Making Private Lands Count for Conservation: Policy Improvements toward 30x30
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March 2022
Policy Paper

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Introduction

In January of 2021, the Biden Administration established a goal of conserving 30 percent of America’s lands and waters by 2030.¹ According to the US Geological Survey, only 12 percent of lands and 23 percent of US waters are currently permanently protected.² This includes wilderness areas, national parks and monuments, state parks, as well as some private lands under conservation easements. Getting to 30 percent would require an additional 440 million acres to be conserved in less than 10 years. At over 4 times the size of California, this is an ambitious goal.³

In order to achieve this goal Americans will need to conserve more than just public land. America has a long history of private land stewardship, as well as a track record of public policy tools that help create incentives for private landowners to preserve the public interest. These tools include direct payments for ecosystem services, tax breaks for providing desired conservation outcomes, and assurances against future regulation, to name a few.

The 30x30 effort has already recognized the importance of private land stewardship. In May 2021, the Biden Administration released its “America the Beautiful” report outlining key principles for achieving this goal. One of those principles is to, “Honor private property rights and support the voluntary stewardship efforts of private landowners and fishers.”⁴ Existing policy tools can help to achieve national conservation goals by working in line with this principle.

This policy paper does not focus on the mechanics of exactly how particular land is counted towards the 30x30 goal. Other experts have already authored several reports with recommendations for specific methodologies on how to do just that.⁵ The Department of the Interior recently opened a comment period to solicit feedback on how to develop the American Conservation and Stewardship Atlas to “reflect a continuum of conservation actions” in the 30x30 effort.⁶ In this paper, we focus on how to better leverage existing policy tools to get substantive improvements in conservation on private lands that contribute toward national conservation goals.

The paper begins by examining how and why private lands matter for conservation and then considers several key policy tools that could be better leveraged for positive conservation outcomes. These tools include conservation easements, conservation banking, the Conservation Reserve

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Program, and the Working Lands for Wildlife program. Although these are not the only tools for conservation on private lands, they are some of the most promising because they offer concrete ways to collaborate with private landowners to get measurable improvements in conservation.

Previous research has shown that private landowners are more receptive to incentive-based approaches to conservation than a regulatory approach.\(^7\) As a result, this paper focuses on tools that create incentives for positive conservation action by landowners rather than on regulations that prohibit harm to wildlife. This does not imply that regulation has no role to play in conservation. In fact, the incentive-based tools examined here benefit from having clear regulatory guide rails that allow them to operate. In some cases, these guidelines could be made clearer to allow for more effective implementation. Ultimately, the policy improvements suggested here will allow us to better leverage the valuable conservation potential of private lands by treating landowners as the valuable partners they are.

**Why Private Lands Matter**

Conservation on private lands can offer an important complement to protected federal lands across the United States. As shown in Figure 1, the federal government owns 28 percent of all land in the US, with most of that managed by the Bureau of Land Management, the Fish and Wildlife Service, the National Park Service, and the Forest Service.\(^8\) While not all of these lands are managed for conservation, many important conservation efforts take place here. One example was the controversial reintroduction of the gray wolf to Yellowstone National Park in the 1990s. Over the next few decades wolves repopulated across much of the West and were eventually removed from the endangered species list in several states.\(^9\)

Although federal lands are home to important conservation, private lands also have massive conservation potential. First, private lands are home to valuable habitat and biodiversity. The overwhelming majority of endangered species (95 percent) rely on private land for at least some portion of their habitat.\(^10\) Much of the nation’s water and forests are also located on private lands. Over half of all US forests are owned privately and, in addition to providing important habitat, these forests supply almost 30 percent of America’s drinking water.\(^11\) Over one-third of threatened and endangered species rely on wetlands, and 75 percent of US wetlands are located on private or tribal lands.\(^12\)

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In contrast, many federal lands were protected for their scenic beauty rather than their biodiversity. Recent research examined how well current protected areas in the US match up with the range of threatened and endangered species. It found that the placement of highly protected areas does not match up well with the range of species. Specifically, protected areas in 80 percent of ecoregions in the continental US actually offer equal or worse protection for endangered species than if their location had been chosen randomly.13

Private lands are also more at-risk of development than federal lands. Many federal lands are already protected from future development. Four federal agencies manage 95 percent of all federal land. While they each have slightly different mandates, all focus on balancing the use and protection of natural resources on the lands they manage.14 Private lands, on the other hand, also have significant conservation potential but do not have the same type of permanent protections against development. Private landowners also must balance the conservation potential of their land

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14 Vincent, Bermejo, and Hanson.
with financial incentives to sell their land to developers or develop it themselves. The Center for American Progress found that 75 percent of natural areas that were developed from 2001 to 2017 were privately owned.\textsuperscript{15}

Private lands are also crucial in preserving some of the most at-risk biodiversity located near urban areas. For example, research by USGS scientists has found that the southeastern US is home to exceptional biodiversity, including habitat for many rare species. At the same time, this region faces threats due to urbanization and climate change. In these areas, landscape-scale wilderness and national monuments may not be possible as they are shared with human development and activities.\textsuperscript{16} But creative policy tools can help us engage private lands in meaningful conservation efforts.

