NRCS and Investment Capital:
Investing in America Together

SEPTEMBER 2017

encourage capital[SM]

FOREWORD

In 2016, USDA's Natural Resources Conservation Service (NRCS) entered into an agreement with Encourage Capital to explore how NRCS might better use Farm Bill conservation funding to leverage private capital. This report is the culmination of many months of interviews, discussions and analyses that involved NRCS staff as well as external partners and stakeholders.

We stand at an interesting time in the history of private lands conservation in the United States. With all the successes that NRCS has helped achieve over many decades—substantial reductions in soil erosion, increases in no-till agriculture, de-listings and avoided listings of endangered and threatened species—we recognize that the agency does not have the resources to help all of the private farm, ranch and forest landowners that need assistance.

At the same time, we know that there is increasing interest in finding new sources of funding for private and working lands conservation. At NRCS, we support this interest insofar as it focuses on uncovering resources that can extend our mission of helping people help the land. At NRCS we take a broad view of the term conservation finance—we are interested in uncovering non-Federal resources that can be deployed on private lands to benefit rural economies and the environment. Impact investment, corporate investment, philanthropy, green bonds, municipal funding—all of these funding sources are welcome and needed to address the Nation's natural resource challenges on private lands. This report focuses on private capital and impact investment, but many of its findings apply to other funding sources, as well.

I want to personally thank Encourage Capital for undertaking this analysis. Their understanding of financial approaches and their willingness to take a deep dive into NRCS Farm Bill programs resulted in a cornucopia of interesting ideas—some of these are things that NRCS and our partners can examine immediately under current authorities. Others may be a bit more out there and be on a longer time frame. There are examples of NRCS projects and programs that currently leverage private capital in ways that are quite familiar to NRCS employees and partners are familiar with. There are other ideas in the report that will make NRCS employees and some of our partners and stakeholders scratch their heads and raise their eyebrows – a hallmark of any forward-looking thinking. Thanks to the team at Encourage Capital for helping us gaze into the future and visualize a new conservation paradigm, one that has the potential to scale natural resource conservation to heretofore unseen levels.

I've been around NRCS for over 40 years, and one of the only constants I have experienced is change. Since its inception, NRCS has been helping the Nation's farmers, ranchers and forest landowners manage their natural resources in harmony with agricultural production. How the agency has gone about implementing this conservation mission has changed substantially since 1935. For many decades, NRCS worked primarily through technical assistance, helping producers develop conservation plans and designing science-based practices that agricultural producers could implement on the lands that they own or manage. The 1950s and subsequent decades saw NRCS build over 11,000 small watershed structures. The late 1990s and 2000s saw remarkable increases, both in the number of NRCS Farm Bill programs and in the financial assistance we are able to provide to private landowners.

As NRCS has changed, so has agriculture. The availability of precision agriculture and terabytes of data, the growth in absentee landowners, the rising average age of the Nation's farmers and ranchers, and the emergence of great interest in corporate supply chain sustainability are just four examples of recent trends that provide both challenges and opportunities. As the Nation's largest private lands conservation organization, NRCS must be aware of these challenges and opportunities to be able to meet the needs of our customers.

All of this is to say that while some of the ideas in this report may strike some as perplexing or fanciful, we need to be thinking carefully about the future of private lands conservation. What NRCS does and how its Farm Bill programs work in 2017 does not necessarily presage how the agency and its programs will operate in the 2020s or 2030s. In NRCS's view, private capital has a big role to play in the future of private lands conservation. To the extent that we can leverage our Farm Bill funding with private capital interested in having a positive impact on private lands and rural communities, we need to be exploring those opportunities. I look forward to digging into this report and I encourage you to do the same.

Leonard Jordan
Acting Chief
Natural Resources Conservation Service

USDA United States Department of Agriculture
Natural Resources Conservation Service

ACKNOWLEDGEMENTS

NRCS and the report's authors would like to thank everyone who shared their time and ideas to ensure this report was a robust representation of the best thinking in the sector at this time.

This report has been produced by Encourage Capital who takes full responsibility for the report's contents and conclusions. While the many organizations consulted have greatly informed the content of this report, their participation does not necessarily imply endorsement of the report's contents or its conclusions. We are very thankful for their contributions.

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SUMMARY OF FINDINGS

Established as the Soil Conservation Service in 1935, the United States Department of Agriculture's (USDA) Natural Resources Conservation Service (NRCS) has in recent decades become the Nation's largest funder of conservation on private lands, which collectively represent 70% of our nation's land area and provide food and fiber for hundreds of millions of Americans and people all over the world. The conservation practices supported by NRCS not only protect our natural resources, but they are an investment in rural American economies, in healthy soils, and in the future of our country. The bulk of NRCS's financial assistance to farmers, ranchers and forest landowners derives from mandatory funding re-authorized every five years in the Farm Bill. As substantial as these Farm Bill dollars have become, **NRCS's funding alone will never be sufficient to address the persistent natural resource challenges that affect private lands, and each year the backlog of interest in NRCS programs grows.**

At the same time, interest in impact investment – investments intended to return principal or generate profit while also resulting in a positive impact on social and environmental issues – is surging, **bringing billions of new dollars into conservation investment.** However, reports by Encourage Capital, JP Morgan and other financial institutions have found that a lack of accessible, investable projects is a limiting factor in realizing the potential of this new source of conservation funding.

Taken together, these facts invite the question: **could NRCS use a portion of its funds to leverage private capital (and impact investment capital in particular) in order to achieve more conservation on the ground for each dollar the government spends?** This report argues that the answer is a resounding yes.

A review of the impact investment landscape and NRCS programs and authorities, as well as other government programs, has revealed that **there is significant potential for NRCS to leverage private capital** to drive more conservation on the ground and spur greater investment in rural America. Some opportunities exist under current statutes and authorities; others would require statutory changes. Overall, however, much can be achieved by simply changing the way these programs are conceived and implemented and by encouraging program staff to think about how government money could best be used to leverage private capital – all for the ultimate objective of more and better conservation on the ground.

The first step in thinking about how to best leverage private capital is to consider that conservation activities that provide a financial return on investment – and many do – present an opportunity for private investment to help finance these activities. Of course, not all conservation activities will lead to financial returns on investment, and it makes sense to use public funds and philanthropy to support the creation of societal goods where there is no other financial incentive to do so. However, **there is a subset of conservation practices that have the potential to generate a private financial return on investment,** practices such as water and energy-efficient irrigation improvements, nutrient management, transitioning to organic systems, and implementation of anaerobic digesters. **Conservation practices which provide a private financial return on investment can – and should – be financed at least in part by private capital, to allow more public funding to focus on projects with limited financial return that would not otherwise happen.**

While projects that generate a financial return should be attractive to investors, there are barriers to investment today that effectively discourage them from happening. Taking steps to **create the conditions for greater participation by third-party investors, particularly impact investors,** would go a long way toward attracting private capital to private working lands conservation, and allow for a greater number of conservation projects by combining private investment with public funding. Leveraging private capital, however, will in most cases require changes to the culture at NRCS, and may also require certain pre-conditions.

Here are five such conditions for NRCS, Congress, and agency stakeholders to consider:

1. **Help facilitate collection of economic data on implementation of conservation practices so that investable opportunities can be identified.** Having a significant quantity of high-quality data on the economics of conservation practice implementation could greatly facilitate the identification of investable projects and practices and enable more efficient allocation of public money. These data do not need to be collected or

managed by NRCS, but where possible NRCS may be able to play a role in encouraging and facilitating collection by appropriate parties (USDA's Agricultural Research Service (ARS) or Economic Research Service (ERS) or academic researchers, to name a few). Where such data may be sensitive, they may still be collected in aggregate to protect privacy or intellectual property.

2. **Shift from investing in conservation practices to investing, and enabling others to invest, in conservation outcomes.** Impact investors (and many philanthropists) prefer to invest in outcomes rather than practices. They want to see results on the ground and are less interested in how these results are achieved. This is seen not only as a way to increase the efficiency of the investments, but also as a way to increase innovation and help ensure conservation outcomes. Already, following various changes in policy and Presidential memoranda, the US government has begun exploring this concept of "Pay for Success." Additionally, to the extent that NRCS funding is used to address natural resources concerns, the agency's spending is already leading to direct outcome generation. NRCS should continue to pursue this approach since it could encourage greater private investment in conservation.

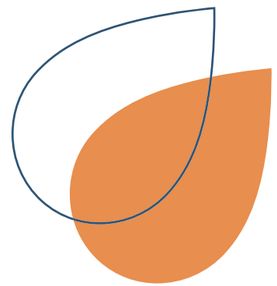
3. **Allow third-party investors to share in the return on investment from NRCS programs along with traditional program beneficiaries.** In order to leverage investment capital, NRCS should allow and encourage direct engagement with investors. Perhaps most importantly, this requires a cultural shift at NRCS to begin seeing third-party investment as an accelerator of private lands conservation and a force that can complement and extend the agency's mission of helping people help the land. Producers across the US are already accustomed to working with third-party investors either in the form of loan providers or equity investors. NRCS can encourage these relationships by allowing these parties to participate in NRCS programs alongside landowners. This is not a zero-sum game between investors and producers. In fact, engaging investors will not necessarily reduce the producers' benefits, and it could provide additional benefit to producers by reducing their exposure to risk and allowing them to undertake even more improvements. Investors, however, require a return on investment, so being comfortable with that return (while also ensuring sufficient safeguards for producers) is part of the cultural shift that needs to happen if more conservation is going to be achieved for each dollar spent. It must be acknowledged that there are real risks and challenges to engaging large investors and landowners in this way (risks that unscrupulous actors will take advantage of producers, among others); however, if done correctly this represents an opportunity to strengthen and expand the agricultural job market and rural communities in addition to supporting more conservation.

4. **Provide risk mitigation to bring the risk-adjusted returns to an investable level.** In some cases, projects are perceived (rightly or wrongly) to have too great a risk for a given level of return. As in other sectors with similar conditions, there are a number of ways that government can reduce the risk of investments to enable investors to participate where they otherwise would not. This is beneficial to government, as it allows for an outsized impact relative to actual spending, and it benefits investors and landowners because it makes deploying and receiving investment capital less risky. While some conservation opportunities may not require this intervention, there are many that likely do, representing a significant untapped opportunity.

5. **Reduce transaction costs, e.g. by aggregating small projects.** Investors are easily deterred by high transaction costs, and NRCS should work to reduce such costs where possible. These may include slow or time-consuming processes, challenges of coordination or lack of process alignment within and across different government agencies, uncertainty around timing of payment, and other friction in the process. All of this can make project development costs prohibitively high. To address these challenges, NRCS must streamline both its own processes and collaboration with other government agencies that are performing related grant-making in working lands conservation and rural development.

   Additionally, many NRCS conservation projects are, on their own, too small to be worth implementing for private investors, even when returns are high, given the high transaction costs. To facilitate greater private investment, NRCS must find ways to aggregate projects to an investable scale.

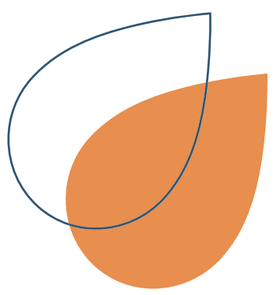
   Where opportunities to simplify and streamline are limited, more help may be required to overcome these barriers. NRCS should consider subsidizing project development, perhaps through its Conservation Innovation Grant program.



SUMMARY OF FINDINGS

Each of the programs examined in this report – Environmental Quality Incentives Program (EQIP), Regional Conservation Partnerships Program (RCPP), Agricultural Conservation Easements Program (ACEP) and Conservation Innovation Grants (CIG) – offer opportunities to better leverage private capital without any statutory changes. Additionally, there are a number of statutory changes that could open up additional potential for leveraging investment capital through existing NRCS programs. The Conservation Stewardship Program was considered out of scope for this report but may hold further potential for leveraging investment capital and merits future analysis.

A subset of **EQIP** projects are believed to generate financial value currently, which means that, with statutory changes, they could be carved out and aggregated for funding by private investors in the form of revolving loan funds or other investment vehicles. Under current statutes, a similar approach is likely possible using EQIP practices aggregated under RCPP.



ACEP is already successful in attracting investment capital for conservation, and there is potential to expand opportunities both with and without statutory changes. Three model concepts already in use were identified: 1) project developers combining revenue from environmental credits, easement payments and undeveloped recreation (e.g. private hunting land) to provide a sufficient financial incentive to put the land under easement; 2) NRCS using increased transparency on easement eligibility to reduce uncertainty and incentivize greater investment in conservation easements; and 3) investors acting as intermediaries to quickly secure available land for conservation and making it more affordable to farmers. These models could be expanded on today for greater impact, for example using credit aggregation for avoided conversion of grasslands. With statutory changes, investors could be certified as partners and program participants for the ultimate benefit of the farmers that both they and NRCS serve and the Adjusted Gross Income (AGI) limitation could be waived when it would achieve compelling conservation benefits.

RCPP already allows private entities to partner with agricultural producers and conservation partners to achieve conservation on a landscape scale, though funding recipients must still meet all eligibility criteria for the programs providing the funds (EQIP, ACEP, Healthy Forest Reserve Program (HFRP)) or seek a waiver, which can still be restrictive. To date, RCPP has been used successfully by corporate actors seeking to improve conservation practices within their supply chains (for example, by MillerCoors focused on water), by impact investors, and by conservation groups organizing landowners and others for large-scale projects. Potential RCPP models to explore include: 1) aggregation of small projects to investment-scale deals, 2) facilitating agreements for upstream conservation activity funded by downstream beneficiaries, 3) enable producers using conservation practices to unlock a higher return on their products through investment in mid-stream infrastructure (e.g. processing and transport for organic commodity crops), 4) monetization of underutilized co-products of conservation (e.g. taking biomass that would otherwise be burned and using it to generate electricity), and 5) engaging insurers to help fund projects such as watershed restoration that ultimately reduce their claim costs.

CIG currently functions as an incubator for conservation finance and credit trading concepts and has been used to fund work developing new standards for carbon credits via agriculture and grasslands, new credit mechanisms for river nutrient and temperature controls, and innovative financing solutions that value ecosystem services. It is, in a sense, the Research and Development arm of NRCS's conservation programs. The funding reduces the risk for businesses to explore different types of conservation investments and instruments. In and of itself, CIG leverages private investment only in the sense that organizations that apply for grants must also invest their own resources for their projects. The long-term impact of CIG on private capital may be much larger over time, however, as ideas supported by CIG spur the development of investment models and credit generating protocols that can attract significant private capital into conservation. CIG has the potential to be used more effectively as an incubator and accelerator of new financing models as well as new businesses, and it could even create a self-sustaining fund to provide ongoing support to successful CIG projects. This could help fund interesting ideas that are incubated within the CIG.

"As impact investors are currently limited by a shortage of investable projects, NRCS has the potential to create more opportunities for investors to engage in conservation projects while continuing to prioritize the needs of traditional program participants."

SUMMARY OF FINDINGS

New authorities for NRCS could create more opportunities for investment capital to fund conservation work through new investment instruments, lowering risk for investors, and exploring new roles for NRCS.

Producers, landowners, and supply chain actors interested in conservation often need access to more and lower-cost capital, as well as ways to reduce their risk exposure. As many conservation practices offer unproven financial benefits, traditional lenders may not be well-suited to offer financing, which offers opportunities for impact investors to enter the market. NRCS could consider creating new kinds of investable vehicles which would channel available funds to conservation projects (everything from farm-level to landscape scale), using direct loans or loan guarantees, issuing conservation bonds or using Pay for Success models. Within these vehicles, to better align risk with reward for investors, NRCS could offer various kinds of credit enhancement.

Given the statutory authority, NRCS could play a number of new roles that it currently cannot. NRCS could better support producers by helping with marketing, providing income recovery from conservation-driven losses, and by creating Individual Development Accounts targeting conservation. NRCS could also do more to support environmental markets and businesses innovating in conservation technology and services.

Participation in NRCS programs is impacted by exogenous factors such as tax policy, easement valuation protocols determined by Treasury, and by regulations defining commodities.

Farm Bill discussions should examine opportunities to adjust these outside factors to increase NRCS's long-term impact and to enable expanded participation in NRCS programs. Further, NRCS has opportunities to collaborate with other agencies within USDA such as the Farm Service Agency (FSA) and the Risk Management Agency (RMA).

Research for this report also identified a set of other improvements and enablers, which are provided as inspiration for further improvements to the administration of NRCS programs.

Specifically, two ideas came up again and again in interviews: better support matchmaking between potential program participants and raising the profile of NRCS programs through more outreach and marketing.

This report concludes that there is significant near- and long-term potential for NRCS to leverage private capital to accomplish more conservation on private lands.

As impact investors are currently limited by a shortage of investable projects, NRCS has the potential to create more opportunities for investors to engage in conservation projects while at the same time addressing needs of traditional program participants. While many of the ideas explored in this analysis require statutory changes, there is a robust list of opportunities that have the potential for significant increases in achieved conservation that could be implemented immediately. Allowing these changes would benefit farmers, natural resources, and investors, as they would promote a larger number of conservation projects that generate financial returns.

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CONTEXT AND PURPOSE OF REPORT

There is more money in private sector investment than philanthropy and government funding combined. And the difference is not minor: private capital is bigger than other types of funding by several orders of magnitude. The total value of financial assets worldwide was around $294 trillion in 2014 and is likely considerably more than $300 trillion today (this includes the value of major stock exchanges, as well as the value of loans and bonds outstanding),[1] compared with the United States government's 2016 budget of $3.9 trillion[2] and $390 billion of philanthropic capital (mission-driven, or non-financial-return-seeking capital) for all causes.[3]

Looking at funding specifically for conservation, around $40 billion came from government budgets and philanthropy worldwide in 2016.[4] Investors committed $2 billion to conservation in 2015.[5]

Within the category of impact investment capital, one analysis showed a cumulative total of $8.2 billion between 2004 and 2015 committed to conservation, and the level of impact investment is growing rapidly: in just two years, the total private capital committed to conservation investments jumped by 62%.[6]

As the number of impact investors focused on conservation opportunities grows, so too does demand for attractive and appropriate investments. In fact, conservation-focused investors reported that they had already raised $3.1 billion in private capital that they intend to deploy between 2016 and 2018. The biggest barrier to more investment in conservation cited by investors is the lack of accessible projects, specifically "high-quality investment opportunities (fund or direct) with track record."[7]

On the flip side, NRCS is currently one of the largest single "buyers" of conservation, with capital outlays each year of approximately $4 billion, including both financial assistance and technical assistance. And yet, each year the demand for NRCS programs far outstrips the available funding. For example, only about 30% of EQIP

[1] "Here's what the $294 trillion market of global financial assets looks like," last updated February 12, 2015, http://www.businessinsider.com/global-financial-assets-2015-2.
[2] "The Federal Budget in 2016," last updated February 8, 2017, https://www.cbo.gov/publication/52408.
[3] "Giving USA 2017 Infographic," last updated June 12, 2017, https://givingusa.org/see-the-numbers-giving-usa-2017-infographic/.
[4] "Conservation Bonds Take Green Financing to the Next Level," last updated December 4, 2014, http://impactalpha.com/conservation-bonds-take-green-financing-to-the-next-level/.
[5] Kelley Hamrick, State of Private Investment in Conservation 2016: A Landscape Assessment of an Emerging Market, (Washington DC: Ecosystem Marketplace, 2016), http://forest-trends.org/releases/p/sopic2016.
[6] Kelley Hamrick, State of Private Investment in Conservation.
[7] Abhilash Mudaliar, Hannah Schiff, Rachel Bass, Annual Impact Investor Survey, (New York: Global Impact Investing Network, 2016), https://thegiin.org/knowledge/publication/annualsurvey2016.

