optimistic projections do not have them rivaling current fossil fuel revenues anytime soon. Solar and wind also face some of the same challenges as oil and gas, albeit in different magnitudes and contexts—impacts on wildlife habitat, uncertainty over environmental impact assessments, and “not-in-my-backyard” objections. In light of the challenges, conservationists, recreationists, and lawmakers would all be wise to explore alternative funding approaches.

Public land users are the most promising backers of public lands for the future. The growth of visitor revenues from recreation fees have already demonstrated how user-based funding can provide resources to improve the recreation experience at federal sites. But more could be done to complement or eventually replace the energy-dependent funding used today. At the state level, hunters and anglers already finance the lion’s share of wildlife conservation through purchases of hunting and fishing licenses and revenues from excise taxes on firearms, fishing tackle, boat fuel, and related gear. State fish and wildlife agencies use the revenues to increase outdoor recreation access, protect wildlife habitat, and fund similar purposes. And unlike the programs funded by energy revenues, there is no mandated annual cap on any of these user-generated funds, meaning growth in outdoor recreation translates into more funding for public land management.

The issues presented by the current model warrant innovative and creative ideas that would circumvent the short- and long-term concerns of relying on energy revenues. Policymakers should enlist the help of conservationists and recreationists to expand user-based funding models that can support future public land stewardship. A group with representation from

recreationists, conservation groups, outdoor industry, and related parties could weigh the trade-offs of various approaches and explore the most promising options.

## Finding another way forward

While the Great American Outdoors Act will bolster public land funding, it could also lay bare some cracks in the foundation. In the short term, mandating full funding for the LWCF and establishing the restoration fund will conserve habitat, promote recreation access, and help address maintenance needs. But more land acquisition through the LWCF also means more land to look after, and federal agencies already struggle to keep up with the current workload. Likewise, making a dent in the deferred maintenance backlog would be great progress, but if routine maintenance remains neglected, the fundamental problem will remain unresolved.

The act also reveals an often-overlooked paradox: Many conservation and recreation advocates oppose oil and gas drilling while supporting programs that are directly reliant on it. Eventually, unease over the bedrock funding source for these programs must be reckoned with. Conservationists and recreationists uncomfortable with the status quo have an incentive to reconsider where funding will come from in the decades ahead. Expanding or creating user-based funding models to support recreation and conservation on public lands could mitigate, at least in part, dependence on energy revenues.

Recreationists and sportsmen groups overwhelmingly supported the Great American Outdoors Act. The fact that it became law during a pandemic, in an election year, and amid an acrimonious and dysfunctional political atmosphere attests to the huge support for conservation and recreation among Americans. If policymakers and stakeholders are willing to search for creative solutions, that same spirit and support can help tackle the issues laid bare by the act, now and for future generations.



**Jack Smith** is a research assistant at PERC. **Tate Watkins** is a research fellow at PERC and managing editor of *PERC Reports*. This essay is based on a new series of policy briefs published by PERC.

**Read the full reports at [perc.org/outdoor-briefs](http://perc.org/outdoor-briefs)**





# THE DAM RENT IS TOO LOW

The city of San Francisco has benefited enormously from an outdated lease with Yosemite National Park over the use of Hetch Hetchy Reservoir. It's time to update the dam agreement.

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BY SARA A. SUTHERLAND

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The construction of O'Shaughnessy Dam a century ago created the Hetch Hetchy Reservoir.





