

**CHALLENGES AND SUCCESSES OF
CONSERVATION PROGRAMS IN 2020**

HEARING
BEFORE THE
SUBCOMMITTEE ON CONSERVATION AND FORESTRY
OF THE
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HOUSE OF REPRESENTATIVES
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THURSDAY, OCTOBER 1, 2020

HOUSE OF REPRESENTATIVES,
SUBCOMMITTEE ON CONSERVATION AND FORESTRY,
COMMITTEE ON AGRICULTURE,
Washington, D.C.

The Subcommittee met, pursuant to call, at 10:01 a.m., in the Capitol Visitor Center Auditorium, Room CVC-200, Hon. Abigail Davis Spanberger [Chair of the Subcommittee] presiding.

Members present: Representatives Spanberger, Pingree, Axne, Peterson (*ex officio*), LaMalfa, Allen, and Balderson.

Staff present: Prescott Martin III, Félix Muñoz, Jr., Josh Maxwell, Ricki Schroeder, Patricia Straughn, John Konya, Dana Sandman, and Justina Graff.

OPENING STATEMENT OF HON. ABIGAIL DAVIS SPANBERGER, A REPRESENTATIVE IN CONGRESS FROM VIRGINIA

The CHAIR. This hearing of the Subcommittee on Conservation and Forestry entitled, *Challenges and Successes of Conservation Programs in 2020*, will come to order. Welcome, and thank you for joining today's hearing with Mr. Kevin Norton, Acting Chief of the Natural Resources Conservation Service; Mr. Tim Palmer, President of the National Association of Conservation Districts; Mr. Steve Patterson, Senior Vice President of Corporate Marketing, Communications, and Government Affairs for Southern States Cooperative; Dr. Karen Waldrop, Chief Conservation Officer for Ducks Unlimited; and Mr. Jonathan Coppess, Assistant Professor at the Department of Agricultural and Consumer Economics at the University of Illinois. After brief remarks, the hearing will begin and will be open to questions. Members will be recognized in order of seniority, alternating between Majority and Minority Members. When you are recognized, you will be asked to unmute your microphone, and you will have 5 minutes to ask your questions or make a comment. In order to get to as many questions as possible, the timer will stay consistently visible on your screen.

Good morning, and welcome to today's hearing on the challenges and successes of conservation programs in 2020. I hesitate to say this, but in these unprecedented times, it goes without saying that the way NRCS operates and serves stakeholders and landowners across the country looks very different these days. And perhaps more importantly, the realities facing farmers and producers as a result of the COVID-19 pandemic and subsequent economic down-

turn are about as different today as one could imagine, compared to when the 2018 Farm Bill was passed.

We are here today to examine the ways NRCS is adjusting to the new normal of serving customers and administering programs amid the pandemic. How producers and farmers are utilizing conservation during these dual crises, what challenges NRCS is experiencing, what successes the agency has had that we can build upon, and what role conservation could play in the upcoming, hopefully, economic recovery, and whether there are additional flexibilities that farmers and producers may need within the existing conservation programs to ensure that they are able to continue the important work of conservation during these uncertain times.

Since the 1930s, NRCS has worked to provide producers with technical support and financial assistance to achieve the benefits of a healthy and productive landscape. In 2019 alone, NRCS and its partners worked with more than 500,000 producers on over 43 million acres to build conservation plans and implement practices that increase production, reduce input costs, conserve natural resources, and protect wildlife habitat. Together, these actions not only have a positive impact on farms, but also on their neighbors, their watersheds, and the entire U.S. population.

In my home State of Virginia, NRCS works with 47 Soil and Water Conservation Districts and partners at the state and local levels to make sure Virginia's farmers and landowners have the assistance and resources they need to protect soil and water quality across our Commonwealth. Yet in central Virginia and across the country, the process of administering and delivering successful and meaningful conservation programs has grown increasingly complex over the years. For one, the forces acting on our soil and water and air are themselves becoming more extreme, and we see more frequent and intense impacts as a result of climate change, frequent storms, flooding across the Midwest, hurricanes in the Southeast, historic wildfires in West, and adding to this complex environment is the COVID-19 public health crisis. In addition to its human toll, it has rippled through the agricultural sector as well.

For these reasons, it is imperative that we take a hard look at the way we deliver our conservation programs so that we can make sure we are able to accomplish their important goals in light of the challenges that exist. We know that NRCS programs not only help producers adapt to climactic conditions, to protect food and fiber production, but can even help reverse the effects of climate change. We also know that conservation programs can assist communities in recovering from the economic shocks like the ones presented by COVID-19 by generating significant economic activity and supporting a variety of jobs in rural communities.

It is worth noting that conservation spending, including implementation of practices, direct payments to farmers, administrative costs, results in an injection of dollars into local economies. For example, from 2014 to 2017, \$2.6 billion was invested in the Conservation Technical Assistance Program. This investment generated an average of \$4 billion in economic activity and supported 12,100 jobs each year.

Throughout this hearing, I am eager to hear from our experts on conservation program delivery, especially in light of this rapidly

evolving landscape. I am also interested in hearing how conservation can contribute to the well-being of farm operations and aid in COVID recovery. I also specifically would love to hear from our witnesses, their perspectives on the ability of NRCS field staff to service producers as the environmental landscape evolves, including updated staffing needs of the Department, efforts to attract qualified staff, and what personnel resources are required to optimize the ability of these critical programs to accomplish their next goals.

[The prepared statement of Ms. Spanberger follows:]

PREPARED STATEMENT OF HON. ABIGAIL DAVIS SPANBERGER, A REPRESENTATIVE IN
CONGRESS FROM VIRGINIA

Good morning and welcome to today's hearing on the *Challenges and Successes of Conservation Programs in 2020*.

I hesitate to say, "in these unprecedented times," but it goes without saying that the ways NRCS operates and serves stakeholders and landowners across the country look different these days. Perhaps more importantly, the realities facing farmers and producers as a result of the COVID-19 pandemic and subsequent economic downturn are about as different today as one could imagine as compared to when the 2018 Farm Bill was passed. We're here today to examine the ways NRCS is adjusting to the new normal of serving customers and administering programs amid the pandemic, how producers and farmers are utilizing conservation during these dual crises, what challenges NRCS is experiencing, what successes the agency has had that we can build upon, what role conservation could play in the coming economic recovery, and whether there are additional flexibilities that farmers and producers may need within existing conservation programs to ensure that they are able to continue the important work of conservation during these uncertain times.