CONTEXT AND PURPOSE OF THIS REPORT

applications have been funded on average in recent years and the CIG program has a much lower funding rate closer to 10 percent.
This means that on the one hand, there is a growing interest from private capital in funding investment opportunities in conservation, but they face a challenge finding good projects. And on the other hand, NRCS is finding that the supply of conservation projects (a portion of which might be "investable") on private lands seems inexhaustible, given the shifting mosaic of land conditions, weather variability and ownership changes, and the continuous need for maintenance and rehabilitation. Today though, much of this need remains disconnected from interested third-party investors, even as their demand for investable conservation projects is growing.

The purpose of this report is to explore the opportunity at the crux of this paradox: how might NRCS leverage a growing pool of impact investment capital to increase the scale of private lands conservation? If NRCS programs were designed to better engage with impact investment capital, would it be possible to achieve more conservation on the ground per dollar of NRCS spending? Could it be possible for one or more NRCS programs to become self-sustaining over time, and no longer be dependent on continued federal appropriations? And by engaging outcome-oriented investors, might the overall impact of these conservation investments exceed the current level achieved through practice-based payments?

This report focuses on four NRCS programs, chosen for their likely relevance to the central question of the project: Environmental Quality Incentives Program (EQIP), Regional Conservation Partnership Program (RCPP), Agricultural Conservation Easement Program (ACEP) and Conservation Innovation Grants (CIG). CIG is authorized in the Farm Bill as a component of EQIP, but for all intents and purposes, is managed as a distinct program and is treated as such in this report. Beyond these, this report explores the potential for new authorities that might be established to further leverage private capital outside of these four programs. The Conservation Stewardship Program (CSP) and other NRCS programs were considered out of scope for this report but may warrant future analysis. See Figure 1 for further context on the programs in and out of scope.

This report is informed by over 60 interviews with current and former NRCS leadership and staff (national and state level), program participants including producers and partner organizations, program watchers, National Association of Conservation Districts staff, traditional investors, impact investors, and staff from other government agencies. Research and analysis of past projects and applications were also conducted.

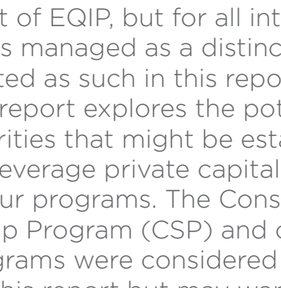
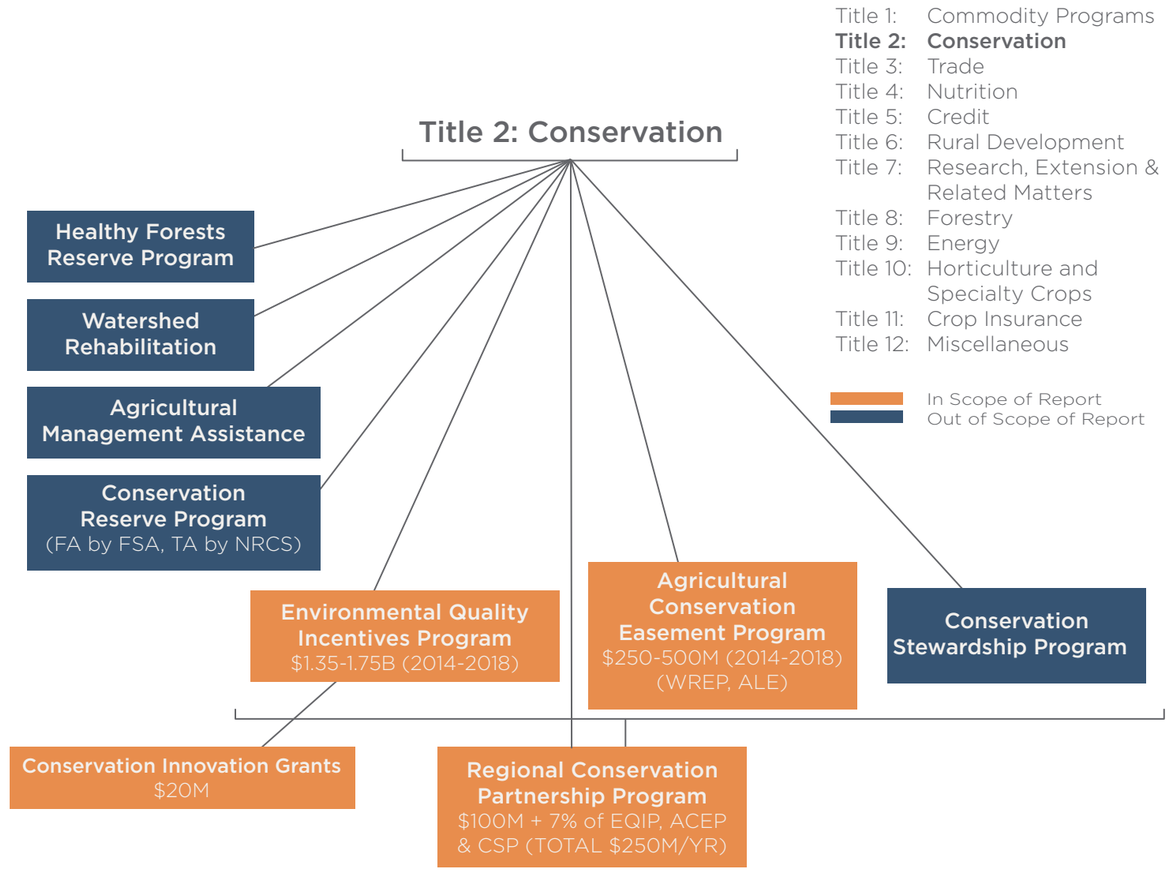


Figure 1: Farm Bill Funding for Title 2 Conservation Programs through NRCS



DEFINITIONS

In this report, **private capital** is defined as any non-governmental funds.

Investment capital refers exclusively to financial-return-seeking private capital. Investments are neither grants nor philanthropy, but rather capital outlays that will be repaid with a profit. Providers of investment capital include investors, foundations (through mission-related investments or program-related investments, not grants), banks, and money provided by corporations seeking some form of return (either financial, strategic, or reputational). The capital that landowners and producers put into NRCS projects can also be considered investment capital. For this report, however, we distinguish between investments made by the landowners themselves and those made by anyone else. "Third-party" investors are the focus of this report as they represent the largest untapped source of capital.

The term **investable projects** refers to projects that can expect repayment within three to ten years, are large enough in size to warrant the transaction costs financiers face, and can be replicated with relative ease. We use this term to distinguish between the conservation projects that can, under the right circumstances, be profitable versus those that might never be profitable.

At the other end of the spectrum is **philanthropic capital**, which is non-financial-return-seeking and may be provided by land trusts, individual donors, foundations (through grant-making), and charitable giving from corporations and NGOs. The difference between philanthropic capital and investment capital is that investment capital expects (though does not always get) a return on its investment whereas philanthropic capital never expects repayment (it is, in effect, a guaranteed 100% loss of the capital).

While the term "impact investment" is sometimes used very broadly, for this paper, **conservation impact investments** are defined as "investments intended to return principal or generate profit while also resulting in a positive impact on natural resources and ecosystems. In addition, conservation impacts must be the intended motivation for making the investment; they cannot be simply a by-product of an investment made solely for financial return."[8]

Working lands conservation is the use of conservation tools and practices on working agricultural, silvicultural and ranch lands in a way that maintains them as productive working lands; in other words, it does not seek to retire lands from production as a means of conservation, but rather modify the way the land is worked to achieve combined conservation and productivity goals.

Producers refers to agricultural producers, ranchers, and private forest landowners.

[8] Kelley Hamrick, State of Private Investment in Conservation.

THE NATURAL RESOURCES CONSERVATION SERVICE (NRCS)

Since 1935, NRCS, previously known as the Soil Conservation Service, has been working with farmers, ranchers and forest landowners across the country to help them boost agricultural productivity and protect natural resources through conservation. NRCS provides a combination of financial assistance and technical assistance to program participants, who, in almost all cases, must also provide a financial contribution to their projects. NRCS's annual budget is approximately $4 billion, making it one of the largest single buyers of conservation in the world. NRCS projects are not only conservation efforts to help solve natural resource challenges—they are also investments in rural America and the economic well-being of American farmers, ranchers and forest landowners.

NRCS leaders and staff are deeply committed to the agency's mission to support and partner with farmers, ranchers and forest landowners to drive conservation on the ground, and the results speak for themselves. From 2009 through 2015, NRCS invested more than $29 billion to help private landowners and communities make conservation improvements, touching over 400 million acres nationwide. With NRCS's help, the New England Cottontail and Louisiana Black Bear were removed from the Endangered Species list, and a listing of the Greater sage-grouse was avoided.

Water bodies in Oklahoma have been removed from the impaired 303(d) list under the Clean Water Act. Coastal communities ravaged by Hurricane Sandy have received over $120 million in NRCS funding for floodplain easements.

NRCS funding for conservation is not only good for the environment, but it has proven to be of critical value to rural American economies. A 2012 report by the Outdoor Industry Association found that the outdoor recreation economy, including hunting, fishing, rafting and other activities directly impacted by conservation efforts, generated $646 billion in economic activity annually and directly supported 6.1 million jobs.[9] As a point of comparison, on-farm labor employs 2.6 million individuals and contributes $137 billion to US GDP annually.[10] The annual economic contribution of restoration is estimated at roughly $9.5 billion, including the direct employment of more than 125,000 workers.[11] Because on-the-ground conservation work is often labor intensive, investment in this work in rural areas has a significant impact on job creation, more so than other forms of infrastructure investment.[12]

Without disregarding these and other conservation successes, NRCS's annual budgets are insufficient to help solve the nation's persistent natural resource

[9] Outdoor Industry Association, "The Outdoor Recreation Economy" (Boulder, CO: Outdoor Industry Association, 2012), https://outdoorindustry.org/images/researchfiles/OIA_OutdoorRecEconomyReport2012.pdf.
[10] Economic Research Service of the USDA, "Ag and Food Sectors in the Economy" (Washington DC: United States Department of Agriculture, 2017), https://www.ers.usda.gov/data-products/ag-and-food-statistics-charting-the-essentials/ag-and-food-sectors-and-the-economy.aspx.
[11] Todd BenDor and others, "Estimating the Size and Impact of the Ecological Restoration Economy," PLOS ONE 10 (2015): 1–15, http://journals.plos.org/plosone/article/asset?id=10.1371%2Fjournal.pone.0128339.PDF.
[12] Ryan Richards, "Green Is Good: How Smart Policy Can Sustain Growth of Private Investment in Conservation," (Washington DC: Center for American Progress, 2017), https://www.cbd.int/financial/2017docs/smartpolicy-private.pdf.

challenges—soil erosion and degradation, eutrophication in many significant water bodies, groundwater depletions, drought, flooding, and the spread of invasive species, to name but a few. A growing body of research shows that conserving farmland is critical to stabilizing carbon emissions (because emissions from urban land are as many as 58 times higher than emissions from ag land),[13] however over 6.6 million acres of farmland were lost to development between 2009 and 2016, with one million or more acres lost each year for the last four years.[14] Further, forests and grasslands, which are also important carbon stores as well as providing other critical ecosystem services, are also declining, with 13% of American grasslands lost to conversion since 2009.[15] (Farmland is being converted for real estate development and grassland is being converted to farmland. In both cases, this represents significant negative carbon and environmental impacts.)

With the realization that federal funding alone is insufficient, NRCS has, over the past decade, supported environmental markets and conservation finance approaches to attract non-Federal funding to private working lands conservation. Largely through its Conservation Innovation Grants (CIG) program, the agency has been a leader in supporting the development of water quality, greenhouse gas and wildlife habitat markets. More recently, the CIG program has been used to fund the development of innovative conservation finance approaches, as well as the Conservation Finance Practitioners Roundatble, a forum in which practitioners can share insights about these approaches and how they are using them.

To support the establishment of environmental markets, NRCS and Colorado State University have developed credible software tools to enable outcomes-based conservation. For example, Monsanto, Ben & Jerry's, and other organizations are using the COMET greenhouse gas suite of tools. A similar conservation evaluation tool for water quality is under development. These tools estimate the impacts of working lands conservation practices, allowing users to better estimate the outcomes of conservation actions. In the proper context, the tools can be used to estimate credit generation in various environmental markets. The development and continued refinement of such tools are critical for impact investing, both for credit trading purposes and to help estimate the environmental impact of conservation investments.

These efforts are substantial, but CIG funding is limited and focused on providing opportunities to external partners to develop innovative financial approaches. Other than in a few instances, there is limited connection between these efforts and the potential for NRCS's Farm Bill programs to leverage private investment. And the difference in scale is substantial: whereas the CIG program awards approximately $20 million in grants every year, the other conservation programs of NRCS provide nearly $3 billion on an annual basis.

Most NRCS conservation programs stretch Federal support by engaging a range of different players who provide non-Federal capital for NRCS projects. The bulk of this private capital comes directly from private landowners in the form of matching funds for Farm Bill conservation projects (for instance, participation in EQIP, which is voluntary, requires matching cash and non-cash funding from producers). Other non-Federal funders including land trusts and foundations are partners in NRCS easement projects. Recent years have seen increased involvement by corporations, like MillerCoors and Ben & Jerry's, in supply chain sustainability efforts.

This report includes examples of projects that use NRCS Farm Bill funding to leverage some type of private capital investment, but again, these projects are generally single instances or the result of ad hoc partnerships rather than an intentional effort by the agency to engage with sources of private capital. Much more could be done to increase the amount of private investment leveraged by NRCS program funding.

[13] American Farmland Trust, "A New Comparison of Greenhouse Gas Emissions from California Agricultural and Land Use," (Washington DC: American Farmland Trust, 2015), https://4aa2dc132bb150caf1aa-7bb737f4349b47aa42dce777a72d5264.ssl.cf5.rackcdn.com/AFTCrop-UrbanGreenhouseGasReport-Feburary2015.Edited-May2015.pdf.
[14] National Agricultural Statistics Service, "Farms and Land in Farms: 2016 Summary," (Washington DC: United States Department of Agriculture, 2017), http://usda.mannlib.cornell.edu/usda/current/FarmLandIn/FarmLandIn-02-17-2017.pdf.
[15] World Wildlife Fund, "2016 Plowprint Report," (Bozeman, MT: World Wildlife Fund, 2016), https://c402277.ssl.cf1.rackcdn.com/publications/946/files/original/plowprint_AnnualReport_2016_GenInfo_FINAL_112016.pdf.

WAYS TO WORK WITH PRIVATE CAPITAL

Given that there is interest in finding ways for NRCS to leverage private capital, and since there is a growing amount of private capital interested in impact investments that both produce a return and achieve conservation, there would seem to be a remarkable opportunity for the interests of NRCS and impact investors to overlap. The question is how best to take advantage of this alignment of interests.

At the highest level, there are a number of different types of opportunities to use NRCS money to leverage private capital. These include:

- Allowing greater participation from investors in NRCS programs, through changes to eligibility requirements (including waivers of AGI limitations) and by creating new roles for investors within these programs (as recipients of funds as well as providers of funds).
- Encouraging and enabling private capital to invest in conservation projects that provide a financial return. This may include boosting returns or decreasing risk (or both), connecting investors with projects, and providing data to inform potential investments.
- Creating and facilitating markets for ecosystem services that enable the monetization of environmental benefits (e.g. carbon markets, mitigation banking markets, etc.), thereby attracting private capital investment.

These three categories of opportunity underlie, individually and in combination, all of the specific opportunities identified throughout this report.

Public Capital For Public Returns, Private Capital for Private Returns

To provide incentives for investment, the first step is to begin to think about what types of conservation projects might provide financial returns on investment. The reality is that implementation of conservation practices is often a "net cost." Installing a saturated buffer or grassed waterway, adopting a no-till approach, and improving manure handling, for example, all create public conservation value but likely will not provide any significant monetizable financial return on investment. In part, this is because many of the benefits of conservation are not properly accounted for in our economic system. They are, to use the economic term, "positive externalities." It therefore makes sense, and is likely necessary, to use public money to pay producers and landowners a portion of the cost of these practices as an incentive for them to generate public goods.

WAYS TO WORK WITH PRIVATE CAPITAL

There are, however, conservation practices that have a high potential for creating monetizable financial value in addition to public conservation value. For example:

- Implementing water and energy-efficient irrigation practices can reduce operating costs for the producer, which can be significant over time. In Arkansas, savings from reduced water usage ranged from $3 to 4 per acre per year for basic irrigation water management practices but went all the way up to $33 per acre per year for storage reservoirs and tailwater recovery ditches, and that does not even take into account additional energy savings that are possible as well. (See case study below.)
- In the right setting, nutrient management efforts can lower a producer's input costs without sacrificing yield, which improves a farmer's bottom line while providing environmental benefits and minimizing legal exposure. (See case study below.)
- Another profitable EQIP practice is transitioning to organic agriculture. Producers of organic crops can expect to be 22 to 35% more profitable than they were as conventional farmers at current premium price levels.[16] (See case study below.)
- Implementation of anaerobic digesters to convert animal waste into energy can pay for their initial investment within five to seven years under good conditions,[17] though in some cases the payback period may be closer to ten years.[18]
- Finally, environmental markets make it possible to monetize value from improvements in water quality and quantity, nitrogen reductions, air quality and more, depending on the location and available programs.

In short, there are many conservation practices that have the potential to provide an economic return on investment.

NRCS currently awards the same type of financial assistance and support to both those activities that generate financial return and those that do not. This is an inefficient use of government resources, as, from a purely economic perspective, producers should not need any external financial incentives to implement practices that pay for themselves within reasonable time-frames.