Finally, surveys in the academic literature have shown that private landowners want to be good stewards of their land, and many already participate in voluntary conservation efforts through government and non-profit partnerships.\textsuperscript{17} Efforts to reach national conservation goals will be more successful if they engage private landowners as valuable partners. The remainder of this paper will cover existing tools for private conservation by examining how they currently aid conservation efforts and how they could be improved.

**Conservation Easements**

One of the most commonly used tools for conservation on private lands is conservation easements. A conservation easement is the relinquishment of development rights by a landowner to an easement holder in the form of a legally binding agreement for the purposes of land conservation and preservation. The landowner (owner) gives up certain rights to their land, commonly mining, grazing, and timber harvesting rights, in exchange for financial compensation, either money from the easement sale or tax incentives from donating the easement.\textsuperscript{18} It is the job of the easement holder, usually a non-profit conservation group or government agency, to make sure their rights are not violated by the owner. If the owner begins to develop the land in ways not allowed for in the easement, the holder will need to seek some form of dispute resolution, which could result in a lawsuit.

Easements are the most common form of private land conservation. According to the National Conservation Easement Database, a public-private partnership between conservation groups and government agencies, there are nearly 200,000 conservation easements, totaling more than 32 million acres of land.\textsuperscript{19} In total, the cost of tax deductions for easements was $1.6 to 2.9 billion in 2016. For comparison, the National Park Service’s annual budget was $3 billion in the same year.\textsuperscript{20}


\textsuperscript{18} Bernstein and Mitchell.


Outside of the United States, easements are commonly used in most English speaking and Latin American countries, where they are called conservation covenants.\textsuperscript{21} Easements range in size from massive reserves encompassing entire landscapes, to small plots of land only a few acres in size. Their flexibility makes them an excellent way to include private lands in the 30x30 goals.

**How Conservation Easements Work**

Easements are a diverse conservation tool and can be crafted to achieve a wide range of conservation goals and provide benefits to both the owner and holder alike. Financial compensation for the owner can come in the form of a charitable tax deduction or cash purchases of the easement by a conservation group. While some owners may donate their land out of a sense of environmental stewardship, many are seeking some sort of tax relief. Property taxes can be significantly reduced by placing land into a conservation easement, which forbids any future development, and greatly reduces the land’s property value. Estate tax payment can also be reduced up to $500,000 by placing inherited property into an easement.\textsuperscript{22}

The most important tax incentive for owners is the charitable deduction on income tax. Depending on the value of the land, the easement could save the owner hundreds of thousands of dollars or more. Since a policy change in 2015, landowners who have donated a conservation easement can now deduct 50 percent of their income for a 15-year period. Farmers and ranchers in particular face an even greater incentive and can deduct 100 percent of their income for the same period. The policy also sets an upper bound in that deductions may not exceed the total value of the easement.\textsuperscript{23} According the Internal Revenue Code, in order for an owner to be eligible for the tax deduction, the easement must be perpetual, provide some public benefit and be donated to a “qualified organization” such as a government agency or non-profit organization, usually a land trust, which has the “commitment to enforce” the easement and “ability to protect” the conservation goals.\textsuperscript{24}

Easement purchases can be made by both governments and private groups alike. Land trusts, non-profit groups that hold the majority of conservation easements, such as The Nature Conservancy (TNC), may purchase easements to further their own private conservation goals.\textsuperscript{25} In 2019 TNC purchased several thousand acres of land in Eastern Montana around Matador Ranch, which is operated as a grassbank and wildlife reserve by TNC.\textsuperscript{26} Over the next several years, local farmers will have the option to buy back the land at a lower than market price in exchange for giving TNC conservation easements. The easements, which include a large wetland and habitat for


\textsuperscript{22} Bernstein and Mitchell.


many prairie species, will help conserve the northern mixed grass prairie habitat which is crucial for many important and disappearing species such as the Greater Sage Grouse and Prairie Dogs.27

Government purchases of easements are common when outright land ownership is impossible or undesirable. In the late 1990s, the City of New York purchased easements to build riparian buffers around its Catskill mountain water supply.28 In exchange for purchasing the easements and protecting its watersheds, New York was given a filtration waiver for its Catskill water supply, meaning water from the region does not need to be treated by filtration before consumption. The waiver, given by the Environmental Protection Agency, will remain in effect as long as certain water quality requirements are met by the city.29 New York also paid a portion of the owners’ taxes to help incentivize easement sales.30 Easement purchases like this are cheaper than purchasing land directly, thus saving governments money while also allowing them to achieve conservation and environmental goals.