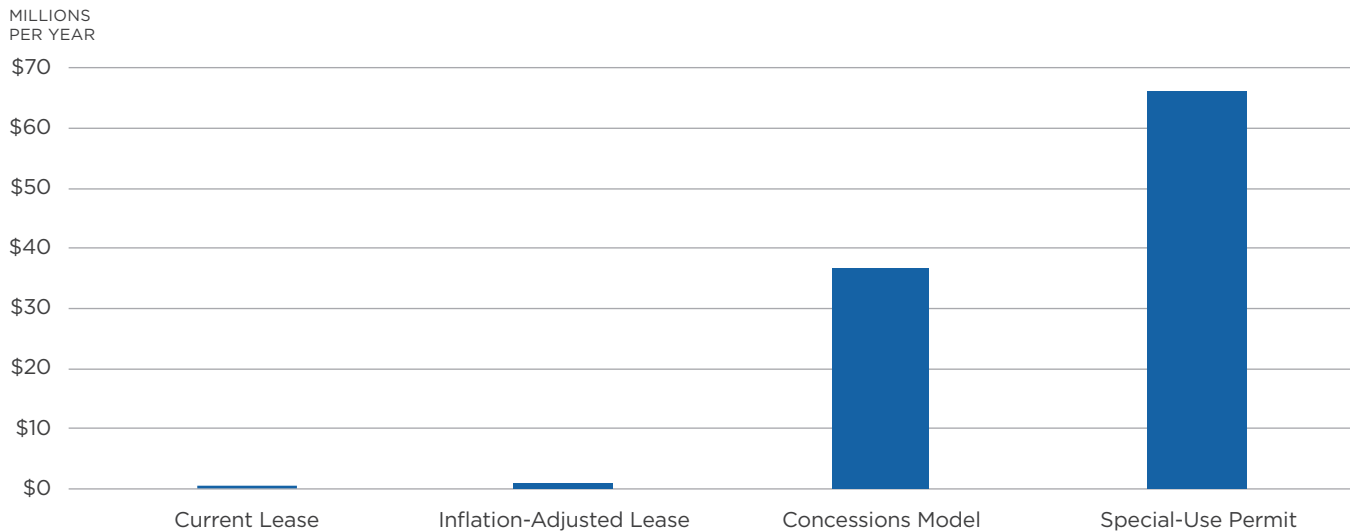
In 2018, the National Park Service proposed to move its Pacific West Regional Office out of San Francisco, citing the need to save money on rent and salaries in the notoriously high-cost city. There's an irony in the fact that the city's high costs prompted the agency to look elsewhere. For more than a century, San Francisco has benefited tremendously from an outdated, bargain-rate lease as the sole user of the dammed Hetch Hetchy Valley in Yosemite National Park, which supplies municipal water and generates electricity.

The existential debate over whether the valley should be dammed has largely overshadowed any discussion of whether San Francisco should pay fair compensation for its lease over the property. In a recently published *PERC Policy Brief*, I argue that Yosemite is saddled with an underpriced and outdated contract for the use of Hetch Hetchy, and I suggest several alternative options that could be used to update the agreement.

Yosemite is the fifth most visited national park in the country—and that visitation has taken its toll. It has the highest deferred maintenance backlog of any national park in the country, with \$646 million worth of overdue maintenance projects. The lease over Hetch Hetchy Valley could represent a source of funding to tap for maintaining and preserving public access to the park's scenic grandeur. Located entirely within the park, the valley provides San Francisco with water as well as approximately one-tenth of the city's power from hydroelectricity generated by the gravity-driven flow from Hetch Hetchy Reservoir.



## HETCH HETCHY REVENUE SCENARIOS FOR YOSEMITE NATIONAL PARK



Legislation passed in 1913 set the annual price paid by the city of San Francisco to Yosemite National Park to lease Hetch Hetchy Valley at \$30,000. It has remained the same ever since. Three methods present straightforward options to update the agreement. Adjusting the lease price for inflation would account for changes in the value of the dollar over past decades. Treating San Francisco as a park concessioner would generate revenue from a franchise fee. Setting the price equal to the recreational value of an undammed valley, as a special-use permit would require, would account for changes in the value of the valley over time.

In 1913, the Raker Act authorized the unprecedented dam inside the park and also set the fee that the city pays to rent the entire valley in which the dam sits: \$30,000 per year. It may be the worst contract in the history of the National Park Service. While the lease price has remained constant over the past century, the value of the valley has not. Yosemite today is exceptionally congested, and restoring the Hetch Hetchy Valley would increase both the quantity and quality of recreational opportunities available to the park’s 4.5 million annual visitors. A benefits-transfer study conducted by a consulting firm has calculated the potential recreational-use value of undamming the valley to be between \$1.7 billion and \$5.4 billion.