Since the 1930s, NRCS has worked to provide producers with technical support and financial assistance to achieve the benefits of a healthy and productive landscape. In 2019 alone, NRCS and its partners worked with more than 500,000 producers on over 43 million acres to build conservation plans and implement practices that increase production, reduce input costs, conserve natural resources, and protect wildlife habitat. Together these actions not only have a positive impact on farms, but also on their neighbors, their watersheds, and the entire U.S. population.

In my home state of Virginia, NRCS works with 47 Soil and Water Conservation Districts and partners at the state and local levels to make sure Virginia's farmers and landowners have the assistance and resources they need to protect soil and water quality across our state.

Yet, in central Virginia and across the country, the process of administering and delivering successful and meaningful conservation programs has grown increasingly complex over the years. For one, the forces acting on our soil and water and air are themselves becoming more extreme. We are seeing more frequent and intense impacts as a result of climate change—including frequent storms and flooding across the Midwest, hurricanes in the Southeast, and historic wildfires in the West. Adding to this complex environment is the COVID-19 public health crisis which, in addition to its human toll, has rippled throughout the agricultural sector as well.

For these reasons, it's imperative that we take a hard look at the ways we deliver our conservation programs, so that we can make sure we're still able to accomplish their important goals in light of the challenges that exist. We know that NRCS programs not only help producers adapt to climatic conditions to protect food and fiber production but can even help reverse the effects of climate change. We also know that conservation programs can assist communities in recovering from economic shocks like the one presented by COVID-19 by generating significant economic activity and supporting a variety of jobs in rural communities. It's worth noting that conservation spending, including implementation of practices, direct payments to farmers, and administrative costs, results in an injection of dollars into local economies. For example, from 2014 to 2017, \$2.6 billion was invested in the Conservation Technical Assistance Program. This investment generated an average of \$4 billion in economic activity and supported 12,100 jobs each year.

Throughout this hearing today, I am eager to hear from our experts on conservation program delivery especially in light of this rapidly evolving landscape. I am also interested in hearing how conservation can contribute to the well-being of farm operations and aid in the COVID recovery.

I also specifically want to hear our witness' perspectives on the ability of NRCS field staff to service producers as the environmental landscape evolves, including updated staffing needs of the Department, efforts to attract qualified staff, and what personnel resources are required to optimize the ability of these critical programs to accomplish their important goals.

With that, I look to the Ranking Member, Mr. LaMalfa of California, for his comments.

The CHAIR. With that, I look to the Ranking Member, Mr. LaMalfa of California, for his comments.

**OPENING STATEMENT OF HON. DOUG LAMALFA, A
REPRESENTATIVE IN CONGRESS FROM CALIFORNIA**

Mr. LAMALFA. Good morning, and thank you, Chair Spanberger, for holding today's hearing to review the successes and challenges of the conservation programs in 2020.

Of course, in January of this year, our Subcommittee heard from NRCS Chief Lohr and FSA Administrator Fordyce regarding the implementation of the conservation programs included in the 2018 Farm Bill. Since that time, our country has been through—and I don't have to tell you here today—an extended period with the COVID situation. While much was shut down, of course, farmers and ranchers continued to make sure that Americans still had access to the safest, most abundant, and most affordable food supply in the world. The season does not wait for the virus. You have to get it done.

NRCS field offices also continue to work to serve their customers. Although there are some restrictions, NRCS employees have adapted and continued to administer these critical conservation programs.

Almost 2 years ago, Congress passed the 2018 Farm Bill that protected mandatory funding in the conservation title. It increased funding for EQIP, which is known as the Environmental Quality Incentives Program, and ACEP, the Agriculture Conservation Easement Program, and provided a separate funding allocation for RCPP, the Regional Conservation Partnership Program. The 2014 Farm Bill made significant reforms like consolidating over 20 conservation programs into 13. The 2018 Farm Bill built upon these successes by streamlining program administration to provide for better delivery.

These changes were designed to improve access to conservation programs all across the country, and I am proud of the results so far we have seen, specifically in my home State of California. For example, the California Rice Commission was recently awarded nearly \$5.5 million in RCPP funding to maximize water bird habitat on rice lands in California.

So, I would like to congratulate Chief Kevin Norton on his role as Acting Chief of Natural Resources Conservation Service. I welcome him here today. Of course, he has a long history of service at NRCS, including as Louisiana State Conservationist, as a detailee to the Senate and House Agriculture Committees during the 2014 and 2018 Farm Bill, and most recently as Associate Chief of NRCS. Thanks for being here, sir.

I also would like to thank our second panel of witnesses as they come up a bit later for being here. With the input and expertise of stakeholders like you, we have been able to improve conservation

programs over the years so that they work better for our farmers and ranchers. I look forward to a productive discussion with both panels of witnesses to hear about their successes and challenges of the programs in 2020. I thank Chair Spanberger, and I will yield back.

The CHAIR. The Chair would request that other Members submit their opening statements for the record so witnesses may begin their testimony and to ensure that there is ample time for questions.

I would like to begin by first welcoming our first witness. Thank you for being here today, Chief Norton.

Mr. Kevin Norton serves as Acting Chief for NRCS. He began his career with NRCS in 1981 as a ranger conservationist in Oklahoma, and has since served in a number of other roles within the agency, including as the NRCS State Conservationist for Louisiana, and most recently as the NRCS Associate Chief.

We will now proceed to hearing your testimony. I thank you for being here today, sir. You will have 5 minutes, and when 1 minute is left, the light will turn yellow, signaling that your time is close to expiring.

Mr. Norton, please begin when you are ready.

STATEMENT OF KEVIN D. NORTON, ACTING CHIEF, NATURAL RESOURCES CONSERVATION SERVICE, WASHINGTON, D.C.