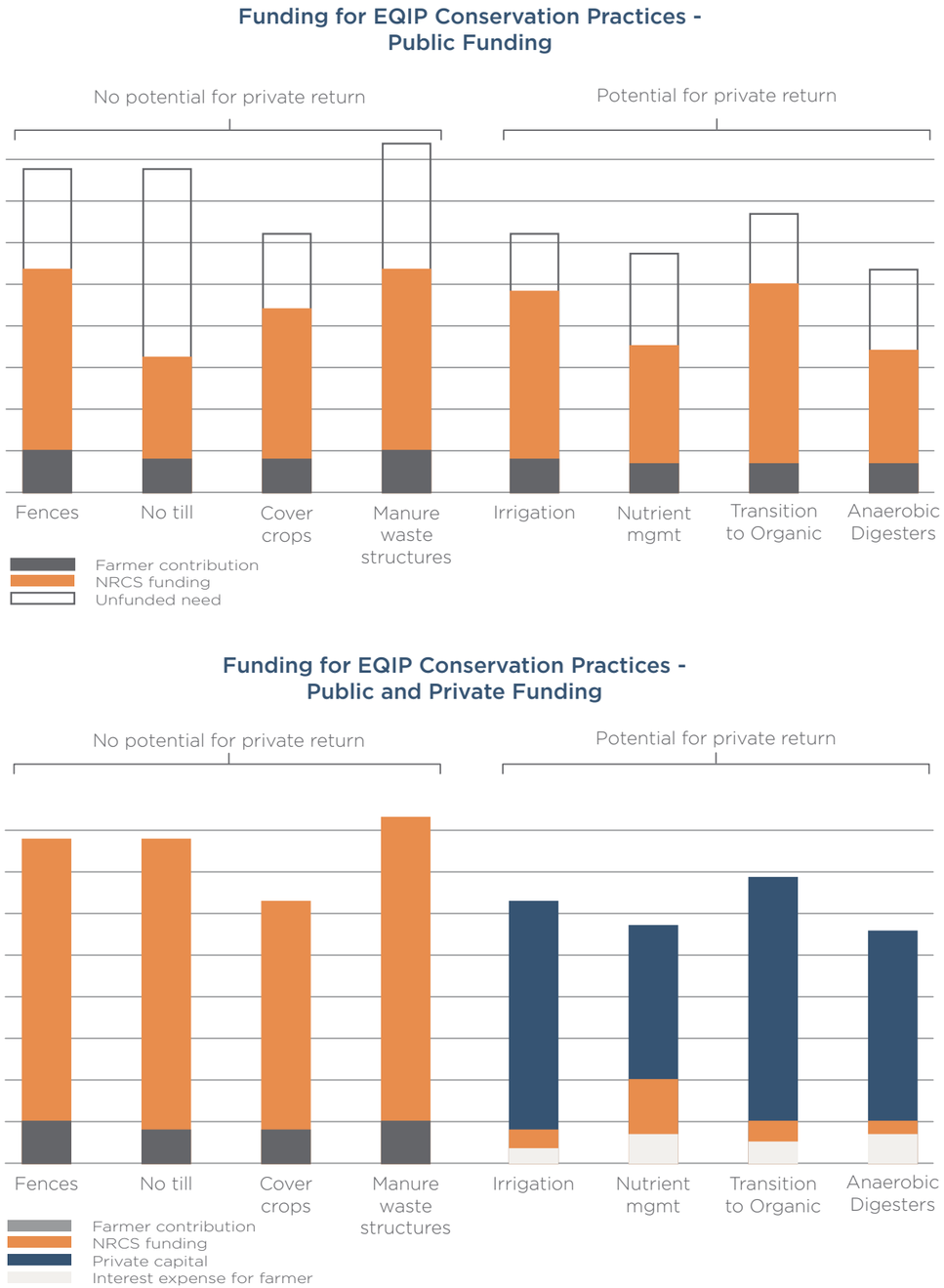
However, some producers are capital-constrained and may lack the available funds to finance a project's up-front costs. This is where private funding can play a role: projects at the right scale that generate a risk-adjusted financial return on investment over three to ten years are projects that private investors should be willing to take on. Further, deals can be structured so that farmers still retain a portion of the financial value the projects create, ensuring it is a win-win-win for producers, investors and society.

The advantage of deploying private capital to working lands projects that provide a private financial return is that a significant amount of public money is then available for investments where the public value outstrips the private value that producers and investors are unlikely to implement without financial incentives, such as riparian buffers and denitrifying bioreactors.

Figure 2 shows an illustrative example of how this might work. Currently, available funds are spread across all qualified conservation practices or funding pools, leaving worthy projects unfunded every year. On average in recent years, only about 30% of the roughly 135,000 applications have received funding, though this can vary significantly over time. If private investment capital could be engaged to provide low-cost loans (for example) for projects that have a financial return on investment, it would allow funds that would otherwise have gone to these projects to be targeted instead toward "net cost" conservation projects. The net result is more conservation and more producers receiving support.

[16] David W. Crowder and John P. Reganold, "Financial competitiveness of organic agriculture on a global scale," PNAS 112 (24) (2015): 7611-7616.
[17] "A guide to financial incentives for AD," last updated August 25, 2015, http://www.letsrecycle.com/news/latest-news/the-financial-case-for-anaerobic-digestion/.
[18] "Funding On-Farm Anaerobic Digestion," last updated September 2012, https://www.epa.gov/sites/production/files/2014-12/documents/funding_digestion.pdf.

Figure 2: Illustrative Example of How Engaging Private Capital Expands Conservation Achieved

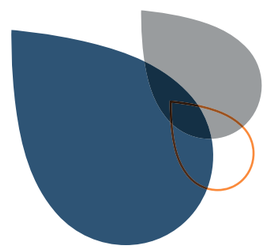


Note: Total NRCS funding (orange) is equal between these two graphics. The dark gray in the top graph is more than the sum of the dark and light gray in the bottom graph because the interest expense paid by farmers is expected to be less than what producers would have paid for their contribution in a traditional NRCS project. The overall amount of conservation achieved is higher in the bottom graphic, with unfunded needs met.

Case Studies: Conservation Practices That Provide a Return on Investment

Water- and Energy-Efficient Irrigation
In Arkansas, Alternate Wetting and Drying (AWD) irrigation methods are one way that rice farmers can reduce unsustainable draws on aquifers, while also reducing greenhouse gas emissions and even saving farmers money. "[AWD] can save up to $50 an acre on production costs that can reach $1,000 an acre—important savings in a low-margin industry that's seeing harder times," according to Dennis Carman, an adviser who is chief engineer and director of the White River Irrigation District in Hazen, Arkansas.[19]

Implementation of AWD is an eligible EQIP practice, so rice farmers can apply to NRCS for financial assistance to make the shift. But, as illustrated in the charts below, under certain conditions AWD is also more profitable than flood-irrigation methods for growing rice. For example, when the cost of rice is at the lower end of the range, and the cost of diesel fuel is at the higher end of the range, then AWD's reduced yield is less of an economic hit, while its lower energy use becomes a meaningful economic advantage (see Figure 3). If rice farmers are able to generate carbon offset credits for the methane reductions, this further improves the economics of AWD, seen in the expansion of the profitable range to include the red cells in Figure 3. If water were priced at the 'social cost of water,' then this would improve the comparative profitability of AWD even further given its reduced reliance on water, seen in the expansion of the profitable range to include the green cells.[20] Both a carbon offset credit and a social cost of water expand the profitable conditions even further, as seen in Figure 3.



[19] "How U.S. Rice Farmers Could Slash Their Emissions (and Costs)," last updated April 26, 2017, https://www.bloomberg.com/news/features/2017-04-26/rice-farming-is-a-big-polluter-in-arkansas-farmers-test-a-cleaner-way.
[20] Lanier Nalley, Merle Anders, Kent Kovacs and Bruce Lindquist, The Economic Viability of Alternative Wet Dry (AWD) Irrigation in Rice Production in the Mid-South, (Dallas TX: Working Paper Prepared for the Southern Agricultural Economics Association, 46th Annual Meeting Program, 2014).

Figure 3: Economic Viability of Alternate Wetting and Drying in the Mid-South

Profitability of AWD with Carbon Payments vs Flooding

Rice Price ($/bu)	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.50
Diesel Price ($/gallon)										
$3.20	5.22	-0.82	-6.93	-13.01	-19.09	-25.16	-31.24	-37.32	-43.40	-49.47
$3.50	8.56	2.48	-3.59	-9.67	-15.75	-21.83	-27.90	-33.98	-40.06	-46.13
$3.70	10.79	4.71	-1.37	-7.45	-13.52	-19.60	-25.68	-31.75	-37.83	-43.91
$3.90	13.01	6.94	0.89	-5.22	-11.30	-17.37	-23.45	-29.53	-31.61	-41.68
$4.10	15.54	9.16	3.08	-2.99	-9.07	-15.15	-21.23	-27.30	-33.38	-39.46
$4.20	16.35	10.27	4.20	-1.88	-7.96	-14.04	-20.11	-26.19	-32.27	-38.35
$4.40	18.58	12.50	6.42	0.34	-5.73	-11.81	-17.89	-23.96	-30.04	-36.12

Profitability of AWD with Social Cost of Water vs Flooding

Rice Price ($/bu)	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.50
Diesel Price ($/gallon)										
$3.20	5.22	-0.82	-6.93	-13.01	-19.09	-25.16	-31.24	-37.32	-43.40	-49.47
$3.50	8.56	2.48	-3.59	-9.67	-15.75	-21.83	-27.90	-33.98	-40.06	-46.13
$3.70	10.79	4.71	-1.37	-7.45	-13.52	-19.60	-25.68	-31.75	-37.83	-43.91
$3.90	13.01	6.94	0.89	-5.22	-11.30	-17.37	-23.45	-29.53	-31.61	-41.68
$4.10	15.54	9.16	3.08	-2.99	-9.07	-15.15	-21.23	-27.30	-33.38	-39.46
$4.20	16.35	10.27	4.20	-1.88	-7.96	-14.04	-20.11	-26.19	-32.27	-38.35
$4.40	18.58	12.50	6.42	0.34	-5.73	-11.81	-17.89	-23.96	-30.04	-36.12

Profitability of AWD with both Carbon Payments and Social Cost of Water vs Flooding

Rice Price ($/bu)	2.50	3.00	3.50	4.00	4.50	5.00	5.50	6.00	6.50	7.50
Diesel Price ($/gallon)										
$3.20	5.22	-0.82	-6.93	-13.01	-19.09	-25.16	-31.24	-37.32	-43.40	-49.47
$3.50	8.56	2.48	-3.59	-9.67	-15.75	-21.83	-27.90	-33.98	-40.06	-46.13
$3.70	10.79	4.71	-1.37	-7.45	-13.52	-19.60	-25.68	-31.75	-37.83	-43.91
$3.90	13.01	6.94	0.89	-5.22	-11.30	-17.37	-23.45	-29.53	-31.61	-41.68
$4.10	15.54	9.16	3.08	-2.99	-9.07	-15.15	-21.23	-27.30	-33.38	-39.46
$4.20	16.35	10.27	4.20	-1.88	-7.96	-14.04	-20.11	-26.19	-32.27	-38.35
$4.40	18.58	12.50	6.42	0.34	-5.73	-11.81	-17.89	-23.96	-30.04	-36.12

Note: Cell values indicate the difference between AWD profits and traditional flooding profits.
*Carbon payment is based on the amount of CO2e mitigated by switching from traditional flooding to alternative AWDS methods
*Social Cost of water is based on the amount of water (ac/in) saved by switching from traditional flooding to alternative AWD methods The social cost of water was estimated to be $0.472 per acre inch.

White cells denote those price combinations (diesel and rice) for which AWD irrigation was more profitable than traditional flooding

Orange shaded cells denote the price combinations (diesel and rice) for which the addition of carbon payments makes AWD irrigation more profitable than traditional flooding

Blue shaded cells denote the price combinations (diesel and rice) for which the addition of the social cost of water makes AWD irrigation more profitable than traditional flooding

Red shaded cells denote the price combinations (diesel and rice) for which the addition of both carbon payments and the social cost of water makes AWD irrigation more profitable than traditional flooding

Source: [21]

[21] Lanier Nalley, Merle Anders, Kent Kovacs and Bruce Lindquist, "The Economic Viability of Alternative Wet Dry (AWD) Irrigation in Rice Production in the Mid-South."

Case Studies: Conservation Practices That Provide a Return on Investment

Nutrient Management Practices

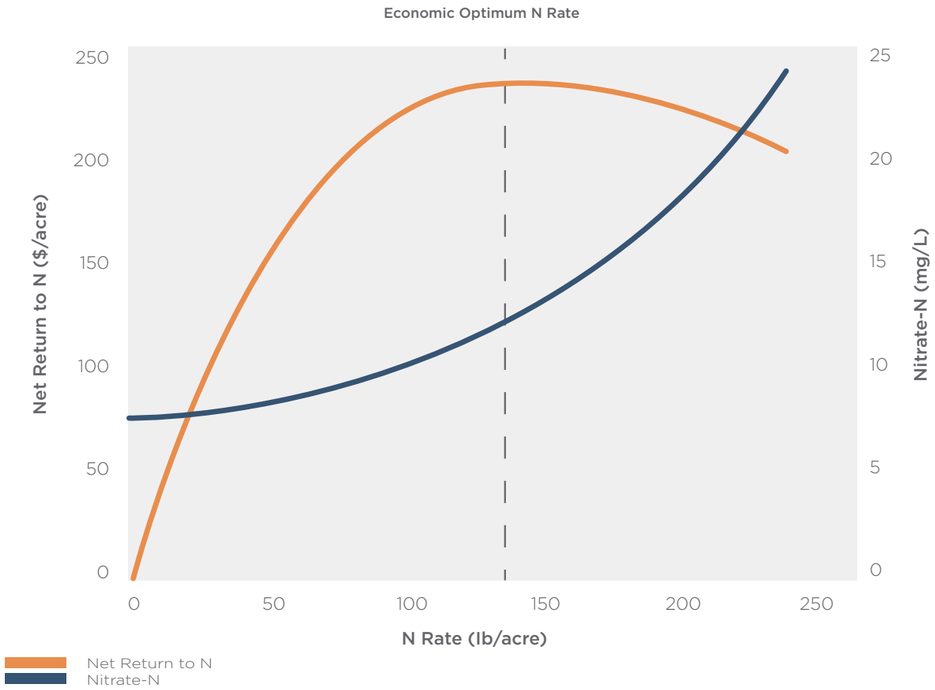
Crop yield-nutrient rate response curves can be used to determine the point at which adding more of that nutrient actually decreases the economic return on investment (nutrient application). This is illustrated for nitrogen in Figure 4, and similar curves apply for phosphorus.

Further, research has shown that there are times when the nutrient payoff function is flat, meaning that the farmer can vary the amount of a nutrient applied quite a bit with a negligible impact on productivity.[22] Determination of the optimal rate of some nutrients, such as nitrogen, can be difficult due to many factors. Due to this challenge, farmers do not want to chance under-applying nutrients and missing yield potential, so some farmers over-apply nutrients as an "insurance policy" to maximize yield. Improved data, tools, and technologies make it easier and more affordable for farmers to be more data-driven in their nutrient planning and applications. Nutrient management can help farmers lower input costs (nutrients, energy/fuel, labor) without sacrificing yields, providing both economic and conservation benefits (water quality, air quality). For a sense of scale, a very rough estimate of the economic benefits puts the potential savings per year from nutrient management practices at $10 to $75 per acre. NRCS currently provides technical and financial assistance for the implementation of improved nutrient management, which helps farmers find the balance that maximizes the value of their applied nutrients. Further, farmers can generate nitrogen credits based on their reductions in nitrogen usage, which might one day have value in environmental markets and further enhance the value of hitting the optimal nitrogen usage.

Transition to Organic Crops

The EQIP program covers practices that are part of a producer's transition to organic farming. Organic standards emphasize a number of conservation-focused practices, such as building soil health, enhancing nutrient retention (to minimize water quality issues), and prohibiting the use of synthetic fertilizers and pesticides.[24] Further, studies have shown that organic farming produces more biodiversity than other methods of farming.[25]

Figure 4: Example Economic Optimum N Rate for Corn



Source: [23]

[22] David Pannell, "Economic perspectives on nitrogen in farming systems: managing trade-offs between production, risk and the environment," (Melbourne, Australia: Proceedings of the 2016 International Nitrogen Initiative Conference, 2016) http://www.ini2016.com/pdf-papers/INI2016_Pannell_David.pdf.
[23] NRCS, NRCS Nutrient Stewardship, Chapter 10: Economics & Environmental Issues Module Background, (Washington DC: United States Department of Agriculture) http://www.nutrientstewardship.com/chapter-10-economics-environmental-issues-module-background/.

[24] "Organic Agriculture," last update date not noted, http://www.fao.org/organicag/oa-faq/oa-faq6/en/
[25] Gerold Rahmann, "Biodiversity and Organic farming: What do we know?" vTI Agriculture and Forestry Research 3 (61) (2011), http://www.fao.org/fileadmin/user_upload/suistainability/pdf/11_11_28_OA_biodiversity_Rahmann.pdf.

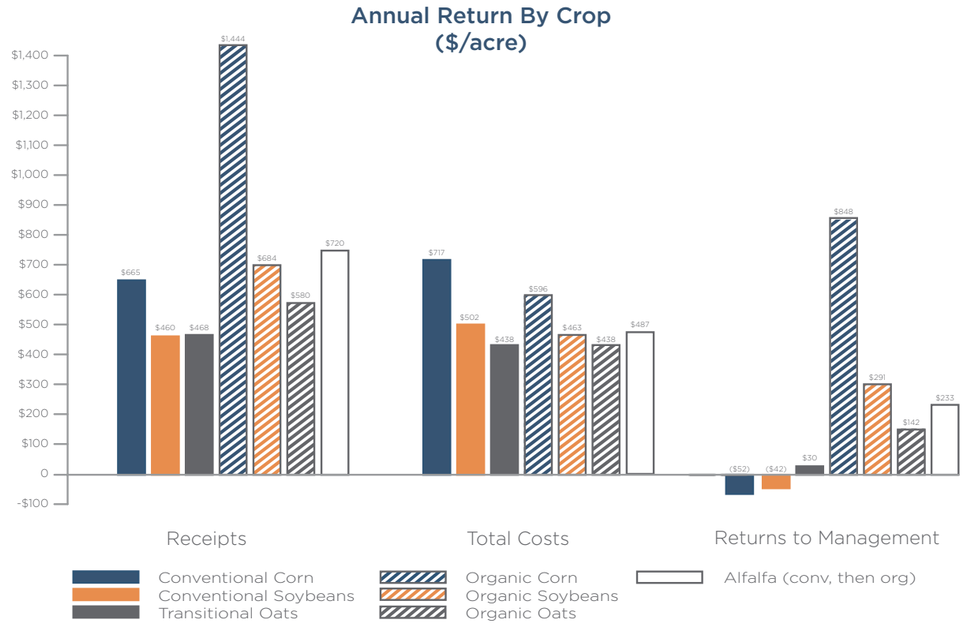
WAYS TO WORK WITH PRIVATE CAPITAL

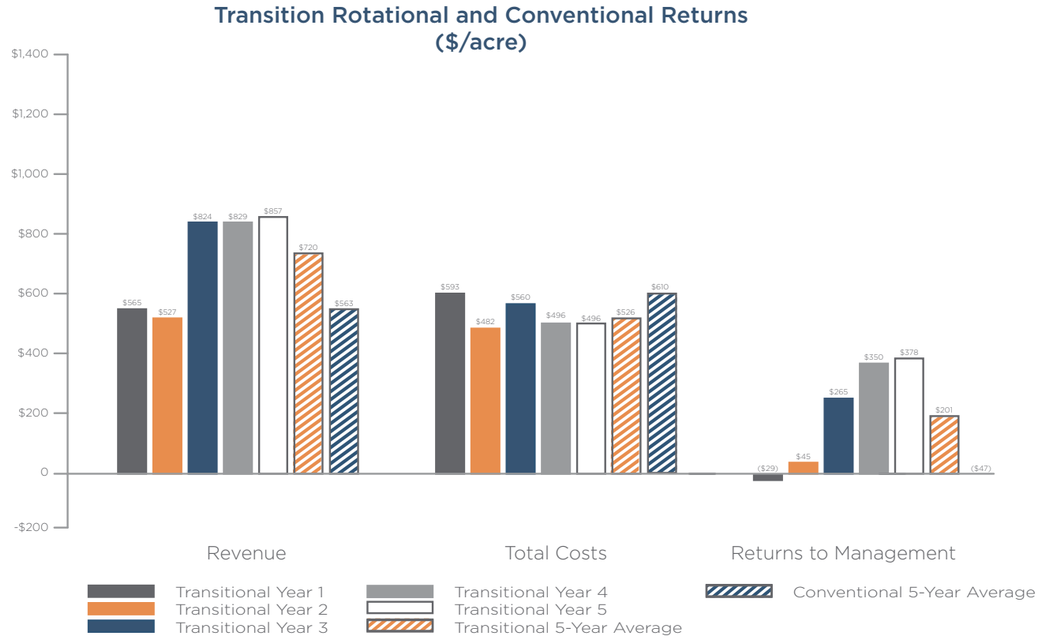
Case Studies: Conservation Practices That Provide a Return on Investment

A report from Iowa State Extension showed that organic farmers on a four-crop rotation generate $200 to $300 more per acre than conventional corn-soybean farmers. From an economic perspective, the higher organic prices and lower production costs more than make up for the decrease in yield that farmers often face during the three-year transition to organic farming.[26] This is not unique to Iowa: the results were borne out in a meta-study that showed that organic agriculture was 22 to 35% more profitable than conventional agriculture.[27] The transition to organic agriculture takes three years and requires meticulous planning and record keeping. Costs associated with the transition include certification, nutrient and pest management, and reduced yields with no price premium.[28] An example developed by Iowa State University Extension recommended a four-crop rotational plan that allows a farm to transition one field at a time and attain organic certification on all four fields by year six. The returns to management (net of costs incurred) are positive even in year one at $61.72 per acre, and they climb steadily to reach $521.01 by year five, with a five-year average of $303.53.