Land management of easements varies greatly depending on the easement agreement. Some allow for limited land use by the owner, such as grazing, timber harvesting or a single dwelling, while others prevent all intrusive activity.31 The holder is responsible for making sure the easement terms are not violated by the owner. According to an analysis of easements conducted by Kiesecker et al., 92 percent of all easements have been checked for compliance within the last three years.32

Land management practices for a conservation easement are outlined in the easement agreement. Some agreements may call for the creation of a management plan—a document separate from the agreement that outlines land management practices. Plans separate from the agreement provide more flexibility, allowing for periodic updates by the easement holder as conservation goals change without the burden of renegotiating the entire agreement.33

**Benefits of Conservation Easements**

Since the creation of conservation easements in the 1990s, agreements have become more complex and less restrictive for landowners. A study by Owley and Rissman examined agreements from 269 different conservation easements and found that as easements have become more widely used, land trusts and landowners alike have learned what works best and now seek to include those requirements in agreements. Over time, land trusts have also become more likely to allow low impact activities, such as limited grazing or a single dwelling on easement land.34 "Decreased restrictions

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28 Bernstein and Mitchell.


31 Bernstein and Mitchell.


33 Rissman.

help make easements more attractive to landowners, allowing them to continue using their land in a limited capacity while it is used for conservation.

Easements are clearly an important tool for private land conservation. They require limited top-down enforcement and provide many financial benefits to landowners. Easements also give conservationists a cheaper option than direct land ownership, thus allowing them to conserve even more lands than ownership might allow. Easements are relatively flexible, often allowing for some limited land use by the owner as long as the terms of the easement are respected. This policy tool is not without its drawbacks, however. The next section examines some of the issues with conservation easements and how they could be further improved to help leverage private lands towards national conservation goals.

Challenges and Solutions

Perhaps the most controversial aspect of conservation easements is perpetuity.\textsuperscript{35} The US Tax Code requires easements to be perpetual in order to qualify for the charitable tax deduction.\textsuperscript{36} As a result, even though temporary easements are possible, they are rarely used in practice. Perpetuity has important benefits like protecting lands from development indefinitely, securing valuable habitat and removing any potential that conservation gains could be lost because a more profitable option arose. Of course, no legal requirement is truly permanent over a long enough period of time. But in practice, the perpetuity requirement of easements is binding.

Both conservationists and private landowners have difficulty navigating the perpetuity requirement. Conservationists worry that some lands may not be as valuable for conservation goals in the distant future, having been made unsuitable for their goals by climate change, natural disaster or increased development in surrounding areas. Landowners, on the other hand, worry about locking their land into an easement indefinitely, decreasing its market value and ruining any potential it might have for future profitable use.\textsuperscript{37} Owners and holders may both periodically wish to update their agreement, but perpetuity requirements make it difficult to change an agreement. Changes must be agreed on by both parties, and both owners and holders are often reluctant to open a perpetual easement up for renegotiation.

One option to alleviate the issue of perpetuity is the discretionary-consent clause. Usually outlined in the agreement or in management plans, discretionary-consent clauses allow easement holders to change which activities the owner can engage in depending on the easement holder’s conservation goals. The clause often sets guidelines for how land use authorization can be changed, what types of activities can be permitted or prohibited, and lays out standards for what constitutes unreasonable changes in permission.\textsuperscript{38} Discretionary consent gives owners and holders a more dynamic land use agreement that can be changed as the easement ages without sacrificing perpetuity or access.

Habitat leases are a relatively new policy idea, which functions similar to conservation easements but only last a short period of time. These leases could help solve the perpetuity problem. Agreements with private landowners would be funded by private conservation groups or public-private partnerships. Lasting from 10 to 30 years, habitat leases would allow lessees to adapt

\textsuperscript{35} Bernstein and Mitchell.
\textsuperscript{36} “26 US Code § 170 - Charitable, etc., Contributions and Gifts.”
\textsuperscript{37} Rissman.
\textsuperscript{38} Rissman.
which lands need to be conserved as goals change and give landowners the option to use their land for conservation without locking it into a perpetual easement. Although this idea is still in its infancy, some conservation groups are calling for its implementation to increase private lands conservation.  

Easement termination is also possible, but with little legal precedent the process is complicated. Current law requires that an easement may only be terminated when a judicial proceeding finds that the land has become “impossible or impractical” to use for conservation purposes. The law also states that a portion of any money gained by the landowner from the sale or development of the former easement land must be used for similar conservation purposes.

Other problems with easements stem from their management. While it is likely beneficial in some cases to simply sign an easement and leave it alone, one of the goals of 30x30 is preservation of biodiversity, which requires planning and purposeful management of conserved lands. A study by Kiesecker et al. found some of the conservation monitoring activities of easement holders were almost nonexistent. While most easements have a baseline habitat report and a clear conservation goal often outlined in their agreement or management plan, only 20 percent of easements examined in the study have regular quantitative measurements taken on environmental parameters. While this is likely a reflection of a lack of resources for scientific monitoring of easements, if easements are to help achieve conservation goals and preserve biodiversity, the habitats and quality of the land must be monitored on a regular basis.

A concern often raised by environmental justice advocates focuses on the difference between the conservation value of the easement as opposed to the loss in tax revenue from the charitable deduction. Deductions from easements cost American taxpayers between $1.6 and $2.9 billion in 2016, or about as much as the National Park Service annual budget. While this would not be a problem if the conservation easements provided similar value to the National Parks, a recent investigation by the Senate Finance Committee has found that many easements are simply syndicated tax shelters, providing the wealthiest Americans with a way of avoiding income tax.