Mr. NORTON. Thank you, and good morning, Chair Spanberger, Ranking Member LaMalfa, Chairman Peterson, and Members of the Subcommittee that are joining us via the teleconferencing functionalities. Thank you for this opportunity. It is really a privilege to be before you today to discuss the challenges and successes of the Natural Resources Conservation Service and the delivery of our programs this past year.

As you have said, it has been an unprecedented year with external influences applying unusual pressures on our staff, adjusting to some degree, and then the way we have operated at the field level. Our discussion today will highlight the resiliency and dedication of the NRCS team and our partners as we ensure service delivery to our customers.

But, I want to start first by thanking and expressing a great appreciation to the farmers, ranchers, and foresters throughout this country who adopt voluntary conservation, a lot of times without cost-share or with cost-share financial assistance that you all provide to us through the farm bill, as they work to meet their needs and the needs of agriculture, forestry, and natural resources and provide a multitude of services to our great nation. As you said, Mr. LaMalfa, agriculture never stopped. We had to be there for them.

It is noteworthy during this challenging year that we did complete 115,000 conservation plans with producers. We installed conservation measures on over 1 million acres of conservation practices, and this would not have happened without the dedicated staff, the work of our partners coming together and contributing to the collective efforts to service our customers and the natural resources.

In identifying some challenges, I will share a few things with you. The pandemic obviously was the most important challenge impacting our agency today. However, at no time did the NRCS cease operations at any location in the United States. We were available by varying means to continue the field work. We abided by the protocols of social distancing and those kinds of things, and we were able to continue delivering the field work, applying the conservation measures on the field, and then also working to put that funding that you all provided to us into contracts via some very innovative-type things. And we have done that through opening our services by phone, connecting folks from the office call to their home phone, email, fax, and more importantly, bringing web services available for them to access our customers. We have extended the field office, our servicing points, to our employees' homes and into the homes of our customers, and with great success.

By the time the year is—and I will tell you, when this all started, we really did have some concerns about our ability to continue to deliver these programs with all of the things that were happening, and the varying degree of local regulation, local influences on how we could move about and do things. The Department gave us latitude to still get into the field, to be there, and to be available, and by the time we closed out the year yesterday, we saw very little impact on the work that we needed to do throughout the year. So, it was quite a success.

As you indicated, we talked a little bit at the last hearing, Chief Lohr talked about our staffing. Our collective efforts of priority hiring, using direct hire authority, it had a positive impact. I am pleased to report today while we are not yet at the goal that we had set for ourselves of 10,445 positions by mid-year, we have had 2,900 new people join our agency. We have had attrition through separation, retirements, and those kinds of things, but we are very close to 9,400 people, and that is at least 700 more than any time, any number that we have had in the past 2 years. We are on a positive trajectory. We are making inroads. We are beginning to see the staffing improve. The focus of all of these efforts are the field servicing points, those state offices down to the field offices where we interact and connect with our customers.

Throughout this year, there have been many challenges, but there have been many successes. We talk about the impacts on the livestock industry with the pandemic and production supply problems. We have created a new CART system for our unified streamlined application evaluation process, and many achievements about conservation implementation where we are on pace with all the work that we had this last year.

I will close with my comments and say when I reflect back on 2020 and the challenges that were laid out before us, it is only because of the resiliency of the entire NRCS team from the field level through to our national office, the adjustments that we made in being more flexible about our service and that NRCS and our partners that are helping us service the customers—that we have been able to achieve the accomplishments that we had this past year. We responded with all of this going on. We continued our response to the wildfires, the hurricanes, and the floods, the major impacts that happened. That work will continue. We don't solve those

issues and address them overnight. We are still gathering information. We have completed delivery of our conservation programs, numerous initiatives. We established and stood up the Office of Urban Agriculture that was provided instruction in the farm bill, and we are continuing to lean forward in addressing emerging natural resource issues and needs.

With that, I want to thank you for your continued support, your confidence, the authorities that you have given us through the farm bill and the financial assistance programs to continue to work with customers and address the natural resource issues of our nation.

Thank you very much.

[The prepared statement of Mr. Norton follows:]

PREPARED STATEMENT OF KEVIN D. NORTON, ACTING CHIEF, NATURAL RESOURCES CONSERVATION SERVICE, U.S. DEPARTMENT OF AGRICULTURE, WASHINGTON, D.C.

Introduction

Chair Spanberger, Ranking Member LaMalfa, and Members of the Subcommittee, thank you for the opportunity to appear before you today to discuss the challenges and successes of the Natural Resources Conservation Service (NRCS) conservation programs. This has been an unprecedented year with external influences applying unusual pressures on our staffs and adjusting, to some degree, the way we operate at the field level. The information I will share with you today will show the resiliency and dedication of the entire NRCS team, from field technicians and District Conservationists all the way through our state and national leadership teams, to ensure services are delivered to our customers. I appreciate the ongoing support and leadership this Subcommittee has provided for voluntary, private lands conservation and the improvement of our soil, water, and other invaluable natural resources as embodied in the 2018 Farm Bill and within our other authorities.

COVID-19 did have an impact on our operations. Our staffing levels have been impacted due to diminished ability to on-board employees and difficulty in completing relocations. We are working with the Farm Production and Conservation (FPAC) Business Center's hiring team and continue making strides to bring people on board. For example, the FPAC Business Center addressed issues we were having with fingerprinting requirements. They made adjustments that resulted in improved on-boarding timeframes. Even with these difficulties, our efforts are having a positive impact. In the fourth quarter of FY 2020, we brought on board 639 employees. The total of new FY 2020 on-boarded employees to fill vacancies is 2,943, which is higher than those on-boarded to fill vacancies in FY 2019 by 1,331. This includes both permanent and nonpermanent on-board employees. This demonstrates that NRCS has overcome the impediments to on-boarding created by COVID-19.

We also had to rethink our methods for training our staff and partners who help us deliver our programs. We have evaluated our training needs and identified those that can be offered virtually and those that must remain in-person trainings. Some of the in-person trainings had to be postponed until sometime in FY 2021.