[26] Ag Decision Maker, "Making the Transition from Conventional to Organic," (Ames IA: Iowa State University Extension, 2009), https://www.extension.iastate.edu/agdm/crops/pdf/a1-26.pdf.
[27] David W. Crowder and John P. Reganold, "Financial competitiveness of organic agriculture on a global scale."
[28] Craig Chase, et al. "Making the Transition from Conventional to Organic," (Ames IA: Iowa State University Extension, 2008), https://www.extension.iastate.edu/agdm/crops/html/a1-26.html.

Figure 5: Organic Transition Rotational Returns vs Conventional Returns





Source: [29]

[29] Craig Chase, "Making the Transition from Conventional to Organic."

BETTER ALIGNING INCENTIVES FOR INVESTING IN SOIL HEALTH

The importance of soil health for both productive agriculture and conservation is well-established. USDA itself has said that, "Improving the health of our Nation's soil is one of the most important conservation endeavors of our time."[30]

While improving soil health typically requires an up-front investment from producers, healthier soils have been shown to both reduce economic risk and enhance productivity, while also resulting in environmental improvements. For example, no-till planting requires new equipment, but also typically results in lower fuel costs. Similarly, the seeds for cover crops represent a cost to farmers, but greater nutrient retention through the cover crop can improve yields while reducing input costs.[31] Improving soil health may also open up additional revenue streams: for example, farmers who have planted cover crops could have contracts to allow other farmers to graze their animals on this land, which further boosts the health of the soil, while generating a profit.[32]

There are two ways that current soil health incentives are not currently working to optimize investment in soil health. One is through the assessment of agricultural land value and the other is through the crop insurance program.

Soil health is not currently taken into account when determining the value of agricultural land. In fact, many of the tools currently used to value agricultural land, such as the Corn Suitability Rating 2 in Iowa or the high-tech Acrevalue tool from Granular, discount the internal and external benefits of conservation cropping systems.[33] This means that farmers who invest in building healthy soil will not be able to realize the full benefits of that investment if they need to sell the land for some reason. If land assessors were to begin to take current soil health into account when appraising the value of the land, it would provide both a greater incentive to farmers to invest in soil health and a clearer mechanism for monetizing the financial value of healthy soil. There are a few new land valuation methodologies being developed but additional research and modeling is still needed. Pioneering investors are already taking advantage of this market failure by buying farms with healthier soil at 'artificially' low prices and benefitting from their superior production as well as environmental market credits generated from their conservation value. Addressing this market gap by assessing land value based on its current soil health could better align conservation and economic value for all farmers.

The US Federal Crop Insurance Program (FCIP) provides financial support to farmers who suffer losses from severe weather and bad years of production. The FCIP is extremely complex, and a detailed analysis is beyond the scope of this report. That said, one concern that surfaced a number of times during the research for this report is that the FCIP does not currently take into account the use of conservation practices, which can end up effectively penalizing farmers who use them and rewarding farmers who do not. For example, a farmer who plants a cover crop one year will see his or her premiums rise due to a dip in yield even though he or she has effectively been investing in soil capacity. Critics argue that the FCIP is essentially subsidizing poor farming practices and discouraging responsible ones. If FCIP took conservation principles and practices into account in how it determined premiums and payouts, it could align incentives for conservation and responsible production — with an impact at a massive scale.[34]

[30] "Want Healthier Soil? Link it to Crop Insurance," last updated May 2, 2017, http://civileats.com/2017/05/02/want-healthier-soil-link-it-to-crop-insurance/.
[31] "Soil Health Institute Newsletter," last updated Spring 2017, http://soilhealthinstitute.org/soil-health-institute-newsletter-spring-2017/.
[32] "Why It's Time to Stop Punishing Our Soils with Fertilizers," last updated May 3, 2017, http://e360.yale.edu/features/why-its-time-to-stop-punishing-our-soils-with-fertilizers-and-chemicals.
[33] Delta Institute, "Market Drivers for the Illinois Nutrient Loss Reduction Strategy,"(Chicago IL: Delta Institute, 2017)
[34] "Want Healthier Soil? Link it to Crop Insurance."

Creating the Conditions for Engaging Investment Capital in NRCS Programs

In order to take advantage of the momentum on impact investing, NRCS and the Senators and Representatives that authorize the agency's programs, must be conscious of the ways that NRCS facilitates, or discourages, investment capital from participating in its programs. This report identifies five "conditions" that, while not strictly required for success, have a significant impact on the ability and willingness of investors to help complement NRCS funding.

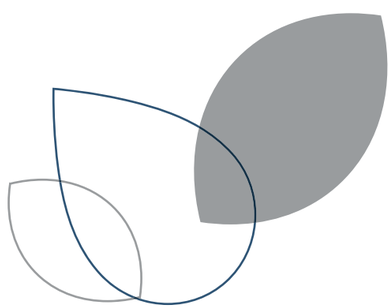
First, investors need more and better data on the economics of conservation practices. Some of this information exists, but more extensive, higher-quality data on the economic realities of implementing these practices across different agricultural sectors and geographies would allow for better informed decisions about which practices would be good candidates for alternative financing mechanisms.

Second, NRCS should consider enabling investment in outcomes in addition to practices. Investors like buying outcomes, rather than prescriptive practices, because this allows for those outcomes to be achieved in the most efficient way possible. This gives investors, as well as the producers doing the work, the best "bang for buck."

Indeed, outcome-based investment is now considered a 'best practice.' The Gates Foundation, the Hewlett Foundation, and other notable providers of philanthropic capital, focus on the results rather than the process: "From the outset of the grantmaking process, we work with partners to define the overall results we hope to achieve and the data needed to measure those results. We call this approach outcome investing."[35]

Third, to engage investment capital at scale, investors must be able to make a financial return on investment, which may seem, in many ways, at odds with NRCS tradition. Despite this, we believe that allowing such investment is in line with the heart of NRCS's mission: helping people help the land. This change simply recognizes that the type of help that people need varies based on the individual project.

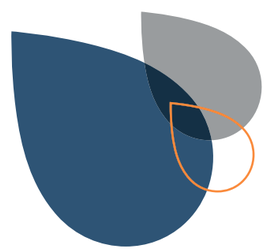
For the subset of projects that have the potential to generate financial returns, the required shifts are to allow investors to participate in creating those returns and to enable revenue sharing among appropriate parties. For example, third-party investors could be awarded a portion of the environmental credits generated through a project that they help fund, while the producer, rancher, or landowner retains some of the credits or the other conservation benefits such as reduced costs or improved yield. Once there is flexibility in the statutes, it will not be difficult to structure investment agreements that are beneficial to both landowners and investors. Indeed, farmers, ranchers, and forest owners are used to working with third-party investors or loan providers for operating capital—sharing profits and returns with investors is not a foreign concept to producers, but it is to NRCS.



Socializing NRCS staff to this new way of working is a key component of success. It would be necessary to reinforce that, by allowing investors to profit from NRCS projects, NRCS is able to achieve conservation results at scale and bring vastly greater sums of money into conservation than would otherwise be possible.

The investors who would be interested in working with NRCS are individuals or groups based all over the country, who are often focused on their local communities, ecosystems, or watersheds. These potential investors typically have a deep commitment to this country's agricultural heritage and natural resources and are motivated to use their investment capital to protect and support them, often but not always at the expense of some level of financial return. While impact investors have a range of expectations on the level of return they hope to realize, the most common level of return expected by not-for-profit impact investors, as reported in a recent survey, was 0 to 4.9% Internal Rate of Return.[36] Among for-profit impact investors, the bulk of capital – 64% – was committed with an expected a return of 5 to 9.9% Internal Rate of Return (IRR).[37] This is not particularly onerous and could still allow for substantial benefits to accrue to producers. It should be noted that banks, not included in the numbers above, may have different criteria and expectations. It should also be noted that those IRR rates were largely for real estate transactions which are inherently less risky than other types of transactions. Expected IRR will likely go up as the perceived level of risk increases.

Even with clear alignment on mission and investment goals, allowing investors to make a profit on capital invested to leverage NRCS programs may still create some cultural discomfort with NRCS staff and among Congressional staff and authorizers. This dynamic must be recognized and addressed if NRCS is going to effectively leverage investment capital.



[35] "How We Work," accessed June 23, 2017, http://www.gatesfoundation.org/How-We-Work.

[36] Internal Rate of Return (IRR) is a metric that measures the profitability of a project. The IRR is the rate at which the project breaks even.

[37] Kelley Hamrick, State of Private Investment in Conservation.

Fourth, when there are higher levels of uncertainty around investment opportunities, investors either require greater returns, or else they shy away unless there are tools that they can use to mitigate these risks. Mitigating risk is a familiar role for the Federal government. Federal agencies frequently take on the role of reducing risk in order to entice investors into new opportunities. The same mechanisms used elsewhere by Overseas Private Investment Corporation (OPIC), US Agency for International Development (USAID), and the Department of Energy (DOE), are needed to bring more investment capital into conservation. Credit enhancements, loan guarantees, buyer-of-last-resort for credits or products, insurance products, and other risk mitigation tools hold promise for expanding the investable pool of conservation opportunities.

Finally, investors have a low tolerance for high "transaction costs," or other friction in the process of getting a project developed and launched. Project participants interviewed described a number of specific transaction costs of working with NRCS including cumbersome application processes, uncertainty around timing of payments, lack of harmonization with other government agencies on related processes, and the reality of needing to put in quite a bit of time and energy before it is possible to get any sense of the chances of success.
Program participants – investors and others – find it challenging to navigate the various programs, benefits and requirements and to develop potential projects through the application process. NRCS would likely see more and better applications if it were easier for landowners to understand the conservation investment potential of their land and operations. NRCS could go as far as to provide funding or technical assistance support for potential program applicants to subsidize and support project development. At some point, this would no longer be necessary but it is likely needed at this stage of maturity. It might even make sense to use CIG dollars to subsidize deal development.

Two other potential resources to support project development are soil and water conservation districts and Resource Conservation and Development Councils. Conservation districts possess the local insight and leadership to help design investment opportunities. A number of districts are already engaged in environmental credit projects, and the National Association of Conservation Districts is interested in increasing capital flows to districts to support conservation and local economic development.

Resource Conservation and Development Councils (RC&Ds) work at the intersection of natural resource conservation and community development. RC&Ds are composed of local leaders and often play a financial role in communities through the provision of grants or loans to small businesses. This financial role and understanding highlights the function that RC&Ds could play as potential conservation finance project development intermediaries.

Table 1: Summary: Creating the Conditions for Increasing Private Investment in Conservation

Recommendation	How it facilitates investment	Implications for producers and landowners
1) Collect, analyze and publish essential data	Provides insight into actual economics of each conservation practice as implemented.	This increase reporting requirements (even though the data requested should already be getting collected) minimizing the burden on farmers wherever possible. Ensure that producers are comfortable sharing these data.
2) Focus on conservation outcomes	Enables efficient investment approaches, using the least amount of capital to achieve the desired conservation outcomes.	Emphasizing outcomes rather than practices allows farmers to choose the most efficient method of achieving the desired outcome, which should be viewed favorably. Measurement of outcomes can add cost and complexity, however, which must be managed. NRCS and government-supported quantification tools provide a standardized set of ecosystem service calculation methodologies.
3) Allow a return on investment	Investors require the ability (not the guarantee) to earn a return on invested capital.	While farmers would almost certainly prefer grants to loans, the alternate investment approaches proposed in this paper should ensure that farmers still benefit from the implementation of conservation practices.
4) Mitigate risk	Where data are limited and there is significant uncertainty, risk management tools enable investors to engage where they otherwise would not.	Risk management support from NRCS should make more projects and practices viable, allowing more producers and landowners to benefit from these programs.
5) Reduce transaction costs	Transcation costs erode financial returns, dimishing the attractiveness of otherwise viable projects. Reducing transaction costs makes more conservation projects investable for private capital.	Simplifying and streamlining application and implementation processes should also reduce the amount of time and effort that producers and landowners must contribute, benefiting them as well. The judicious use of technology to handle easy or repetitive tasks, or to aggregate information, can also help lower transaction costs.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

This section looks at each of the four programs that are the emphasis of this report (EQIP, ACEP, RCPP, and CIG) and identifies opportunities for investment capital to participate today. This analysis includes successful project models that could be replicated and explores potential new ways to use these programs. Opportunities for statutory changes that would allow increased leveraging of private capital also are identified.

A Note on Environmental Markets

Government plays a key role in creating the conditions for market development and maturity. This includes establishing rules and rights (and enforcing them), providing standards, and sometimes managing the new environmental currency (e.g. carbon credits). Government plays a unique and necessary role in the creation of new markets, which may require even further intervention in their early stages. To launch new markets, government often provides risk mitigation mechanisms and may take on "excess" risk in the market until enough historical data can allow for risk-adjusted returns. This can include taking "first-loss" positions, providing a price floor for a certain commodity, or acting as a buyer (or insurer) of last resort.

Environmental markets are designed to provide a mechanism for monetizing and transferring the value of conservation and other environmental benefits. Markets exist or are being developed for wetland mitigation, water quality and quantity, water temperature, nitrogen, wildlife habitat, carbon and more. Most environmental markets are not yet fully mature or robust, but they have on many occasions made the difference between a conservation project happening or not happening and they have the potential to play an even greater role in driving conservation on the ground as they get stronger.

While the carbon market faces an uncertain future and other environmental markets have struggled to gain traction, this paper presumes for now that markets will continue to exist and function at current levels. From this foundation, this paper aims to highlight opportunities for supporting these markets in conjunction with NRCS conservation programs.

Environmental Quality Incentives Program (EQIP)

SUMMARY OF FINDINGS: A subset of EQIP projects are believed to generate financial value, which means that, with statutory changes, they could be carved out and aggregated for funding by private investors in the form of revolving loan funds or other investment vehicles. Under current statutes, a similar approach is likely possible using EQIP practices aggregated under RCPP.

EQIP was first authorized in the 1996 Farm Bill and has been reauthorized in each successive Farm Bill, eventually growing into NRCS's largest financial assistance program. Through EQIP, producers compete for funding to implement conservation practices on farms, ranches and forestlands. Payments are made

according to regionally adjusted payment schedules, which are designed to cover anywhere from 50 to 90 percent of the cost of practice implementation, with payments that are usually between 50 to 75% of the cost. Producers are responsible for covering any remaining costs.

There are approximately 175 conservation practices that are eligible for EQIP funding. Many of these practices represent a net cost to producers and are less likely to be implemented without some form of incentive or financial support. Examples of such practices include riparian buffers, edge-of-field water quality practices, and cover crops.

There is a subset of EQIP-eligible practices, however, that are likely to create financial value either by reducing input or management costs or by increasing productivity. These include practices that increase water efficiency, improve nutrient management, support the transition to organic crops, or promote implementation of anaerobic digesters, or that result in the generation of credits with value in environmental markets.

Projects that provide a financial return on investment open up potential opportunities for leveraging private investment through a variety of different arrangements, discussed below.

Participation by Investment Capital in EQIP today

Investors are not eligible participants in EQIP today, either as funders (providing funds to NRCS for co-investment) or as recipients.

The Farm Service Agency provides microloans of $50,000 through its regular loan program, which may be used by producers to cover some or all of the up-front costs of EQIP project implementation, however FSA does not currently monitor the extent to which microloans are being used for EQIP. It is likely, though NRCS does not track it, that some producers today receive third-party loans from private sources for the same purpose.

Opportunities to Leverage Investment Capital

No Statutory Changes

Aggregate high-return EQIP projects using RCPP – see RCPP section for details

Process Change: Adjust the relative weight of criteria in the ranking process or create a national pool of EQIP funds to ensure that the funds are going to support the greatest conservation "bang for buck"

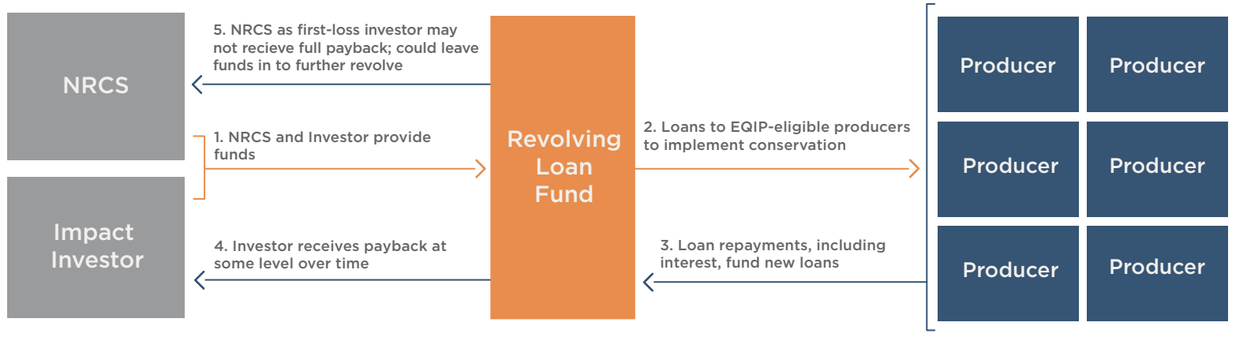
NRCS State Conservationists often feel an obligation to spread funds around and to touch as many landowners as possible. This is a worthy intention, but it creates a tension since it biases EQIP money away from larger projects that would consume a large share of available resources. A national pool, or an adjustment of the ranking criteria, could help provide a way to help manage this tension and ensure the best conservation outcomes.

With Statutory Changes

Investment Concept: EQIP Revolving Loan Fund

NRCS would work with private investors to carve out and aggregate a group of projects employing practices with potential for financial return. Instead of receiving reimbursements from NRCS, these producers would receive loans (potentially below market rate) to cover the costs of implementing the practices. While landowners would almost certainly prefer grants to loans, they would still be able to benefit financially from these loans, given that the loans would exclusively fund profitable conservation practices. The loans would be funded primarily with capital from third-party investors, but could also include some level of NRCS funding or even philanthropic capital as well. (Layering in NRCS and philanthropic capital could provide a first-loss reserve for investors, or else could serve to lower the risk or increase the returns of the projects, thus providing a further incentive to participate). Instead of the usual producer contribution to the costs of the project, producers would be expected to pay back the loan principal plus interest, ideally set at a level where they retain some value after their financial obligations to investors are satisfied. This means a producer could finance the entire cost of the project and still get a share of the benefits. It may be necessary for NRCS to provide some form of risk mitigation to farmers and/or investors during the initial period of the fund to address the uncertainty and lack of historical data for these kinds of projects. This could be through loan guarantees or other mechanisms.