From the nearby urban perspective, the deal to bring water from Hetch Hetchy Valley to San Francisco has been an enormous boon. The city earns about \$440 million annually from the sale of Hetch Hetchy water to its own customers and other Bay Area municipalities. San Francisco credits Hetch Hetchy with enabling the city to make a \$678 million transfer to its general fund from 1978 to 2001 and providing \$151 million of cash-funded streetlights, city-owned solar panels, and similar energy investments. So while the city uses the proceeds of Hetch Hetchy to invest in green infrastructure and streetlights,

Yosemite struggles to maintain its roads, treat the wastewater from its visitors, and repair its bridges, buildings, and trails.

### SEVERAL OPTIONS

There is clearly a trade-off between keeping the dam and tearing it down. The former would continue to prevent recreation in the valley, while the latter would force the Bay Area to reassess its entire water supply. What is also clear is that under the current agreement, Yosemite, its visitors, and the American taxpayers who predominantly fund the park are all losing. In light of the situation, the annual lease price San Francisco pays could be adjusted to raise revenue to help maintain infrastructure inside the park, a move that would also be consistent with how national parks structure their concessions and special-use contracts. One of three methods could be used to update the lease between the city and the park and find a more equitable arrangement.

#### Method 1: Adjust for inflation

The simplest of the three proposed methods is to adjust the lease price for inflation that has occurred since the passage of the Raker Act. The 1913 fee of \$30,000 is equal to approximately



\$800,000 in 2020 dollars. While this method captures the change in value of the dollar—\$30,000 was worth a lot more in 1913 than it is today—it fails to account for the change in value of the valley.

### Method 2: Treat San Francisco as a concessioner

Private companies that offer services to national park visitors are known as concessioners. Concessioners typically pay a franchise fee, which is calculated as a percentage of their gross revenue. While San Francisco may not meet the traditional definition of a concessioner, the model presents a framework to estimate a portion of revenues from the city's Hetch Hetchy water and power sales that could be used to support Yosemite.

In fiscal year 2017-18, approximately \$440 million of San Francisco's total water sales can be attributed to Hetch Hetchy Reservoir. Furthermore, electricity sales attributed to the reservoir that year totaled approximately \$13 million, meaning that the city generated total sales of approximately \$453 million that could be attributed to Hetch Hetchy.

Yosemite National Park has existing concession contracts that use a franchise fee of 8 percent. If San Francisco were treated as a concessioner that paid the 8 percent fee, then the park would receive approximately \$36 million annually by allowing the city to benefit from its water resources in Hetch Hetchy.

### Method 3: Estimate the annual value of an undammed valley

The National Park Service is authorized to collect special-use fees for short-term activities—such as memorial services, community events, and weddings—that take place in parks. Such activities are governed by multiple agency rules, but they generally occur when the use provides a benefit to a specific group or individual rather than the public at large and the activity is not legally prohibited in parks. Although the damming of Hetch Hetchy Valley was certainly not a short-term event, it resembles a special use in that it does not provide benefits to the general public and is explicitly made legal by legislation. In some respects, the deal resembles a right-of-way permit, a particular category of special-use permit that allows a utility to pass through, under, or over park property.

The National Park Service provides a methodology that could inform an estimate of an appropriate fee for a right-of-way permit for the valley. Agency rules dictate that the fee charged should “reflect the fair market value of the use requested.” In this case, it can be estimated as the annual value of an undammed Hetch Hetchy Valley, which would allow for recreational use. That value has been estimated to be between

\$1.7 billion and \$5.4 billion by consulting firm EcoNorthwest using data on how much visitors value recreating in other areas of Yosemite. Using the low-end estimate of \$1.7 billion and a conservative discount rate of 3 percent yields an annualized value of \$66 million, which could be used to set the annual lease price.

### PAY THE DAM RENT

When the Raker Act passed, its proponents assured the public that the reservoir would bring not only a reliable water source to San Francisco, but also great public enjoyment. As of 2020, however, no bus service or other public transportation exists to access Hetch Hetchy Valley, and appeals to allow boating and swimming in the reservoir have been repeatedly denied. The public road to access Hetch Hetchy needs repair, and in 2016, after four years of drought, San Francisco covered the entire reservoir with floating black balls to protect water quality and reduce evaporation. Hetch Hetchy Reservoir, encompassing 2,000 acres of federal park land, has clearly been maintained for the benefit of San Francisco with minimal consideration of the wider public whose tax dollars—and, in the case of visitors, entrance fees—support the national park.