Although we are at varying phases of reopening, our field staff have continued servicing our customers. From the early stages of the pandemic, we instructed staff to continue servicing producers in the field while following social distancing requirements. Consequently, programs like the Environmental Quality Incentives Program and the Conservation Stewardship Program have seen little impact. A few challenges we experienced included:

1. Some impact in our easement programs due to courthouse closings impeding records search requirements.
2. A delay in installing Soil Climate Analysis Network stations for American Indian Tribes due to travel restrictions on reservation lands. We'll be working with Tribes to get these installed as soon as possible.
3. Collecting field data needed for our National Resources Inventory. COVID-19 has made collecting field data problematic. But we are working through these challenges to maintain the accuracy and consistency of the data.

NRCS does not have specific COVID authority, but we did see a need and moved to help producers who were adversely impacted by market chain disruptions and closed outlets. NRCS worked with the USDA-Animal and Plant Health Inspection Service researchers to offer assistance to impacted producers. We reached out to

state producer organizations, national associations, and state agencies in calibrating our response to the needs of producers. For dairies who dumped excess milk, NRCS developed excess milk disposal guidance that outlined various approaches on how to safely dispose of milk. For livestock producers who had to depopulate inventory, NRCS developed guidance for disposal and offered assistance through the Environmental Quality Incentives Program (EQIP). Additionally, NRCS developed guidance for producers who were changing from a production diet to a maintenance diet. Through EQIP, over \$500,000 were obligated in eight states to help producers deal with facility closure impacts on their operations.

Though we had challenges, when I reflect back on FY 2020 I see significant results. The 2018 Farm Bill included numerous references for agency outcomes reporting related to our conservation programs and to streamlining programs. In response, NRCS embarked on a historic change to amalgamate numerous business practices into one program-neutral conservation planning process through an information technology application known as Conservation Assessment and Ranking Tool (CART). CART established a common quantitative framework for all of conservation planning and program delivery activities. This IT application was deployed in FY 2020 and will revolutionize the way NRCS adopts and deploys technology to its 2,400+ field offices and enhance our ability to report our outcomes.

We also, in 2018, established an Outcomes Team that is working closely with our Conservation Effects Assessment Project modelers and other staff to develop outcomes related materials to be shared in an interactive environment with the public. This year, we instituted a monthly webinar series that has shared outcomes information on various topics, including results from various Working Lands for Wildlife initiatives, measuring and understanding the effects of conservation within watersheds, results from tillage management and structural conservation practices effects and trends, and data available in the Natural Resources Inventory. The meetings are well attended and will be continuing throughout the year.

You also asked that we provide more useful data to the public that resulted from various Conservation Innovation Grants (CIGs) that were awarded either nationally or at the state level. Work on this database is on-going and we anticipate releasing information later in FY 2021.

Another significant achievement was the update of our conservation practice standards. We evaluated and updated our conservation practice standards within 2 years of farm bill enactment. These reviews incorporated public feedback along the entire process, including initial feedback on practices needing to be updated followed by specific feedback requests for each specific practice, and, once updates were incorporated, the public had an opportunity to provide feedback on the accepted updates. We released 47 conservation practice standard updates; 25 standards were updated and are being prepared for release; 23 standards have been reviewed and are ready for public review with a Federal Register posting; and 14 are still under internal review.

Further, we established the Office of Urban Agriculture and Innovative Production through collaboration with all USDA agencies whose missions included urban agriculture. Through this office we entered into grant agreements with those seeking to improve opportunities for urban agriculturalists. Interest was tremendous. Under the farm bill authorities, we received more than 500 proposals for the \$4 million funding provided for this purpose. Additionally, we are working with the Farm Service Agency to initiate the process of establishing five of the required ten pilot urban county committees; and are working through the process to establish the Secretary's Urban Agriculture Advisory Committee.

Opportunities continue to grow with the Joint Chiefs' Restoration Initiative where we are working in concert with the USDA Forest Service (USFS) to address resource concerns where private lands join National Forest System lands. This initiative exemplifies the USDA shared stewardship model of bringing together Federal, state, and local governments with Tribes, community groups, and private landowners to achieve landscape-scale conservation outcomes across different land ownerships. Over the last 7 years, USDA (NRCS and USFS) has invested more than \$225 million in 85 projects across 40 states and Puerto Rico. A record 34 proposals were submitted in FY 2020. Community interest has also expanded as people become more aware of this collaborative means to fund conservation work addressing wildfire risk reduction, water quality and supply protection, and at-risk wildlife habitat improvements.

Another highlight is our strategic effort to increase the adoption of soil health management systems across the landscape. Every state now has a Soil Health Strategy focused on the goal of getting soil health management systems implemented. national and state strategic efforts include enhanced outreach and training across the agriculture community and within our staffs so they can provide better assistance

to our customers. The agency launched a soil health management systems Key Performance Indicator in 2020 that will track cropland with multiple conservation practices installed representing a soil health management system. In FY 2019, a baseline of 209,000 acres was established.

We responded to emergencies, including wildfire, hurricane, and flooding disasters. Our efforts in this area seem to be growing. In FY 2020, we provided \$12 million for flooding in Michigan and \$7 million for tropical storm Cristobal. We are currently evaluating funding needs for other natural disasters. For Hurricane Isaias, we are evaluating damages in the southeastern states to determine if there is a need for Emergency Watershed Protection (EWP) Program-Recovery disaster assistance. For Hurricane Laura, we received an EWP assistance request from the Orange County, Texas, Drainage District and anticipate another request will come from Shelby County. For western wildfires, NRCS offices throughout the region are working with local communities to assess damages as conditions allow. We are also monitoring Hurricane Sally in the Gulf Coast to determine whether any assistance is needed for impacted states.