Figure 6: EQIP Revolving Loan Fund



OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

As a revolving loan fund, this program could become self-sustaining over time if successful, as the money repaid by previous recipients could then be re-loaned out to new ones. This would also reduce the dependence of this program on future federal budget allocations and would allow that money to be directed exclusively to projects that require greater financial incentives for producers to implement.

The regular FSA loan program may already be used by producers to cover up-front costs associated with EQIP projects but, according to FSA, this is not tracked.

Other federal agencies such as the Department of Energy, OPIC, and USAID use similar models, taking advantage of existing legislation (the Federal Credit Reporting Act of 1990) as well as specific enabling legislation for each of their loan programs.

While Rural Development (RD) and FSA already have lending authority, conservation is just one of many objectives for them. Establishing lending authority for NRCS would provide a source of loan funding which is laser-focused on conservation and, as a result, would prioritize a different set of projects and likely result in greater conservation. Further, loans that fund conservation practices (rather than large equipment purchases, for example) are a better mechanism for ensuring that farmers are the ultimate beneficiaries of such a program because they are less capital-intensive and do not become obsolete. At a minimum, greater collaboration between NRCS, RD and FSA could improve the use of farm lending to support conservation on the ground.

This revolving loan concept is also scalable to the extent that there are profitable practices to be funded, enabling a significant expansion of program beneficiaries and conservation outcomes over time.

In a variation of this model, this program could be set up to provide loan guarantees rather than loans. In this case, NRCS would supply loan guarantees or some form of risk mitigation while the loan capital would come from third-party commercial providers, as in the farm credit system. This would allow NRCS to leverage its capital even further since the amount paid out (as in the case of a default) is typically far less than the amount guaranteed. In other words, one dollar of guarantees leverages a multiple of that dollar in terms of loans. Structured correctly, the leverage ratio of these types of guarantees could be significant. For an example of how these types of guarantees work, see the detail boxes on OPIC and USAID guarantee programs.

There are several statutory changes required for this investment concept to be possible:

- **Carve out a portion of EQIP money to be provided as loans or guarantees.** This would allow for a pilot of this approach, with the potential to scale up over time based on results. Over time, it may make sense to test the viability of only providing loans to projects which generate a financial return, instead of direct financial assistance. For projects that generate marginal financial benefits a mix of loans and financial assistance could be used.
- **Allow for a waiver of the AGI limitation** for participation in the program so that larger organizations and/or more and higher quality projects may be included, when appropriate.
- For a variety of reasons (including not wanting to compete with other private lenders), it may be preferable for NRCS to provide loan guarantees or other credit enhancements instead of direct loans. However, if NRCS were to be the lead lender and to simplify the flow of funds, then **the agency needs to be able to receive funds from investors for the purpose of being loaned out.** (If the model were for investors and NRCS to make parallel investments into a common revolving fund, then this would not be required.) Without statutory changes, NRCS could also play the role of encouraging landowners to seek out RD loans that achieve the same goal.
- Further, **NRCS needs to be able to receive funds back when loans are repaid.** This is not allowable under current authorities. However, there are other government programs that provide loans or guarantees that can accept repayment (see boxes on OPIC and USAID below). The idea of establishing a loan guarantee program under a similar authority should be explored.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

Agricultural Conservation Easements Program (ACEP)

SUMMARY OF FINDINGS: ACEP is already successful in attracting investment capital for conservation, and there is potential to expand opportunities both with and without statutory changes. Three model concepts already in use were identified: 1) project developers combining revenue from environmental credits, easement payments and undeveloped recreation (e.g. private hunting land) to provide a sufficient financial incentive to put the land under easement; 2) NRCS using increased transparency on easement eligibility to reduce uncertainty and incentivize greater investment in conservation easements; and 3) investors acting as intermediaries to quickly secure available land for conservation and make it more affordable to farmers. These models could be expanded on today for greater impact, for example using credit aggregation for avoided conversion of grasslands. With statutory changes, investors could be certified as partners and program participants for the ultimate benefit of the farmers that both they and NRCS serve and the AGI limitation could be waived when there are compelling conservation benefits.

Conservation easements are cash payments to landowners to compensate them for the portion of the market value of their land forgone when the land is put under an easement that restricts some activities (often development actions) on the property. This provides a financial incentive to landowners to conserve their land, and enables easement purchasers to conserve private lands while only effectively paying a portion of the land's total market value. While NRCS has administered easement programs under a variety of names and authorities for decades, the Agricultural Conservation Easements Program was first authorized in the 2014 Farm Bill to provide between $250 and $500 million from 2014 through 2018. ACEP – which is composed of a working agricultural lands preservation component (Agricultural Land Easements, or ALE) and a wetlands component (Wetland Reserve Easements, or WRE) – uses conservation easements to protect agricultural lands and restore, protect, and enhance wetlands. Under ALE, NRCS pays up to 50% of the fair market value for agricultural easements and up to 75% for grasslands of special significance. For WRE, permanent easements receive 100% of easement value and 75 to 100% of restoration costs, while 30-year easements receive 50 to 75% of both easement value and restoration costs. In each case, the landowner is effectively making a co-investment with NRCS in conserving the land. In this way, easements can also be a vehicle for engaging investment capital.

Easement programs like ACEP are attractive to conservation-minded investors because the easement payment lowers the investment required (if the land is already encumbered) or provides immediate and substantial returns, helping boost the return on capital. For example, Dirt Capital, an agricultural investment firm, has purchased two properties that it co-manages with farmers that had previously been encumbered with NRCS easements. Easements do restrict some forms of use, but many forms remain viable, such as managed timber harvesting, agricultural production, ranching, and undeveloped recreation such as private hunting or fishing, all of which allow for additional revenue streams on conserved lands.

One of the biggest constraints on leveraging investment capital through ACEP today is the AGI limitation, a provision of the Farm Bill that limits the amount of some USDA program payments (including all conservation payments) that can be provided to individuals whose prior three-year average income exceeds $900,000. The AGI limitation effectively prohibits wealthy landowners and landowning entities from participating, though AGI waivers may be requested under RCPP, see below. Because wealthy landowners and landowning entities own a lot of private land, this AGI limitation puts large amounts of land with relatively high environmental value out of reach of conservation through NRCS easements. Additionally, it excludes certain third-party investors who might otherwise use the program to leverage their capital for conservation.

Even with the AGI challenge, investors are already working with ACEP today in a range of ways to conserve land, and several successful models are described below that involve credit generation and reduced land purchase prices. There may be opportunities to further leverage private investment through ACEP that do not require statutory changes, described in the next section. Additional opportunities that could be opened up through statutory changes are also explored further below.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

Finally, there are other opportunities to drive increased use of the program in general, such as raising awareness of the program with potential participants, facilitating matchmaking between interested partners and supporting project development. These are detailed in the section on Enablers at the end of the report.

Participation by Investment Capital in ACEP today

Selected Projects

Alligator River Avoided Conversion Forestry Project

This project combined easement payments with carbon offset credit generation to enhance the financial value to the landowner, thus making it a viable alternative to converting the land for cultivation. In this project, 2,372 acres in Hyde County, North Carolina, were put under permanent easement through the Wetland Reserve Program (now known as the Wetland Reserve Easement component of ACEP), which provided a critical characteristic (permanence) for the generation of carbon credits. Blue Source originated the carbon credits, Goldman Sachs provided the financial backing and transaction expertise, the Climate Action Reserve verified the credits, and an unspecified private firm purchased the entire bundle of avoided forestry and methane credits for $12 million in July 2011. The private landowners involved in the project chose to forego future hardwood harvests and draining of the previously harvested coastal plains in exchange for an NRCS WRP easement and the carbon offset revenue stream. The deep organic soils of this region provide unique carbon offset value, making this project particularly financially attractive. This project also had the co-benefit of supporting duck habitat, which helped make it more compelling. At least one similar WRP carbon credit project was completed in South Carolina, which also benefits from the deep organic soils of the region.

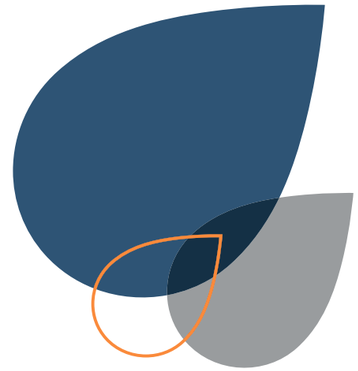
WRP/WRE can be challenging to use to generate verified carbon credits because the WRE statute retains substantial rights for the federal government. This means that, to maintain optimal wetlands functions and values, NRCS has the right to undertake activities on the property that may not be consistent with the permanent maintenance of soil or forest carbon. In the Alligator River project, the landowner obtained a compatible use letter stating that, while NRCS retained the timber rights, it had no intention to harvest or manipulate the timber. This was acceptable to NRCS because the bottomland hardwood ecosystem present on the property was consistent with the optimal wetland functions and values desired by the agency.

The opportunity highlighted by these projects is to identify properties that simultaneously fulfill three criteria: the land is uniquely important for conservation (and would qualify for an easement), the natural characteristics of the land make it particularly valuable from a carbon sequestration perspective (to a standard acceptable to carbon registries), and credit generation is a compatible use with recommended land management plans (such that NRCS would be comfortable writing a compatible use letter). When these conditions converge, the revenue stream (from the easement and carbon credits) on some plots of land is typically sufficient to interest landowners and conservation-minded investors and can drive increased investment in conservation.

There are opportunities that use a similar model, such as Avoided Conversion of Grasslands, described below, and similar mechanisms could be explored elsewhere.

Arkansas Easement Qualification Transparency

NRCS in Arkansas has provided additional transparency on easement eligibility as a way to encourage more landowners to explore enrolling their lands in conservation easement programs. After a rule change cleared their queue of potential projects, the WRP team wanted to muster up interest in wetland easements in a way that was likely to increase the quality of easement applications. Their solution was to release a map of Arkansas that overlaid two key easement criteria: soil type, which shows whether the land was originally a wetland, and cropping history, which shows whether the land is currently under cultivation. The portions of the map where the criteria lined up with eligibility requirements were colored red, which ended up identifying eligible land with about 90% accuracy. This map was distributed to the district conservationists for them to have on hand when they met with producers as an easy, visual way to spur landowners to apply who might not have thought to do so otherwise. Once such a map is created, it does not need to be updated as the underlying data do not change very often. The map is not used to exclude anyone from applying; applications from non-red areas are still accepted and reviewed as normal. Creating this sort of map for each state would be relatively easy and a national version could be possible as well. From an investor perspective, this information provides greater certainty on which pieces of land may qualify, which reduces risk to investors and can spur greater investment.



OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

Investors as Conservation-Focused Intermediaries

Investors can often act more quickly than government agencies or large NGOs to purchase land with high conservation value when it becomes available. These investors can then do the work to secure an easement and sell the land with a requirement in the contract that the buyer must purchase the easement upon closing. The buyer gets a lower purchase price for the land, the investor gets a modest return (a share of the easement funds) and the high-value land gets conserved. Given that easements can take a while to come to fruition, the investor may need to finance the value of the easement for a time. See Figure 7 for an illustration of how this can work.

Opportunities to Leverage Investment Capital

No Statutory Changes

Process Changes:

- **Build off the Arkansas Easement Qualification model to provide pre-qualification of easements:** In Arkansas, conservationists analyzed the eligibility of land in Arkansas for easements and then made this assessment public as a way of prompting greater use of easements. NRCS could consider adopting a similar approach across all 50 states with the goal of providing more transparency on which land may be considered a priority for easements. This information can shape investor decisions in choosing land to invest in, and could prompt existing landowners to seek easements who would not otherwise have considered doing so. If doing this at a national scale is not feasible, then at a minimum NRCS could consider doing it upon request to help inform land purchase decisions.
- **Adjust the relative weight of criteria in the ranking process or create a national pool of easement funds to ensure that the funds are going to support the greatest conservation "bang for buck"** even if this means choosing to acquire fewer, larger easements rather than more smaller easements, if the conservation value supports this decision. State conservationists often feel an obligation to spread funds around and to touch as many landowners as possible. This is a worthy intention, but it creates a tension since it biases easement money away from very large easement opportunities that could effectively gobble up the entire budget, even when these may achieve greater conservation at scale. A national pool, or an adjustment of the criteria, could help provide a way to help manage this tension and ensure the best conservation outcomes.

Investment Concept: Avoided Conversion of Grasslands Project with Credit Aggregation

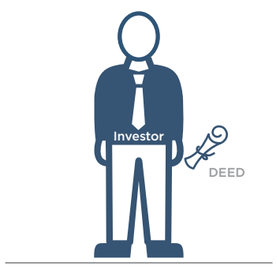
Through CIG, NRCS has supported a number of projects that generate carbon credits on ranchlands. The permanence of the carbon is assured through a conservation easement, the terms of which state that the existing soil carbon cannot be disturbed, in perpetuity. These projects have used easement funds from non-NRCS sources, but ACEP could be used as the source of easement funding for this type of carbon credit transaction. Project developers would identify one or more ranches for working lands easements, which would provide the permanence for the credit generation and unlock an additional revenue stream for the landowner(s). A third-party investor or project developer would act as an intermediary and work with the landowner(s) to put together the deal in a way that works for all involved. (Eligible landowners could also pursue this opportunity independently, but this would be a heavy lift.) The investor would only be a participant in the actual ACEP easement transactions if he or she were also a landowner. All landowners involved would need to individually meet the eligibility requirements of ACEP.

With Statutory Changes

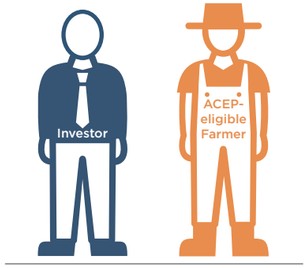
Allow selected investors / businesses to be eligible participants

There are a number of impact investors (e.g., Farmland LP, Iroquois Valley Farms, Dirt Capital) whose business model is to purchase agricultural land, lease land to farmers to sustainably grow organic or conventional agricultural products, and then ultimately sell the land, often to these same farmers. During the time the investment company owns the land, it works closely with the farmers to improve the natural resource base of the land and operate the farm with conservation values. This arrangement benefits not only the landowner (investment firm), but also the farmers who ultimately end up owning the land. There are also the usual benefits of conservation for society in general from enhanced ecosystem services. To recognize the unique role these investors play in supporting a common beneficiary,

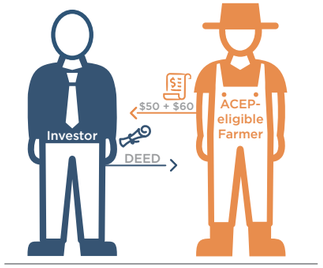
Figure 7: Investors as Intermediaries in Securing Conservation Easements



Step 1: Investor buys agricultural land with unique conservation value for $100.



Step 2: Investor identifies ACEP-eligible Farmer who needs land and can't afford $100 but could afford $60. Process to secure easement is initiated on behalf of Farmer.



Step 3: Investor sells land to ACEP-eligible Farmer for $60, with two requirements: the Farmer must secure the easement ($50) and give it back to the Investor.

Outcomes: Farmer gets land (encumbered to remain agricultural land) that would otherwise have been inaccessible and Investor makes $10 as a return for the risk assumed to execute the deal.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

NRCS could specifically certify groups like this as "conservation finance entities" which would allow them to participate in NRCS programs (regardless of AGI) on behalf of their farmers prior to (and perhaps contingent on) the farmers actually owning the land. There is precedent for this kind of designation from the Rural Business Investment Program (RBIP), which can designate a company as a Rural Business Investment Company (RBIC).

Allow waivers for the AGI limitation
It had previously been possible for program participants to seek waivers for the AGI limitation for protection of environmentally sensitive land of special significance, but this provision was removed in the 2014 Farm Bill. However, NRCS may still waive the AGI requirement for participants of RCPP (who may be accessing ACEP easements) when it would further the purpose of the project. While working through RCPP may make sense for some situations, it would greatly facilitate the participation of investment capital in conservation easements if waivers were possible within ACEP as well.

Regional Conservation Partnership Program (RCPP)

SUMMARY OF FINDINGS: RCPP already allows private entities to partner with agricultural producers and conservation partners to achieve conservation on a landscape scale, though funding recipients must still meet all eligibility criteria for the programs providing the funds (EQIP, ACEP, HFRP) or seek a waiver, which can sometimes be restrictive. To date, RCPP has been used successfully by corporate actors seeking to improve conservation practices within their supply chains (for example, by MillerCoors focused on water), by impact investors, and by conservation groups organizing landowners and others for large-scale projects. Potential RCPP models to explore include: 1) aggregation of small projects to investment-scale deals, 2) facilitating agreements for upstream conservation activity funded by downstream beneficiaries, 3) enable producers using conservation practices to unlock a higher return on their products through investment in mid-stream infrastructure (e.g. processing and transport for organic commodity crops), 4) monetization of underutilized co-products of conservation (e.g. taking biomass that would otherwise be burned and using it to generate electricity), and 5) engaging insurers to help fund projects such as watershed restoration that ultimately reduce their claim costs.

RCPP is unique among NRCS's portfolio of Farm Bill programs in that it is partner-driven: third parties apply for RCPP funding for projects in a given geographic area. RCPP funding is also unusual because it combines funding from other NRCS programs, such as EQIP, ACEP, the Conservation Stewardship Program, and others. Congress also imbued RCPP with more flexibility with regards to its participants and procedures, providing more opportunity for participation from investment capital. A range of different kinds of organizations, including

For consideration...

Consider Raising RCPP Maximum Award Back to $20 Million

Because it targets landscape-scale projects, the RCPP team originally set the maximum award at $20 million per project. However, the team has since lowered the ceiling to $10 million based on the observation that there were very few high-quality projects coming in at the higher funding levels. As RCPP becomes better known and the challenges with program implementation are overcome, and assuming application quality continues to improve, NRCS should consider raising the maximum award back to $20 million. The larger project size reduces the transaction costs of applying relative to the total award and allows for projects at a large enough scale to attract private and philanthropic investment capital. Further, this higher cap may allow for projects that otherwise would not apply to be considered, leading to better overall conservation outcomes.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

businesses and investors, can be program participants and the AGI limitation can be waived to enable their participation under certain circumstances.

The RCPP projects highlighted below demonstrate the program's potential for leveraging private investment through supply chain sustainability projects, timber management investment projects, and projects based on environmental credit markets. In addition, a number of new project models that may warrant further exploration by future program participants are listed below.

While RCPP is an effective vehicle for aggregating smaller projects into landscape-scale efforts, it is funded at a much lower level than EQIP on its own. As discussed in the section on EQIP, addition of a project aggregation and funding mechanism within EQIP (which is funded by itself at a much higher level than RCPP) would maximize the ability of third parties to leverage investment capital for larger-scale projects.

RCPP is still quite new, having first been authorized in the 2014 Farm Bill, and it is not yet well known or well understood by many impact investors. Those who have participated have reported frustrations and challenges typical of the initial rollout phase of a program. Other participants have complained about the lack of transparency on project competitiveness and the need for high levels of matching support. The program staff members have been receptive to partner feedback and have worked to revise and adapt the application and implementation processes to make them less burdensome.