People seeking to use conservation easements as a tax shelter will often purchase an interest in a business that advertises a certain tax break per dollar. The business will purchase cheap land without concern for its conservation value, hire an appraiser to inflate the value of the land based on potential mineral rights, donate a conservation easement and claim the newly inflated value for tax purposes.

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39 Yablonski; “Big Idea – Habitat Leasing – Critical Habitat for Wildlife in the West is Disappearing at an Alarming Rate,” https://westernlandowners.org/policy/habitat-lease/.


44 Looney.

their tax deduction.\textsuperscript{46} The bipartisan Senate Finance Committee report claims that by using this method owners gain on average $2 in deductions for every $1 used to purchase the land.\textsuperscript{47} In sum, this loophole cost taxpayers around $1.3 to $2.4 billion in 2016, a large portion of the total lost revenue from conservation easements.\textsuperscript{48}

Some actions have already been taken by the Federal government to alleviate this problem. The same Finance Committee Report called on the Internal Revenue Service to use stronger enforcement actions to go after syndicated conservation easements and highlighted the IRS’s current efforts to audit hundreds of syndicated easement businesses.\textsuperscript{49} While the Senate Report is a step in the right direction, more work needs to be done to make sure conservation easements are truly used for conservation.

A recent article from Burnett et al. highlights several policy options that need to be enforced or enacted to improve the conservation value and solve the syndicated easement problem. One simple policy change would be to include specific requirements for deed and easement agreements to qualify for the charitable deduction.\textsuperscript{50} The Agricultural Conservation Easement Program within the USDA, which already uses minimum deed terms in accepting easements, could be used as a model.\textsuperscript{51} The Pension Protection Act of 2006, which created the conservation easement deduction, specifies a fairly broad definition of qualified conservation purposes that includes “open-space” preservation.\textsuperscript{52} While preserving open space is important, this concept can be easily abused by syndicated easements. Amending this law to better clarify what conservation means could go a long way to limit that abuse.\textsuperscript{53}

Despite their drawbacks, conservation easements are an incredibly dynamic tool that can help America achieve its 30x30 goals. The US already has millions of acres of land in easements, and with a pre-existing organizational structure of land trusts, government agencies and nonprofits, it will be easy to increase the size of America’s total easement land before 2030. Before expanding the nation’s easements, however, steps must be taken to ensure that easements are used for conservation and not tax avoidance. Easements are attractive to both landowners and easement holders who can craft them to achieve many different conservation goals. In order to grow the number of easements, they will need to be made more attractive to landowners and easement holders by including more adaptive and flexible policies such as discretionary-consent clauses and management plans. Easement holders could contribute to the 30x30 biodiversity goal by improving their information gathering systems and providing academics with data they need to study the effectiveness of easements in achieving conservation goals.


\textsuperscript{47} US Congress, Senate, Committee, \textit{Syndicated Conservation-Easement Transactions}.

\textsuperscript{48} Looney.

\textsuperscript{49} US Congress, Senate, Committee, \textit{Syndicated Conservation-Easement Transactions}.

\textsuperscript{50} Burnett, Leshy, and McLaughlin.


Conservation Banking

Another promising but less commonly used policy tool for private conservation is conservation banking. Conservation banks sell land credits to developers whose project will have a negative effect on the habitat of an endangered species. Mitigation banks similarly preserve wetlands, but for the purposes of this paper only conservation banks will be covered. Conservation banking started as a state program in 1995 when California created the first program in the US.  

In 2003, the US Fish and Wildlife Service modeled its conservation banking policy after California’s in a memo titled “Guidance for the Establishment, Use, and Operation of Conservation Banks,” which still stands as the blueprint for all FWS banking policy. Under the Obama Administration the FWS began seeking a policy of “no net loss” of habitat for endangered species, encouraging conservation banking as a tool to prevent habitat loss for endangered species. The no net loss policy was repealed under the Trump Administration in an attempt to limit the bureaucratic requirements placed on the oil and gas industry.  

Despite the repeal of the no net loss policy, banks today still remain an important policy tool to include private lands in the 30x30 goals. As of 2022, there were 151 conservation banks across the US protecting nearly 250,000 acres of habitat for species. Although not nearly as large an area of land as conservation easements or public lands, banking stands as a promising way to turn land conservation into a profitable business model. One of the largest problems facing conservationists is finding ways to incorporate business into conservation goals without hurting their bottom line. Banks are one way that businesses could actually profit from conservation.

How Conservation Banking Works

Conservation banks were created to protect endangered species, with the purchase of bank credits as an option for developers to engage in compensatory mitigation. Compensatory mitigation is when developers offset adverse impacts to an endangered species. If a developer’s project will harm the habitat of an endangered species, the Endangered Species Act (ESA) requires them to file for an incidental take permit and pick one of three options for mitigation. Developers

60 “Endangered and Threatened Wildlife and Plants.”
may choose to engage in their own on-site mitigation, pay a fee to a qualified organization that supports the species in question, or purchase credits from a conservation bank protecting the species' habitat.  