Other accomplishments in FY 2020 include:

- Interim Final Rules for all major farm bill programs were published, public comments were evaluated, and final rules for each program have been developed and are in various stages of clearance;
- We provided transparency and more clarity to the conservation compliance provisions with our recently published final rule following public comment evaluation on the interim final rule that was published in December of 2018;
- Our Plant Materials Centers are developing vegetative solutions to protect coastal and estuarine areas that are feeling the effects of rising sea levels and increased storm intensity;
- We have offered funding opportunities in the amount of \$345 million for those who want to partner with us to address natural resource concerns through the Regional Conservation Partnership Program (RCPP), as well as funding opportunities for feral swine eradication projects (\$11.9 million), CIGs (\$37 million awarded in FY 2020 and \$40 million subsequently announced as available for projects to be selected in FY 2021, both on-farm and classic), Wetland Mitigation Banking Program (\$5 million), as well as offering opportunities through the Working Lands for Wildlife Initiatives[;]
- Entered into agreements with other Federal Agencies where it benefitted the agriculture community and our other customers, including with the Federal Emergency Management Agency and the U.S. Army Corps of Engineers[; and]
- NRCS has addressed water quality throughout the history of the agency, but the 2018 Farm Bill made source water protection and collaboration with partners in the drinking water sector an explicit priority of NRCS conservation programs. NRCS State Conservationists, in collaboration with partners, have identified high priority areas for source water protection in each state, and at least 10% of most farm bill conservation program funding is dedicated to protecting source water.

Although we do not yet have final FY 2020 enrollment information, we have provided preliminary information so you can see the volume of work our staff completed during this complicated year:

Environmental Quality Incentives Program (EQIP): Over 30,000 contracts providing nearly \$1.1 billion on 9.6 million acres.

Conservation Stewardship Program (CSP): In addition to the new enrollments described below, NRCS also renewed almost 1,000 contracts on 2.5 million acres.

CSP Classic: Over 4,248 contracts providing over \$260 million on 5.3 million acres

CSP Grassland Conservation Initiative: more than 5,000 contracts on nearly 400,000 acres providing \$35 million.

Regional Conservation Partnership Program (RCPP): More than 1,300 contracts on 430,000 acres.

An additional highlight for FY 2020 the U.S. Fish and Wildlife Service **decided not to list**:

- the bi-state population of greater sage-grouse, (CA and NV) in part due to over 17,000 acres conserved through NRCS programs; and
- the arctic grayling Upper Missouri River population (MT and WY). Critical conservation measures implemented by partners, including NRCS clients, addressed threats and increased the number of breeding fish.

Other notable results of conservation programs include delistings of stream segments, which have been associated with National Water Quality Initiatives watersheds, as reported by the EPA this year. These include Bayou Grand Marais in Louisiana (total dissolved solids) and Rio Grande de Añasco (dissolved oxygen and turbidity) in Puerto Rico.

Though we made significant accomplishments in FY 2020, including CART described above which will improve the agency's ability to assess performance and report outcomes, there is more to be done. NRCS will soon be rolling out:

- the opportunity for producers to enter into incentive contracts under EQIP[;]
- the soil remediation provision in the farm bill will begin implementation in October 2020;
- the Comprehensive Conservation Plans in the CSP as well as the Conservation Planning Assessment in EQIP; and
- developing capability for applications and contracts with individual producers through RCPP.

Conclusion

I am excited about the authorities, responsibilities, and opportunities you provided NRCS for delivering private lands conservation programs to the farms, ranches and forestland of our great country. We embrace the work with passion and will continue striving to deliver these programs to the benefit of our nation's natural resources. I thank you for letting me share our progress and successes with assisting private landowners, producers, and others with implementing the agencies program authorities.

The CHAIR. Thank you very much for your testimony, Chief Lohr—excuse me, Chief Norton. Old habits die hard. I apologize.

At this time, Members will be recognized for questions in order of seniority, alternating between Majority and Minority Members. You will be recognized for 5 minutes each in order to allow us to get to as many questions as possible. Please keep your microphones muted until you are recognized in order to minimize background noise. When 1 minute is left, the light will turn yellow, signaling time is close to expiring.

I will first recognize myself for 5 minutes.

Chief Norton, I want to first congratulate and thank you for all of the work that your agency has done. Those staffing numbers, I know, in prior months, on this Committee, we had concerns about staffing levels within NRCS, and certainly, hiring during a global pandemic is an impressive feat. I am pleased to hear that you all are on a positive trajectory.

I would like to get the conversation started within a focus of conservation more broadly. It is essential to helping farmers build resiliency, boost their bottom line, improve production, stimulate local economies. We know these things to be true, but certainly during the COVID-19 crisis, farmers are facing such significant challenges.

What do you see the role for conservation programs as part of how farmers can respond to and recover from the COVID-19 crisis? Are there any particular opportunities that conservation programs could present as farmers are continuing to plan for the future amid our current reality?

Mr. NORTON. Thank you for that question.

I really believe and think that we have demonstrated that we will be able to continue delivery of all of our conservation portfolio even through things like that. We have no idea, as we look across the country, of when all of our offices will be back to full open status. But I see the needs of those producers out there have not changed. They are making applications for the program. It is about

them achieving resource sustainability, doing adjustments to their operation, and us being able to continue to do that, because that is their livelihood. In many cases, it is their generational farm. And I see not a lot of difference, from our perspective, other than the way we service people. And it has changed. We were very much a face-to-face engaging agency, and it is remarkable how successful we have been in using the technologies around us to engage with those producers so that they can have those contracts, they can get those conservation plans, and they can get the conservation work implemented.

I see continuing this path and continuing to innovate around the way we engage and have opportunities for them, but we want to be there for them for the conservation work they need to do on their operations.

The CHAIR. And you talked about the adjustments that NRCS has made, and certainly the adjustments that our producers are making. Are there additional flexibilities that we, Members of Congress on this Subcommittee, flexibilities that we should consider for conservation programs that would help maintain farmer engagement and help reduce uncertainty during this challenging time?

Mr. NORTON. We believe that, at this point, in this last farm bill, you provided us a tremendous amount of flexibility. We need to continue that. The idea that conservation—well, just looking at the Chair and the Ranking Member, the conservation needs of your states couldn't be any different. Water quality is water quality, but how you deal with that in Virginia *versus* California, tremendously different. Having those flexibilities so that we can shape that conservation program delivery to what is needed is the thing that we need to continue. We do not need to be unduly influenced of setting priorities at one level that doesn't really work across the landscape. And the authorities that you have given us, the flexibility allows us with our State Conservationists and the state technical committee, the partners there within the state, to really address those conservation issues as they reside locally within that state.

I think it is a continuation of that locally-led effort that is local even at the county level, but at the state level, gives us the flexibility to deliver the programs that best address the issues and the needs there in the state.