Project Models Involving Private Capital (not Investment Capital)

Corporate Supply Chain Sustainability Projects: The Yellowstone Region Agricultural Sustainability Project, led by MillerCoors, seeks to define best management practices for irrigated agricultural producers in Southern Montana that would lower natural resource consumption and degradation. Over the five-year timeline, the project teams will work to lower the consumption of natural resources through the use of added incentives that would allow producers to mitigate financial risks while transitioning to adopt the practices. While MillerCoors does not receive any direct financial benefit from the project, the project provides benefits that positively impact their business, such as a healthier and more resilient watershed from which they can source clean water. RCPP provides a useful platform for companies seeking to engage upstream actors in their supply chains for mutual benefit in addition to driving conservation outcomes. This model (which relies on RCPP's AGI waiver) could enable other large food and beverage companies to tap into RCPP funding on behalf of their suppliers to fund conservation improvements that help to achieve sustainability goals or other public corporate social responsibility (CSR) commitments.

Aggregation Projects: Unlocking Carbon Markets for Non-Industrial Private Forest Landowners in the Pacific Northwest, led by the Pinchot Institute, is designed to aggregate small, private forest plots and facilitate landowner participation in carbon credit markets, providing new income streams and incentivizing sustainable forest management. The Pinchot Institute first completed a CIG project to pilot the approach before applying to RCPP to attempt to replicate the project model at a larger scale. The carbon credit verification costs on small plots are prohibitive, but through aggregation and the use of emerging technologies, the project leaders hope to develop a workable carbon credit model for small private landowners. For example, forest inventories have typically cost from $40,000 to $100,000 depending on the amount of land, but may now be completed much more cheaply and quickly with a modified mobile phone, greatly reducing the cost of credit generation for landowners. This project and others that use low-cost (and technology-enabled) aggregation of small-holder landowners to enable the monetization of conservation outcomes holds great promise that warrants further exploration (see Potential Project Models below for related ideas).

For consideration...

The Role of Commodity and Trade Groups

Commodity and trade groups (or even co-ops) can play a helpful intermediary role, acting as a liaison and aggregator for their members and enabling them to collectively access otherwise unattainable resources. For example, in 2016, NRCS awarded a $1 million Conservation Innovation Grant to the National Corn Growers Association (NCGA) and its Soil Health Partnership (SHP) to better understand and adopt farming practices that reduce the impacts of climate change. Monsanto contributed an additional $1.6 million to support this effort. The NCGA will work with a range of project partners to help farmers implement practices that are believed to reduce climate change impacts and then use emerging technologies such as satellite data to take measurements to validate these reductions. As in this example, where there are opportunities that rely on aggregation for scale, commodity and trade groups can be useful channels through which to work.[38]

[38] "Monsanto Announces $1.6 Million Investment in Developing System to Help Agriculture Quantify Greenhouse Gas Reductions," last updated September 23, 2016, http://news.monsanto.com/press-release/climate/monsanto-announces-16-million-investment-developing-system-help-agriculture-qu.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

Market-based solutions:
The Teton Valley Soil, Water, and Wildlife Initiative, led by Friends of the Teton River, uses a new partnership in the Teton Basin to address growing concerns related to the loss of agriculture in Teton Valley, as well as the related loss of wildlife habitat. The partners will implement a "groundwater bank" to recharge the local aquifer, which will address water quality and quantity issues that are impacting farmers and wildlife populations. The partners also propose to explore new conservation funding streams and develop new markets for agricultural products. This project leverages private capital from irrigators and philanthropic capital to make needed improvements as well as support adoption of new practices. It provides a model for using market mechanisms to align the incentives of a range of actors to drive attainment of conservation outcomes.

Participation by Investment Capital in RCPP today

The Gulf of Mexico Forest-to-Sea Project conserves Florida's pristine "Big Bend" area along the northeastern Gulf through a Healthy Forests Reserve Program (HFRP) easement/restoration plan. The project, led by the Conservation Fund, brings together 12 partners and the conservation-minded private timberland investment management organization Lyme Timber. Lyme Timber, a large investor with $650 million in assets under management, focuses on the acquisition and sustainable management of lands with unique conservation values. As an impact investor, Lyme Timber seeks to achieve conservation outcomes while also providing a return on investment to its investors. The company was founded in 1976 and currently manages a portfolio of over 610,000 acres of forestland.

Returns depend on the type of land and they may come from a range of sources, including: sale of conservation easements or fee interests to public agencies, sale of development rights, sale of sustainably harvested timber, sale of carbon credits, alternative energy supply agreements, and sale of mitigation banking credits. In this case, the project uses a combination of easement and restoration cost payments through the Healthy Forests Reserve Program to private working forest owners and to Lyme Timber to complete the restoration plan and achieve the desired conservation outcomes of improved water quality and quantity, enhanced wildlife habitat, and improved air quality. (HFRP does not have an AGI limitation, which allows Lyme Timber to participate directly.) In addition to NRCS easement funds, landowners in this project were also able to secure state and local easements to further leverage federal funding. It should be noted that, while private landowners are the intended beneficiaries of the ACEP and HFRP programs, the complexity and time required to go through the process can be a barrier to participation for many forest landowners. Project developers, such as Lyme Timber and the Conservation Fund, increasingly play a critical role in helping landowners access these benefits. This suggests that there could be a multiplier effect from engaging more impact investors acting as intermediaries for NRCS programs, resulting in an expansion in the number of potential program beneficiaries.

For consideration...

Improve Application Quality with Project Development Grants

Many of the groups interviewed for this report emphasized that due to the multi-stakeholder approach of RCPP projects, the up-front investment of time and resources required just to get to the point of being ready to apply is significant. One way to increase the quality of RCPP project applications would be to provide grants in the range of $50,000 to $250,000 to support the project development costs. Grants could be awarded to the most promising applicants at the pre-application stage to support the development of the full application. It might even be possible to use some portion of CIG funding, if expanded, for this purpose.

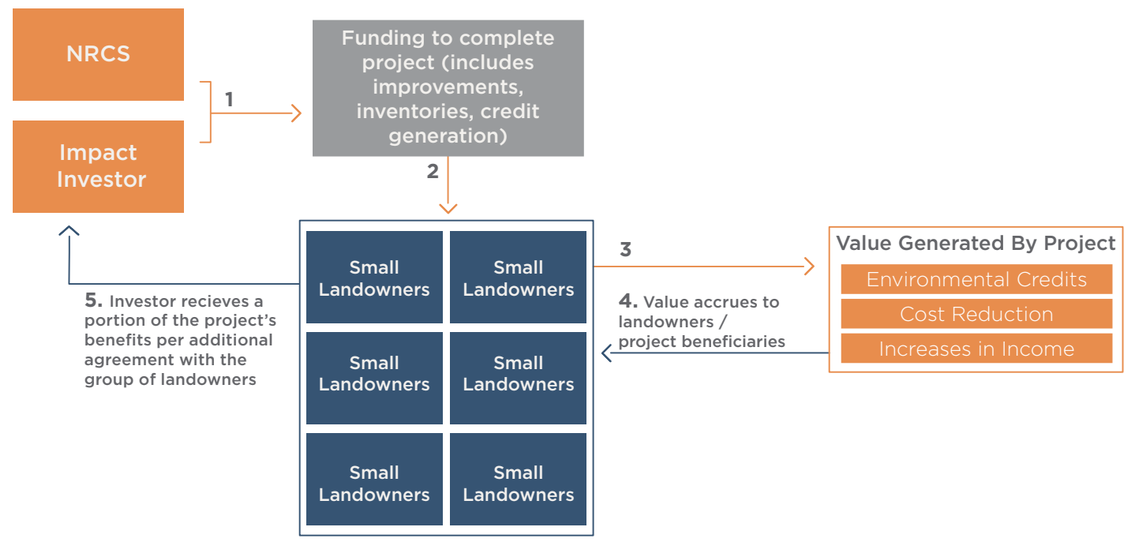
Opportunities to Leverage Investment Capital

No Statutory Changes

The following five project models illustrate opportunities for RCPP to leverage investment from private, third-party capital that are possible today.

Aggregation projects
As seen in the small landowner example, aggregation models hold promise. A modified iteration of the Pinchot Institute project could provide investors the

Figure 8: Aggregation Model with Investment Capital



Notes: 1) This diagram shows the process without a landowner financial contribution, however in some cases landowners may be expected to provide a financial contribution to the project up front as well, which would slightly change this structure. 2) It is likely that a project developer or intermediary would do the aggregation and liaison function between the investors and the farmers.

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opportunity to co-invest alongside NRCS, providing the upfront capital for project origination and verification costs. The investors would then take a cut of the carbon credit sale at the project's end, while still providing sufficient financial incentives to landowners to participate. Nitrogen stewardship projects are one example where this co-investment model would make sense.

For example, as part of an RCPP project, NRCS funding could be used to implement nitrogen management practices that reduce the amount of nitrogen fertilizer applied to crop fields. The private investors could provide funding for project certification and verification. The resulting nitrous oxide/carbon credits could be aggregated and sold into the voluntary carbon market. Lessons learned from the clean energy technology sector, where a variety of project aggregation models have been explored and used, may also be instructive here.

Facilitate Investment in Upstream Improvements by Downstream Beneficiaries

People and organizations are impacted by the conservation choices, or lack thereof, of the people and organizations who reside further upstream. For example, municipal water authorities face significant costs in water treatment when upstream farms and concentrated animal feeding operations (CAFOs) impair the water that reaches the treatment site. Would these utilities be willing to invest in the implementation of buffer strips on farms along the watershed? In several cases, this answer has already been yes. The city of Sioux Falls, South Dakota used the CIG program to pay upstream farms for the ecosystem services provided by grass buffers alongside waterways that fed their municipal supply. This reduced the incidence of E. coli in the water reaching the city. In a different structure, Denver Water partnered with the US Forest Service to pay for improved forest management in order to reduce the risk of fire and sediment runoff. RCPP could be used as a platform to scale either of these structures on a landscape level. An RCPP project that is designed to bring these actors together for mutual benefit could have a range of positive outcomes, either in water quality, sedimentation, or quantity.

Enable Producers Using Conservation Practices to Unlock a Higher Return on their Products: Co-invest RCPP funds with private funds for infrastructure improvements on mid-stream assets

Farmers, ranchers, and landowners who have adopted conservation practices face a range of obstacles to capturing the full financial return on investment for their products. These barriers can be related to lack of infrastructure (addressed here), limits of environmental credit markets (not addressed in detail in this report, though innovations are addressed in the CIG section), or lack of ability to sufficiently market and differentiate their products with buyers or consumers (addressed under New Authorities). The infrastructure challenge faced by individual producers in their transition to organic or alternative crops is that most often there is a lack of differentiated organic infrastructure to get their products to market. For example, an organic corn farmer may have no affordable way to bring organic corn to market if all of the available infrastructure in the area is for commodity corn. Similarly, an alfalfa grower seeking to switch to a less water-intensive crop in a water-sensitive region may be restricted by the lack of processing and transportation options in the local area. RCPP could be used as a platform to bring individual producers facing these challenges together with private investors and NRCS to identify projects that would both support the transition processes for producers and develop the infrastructure to help them reap the full benefits of their new products. The value generated by the project would accrue to both producers and private investment partners through a predetermined arrangement consistent with NRCS policies. Ideally, NRCS could partner Rural Development, the agency who has traditionally focused on this kind of infrastructure work, to bring a stronger focus on infrastructure that specifically supports conservation efforts.

Monetize Products and Co-Products of Conservation

There are times when the implementation of conservation activities generates an additional "product" that has value in the marketplace and results in an additional revenue stream. For example, projects that require the removal of invasive species may generate red cedar timber that can be sold. Projects that require the removal of large amounts of vegetation produce a significant amount of biomass that has value to energy producers who use biomass as an input (and that would otherwise simply be piled up and burned). Projects like these are attractive to investment capital as they have an additional source of financial return. RCPP can be a platform for these niche projects that combine traditional natural resource conservation with emerging byproduct markets, and could better facilitate

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their implementation with scoring that prioritizes products that can be sold onto a viable market.

Engage insurers to help fund conservation that reduces their risk exposure
Many conservation practices can reduce risk for landowners, and subsequently, for the insurance providers that cover them. Reducing risk, and as a result, expected payouts or costs, has real financial value for insurers, utilities and emergency management agencies. Given this, NRCS could explore whether there are organizations who would be willing to fund or co-invest in "green infrastructure" conservation efforts that have been shown to decrease the costs of natural disasters such as flooding, extreme weather, and wildfires. Flood prevention is already one of the considerations in the WRE application process and there are case examples of how this has translated into significant savings for stakeholders. For instance, NRCS has a long history of funding wetland restoration and wetland easements in Vermont and after Hurricane Irene, it was clear that areas that had benefitted from substantial wetland and floodplain restoration fared better than areas without the same level of investment. In the restored areas, insurers and emergency management agencies faced reduced claims and payments. RCPP could serve as a platform for engaging these parties to design shared solutions around a landscape known to face significant risks. Given that the private companies participating have a clear financial incentive to support improvements, NRCS may be able to provide a smaller amount of the funding needed, resulting in greater leverage for the government funds.

For consideration...

Alternative Funding Arrangements

When an organization develops its application for an RCPP award, it has the option to request the use of an Alternative Funding Arrangement. This designation has created some confusion as organizations thought that this would give them the ability to act as the distributor for the funding. In reality, potential program beneficiaries still have to apply through the full ACEP process in order to receive easements and funding. This creates an administrative challenge for both the organizations and for NRCS. It would streamline the process if the organizations received the funds as block grants and had the ability to distribute the funds themselves, within the agreed upon criteria and consistent with statutes.

OPPORTUNITIES TO LEVERAGE INVESTMENT CAPITAL THROUGH EQIP, ACEP, RCPP, AND CIG

Conservation Innovation Grants (CIG)

SUMMARY OF FINDINGS: CIG currently functions as an incubator for conservation finance and credit trading concepts and has been used to fund work developing new standards for carbon credits via agriculture and grasslands, new credit mechanisms for river nutrient and temperature controls, and innovative financing solutions that value ecosystem services. It is, in a sense, the Research and Development arm of NRCS's conservation programs. The funding reduces the risk for businesses to explore different types of conservation investments and instruments. In and of itself, CIG leverages private investment only in the sense that companies that apply for grants must also invest their own resources for their projects. The long-term impact of CIG on private capital may be much larger over time, however, as ideas supported by CIG spur the development of investment models and credit generating protocols that can attract significant private capital into conservation. CIG has the potential to be used more effectively as an incubator and accelerator of new financing models as well as new businesses, and it could even create a self-sustaining fund to provide ongoing support to successful CIG projects. This could help fund interesting ideas that are incubated within the CIG.

Conservation Innovation Grants, first authorized in the 2002 Farm Bill, stimulate the development of innovative approaches and technologies for conservation on agricultural and forestlands. Since its inception, CIG has been used by NRCS leadership to support the development of environmental credit markets, including water quality, carbon and wildlife habitat markets. Conservation finance has been a priority in recent grant cycles: awarded projects are piloting innovative conservation finance vehicles and building a community of conservation finance practitioners.

CIG is the most flexible of the four in-scope programs—anyone or any entity in the United States is eligible to apply, the funds can be used in a variety of ways, and the NRCS Chief has broad discretion over funding levels.

While NRCS has used CIG to become a Federal leader in supporting market-based mechanisms and conservation finance, the flexibility of the CIG statute allows for further innovation that could allow NRCS to invest in market-based approaches at a larger scale.

Selected Projects Creating Opportunities for Participation from Investment Capital

Innovative Financing to Help Farmers Restore Soil Health: Iroquois Valley Farms' Soil Restoration Notes
Iroquois Valley Farms is using CIG funding to develop and offer Soil Restoration Notes, an innovative investment vehicle that finances Iroquois Valley's partner farmers' transition from conventional to organic production. Soil Restoration Notes will cover the costs of the transition by lowering lease rates for tenant farmers and decreasing their borrowing costs. This will allow farmers to transition their land to organic production more easily and meet the needs of farmers struggling through the three-year transition period. Soil Restoration Notes can serve as an investment model for other entities engaged in organic farming.

Demonstration of a Scalable Nutrient Management Project to Reduce Nitrous Oxide Emissions and Generate Voluntary or Compliance Carbon Credits
The goal of this CIG is to create a large-scale nitrogen fertilizer management project that increases access to environmental markets by reducing barriers for growers to participate. This CIG will catalyze the market for agricultural offsets from nitrogen fertilizer optimization, providing conservation finance professionals with new investments that make good business sense. By removing barriers in agricultural information technology and carbon market education highlighted by previous nitrogen management CIGs, this project will minimize currently prohibitive agricultural project costs and risks and increase engagement. Reducing these costs will prime the market by demonstrating project viability and driving down costs in order to attract the capital needed to jumpstart a virtuous cycle of investment and return. The project leverages the Environmental Defense Fund's experience developing offset protocols for the compliance market and relationships with producers, professional organizations, and supply chain partners.

Unlocking Green Bonds for Natural Infrastructure in the United States Water Sector
WRI and partners are working on a CIG that seeks to use the "green bond" structure to increase investment in working lands conservation. This project is aiming to connect investors, utilities,

water-dependent companies, municipalities, EQIP eligible landowners, and environmental groups to build replicable templates and processes that unlock private sector financing for conservation, restoration and enhanced stewardship on America's farms, forests, and ranches. The planned green bond structure will allow investors to pay the upfront costs of restoration on upstream land (EQIP eligible farms, forest, and ranches) that can save downstream payers (utilities and municipalities) money by improving water quality. Natural infrastructure on EQIP eligible properties will therefore serve as vital infrastructure for the downstream users and enable scaling of natural infrastructure stewardship for enhanced water security. As a result of this project, new financing will flow to agriculture and forestry producers, boosting environmental and economic resilience of the rural economy while simultaneously safeguarding communities, utilities and companies against intensifying climate and water risks.

Opportunities with CIG

No Statutory Changes

Create a CIG Accelerator Program to Advance Successful CIG Projects
CIG funding could be leveraged by a combination of investment and philanthropic capital to further test and scale new investment concepts beyond the current scope of CIG today. For example, NRCS could partner with a foundation to create a pool of funding for a "CIG Accelerator" that then funds project teams that have a plan to expand and scale, prioritizing building businesses that leverage private capital. Recipients could include successful CIG projects that are ready for a mezzanine stage of funding as well as projects and entities that have yet to participate in CIG. As the selected project teams achieve greater success, they would return an agreed-upon portion of the funds to the partner for continual re-investment in future projects. (Alternatively, NRCS could explore the potential of using its contribution account policy to act as the recipient of returned funds.) Over time, NRCS could cease providing additional funding, and the program would be financially self-sufficient, or very close to it. The net result: a larger pool of self-sustaining funding supporting generation after generation of CIG projects achieving conservation.

Structure CIG more like an incubator and accelerator
If CIG is intended to catalyze and promote innovation, the program could do much more to support and develop the participants and their ideas. For example, each approved CIG project could have a dedicated advisor who coaches them and helps them navigate within USDA and beyond. This approach could build on the work of the Conservation Finance Network to foster more collaboration and sharing of learning between CIG project teams as well. Also, if the idea is to use a track of the CIG to incubate projects and companies that might eventually become investable, there could be ways to select CIG projects based on potential investability, or at least scalability, down the line.

Diversify CIG topics
CIG could be strengthened by diversifying the topics for exploration that can be funded with its support, and this would expand possibilities for investment capital to participate in NRCS programs. For example, consider exploring tradable tax credit programs, guarantee or credit enhancement vehicles, deploying insurance vehicles, supply chain investments, or even investing equity in conservation technology companies.

Make "Investment Capital Opportunities" a designated funding priority for CIG
Create a dedicated funding pool to explicitly support the development of Investment Capital Opportunities. Designating funding in this way would send a clear signal to applicants about the program's areas of priority and would ensure that a certain minimum of innovative investment capital projects receive funding each year.