Banks can be set up by any landowner, public or private, that enters into a banking agreement with the FWS. The land is then placed into a conservation easement and a bank is set up. Since it will need to be managed in perpetuity, its management funding must come from a non-wasting endowment, where the interest of the endowment pays for the operation of the bank. Once the bank is established, credits will be established and sold. Credits are mostly sold by acre (1 credit = 1 acre), but some may be sold based on the amount of land needed to support a breeding pair or, in the case of mitigation banks, a wetland area plus its surrounding watershed.

When developers need to buy credits, they try to find the best option that fulfills their compensatory mitigation requirements, which may include more than one species. Once the developer has found a conservation bank that fits their criteria, they will enter into negotiations with the bank and FWS to determine the actual cost and number of credits purchased. Credits can range in price from $3,000 to $125,000, but not all credits provide the same conservation value. Currently there is no set standard for determining the value of a credit, so the largest obstacle during negotiations is making sure that the value of the development impact equals the value of the conservation provided by the credit. Once all credits have been sold the bank is managed like a conservation easement, fulfilling its function as habitat for endangered species.

Benefits of Conservation Banking

Conservation banking as a tool for compensatory mitigation provides several benefits to conservationists, developers, and endangered species alike. Currently many adverse impacts to endangered species are mitigated on a case by case basis by the developer. Permittee responsible mitigation usually means that a small area of land is set aside and preserved or restored as habitat for the species in question. While this may sound like the most straightforward option, banks provide developers with a quicker and easier way to comply with mitigation requirements, having already set up the necessary habitat themselves. Bank credit purchases still must be negotiated and approved by the FWS but this is easier than restoring a habitat on-site in most situations.

Permittee-responsible mitigation requires that the developer invest resources into an area that is often too small to protect species adequately. Conservation banks eliminate this problem by providing a large area to support viable species populations. Banks can also hire the best specialists, centralizing expertise and improving land management practices, and thus species health, beyond what permittees would be capable of themselves. One of the greatest biodiversity benefits of banks is their potential to conserve the most important land from development. In other words, banks

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61 “Endangered and Threatened Wildlife and Plants.”
63 Fox and Nino–Murcia.
can be used to preserve keystone ecosystems, which support high levels of biodiversity, benefiting a species more than the developer's land previously did.\textsuperscript{66}

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**Challenges and Solutions**

Banking has many benefits but also faces several challenges that could be addressed to more effectively leverage private lands for national conservation goals. Restructuring some existing rules and encouraging the collection and publication of information about banks will go a long way to improve the current system.

The lack of publicly available data on conservation banks is the largest problem with the current banking system. Several academic journal articles on the subject of banks mention the lack of data as an issue.\textsuperscript{67} The current federal database, the Regulatory In-Lieu Fee and Bank Information Tracking System (RIBITS), maintained by the US Army Corp of Engineers serves mainly as a way to track credit exchanges between banks and developers. A cursory review of the database shows that bank profiles include contact info, species protected, and available and total credits; often lacking however, is any data on the number of species, quality of habitat or cost of credits.\textsuperscript{68} It is possible that some of this lacking information is recorded within the banking agreements but without public access it is difficult to know. Academic journal articles provide little help as well, as studies usually rely on time consuming and expensive methods of data collection, such as reading publicly available banking agreements or interviewing industry experts, which unfortunately still leave an incomplete picture of the state of conservation banking.\textsuperscript{69}

The lack of data is bad for both landowners and conservationists. Simply setting lands aside without basic data gathering may mean banks are not achieving conservation goals. Information leads to efficient markets, without it landowners seeking to turn their property into a conservation bank will have a difficult time knowing the current status of the banking market. Conservationists and academics can benefit from more information as well. Without data they cannot easily figure out if banks actually work to save endangered species or identify areas where they can be improved. According to Carreras-Gamarra and Toombs’ analysis of RIBITS only 47 percent of banks even have a baseline habitat report, much less keep track of actual habitat quality and improvements.\textsuperscript{70} Providing even minimal information on pricing structures and environmental statistics, such as species counts over time, could go a long way in allowing conservation banking to function more effectively.

Species credits, which are sold by conservation banks, are not all created or valued equally. One credit may represent an acre of pristine, undeveloped keystone habitat while another may represent a river embankment that was once degraded but has now been restored. Many banks are made up of restored habitat that was once used or negatively affected by humans and while restoration is a noble pursuit, the new habitat may not provide the same value as undeveloped habitat.