The CHAIR. Well, I thank you for the kind words about the 2018 Farm Bill, and I give full credit to my colleagues up here, because that predates me. Thank you to the Chairman, Ranking Member Conaway, and Ranking Member LaMalfa for your good work on that.

To just close out in the last remaining seconds that I have, I was wondering if you could just speak to very, very broadly, if you were making a pitch to some of our colleagues who do not serve on the Agriculture Committee who may not have exposure to these programs about what they could mean in agricultural communities across the country as we are rebuilding our economy out of COVID, how do you see these programs really being part of that continued economic engagement and part of the hard work of recovering our economy?

Mr. NORTON. Yes. We are a nation that produces. We feed our people. We feed the world. And we do it in a very sustainable fash-

ion. I grew up in Oklahoma. I grew up with stories of the Dust Bowl, worst environmental catastrophe we ever had. We are producing agriculture efficiently, effectively, and with good environmental practices, stewardship. And those things continue. It keeps moving, as has been discussed earlier in your statements. Things move. We need to help. We need to be there with these programs, these dollars, to help our conservation, our farmers, our ranchers, our forestland owners, those people on the ground. We need to help them move conservation and adapt and adjust, because what we do is about environmental sustainability, economic sustainability, but sustainability of society. And we have to help them move, and we have to help them continue to be productive because the benefits to them applying proper conservation extends way beyond the farm. It expands to the watershed that they are operating in, the community that they live in, as you shared about the rolling out of the money and how it feeds across. But it also is the health and the well-being of our nation. The security of our nation is vested in the conservation work we do. We cannot feed this world on depleted natural resources, and we have a solid resource base. We need to continue to sustain that and work in partnership with the people on the ground that have stewardship of those resources to be successful.

The CHAIR. Thank you very much.

I now recognize the gentleman from California for 5 minutes.

Mr. LAMALFA. Thank you.

We have heard from the Secretary numerous times that improving and having great customer service is a priority for the Department, and so we are wondering in your department how you have a workforce analysis that was done for NRCS, and the technical capacity is something that is being looked at. How is that going *versus* the capacity *versus* the need, going forward? And then, do you have the people you need to deliver these conservation programs at the same time that you are working on the technical capacity that agriculture needs these days?

Mr. NORTON. That is a very good question.

As we shared, and as you all discussed in the last hearing, we are not at a staffing level that we need to be by any of those tools that we are using, the optimal productive office and the cycle time study. We do have the authority and the opportunity to grow to 11,011 people. Whether that is enough when we get there—we need to get there first. We know we are understaffed, but we are gaining staff.

Mr. LAMALFA. Eleven thousand?

Mr. NORTON. Eleven thousand eleven, yes.

Mr. LAMALFA. Precisely 11,011.

Mr. NORTON. Well, that is what the models kick out, so we just go with it.

Mr. LAMALFA. Well, it is precise.

Mr. NORTON. But we are on our trajectory to get there. Actually, COVID probably slowed us down.

Mr. LAMALFA. No doubt.

Mr. NORTON. The challenge of getting people hired; but sir, I think we are on the right path. We have made gains this year. We

have improvement we can still do that we are getting a lot of support from the Farm Production and Conservation Business Center.

You all have given us a lot of resources with the farm bill, both financial and technical assistance resources. The technical assistance is what we staff with, what we work with partners to get the delivery out on to the ground. We are investing those strategically and as efficiently as possible while we are still trying to get the financial assistance dollars out.

Right now, I think we are on our way, yes, sir.

Mr. LAMALFA. Yes. Well, you are having successes out there, even with the difficulty of what we are going through this year.

When I talked with the California Rice people here and ongoing, and they want me to let you know, as I am, that they are very thankful for the help with NRCS for funding, *et cetera*, for the salmon rearing project they have going on a couple hundred acres of riceland adjacent to the Sacramento River. This is where small salmon are introduced into the area and feed up on all those great nutrients that are in the rice fields, and you get nice big fat salmon coming out of there and helping to get the population up in the Sacramento River system, like everybody wants to. So, that has been a very exciting partnership and avenue to see how that will go. They will be looking for expansion of that and I think there are more growers ready to line up and be part of that. So, that is a big thumbs up on that.

I am going to wear our Chair out on this forestry question here. Obviously it is a huge issue in the West, and in California, there are more fires than you can count right now in my home state, and even in my district. What is NRCS's work to help with landowners reduce fire risk? Again, we are having difficulty with forester capacity, boots-on-the-ground, so to speak, and some states have fewer than others. What can NRCS do to help address this issue, increasing the latitude a little bit of your scope there to be helpful in that department, since it really does seem to be an emergency? And then have that affect possible funding for landowners to put the practices in place that would help for reducing wildfire risk on their lands and in maybe surrounding government lands, too?

Mr. NORTON. Thank you. Again, back to the farm bill and our authorities, beginning in 2014, we began to get more flexibility when working on forestland. A lot of the limitations were taken off. We do work with private forestland. That is where we are focused, all of our work on private forestland. We have a lot more flexibility in working with those folks that have forestland.

Mr. LAMALFA. Are there any barriers we need to help you with, that you know of? Anything law-wise or rule-wise that is getting in the way from going farther?

Mr. NORTON. I think we are in a good place. It is about local priorities. We are working with the Forest Service on this fire shed, wildfire risk reduction coming into partnership with them. We saw a success in one of the fires a couple of years ago, 2018, where they used the properties that we had actually done, the forest stewardship on. That was a place that they went to put the preventive measures to stop the fire from spreading.

We have plenty of authority. It certainly is a matter of locally the priorities around funding and whether we are working on

forestland, rice production, those kinds of things, but we have a lot of tools to work with those folks and continue to work on forest stewardship level, forest health activities that would create the opportunity for less, the fires are going to happen whenever the conditions are right, but have a better chance of addressing the fire because you are working with a healthy forest and a diverse vegetation.

Mr. LAMALFA. It comes back to do you have the personnel and the funding to get after all these, right?

Mr. NORTON. Yes, sir, and to your point, in this whole effort of hiring, we are looking at picking up additional forestry staff for our people. That is, again, about the State Conservationists making a decision on what they need. But we engage directly with state and private forestry interests for technical service assistance and have agreements that are complementing our service and filling gaps where we are absent. We do have other avenues that we work with other partners to get forestry assistance where we don't have the trained staff.