With Statutory Changes

Use an "X-prize" or other competition format
Where specific goals or outcomes have been identified, CIG could fund a competition in which the project team(s) who accomplishes them wins a larger amount of money. This format is meant to stimulate break-through thinking on intractable problems in conservation in a capital-efficient way. This could also be an opportunity to partner with investment capital to fund the prize and/or work with the winner and other applicants to further scale their ideas. Groups like Y Combinator have employed this approach to drive new creativity and innovation. While USDA has authorization for this kind of program through the America COMPETES Act, Farm Bill program funding may not be used for an America COMPETES project, effectively putting this idea out of reach based on current statutes.

For consideration...

CIG as a VC Incubator

There are a range of existing and potential start-up businesses today that provide products or services that support conservation, such as water-efficiency technology or nutrient reclamation. These services and products have the potential to hugely accelerate implementation of conservation practices, but they may not be commercial enough to attract typical venture capital investors. There is an opportunity to use CIG funding, potentially co-invested with impact investment capital, as seed funding to support early stage companies with a conservation focus. Under current statutes, these would simply be grants. With statutory changes, these could be structured as debt or equity investments and could use other tools such as guarantees or a range of exit options to recover and reinvest the funds over time.

CONCEPTS FOR NEW AUTHORITIES AND HOW THEY MIGHT BE USED

This section explores the potential for new authorities to expand opportunities for both increasing the amount of funding available for conservation and for attracting additional investment capital to working lands conservation. Some of these new authorities build off existing NRCS programs; others are entirely new concepts. Where relevant, analogs are included from other government programs or other organizations that have demonstrated similar approaches.

Producers and landowners interested in conservation often need access to more and lower-cost capital, as well as ways to reduce their risk exposure – both of which point to opportunities for impact investors to offer solutions. Given that impact investors are currently limited by a shortage of investable projects, additional authorities would give NRCS the ability to create more opportunities for investors to engage in natural resource conservation while at the same time addressing capital and risk mitigation needs of private landowners. NRCS could also carve out new roles as an investor in stimulating innovation in conservation technology and services.

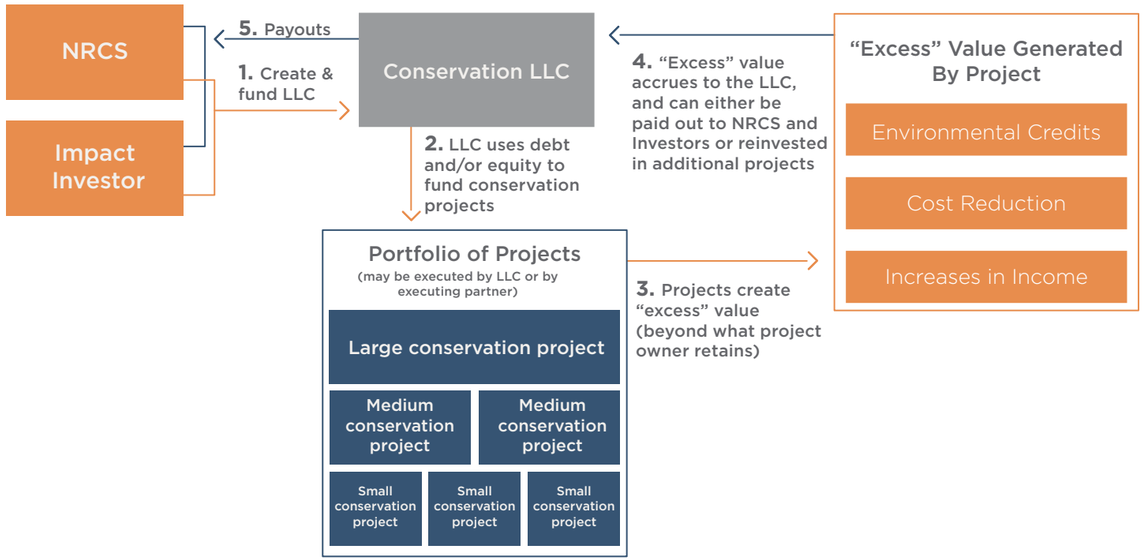
Create New Investment Structures and Mitigate Risk

To make more low-cost capital available and help producers mitigate risk, NRCS could be authorized by Congress to create new kinds of investable vehicles that would channel available funds to conservation projects (everything from farm-level to landscape-scale), using direct loans or loan guarantees, issuing conservation bonds or using Pay for Success models. To better align risk with reward for investors, NRCS could offer various kinds of credit enhancement as part of each of these vehicles. Risk mitigation is an important role for government to play when seeking to facilitate greater levels of investment in markets that are less well known or that face high levels of uncertainty. One key approach to mitigating risk for investors is through credit enhancement tools

CONCEPTS FOR NEW AUTHORITIES AND HOW THEY MIGHT BE USED

1. **Create Investable Vehicles:** Make it easier for private investors to co-invest with landowners and NRCS for a share of the value created by structuring a subset of NRCS projects as investment vehicles (e.g. LLC, joint ventures, etc.). Projects that focus on conservation practices which typically provide a return on investment, such as transitioning to organic production and implementation of efficiency measures (energy, water, nutrient), would be particularly well-suited to this model. Assuming robust environmental markets, credit generation projects are also a good fit with this approach. The execution of the projects could be managed by NRCS or by outside technical experts, execution partners, and even producers themselves. Returns from the projects would be shared between the producer/landowner and the investor or other partners.

Figure 9: Illustrative Model for an LLC Investment Vehicle Supporting Conservation Projects



The economics may work out for individual projects on the larger end of the spectrum, but it is likely that for most projects, aggregation will be required to get to an investable scale and to cover the transaction costs.

This model could also be executed without third-party investors to provide NRCS with a way to do more with existing resources. NRCS would effectively take an equity stake in the conservation improvements their investment is supporting, and then the producer would use the value created to "buy out" NRCS over time.

To further extend this idea, the investment vehicle could act as the issuer for conservation bonds, as described below, sidestepping the need for NRCS to secure bonding authority.

Analog: In the early 2000s, there were a large number of energy efficiency projects with positive returns on investment that were not being pursued due to lack of available capital, risk aversion, and agency issues. One solution that emerged was the use of Energy Service Companies (ESCOs), which effectively acted as project developers and implementers that provided the funding to complete the projects and then also took a share of the returns. ESCOs were typically initiated by the private sector, though they worked closely with the Department of Energy to "develop, design, build, and fund projects that save energy, reduce energy costs, and decrease operations and maintenance costs at their customers' facilities." The results were quite positive: in addition

to the environmental benefits of the reductions in energy usage, the most recent report indicates that, on average, projects reported achieving 102% of the estimated cost savings and 105% of the guaranteed cost savings.[39] Could there be a way to seed "AgSCOs," Agricultural Service Companies, that do the same for water efficiency or nutrient/input efficiency?

2. **Use Direct Loans to Fund Conservation:** As discussed in the EQIP section earlier in this report, EQIP-eligible practices that provide a financial return on investment could be funded through direct loans or loan guarantees rather than EQIP funding, which would free up EQIP funding to focus on projects with no financial return. While there are programs today that provide agricultural and rural development loans, these programs are not exclusively focused on conservation. Collaboration between NRCS and these agencies to prioritize investments with high conservation value should be explored.

   A larger-scale option for using direct loans would be to create a national **Conservation Revolving Loan Fund** dedicated to using direct loans to support landscape-scale conservation activities. These funds could be integrated with other NRCS project funds to provide support for both on-farm projects and for related infrastructure (both "gray" and "green" as long as there was clear conservation value). States, municipalities, utilities, and environmental credit developers or other intermediaries or aggregators could access the Fund. The funds would be lent out and then as they were repaid, those funds could be lent out again, creating a self-sustaining funding vehicle over time that would not be dependent upon continued federal appropriations. The fund could be themed around particular conservation issues or geographies, or maintain a broad focus.

   Analog: Since 1987, the EPA has partnered with states on Clean Water Revolving Funds. "The Clean Water State Revolving Fund (CWSRF) program is a federal-state partnership that provides communities a permanent, independent source of low-cost financing for a wide range of water quality infrastructure projects."[40] As of midyear 2014, the funds had served 278 million people, invested $105 billion, treated 856 billion gallons of water per day, and saved communities $18.8 billion.[41]

3. **Provide Loan Guarantees:** There are reasons why NRCS might not want to be the ultimate lender itself (e.g., to not compete with other lenders). Given this, NRCS might want to provide loan guarantees instead. (Subsidies and other credit enhancements are covered below under Risk Mitigation). Loan guarantees are a more capital-effective way of spurring investment in conservation than using direct loans and they allow people who would not otherwise qualify for a loan to be eligible for one. A bank or private investor provides the loan and the government provides an assurance of payment should the initial recipient be unable to fulfill his or her obligations on the loan. Loan guarantees could be used to support either of the direct loan programs described above, if private capital were engaged to provide the loans themselves. This can be seen as a win-win as it both mobilizes more private capital resources and reduces the funds required from government.

   Analog 1: USDA's Rural Development Agency (RD) has a loan portfolio of more than $216 billion "to bring enhanced economic opportunity to the Nation's rural communities." These loans are provided to businesses through banks, credit unions, and community-managed lending pools to support economic development and rural infrastructure, including housing and energy infrastructure. RD also offers technical assistance and support to agricultural producers and their cooperatives to enhance their operations and effectiveness. RD's environmental objectives include energy conservation and ensuring the provision of safe drinking water and sanitary waste disposal. Conservation in the context of agricultural cultivation is one of many objectives considered as part of the technical assistance provided to producers.[42]

   Analog 2: The Farm Service Agency's Guaranteed Farm Loan Program helps farmers who are otherwise unable to access financing to tap into funding from USDA-approved commercial lenders to buy farmland or finance agricultural operations. FSA guarantees up to 95% of the value of the loan, reducing the risk for the lenders and keeping the cost down for the borrowers. A smaller, simplified version of the program, called EZ Guarantee Program, is available for loans up to $100,000. Beyond that, applicants must go through the full approval process. There are four types of loans: Farm Ownership, Farm Operating, Land Contract Guarantee and Conservation Loans (though these have been sparely used, to date, as noted previously).[43]

   Analog 3: Through its Renewable Energy Loans from the Loan Programs Office, the Department of Energy (DOE) issues loan guarantees[44] for roughly 50 to 70% of a project's cost. The project developer then uses this guarantee to secure a loan from either the U.S. Treasury or a private lender. Many see the program as successful at driving investment: "The loan guarantee program has been successful in

[39] "Federal Energy Savings Performance Contract Project Performance Reports," last update date not noted, https://energy.gov/eere/femp/federal-energy-savings-performance-contract-project-performance-reports.
[40] "Clean Water State Revolving Fund (CWSRF)," accessed June 23, 2017, https://www.epa.gov/cwsrf.
[41] Clean Water State Revolving Fund, "Clean Water State Revolving Fund Fiscal Year 2014 Environmental Benefits," (Washington DC: Clean Water State Revolving Fund, 2014), https://www.epa.gov/sites/production/files/2015-04/documents/cwsrf_2014_environmental_benefits_report.pdf.

[42] Rural Development," accessed June 23, 2017, https://www.rd.usda.gov/.
[43] "Guaranteed Farm Loans," accessed June 23, 2017, https://www.fsa.usda.gov/programs-and-services/farm-loan-programs/guaranteed-farm-loans/index.
[44] "Controversial U.S. energy loan program has wiped out losses," last updated November 13, 2014, http://www.reuters.com/article/us-doe-loans-idUSKCN0IX0A120141113.

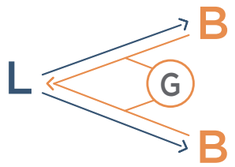
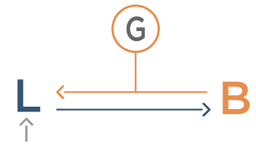
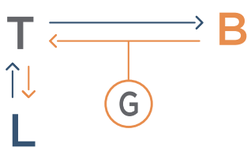
bringing to market good projects with good credit support that absolutely would not have been built," said a spokesman for NRG Energy Inc, an energy company that owns three solar power plants that received DOE loan guarantees. Additionally, the program has made money (despite some well-publicized losses) and has catalyzed billions of dollars in clean technology investments. Could a similar program work for the types of projects that NRCS funds?

Analog 4: USAID's Development Credit Authority was created to enable more lending to underserved markets by reducing risks, while also demonstrating the long-term commercial viability of lending in developing markets. The impact has been significant: from 1999 through 2016, DCA made available $4.8 billion in credit in 76 countries. DCA uses four standard guarantee products, as seen in Figure 10. Further, guarantees may be paired with USAID or other technical assistance projects that can strengthen the borrower's ability to repay or support the financial institution's lending capacity in a new sector.

4. **Issue Conservation Bonds**: Another opportunity is for NRCS to partner with investors to issue a bond to support a landscape-scale conservation effort, ideally a treasury-rate bond like those used for infrastructure projects.[45]

   "Green Bonds" are bonds that provide funds for projects with environmental benefits. Green Bond issuance was $11 billion in 2013, reached $42 billion by

Figure 10: USAID Development Credit Authority Standard Guarantee Products

LOAN GUARANTEE	LOAN PORTFOLIO GUARANTEE	PORTABLE GUARANTEE	BOND GUARANTEE
			
L Identified Lender B Identified Borrower G Guarantee → Loans/Funds → Repayment	L Identified Lender B Borrower in an Identified Sector G Guarantee → Loans/Funds → Repayment	L Unidentified Lender B Identified Borrower G Guarantee → Loans/Funds → Repayment	L Investors B Institution Issuing Bonds T Trustee G Guarantee → Loans/Funds → Repayment

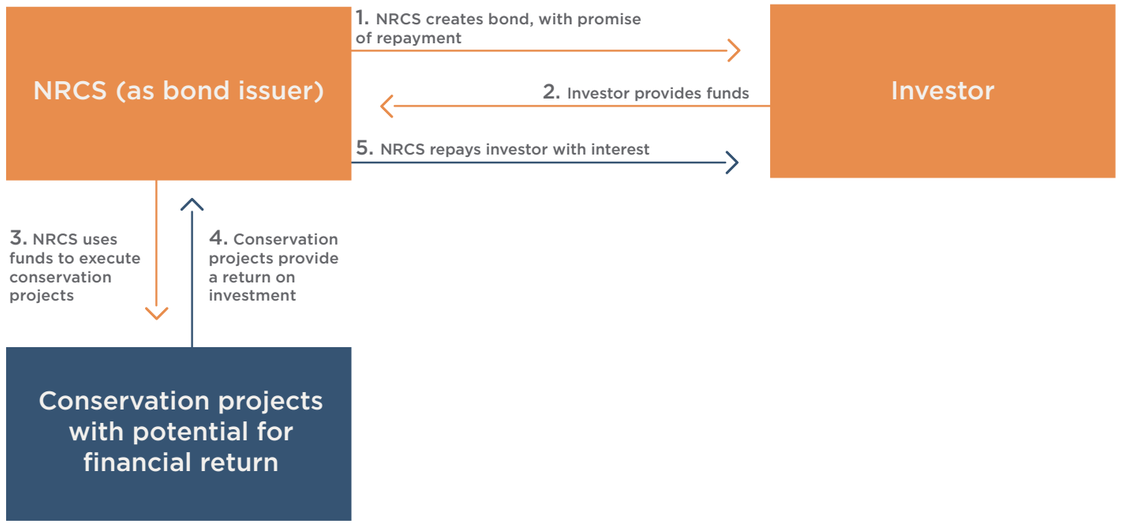
[45] "Explaining Green Bonds," accessed June 23, 2017, https://www.climatebonds.net/market/explaining-green-bonds.

CONCEPTS FOR NEW AUTHORITIES AND HOW THEY MIGHT BE USED

2015 and surpassed $100 billion in 2016. In 2017, Green Bonds are expected to exceed $200 billion in issuance. The bulk of these funds is going to renewable energy and energy efficiency projects, with a small portion going to conservation-oriented projects.

There is a strong case for Conservation Bonds to provide funding to accelerate conservation efforts. Many conservation projects, if structured correctly, can provide reliable, consistent cash flows over time based on the sale of sustainably produced products, monetized value of ecosystem services, and reductions of costs incurred previously (as in the energy efficiency model). Pay for Success models can also be used here to provide tiered payouts based on actual outcomes (see below for detail on Pay for Success models).

Figure 11: How Funds Would Flow in Conservation Bond



Analog: The Climate Bonds Initiative (CBI) is "the only organization working solely on mobilizing the $100 trillion bond market for climate change solutions."[46] CBI is working to build the foundational elements required to enable the issuance of climate bonds, including developing standards and a certification scheme, developing demonstration projects, tracking and sizing the market and providing policy models and advice. The Climate Bond Certified Standard is a label that indicates that the funds for the bond are being used to deliver climate change solutions. There are over 40 bonds that have received this certification so far, including bonds issued by the Metropolitan Transit Authority, The San Francisco Public Utilities Commission and the New York State Housing Finance Agency. This model could easily be adapted to a "conservation bond" model. In fact, many of the standards and approaches already used by Climate Bonds and Green Bonds could simply be applied to conservation projects as long as these projects produced a financial return.

5. **Employ Pay for Success Models**: In a Pay for Success model, investors provide the capital to implement a project and the repayment level is contingent upon the actual outcomes achieved by the projects. In this way, Pay for Success models are also a form of risk management, as they reduce the performance risk for the government or ultimate payer. Figure 12 provides an overview of how the funding would flow. Pay for Success models can be used as part of a bond or they can be used as part of another financial vehicle.

[46] "Climate Bonds Initiative," accessed June 23, 2017, https://www.climatebonds.net.