\textsuperscript{66} Fox and Nino-Murcia.
\textsuperscript{68} Fox and Nino-Murcia; Regulatory In-lieu Fee and Bank Information Tracking System (RIBITS).
\textsuperscript{69} Carreras Gamarra and Toombs; Fox and Nino-Murcia.
\textsuperscript{70} Carreras Gamarra and Toombs.
Academic research has compared the conservation value of restored habitats to untouched habitats with mixed results. One study by Shelley Burgin provides an overview of wetlands restoration in the US, finding that restored habitat is not a “like for like” swap. Burgin finds this problem has resulted in decreased quality of wetlands across the United States.\(^{71}\) Other research suggests that restoration does contribute positively to providing habitat. Another study by McKown et al. looked at the development of a restored wetland over a 35 year period. It found that while there was significant difference between the restored and original wetlands, the restored wetland still functioned as a thriving diverse ecosystem that provided the same benefits as the native habitat.\(^{72}\)

In the case of mitigation banks, the US Army Corp of Engineers (USACE) attempts to compensate for the “like for like” swap problem by using a ratio method when evaluating banks. The ratio method establishes a lower value for credits from banks with restored wetlands than naturally existing preserved wetlands. This method requires developers purchase more credits from banks with restored habitat.\(^{73}\) However, it is unclear whether this method or any similar method is used consistently for conservation banks by the USACE.

Overall, conservation banks are a small part of America’s current land conservation strategy. However, as 30x30 is implemented, conservation banking could become an increasingly important way to leverage private lands for meaningful conservation outcomes. Conservation banks provide a way to tie conservation to profit, but the small scale of the system means there are still problems that need to be worked out. In early 2021, the Biden Administration ordered the FWS to conduct a review of its conservation banking regulations by January 1, 2022.\(^{74}\) As of February 2022, however, the review is still ongoing and gives the FWS an opportunity to provide greater clarity and guidance. To do so, the new rule should clarify the value of credits and establish a system for estimating their value, similar to the ratio method the USACE has developed for wetland mitigation banking.\(^{75}\) Standardizing the system will allow for it to grow and contribute to 30x30.

### Reverse Auctions and The Conservation Reserve Program

Reverse auctions are a form of competitive bidding where many sellers bid down prices to sell to a single buyer. In the case of conservation, this usually means landowners will offer conservation improvements to a government agency in exchange for dollars, with the landowners that provide the most conservation value per dollar winning contracts.\(^{76}\) Reverse auctions are used to achieve

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\(^{75}\) “Assessment Tools for All USACE Districts.”

a variety of conservation goals including lowering phosphorus levels in watersheds, planting cover crops in winter to encourage healthy soil, and setting aside marginal lands for conservation purposes.\textsuperscript{77}

One of the largest federal programs related to reverse auctions is the Conservation Reserve Program or CRP. The CRP is a federal program run by the Farm Service Agency that pays farmers to remove environmentally sensitive areas of their land from production. The program’s goals include preventing soil erosion, improving water quality and providing habitat for species. The CRP is a large program, and though the number of acres enrolled in the CRP changes from year to year, in 2019 over 20 million acres were conserved by the program. All agricultural lands with high soil erosion potential and those in state-designated conservation priority areas are eligible to enroll in the program.\textsuperscript{78} Figure 2 shows the location of CRP lands in 2010, today the distribution remains similar. The CRP has been successful in encouraging voluntary private conservation that could help us achieve the 30x30 goal.

Figure 2: Conservation Reserve Program Land Enrollment

\begin{figure}[h]
\centering
\includegraphics[width=\textwidth]{CRP_Enrollment_2010}
\caption{CRP Enrollment - 2010}
\end{figure}

Source: US Department of Agriculture


How the Conservation Reserve Program Works

Landowners who are interested in entering the program must enroll during the open enrollment period, though continuous enrollment is available for marginal grasslands and the most environmentally sensitive lands. Similar to a reverse auction, the Farm Service Agency (FSA) will rank the lands entered into Open Enrollment using the Environmental Benefits Index, which measures the land’s ability to improve air and water quality, increase wildlife habitat and the likelihood of benefits continuing after the agreement ends. Lands that give the highest conservation value per dollar are selected to enter into the program, though the amount of lands depends on the funds available for that year. In general the budget increases every year, with the 2022 budget for the program set at 2.3 billion (up from 1.8 billion spent in 2020).

Selected lands are placed under a 10–15 year agreement, where landowners receive an annual rental payment to use the land for conservation. Annual payments are based on the average productivity of soil in the area. The FSA will also help cover the costs of improving the environmental quality of the land, which can range from planting native grasses to the restoration of declining habitat. CRP agreements allow for emergency haying and grazing on the lands during years of bad drought, flooding or other natural disasters. Emergency access years usually result in a 10–15 percent decrease in payments.

Benefits of the Conservation Reserve Program

The Conservation Reserve Program has proven its effectiveness since its inception in the 1980s. Although the number of acres changes from year to year, the benefits of the CRP remain high regardless of how much land is enrolled. According to the USDA, the CRP has reduced soil erosion by 325 million tonnes per year on average; to put that into perspective, the Mississippi River, with the largest watershed in the United States, carries 550 million tonnes per year. CRP land also reduces flooding, limits the amount of fertilizer entering the watershed, sequesters millions of tons of carbon per year and provides habitat for wildlife. Achieving these water quality benefits only requires a small sacrifice in land use; according to a study by Yin et al. the benefits to water quality are achieved through only a two percent enrollment of land in a watershed.