Mr. LAMALFA. Great. Thank you, Chief Norton.

I better yield back. Thank you, ma'am.

The CHAIR. I now recognize the Chairman of the full Agriculture Committee, Chairman Peterson, for 5 minutes.

**OPENING STATEMENT OF HON. COLLIN C. PETERSON, A
REPRESENTATIVE IN CONGRESS FROM MINNESOTA**

Mr. PETERSON. I thank the gentlelady. I will be brief, and I am going to have to bug out because I have other commitments I have to take care of.

I don't know. I haven't really thought this through, but the last month or so, I have been confronted by people that have complained that they are having difficulty getting into the CSP program. Some complaints about the nature of the program not fitting their situation. And also, it seems like some people are saying that there are not resources to do or for them to be able to—they won't even take their application, it sounded like. So, is that going on? This is kind of anecdotal, but I mean, are you hearing those kinds of things, and is it something that is on your radar screen and you are doing anything about?

Mr. NORTON. Sir, I can't speak specifically to that, but I can speak to one thing you said. If we have offices not taking an application, I need to know where they are at and who is not doing it. All of our programs are open to accept applications on a continuous basis. We do evaluation cycles, so if they are putting in an application after the evaluation cycle, they will have to wait until the next time. But we are limited to an appropriation amount relative to the number of contracts we can get to. The eligibility criteria did not adjust significantly, so it may be a factor of demand and just the amount of resources we have, and that they are—

Mr. PETERSON. So, that is kind of a state-by-state thing, isn't it?

Mr. NORTON. Yes.

Mr. PETERSON. The state makes priorities. It sounded like some of these folks were discouraging them from applying because they didn't think they would be successful, so I don't know.

Mr. NORTON. Just let me know, sir, because we should not—

Mr. PETERSON. In the future when I hear that, I am going to pin them down and find out where they applied and what the situation is.

You revised the CSP two or three times, and the last time, it was a couple of years ago, you came up with a new process, as I understand it. And do you think that has improved the situation since that has been put in place, or do you have any feedback on that?

Mr. NORTON. Yes. We had the conservation measurement tool that was developed out of the 2008 Farm Bill, then we had the Conservation Activity Evaluation Tool (CAET) that came out of the 2014 Farm Bill. Now we have transitioned to the Conservation Assessment Ranking Tool, CART, that was demonstrated to you. That has become, in this effort of streamlining, reducing confusion, not having completely different approaches when somebody begins to work with us. This is a streamlined process so that they are all evaluated in a very common flow, and if CSP is the best place for them, we take them that way. If it is EQIP, they can go without having to come in and file a completely different application.

We are doing that, but still the priorities around CSP have not changed significantly. We are using a different tool, but the program has taken it to the same, hopefully, end goal that is authorized. Some of this may be—well, one, again, is back to our folks discouraging people. We shouldn't be doing that. We should take the application. We should go in to the CART tool. We should work with them about their goals, their objectives, what their issues are, what they plan to do, and give them honest feedback about where they are at. And then from that, they can make further decisions about whether they want to continue to make some adjustments so they are better eligible for CSP in the future, or whether they want to go to EQIP for a while and then come back and be very competitive to CSP.

That is the functionality we have so that we can help people move forward in the right path. It has been a struggle for our field offices. It is a big change, but we got there. At the end of the day, we got it done.

Mr. PETERSON. Do you survey people that have been through the process, producers that have gone in and applied for CSP and been successful or unsuccessful? Are any of those surveyed? Is there any feedback given to you?

Mr. NORTON. I don't have any right now. We are in the process of a broader customer service survey effort. It has not concluded yet. We don't expect a report until November. We are looking at those kinds of things. We do work through this with the state technical committee, which is a very broad representation of organizations. We welcome feedback and discussion at the state level on those things, but I have no personal feedback. It is really all anecdotal, just as you described.

Mr. PETERSON. Thank you very much, and I apologize having to bug out, but I appreciate you being here today.

I yield back.

The CHAIR. I now recognize the gentleman from Ohio for 5 minutes.

Mr. BALDERSON. Thank you, Madam Chair. Thank you, Mr. Norton, for being here today, this morning, I should say.

I will just ask one brief question of the Ranking Member as my big top question about the employee issue. But in your testimony, you tell us how 2021 will be an improvement compared to 2020. Have you crafted a plan to start the year strong?

Mr. NORTON. I am sorry, could you repeat that?

Mr. BALDERSON. Have you crafted the year for 2021 strong and speaking optimistically? I mean, what can you expect to see this time next year?

Mr. NORTON. I believe we have. Certainly, our objective had been to have everything ready to deploy today. We are still getting some software developed and things like that, but we have a strong position to start where our folks can begin to engage in program delivery earlier than they typically do.

We are going in strong. We believe that all of the things that we have gone through this year have done nothing but make us better and stronger as we address 2021, and we don't have as much learning around our software, our tools, our evaluation process. The programs are now fairly stable, and we want them to stay stable through the balance of the farm bill.

Sir, I believe we have not yet got all the people we need in Ohio or in any other location around the country, but we are on the upward trajectory with that. I feel pretty good. We are maintaining a lot of the initiatives that we had in place. I know for Ohio, Lake Erie is a focal point. We are not pulling back at all from that effort. Our State Conservationist is there working with the state and folks, and we are leaning into that effort.

I feel like we are going in strong. I am pretty optimistic about this year.

Mr. BALDERSON. Okay. Well, thank you very much, and Madam Chair, I yield back my remaining time.

The CHAIR. Thank you very much.

I now recognize the gentlewoman from Maine for 5 minutes.

Ms. PINGREE. Thank you, Madam Chair. Here is hoping the sound works today, you can hear me.

The CHAIR. We can hear you.

Ms. PINGREE. Great.

Thank you, Chief Norton, for being with us today, and to the Committee for holding this hearing.