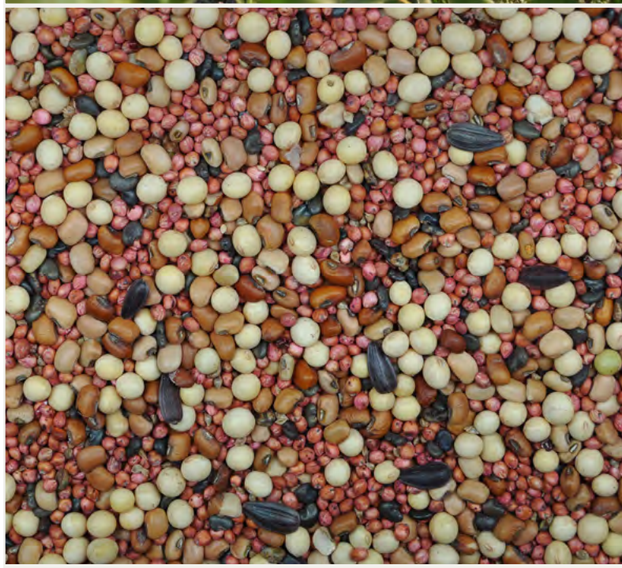
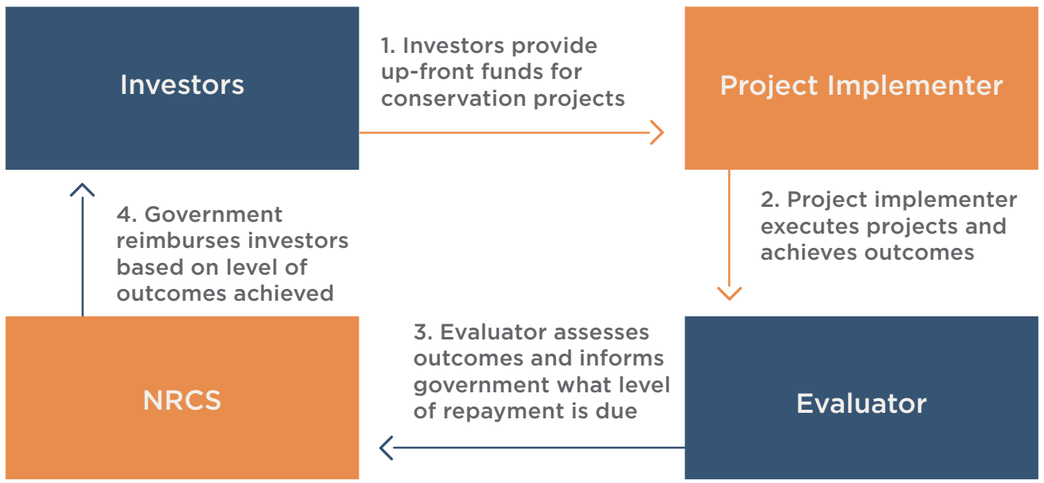


Figure 12: Pay for Success Model

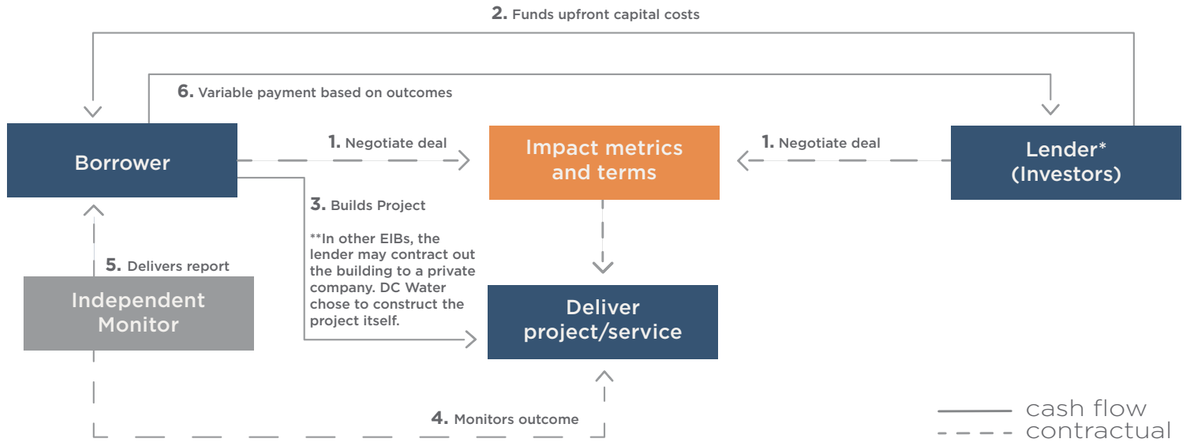


If NRCS were going to use a Pay for Success model, it could make sense to use a third-party trust to facilitate the repayment transactions. NRCS would provide funding to the third-party trust, which would then be responsible for payments and re-contracting. In part, this approach would provide a way to get around government contracting rules that make it difficult to pay for results in the future. NRCS has funded a small number of Pay for Success pilots through CIG.

Analog: DC Water and Sewer Authority and its investors Goldman Sachs and Calvert Foundation created the nation's first Environmental Impact Bond (EIB) "to fund the construction of green infrastructure to manage stormwater runoff and improve the District's water quality." The $25 million bond is part of DC Water's $2.6 billion DC Clean Rivers Project to remediate stormwater and put the District back into compliance with the Clean Water Act. The project will fund green infrastructure in the Rock Creek watershed and, if successful, allow DC Water to forego the cost of a tunnel to capture stormwater in that watershed. The financing structure is unique in that the performance risks are offloaded to the investors: the payments will vary based on the actual outcomes. The project's success will be measured rigorously by an independent third party after five years.

During this five year construction and monitoring phase, the bond will pay investors a 3.43% interest rate, which is equivalent to DC Water's 30-year cost of capital. After the results of the green infrastructure are measured, the bond will be bought back by DC Water at a rate that depends on the project's success. If the project is able to capture an agreed upon benchmark of stormwater, the bond will be bought at par value. If the project fails to capture the benchmark of stormwater, the investors will receive 87 cents on the dollar, and if the project exceeds the benchmark, investors will receive $1.13 per dollar invested.[47]

Figure 13: DC Water Environmental Impact Bond Structure



[47] "Fact Sheet: DC Water Environmental Impact Bond," accessed June 23, 2017, http://www.goldmansachs.com/media-relations/press-releases/current/dc-water-environmental-impact-bond-fact-sheet.pdf.

CONCEPTS FOR NEW AUTHORITIES AND HOW THEY MIGHT BE USED

Explore New Roles for NRCS

NRCS also has the opportunity to try out new roles itself. NRCS could better support producers by helping with marketing, providing income recovery from conservation-driven losses, and creating Individual Development Accounts targeting conservation. NRCS can also do more to support environmental markets and businesses innovating in conservation technology and services.

New Ways to Support Producers

1. **Provide non-infrastructure go-to-market support (e.g. certifications or labels) for ag/forest/ranch products generated using conservation practices:** Producers that have embraced conservation can struggle to realize a return on investment for their products due to lack of mechanisms to sufficiently and credibly differentiate them. One way that NRCS can provide a collective benefit to producers embracing conservation practices is by providing marketing support or tools to help them differentiate their products. Certifications, or labels, are a logical way to do this. Producers that have adopted a certain critical mass of conservation practices could be eligible to mark their products with a symbol certifying them as conservation-focused. One way NRCS could do this is by partnering with trade groups or farmer collectives to more effectively market these products. By supporting the creation of these kinds of mechanisms, NRCS and private investors can create more "pull" for conservation practices by making it easier for producers to be compensated for their conservation work. As producers see that they can receive a premium for conservation-aligned products, more will consider making these changes. The value generated through this work has the potential to provide a return on investment to invested capital deployed to support these projects.

   Analog: One example of this kind of approach is the nascent Xerces Bee Better Label, which distinguishes certain products as pollinator-friendly. The Xerces Society is working in partnership with major food companies, agricultural investors, and conservation-minded farmers, to develop and launch a first-of-its-kind certification program that incentivizes the large-scale adoption of pollinator conservation through a marketing-driven platform. This program, known as Bee Better Farming, will certify producers who practice pollinator conservation, as measured with clearly defined metrics. The private sector will provide investment to support practice implementation. Other similar examples include the Field Stewards effort in Minnesota (CIG 2015) and a CIG 2017 project focused on bird-friendly beef through Audubon.

2. **Income Recovery from Conservation-Driven Losses:** Some conservation practices have a real or perceived risk of lowering yield or income for producers, creating a significant disincentive to giving them a try. NRCS could partner with investors to offer compensation for foregone income to mitigate the risk to producers of adopting critical conservation practices. One example of this comes from the nutrient management side. It has been shown that some farmers apply more than the necessary amount of fertilizer on their land as a sort of "insurance" against weather-related risks to their yield. But what if there were a more conventional insurance product that provided that same benefit? Could farmers then be convinced to apply less fertilizer? Could such a program lead to increased profitability over time via decreased costs of inputs? NRCS might explore how private insurance companies could play a role in managing such a system. It would be logical to house this with other risk management mechanisms like crop insurance as part of RMA, but there is also a case to be made for NRCS incorporating this as an integrated component with its programs. Another option would be to integrate conservation practice requirements with all crop insurance, to align incentives.

   Analog: In 2006, NRCS awarded a CIG grant to AgFlex, American Farmland Trust and the IPM Institute of America to pilot a Best Management Practices (BMP) Challenge. The Challenge was effectively a conservation insurance project designed to compensate producers for any reduced yields resulting from adoption of any one of three best management practices: no-till agriculture, nutrient management and planned nitrogen reduction. The conservation results were successful: "Participating farmers have reduced nitrogen applications by 377,563 lbs, resulting in a reduction of 7,119 lbs. of NO2, a potent greenhouse gas. Further, reductions of 3,078 tons of sediment and 4,103 lbs. of phosphorus have been achieved by farmers participating in the Reduced Tillage BMP CHALLENGE program." However, on average farmers experienced negative net returns, which was anticipated in some cases but not in others, where the BMPs may have been outdated. While this pilot did not achieve its desired outcomes, the lessons learned could be used to inform future iterations of this model, which holds great promise. In addition, the growth of precision agriculture technologies in recent years likely means that producers would have enhanced capabilities to reduce fertilizer inputs while maintaining yields.

3. **Individual Development Accounts for Farmers to Support Conservation Projects:** One way to support farmers who want to embrace conservation practices is to provide Individual Development Accounts targeted at conservation. The basic model is that farmers put a certain amount of savings into their accounts on a monthly basis and it gets matched (typically 1:1) by government money. However, they are not able to take money out of the accounts for at least three years, or until the accounts reach a certain amount. Some IDA programs have a required educational

component to them as well, which could be considered for conservation IDAs. After three years, the farmers can access their money and the matching funds. Farmers would be required to use the funds for conservation practice implementation. There have been discussions of these kinds of accounts with a broader focus over the years as a way of supporting beginning producers or other groups that need extra help. Philanthropic capital often provides some of the match funding, and, because donations of matching funds are tax deductible, private companies have an incentive to contribute as well. The role for investment capital could be as the administrator of the actual accounts, for a modest management fee and the use of the capital while it cannot be touched.

Analog: The Assets for Independence (AFI) program managed by the Department of Health & Human Services provides grants to organizations that run Individual Development Account programs for eligible low-income people and families. The grantee must secure non-federal funds for the project equal to the grant amount and 85% of the grant amount must be used to match participant savings, while the rest may be used for administration. The funds saved in an IDA must be used for one of three purposes: to purchase a first home, capitalize a business, or fund post-secondary education or training. AFI grantees also provide training and support services to participants, such as financial education, credit counseling and repair, and guidance in obtaining refundable tax credits. AFI was appropriated $18.95 million each year in FY 2015 and FY 2016. In 2015, 50 grants were awarded totaling $13.7 million, with awards ranging from $18,824 to $1 million.

New Ways to Support Conservation Businesses and Markets

4. **Accelerate Innovation in Conservation Technology and Services:** NRCS has a clear interest in the successful development and commercialization of new technologies that support conservation practices, such as precision technologies that allow for more efficient irrigation or nutrient management. If NRCS were able to deploy some amount of funding to invest in conservation technology companies, this would stimulate the use of new technologies and, if successful, could provide NRCS with a return on investment over time (which could then be channeled back into more investments). Investments could be debt, guarantees, or some combination of the two. There are restrictions on government agencies investing in company equity, but programs within the DOEE have provided loan guarantees that effectively function as equity.

   NRCS does some similar work today through CIG, supporting the development of animal waste management technologies, for example, and demonstrating that they are economically viable for producers. This could be broadened to other forms of alternative energy production as well as other conservation technologies such as advanced irrigation and nutrient management technology.

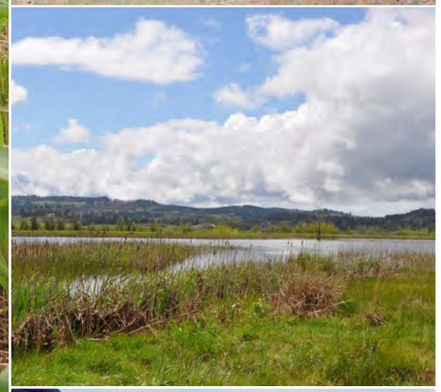
   The USDA Small Business Innovation Research Program, administered by the National Institute of Food and Agriculture (NIFA), may also be used to support this type of innovation as part of its broad mandate. If the goal is to prioritize innovation in conservation, a dedicated program targeting conservation may be needed.

   Analog: See above Analog for Department of Energy Renewable Energy loans and guarantees

5. **Provide More Support for Environmental Markets:** NRCS already has been a leader in supporting environmental markets, playing a key role at times in their early days. If NRCS wants to go further in this area, there is a need and there are opportunities to build off of initial successes. If NRCS had the authority to buy credits, be a buyer of last resort (potentially even have a public auction facility), and generally be a source of demand, this could go a long way toward supporting the agency's big picture conservation objectives, especially when it comes to an increased focus on outcomes, as markets provide a mechanism for quantifying and monetizing outcomes.

   Analog: Washington DC's Department of Energy and Environment has recently established an innovative credit trading market for stormwater retention within the District. In order to stimulate greater investment in the market, the agency is considering ways it can use its own green infrastructure spending to purchase credits from the market. The agency is considering entering either as a buyer of last resort via a price floor purchase guarantee or by purchasing credits to complement its own green infrastructure development. Either type of involvement will increase certainty in the market and lead to greater external investment in green infrastructure

OTHER FARM BILL OPPORTUNITIES



Research for this report uncovered several ideas relevant to discussions about the Farm Bill that relate to NRCS programs but which would not be implementable solely within NRCS. These are captured here to inform future collaborative discussions during the Farm Bill development process and beyond.

Tax Implications:

- **Expand Tax-Free Status to Rebates for Water Conservation:** Currently, energy efficiency rebates are not counted towards gross income, and are effectively tax free. However, water conservation rebates are taxed, providing a significant disincentive for pursuing them compared to energy efficiency projects.
- **Make Tax Credits Tradable:** While outside of NRCS scope, tax treatment of conservation investments is a significant driver of conservation funding and activities. For example, the state of Virginia's Land Preservation Tax Credit provides a tax credit worth 40% of the value of the land located in Virginia which is conserved in perpetuity consistent with their regulations. Further, this tax credit may be transferred to another Virginia taxpayer for a transfer fee of 2% of the value of the donated interest. Research suggests that states with conservation tax credits, and in particular those that are tradable, demonstrate higher levels of private land conservation. Allowing tax credits generated by easement investments to be tradable would provide landowners another mechanism for accruing value through easements and allow investors to use easements to generate tax credits with versatile value.

Easement Valuation:

- **Assess Easements Based on Ecosystem Service Worth Rather than Development Value:** Currently, the valuation on which the easement price is determined is the development rather than the environmental value of the land, which creates an incentive to place easements on green belt land where development value is high rather than on headwaters land where the ecosystem services value is high and the development value is low. Ideally, the easement valuation process could incorporate both forms of value to ensure it is being allocated to the highest priority lands.
- **Make the Appraisal Process for Easements More Affordable:** Currently, the process for getting appraisals for easements is prohibitively expensive, creating a disincentive for producers to pursue them. Reducing this cost could enable more producers to participate in the easement programs.

OTHER FARM BILL OPPORTUNITIES

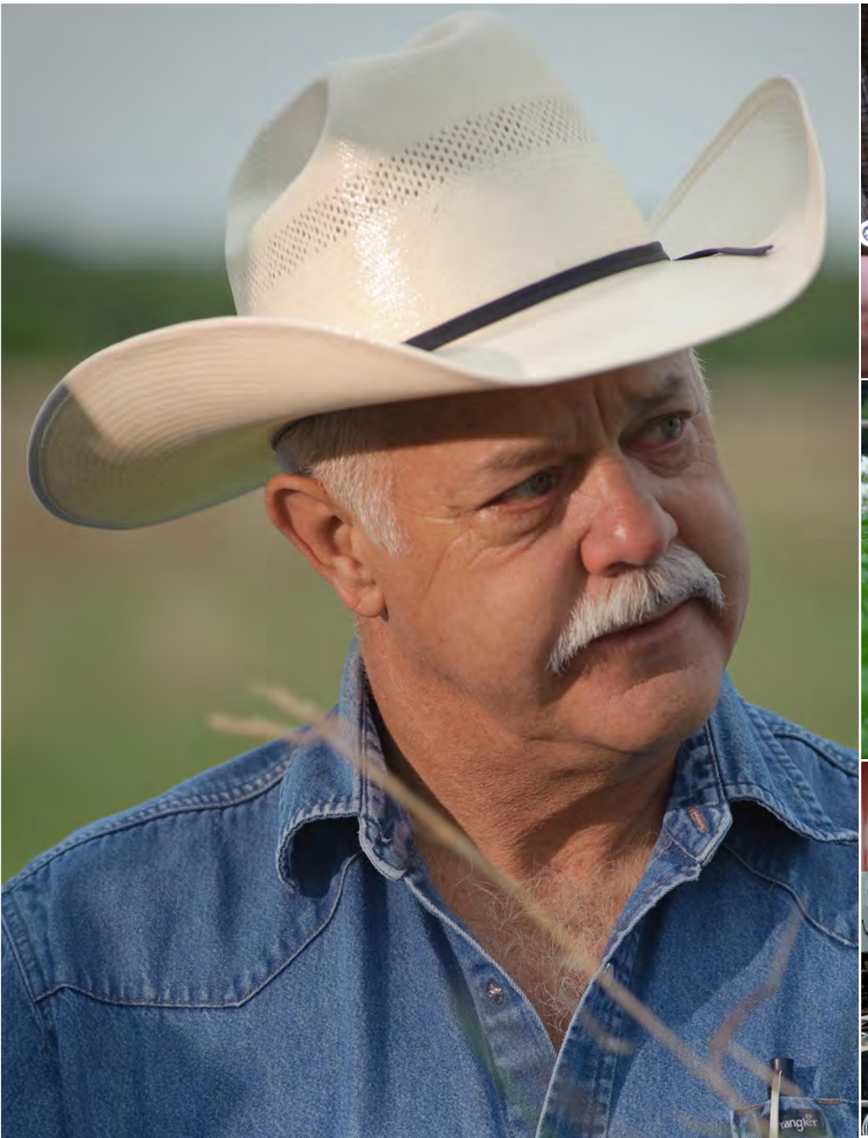
Environmental Credits:

- Explicitly define environmental credits, RINs, and RECs as a “commodity”: The Commodity Credit Corporation (CCC) supports commodities such as corn and soy to ensure farmers receive fair prices for these products. The CCC could further play a very valuable role in supporting a new form of agricultural commodity: environmental credits. If these can be defined as commodities, the CCC could be required to provide the same price support to them, benefitting producers, rural economies and conservation simultaneously.

Inter-Agency Collaboration:

- Identify and Pursue Opportunities to Work More Closely with RMA and FSA: NRCS, RMA, and FSA are all working with and for producers on different aspects of the same problems. Additionally, USDA already has an Agriculture Marketing Service. One way to provide a more seamless and integrated experience for producers and to improve the agencies’ ability to serve their participants would be to identify opportunities to work more closely together.

ENABLERS: IDEAS TO DRIVE MORE AND HIGHER QUALITY PARTICIPATION IN NRCS PROGRAMS



In interviews with NRCS staff and program participants, these suggestions were offered to further improve the quality and quantity of participation in NRCS programs from both philanthropic and investment capital.

Help Connect Potential Program Participants and Supporters
Many people mentioned that it can be challenging for potential participant partners to connect with one another. More intentional match-making could help improve the quality and quantity of NRCS applications by connecting relevant players with each other, e.g. landowners with land trusts or with other third parties such as providers of low-cost capital or debt. Another idea put forth in this vein was to publicly showcase CIG and other success stories with funders or others who have potential to support expansion and scale (e.g. “CIG Shark Tank”).

Expand Marketing and Outreach
Many of the investors interviewed for this report were not familiar with NRCS or with the full range of programs offered. NRCS could consider expanding its promotion of its programs to relevant audiences to raise awareness of programs overall, and in particular to help investors understand RCPP, its newest program.

Further, many of those who have heard about the programs often do not fully understand their potential benefits, such as the indirect but real financial returns, tax benefits, and environmental markets credits. Potential participants may also need support to better understand how to layer different programs together for maximum benefit.

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