Over the years the CRP has improved habitat for hundreds of species of marine animals, waterfowl, and grassland birds. The program is credited with halting the decline of Washington state sage grous populations in the 1970s and 80s. Even small increases in CRP enrollment have large...
effects on the wildlife of a region. According to a study from Western Ecosystem Technologies, just a 4 percent increase in CRP vegetation along ring-necked pheasant migration routes led to a 22 percent increase in the population.\textsuperscript{86} One study by Otto et al. found that honeybees heavily rely on the native wildflowers of CRP lands to make honey, pollinating other plants in the process and improving the overall quality of the entire surrounding environment.\textsuperscript{87}

Aside from the direct environmental benefits, the structure of the CRP is advantageous as well. The CRP infrastructure already exists on a large scale and could easily be expanded to include more lands. In the mid-2000s total enrollment in the CRP exceeded 35 million acres, meaning the USDA already has the capacity to handle much more land.\textsuperscript{88} While enrollment is voluntary and is inversely related to crop prices, the flexibility of temporary agreements allows the program to adapt as conservation needs change. The success of the CRP demonstrates how targeted protection of the most important lands with even small investments in conservation can return large benefits.

**Challenges and Solutions**

For all the benefits of the CRP there are still areas that can be improved. Although the beauty of CRP enrollment is its voluntary and temporary nature, there are some problems that come with this. Voluntary enrollment means that the amount of land in the program can fluctuate from year to year, and while this is not inherently a bad thing, it means that lands that need protection might not continue to be protected after the agreement expires. Fortunately, most farmers are willing to renew after their initial agreement expires. According to the Congressional Research Service, in 2007 when over 16 million acres was set to expire at the same time, nearly 83 percent of landowners accepted a two to five year extension.\textsuperscript{89} For those farmers that wish to leave the CRP, it may be possible to offer higher payments to persuade them or those with similar habitats to continue or enter the program and offset any land lost by farmers leaving.

The final issue with the CRP is that it is a government program. With an annual budget of $2 billion the program is already fairly expensive and most of that money is already tied up in annual agreement payments. Growing the program to include more lands will require increasing its budget, something Congress is not likely to do. One option may be to expand the CRP model through shorter term habitat leases. Private conservation groups and public-private partnerships could work to establish agreements to pay landowners to lease their land for habitat.\textsuperscript{90} Although this is a newer idea, the success of the CRP means a similar private program could be just as successful.

Another option is to improve and continue the Conservation Reserve Enhancement Program (CREP), a subsidiary program of the CRP which uses both federal and non-federal funds to accomplish the same goals. For example, the FSA has partnered with the state of Colorado to


\textsuperscript{89} Stubbs.

\textsuperscript{90} Yablonski.
support the creation of riparian buffers along the Republican River. Under this cost sharing agreement the state and federal governments each pay a portion of the incentive cost to farmers. The CREP successfully brings together federal, state and local governments with non-profit groups to identify problems and fund agreements. Networks like this could help alleviate funding issues while also leaving the decision of which lands to conserve to the locals that know the area best.\textsuperscript{91} These partnerships should be expanded to help get better conservation outcomes.

**Working Lands for Wildlife**

Working Lands for Wildlife (WLFW) is a federal program run by the Natural Resource Conservation Service (NRCS) that works to improve wildlife habitat for endangered and vulnerable species on privately-owned working lands. The program benefits landowners by providing regulatory assurances in exchange for landowners working to make their land more hospitable for species. Currently, WLFW has conserved over 7 million acres of land across the country, building habitat for species from the bog turtle in the Northeast to the Louisiana pine snake. The program operates in 48 states and covers 19 different landscapes by seeking to protect keystone species, which have been identified as indicators of an ecosystem's health.\textsuperscript{92}

**How the Program Works**

Landowners voluntarily enroll and select from a suite of land management options that will improve the quality of their land's habitat. Although the landowners receive financial assistance for conservation actions taken under the agreement, they also receive regulatory haven from any punitive actions that might happen under the Endangered Species Act.\textsuperscript{93} In other words, if their otherwise legal actions unintentionally harm the endangered species in their WLFW program, they will not be fined, as long as they are still following the proper conservation practices.

The gopher tortoise is a keystone species within the WLFW program. Gopher tortoises prefer longleaf pine forests with minimal undergrowth and deep soil that allows them to dig burrows up to 40 feet long that protect them from predators and extreme temperatures. These burrows provide shelter to over 360 other species. Gopher tortoise habitat, however, is under threat from increased development, fire suppression and overgrazing. With 80 percent of gopher tortoise habitat on private land, getting private landowners involved is required for their survival.

Landowners contracted with the NRCS can choose from several different options to improve gopher tortoise habitat on their land, such as prescribed burns, prescribed grazing or the planting of longleaf pines. Although the landowner will receive financial support for any conservation measures taken, the presence of an ecosystem that can support gopher tortoises also improves the quality of timber harvesting, providing an additional incentive for landowners to participate.\textsuperscript{94}


\textsuperscript{93} “Working Lands for Wildlife.”