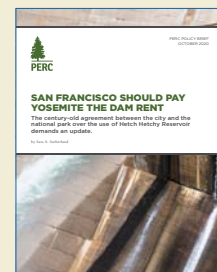
Yosemite's current discretionary budget is about \$30 million per year, and the park also receives other allocations for special projects and activities and generates additional revenue from sources such as recreation fees and philanthropic donations. A fairer contribution from the park's largest “concessioner” would greatly benefit the 4.5 million people who visit annually. It's time to update the century-old arrangement between Yosemite and San Francisco.



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Read more in “San Francisco Should Pay Yosemite the Dam Rent,” a new *PERC Policy Brief*.

Available at [perc.org/dam-rent](https://perc.org/dam-rent)



# Property Rights, Not Politics

Conservation pursued through markets and property rights is protected from shifting political winds

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BY JONATHAN WOOD

**I**n July 2017, employees from the National Butterfly Center—a 100-acre butterfly preserve in South Texas owned and operated by a private non-profit organization—discovered chain-saw-wielding strangers destroying habitat the group had carefully restored. The strangers were contractors hired by the Department of Homeland Security to clear the land in anticipation of border

wall construction. When the organization protested, it learned that the government planned to seize control over more than two-thirds of the preserve, destroy much of the habitat, and bisect the property with a border wall or fence. Facing the loss of its property and destruction of its conservation work, the organization did what many would do in the same situation: It sued.

In addition to claims under the National Environmental Policy Act and Endangered Species Act, the organization asserted the government's actions violated its constitutionally protected property rights. Last year, a federal court dismissed the case, and the butterfly center appealed. In October, the U.S. Court of Appeals for the District of Columbia Circuit revived the case, in







Construction equipment and materials near the site of the proposed border wall that would bisect the preserve.

part, and implicitly demonstrated why property rights are a firmer foundation than politics for conservation.

The D.C. Circuit affirmed the dismissal of some of the organization's claims because Congress has authorized the Homeland Security Secretary to waive various environmental laws for purposes of border construction, a decision that several courts have held is beyond any court's authority to question. But the D.C. Circuit held that the constitutional property-rights claims can proceed because neither Congress nor the Executive Branch can waive them. Consequently, the trial court will soon consider whether the government's entry onto and destruction of the organization's property was constitutionally legitimate.

The case is a helpful reminder of the risks of relying on politics to advance conservation—or other goals, for that matter. What one Congress, president, or agency gives, another can just as easily take away. The only political defense would be to win every election and control every agency at all times—a virtual impossibility. Where conservation is pursued through the free market or secure property rights, on the other hand, it is immune to shifting political winds.

We've grown accustomed to the fact that every four or eight years a new pres-

ident will set to reversing many of the major decisions of his predecessor, only to have his policies inevitably reversed by his successor. The scope of the Clean Water Act, for instance, has yo-yoed so much that basically no one knows what that law means.

Legislation is somewhat more stable because it requires an act of Congress to reverse. But even laws are not set in stone.

In 1978, the Supreme Court interpreted Congress' 1973 enactment of the Endangered Species Act as setting the protection of endangered species as the nation's highest priority—to be pursued “whatever the cost” to competing policy goals and regardless of its effect on people and communities. Whether this was actually the view of the 1973 Congress is debatable, but one thing is for sure: It was not the view of Congress in 1978, which promptly amended the statute to require consideration of economic and other factors and even authorized political appointees to okay the destruction of a species' last known habitat. Subsequent Congresses have delisted species legislatively or, as in the case of the border wall, authorized politically salient projects to proceed without any consideration of the effects on endangered species.

Conservation pursued through the market and property rights, however, is protected from shifting political winds.

The case is a helpful reminder of the risks of relying on politics to advance conservation. What one Congress, president, or agency gives, another can just as easily take away.

When the Supreme Court struck down the government's critical habitat designation for the endangered dusky gopher frog, for instance, it had no effect on the Nature Conservancy's efforts to conserve and restore dusky gopher frog habitat on its own private property in Mississippi. And, as the National Butterfly Center's case shows, when the government interferes with private conservation efforts, the Constitution's protection for property rights and private contracts provide ways to protect conservation values and hold interfering government actors accountable.

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