Benefits of Working Lands for Wildlife

Working Lands for Wildlife is a win-win program, providing habitat to keystone species and regulatory haven to landowners. Much like the CRP, the voluntary nature of WLFW makes it an exemplar of cooperative conservation and an important addition to the options the federal government can use to achieve 30x30. Although not directly conserving lands like the CRP, WLFW encourages a change in land management practices, allowing landowners to still use the land as they see fit as long as it is within the confines of the agreement. This makes the program an excellent option for landowners who find the restrictions of conservation easements too limiting.

On top of this, the incentive side is substantially cheaper for the government. Rather than engaging in annual rental payments, enrollees are rewarded with regulatory haven, and although the cost of restoring or enhancing habitat is taken on by the federal government, this is a one-time expense. Removing the possibility of punishment has been shown to be an effective incentive for landowners who have endangered species on their land. The punitive aspect of the Endangered Species Act, which does not allow any take of endangered species, often prevents landowners from using their land in the most productive way. In the most extreme cases these punitive measures cause the frustrated landowner to kill the species and hide any evidence of its existence, in what is known as “shoot, shovel and shut up.” WLFW removes the punitive side of the ESA by removing the punishment for accidental harm to species if the land is maintained as habitat for the species.

Challenges and Solutions

The issues with WLFW are similar to those of the CRP. Enrollment is temporary and voluntary, which does not guarantee a stable amount of conserved lands. Although this makes the program a good alternative to conservation easements, it may be necessary to alter incentives based on conservation needs. Currently however the only incentive for landowners is regulatory haven. As time goes on and the number of species landscapes included in WLFW increases it may be necessary to offer different types of incentives.

Just like the CRP, WLFW is also a government program with a limited budget. Both politics and fiscal constraints prevent certain endangered species from being included in the program. For example, although the grey wolf was recently removed from the federal list of endangered species, it would have been politically difficult for the federal government to establish landscape scale wolf habitat enhancement programs with ranchers in western Wyoming who opposed the reintroduction of wolves to the area in the first place. Here is where private conservation groups could step in to accomplish similar conservation goals for politically controversial species like the grey wolf or less charismatic species like plants or invertebrates. A program from the American Prairie Reserve, America’s largest private nature preserve, uses camera traps to take images of predators on private land. The landowner is compensated for each image of a bear, wolf or other predatory species in exchange for allowing the species

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to peacefully pass through. In other instances where the government’s conservation goals are not met by providing regulatory haven, it may also be necessary to provide some form of financial incentive to boost the number of lands included in the program. WLFW lands are already an important part of America’s private land conservation and should continue to be in achieving 30x30.

Conclusion

Private lands in the US are an important piece of the conservation puzzle. This makes engaging private landowners a crucial step towards achieving national conservation goals. Efforts to conserve 30 percent of American lands by 2030 will need to fully engage private landowners in order to get positive outcomes for the environment. This is especially true for wildlife and endangered species that rely on private land for their habitat. Fortunately, policy tools already exist to help provide incentives for landowners to make their land more hospitable to endangered species.

The first way to make private lands count for conservation is simply to make sure that the valuable conservation efforts taking place across the country are counted toward the 30x30 goal as well as toward any future conservation initiatives. Past research shows that landowners want to be good stewards of their land and value conservation. Landowners have acted on this desire by enrolling in a variety of conservation programs offered by federal, state, and local governments along with enterprising non-profit organizations. This section provides a brief summary of how the policy tools examined in this paper could be leveraged for greater conservation outcomes in private land.

Eliminate syndicated conservation easements

Conservation easements create permanent agreements to prohibit activities that would harm a species or its habitat. Unfortunately syndicated easements provide little conservation value and are used only as a tax shelter. Although recent government investigations have exposed this problem more can be done. A few simple reforms such as establishing minimum acceptable deed terms or modifying the definition of conservation could help solve this issue.

Establish clear guidelines and greater transparency for conservation banking

Conservation banking offers a market-based approach to conservation in which credits can be purchased to offset the impacts of development that will harm habitat. These markets are still small, and clear guidelines from the FWS would help establish how credits should be allocated. Conservation banks could also increase transparency by providing more data on how they operate and monitor environmental outcomes. Both of these changes would provide clarity and encourage additional investment.

Expand partnerships with non-federal partners

Existing policy tools like the Conservation Reserve Enhancement Program and Working Lands for Wildlife rely on non-federal partnerships to provide incentives for private conservation. State and local governments as well as private conservation groups have valuable conservation knowledge. Private groups in particular can often take a more innovative and flexible approach to conservation. Policy makers should look for ways to expand these partnerships to scale the number of acres involved in meaningful conservation efforts.

Once 30 percent of America’s lands and waters are conserved, the work will be far from done. New challenges will always present themselves for how best to manage the mosaic of lands in the US and get positive conservation outcomes. The tools examined here can play an important role in involving private landowners in national conservation efforts. Policy changes that improve transparency, provide clear regulatory guidelines, and allow for flexible and innovative approaches will help ensure a bright future for conservation that benefits both people and wildlife.