I want to raise an issue I have heard about in Maine regarding the RCPP Program. This year's effort supports new implementation of guidance on forest eligibility that appears to significantly restrict the type of forestlands that can qualify for the program. As you can imagine, this has generated a great deal of confusion and concern among more applicants and existing RCPP projects, including a project that we have in the Sebago Lake Watershed in my district, which is the watershed that provides drinking water for our largest city. I am concerned that the new restrictions could limit easement enrollments and restoration activities performed on small, family-owned forests, which are a substantial share of the forestland in Maine.

Could you explain to me how the Department is interpreting *non-industrial private forestland*?

Mr. NORTON. Yes, thank you. There has been a lot of engagement with us this past 2 weeks around the impacts of the sentence that

we tacked on to the definition of *non-industrial private forestland*, more around the commercial side of things.

In the farm bill, you all did very well in defining *non-industrial private forestland*, so we have that definition. In 2019, when we did the APF for RCPP, we received feedback that we needed to be more clear about what was not non-industrial private forestland, and so that is where we got ourselves a little jammed up here was trying to really say all of this forestland is private, what is non-industrial and what is industrial. And what we have determined that we are going to do is we are going to pull back that sentence. We will re-issue the APF and we will extend the period of application. At this point, we are believing November 30th, but that is our plan at this point. The one thing that we are still struggling with is the discussion about how do you define *industrial private forestland*, because the whole conservation title is really built about serving family forests, not the vertical corporate forest interest or their subsidiaries, or these larger 150, 200,000 acre operations that are pulled together by multiple investments and those kinds of things. We don't really know how we really need to describe that and make sure that the face of RCPP are the things that you all have wanted us to do with the farm bill as we understand them, and we don't move off into these, \$300 million for conservation going off target to the more non-title XII type farm bill interests.

Any feedback that you all could give us along that line would be helpful, but we are trying to find a way to be sure that we stay true to the target audience of the conservation title, which is America's agriculture producers and smaller forestland owners around family interests. They can be corporations. We are not trying to stop any of that, but not do the larger business interest type things.

Ms. PINGREE. Great. That is very helpful, and I certainly can supply more info about the situation in Maine, because we are clear about more industrial forest, the paper company-owned lands. There are a variety of things that are very different than small family holdings that are managed for commercial use to keep the forest healthy, but certainly not big multi-national corporations and finding that balance. We will follow up and send you a little more information.

I am about out of time, but let me ask you just quickly: The 2018 Farm Bill had some new On-Farm Conservation Innovation Trials to test some of the innovative approaches to conservation on agricultural land, and I am interested in the part focused specifically on soil health. The agency just announced a new round of awards earlier this week, and we may run out of time, but could you give me a little bit of a status update and how you plan to use the information collected through that program and for those trials?

Mr. NORTON. Yes, \$25 million total in that authority of on-farm trials. We did our first grants last year. The agreements were done by the end of the year, so this is their first year of implementation. We have no results yet coming back on any of those. We just announced our new suite, really, a lot of interest, good response. We have about \$10 million that is focused on the soil health issue where we—two things: The first is on-farm demonstration trials is for it to be demonstration. People in the field can see it. Their

neighbors, they can actually show, tell, and from a farmer's perspective, rancher's perspective, they can share what they have learned, their journey through this effort. But then we are gathering data and we have currently awarded a small contract to build an interactive website that will actually make this available and serve up in a very user-friendly fashion for the broader agriculture population to look at what is going on in all of our Conservation Innovation Grants and these on-farm trials, and try to map their paths to success if they want to go down that journey.

Ms. PINGREE. Great. That is wonderful to hear, and I yield back my time. Thank you, Madam Chair.

The CHAIR. Thank you.

Before we close out the first panel—again, Chief Norton, I thank you for being here—I am going to yield an additional 5 minutes to Ranking Member LaMalfa for any additional questions he may have.

Mr. LAMALFA. Thank you again. I will try and make it snappy here.

I just wanted to follow up on EQIP and the success we have had in that. In the 2018 Farm Bill, it created a new authority known as Conservation Innovation Incentive Payments. It simplified part of the streamlining that we have seen that came with the bill. It is intended to target natural resource concerns in specific regions of a state. We have had a lot of inquiries from constituents on how this is important, how they can provide input on the resource concerns and the practices that should be applied and would be most helpful. Nobody knows better than the people that live on and run those lands, whether it is farming or forests or firefighting, *et cetera*.

So, on this, can you provide any ideas or guidance on how to best provide for the locally-led input for these practices on the particular resource concerns? Because again, it would probably be very valuable input on having an effective program.

Mr. NORTON. Yes, yes. The process, as rightfully it should have been described, is a state-led process. Individual producers, if they have things that they would like to see as priorities, should communicate directly with the State Conservationist. They should infuse those into the system. They can go to their local district conservationist or they can send a letter directly to the State Conservationist and say I would like to see these priorities for incentive contracts. If they are members of producer organizations or interests that are reflected on the state technical committee, they need to engage there. It could be a state forestry association, it could be California Rice. All of those folks have seats at the state technical committee. We are requiring our State Conservationists to review and seek input from their state technical committee, which is that very large swath that includes universities, non-governmental organizations, state agencies, and local conservation districts, gather it up there and set their priorities.

So, there is an opportunity there for those to be infused in it. Now is the time. Do not wait. Now is the time. You can always share information with us about better ways to do conservation. So, now is the time to do it. We do plan, our work right now is to have

that component of EQIP operational in the first quarter of calendar year 2021.

Mr. LAMALFA. Okay.

Mr. NORTON. We will have it running this fiscal year, but we are not going to be able to get it out as an advertised enrollment option here in the first quarter.

Mr. LAMALFA. We can expect then that D.C. is going to be pretty deferential to the state level once they have had this back and forth, this input with each other at the state level? D.C. is more likely to bless what the state says and not—

Mr. NORTON. Yes, sir.

Mr. LAMALFA. Yes.

Mr. NORTON. We are going to put out parameters and we are working on that policy. We expect the final rule to be out in the next several weeks, and it will be clear about the regulation around this incentive payment option. We will have some parameters. Yes, there is a range of things that could happen, and then they can pick the practices and then they will also be a part of constructing the payment rate that would be associated with that practice, and whether it is a 5 year payment, 10 year payment, or some increment in between.

We talk about forest stewardship, which is important to you. You can enroll a piece of ground, a forest piece of ground in this program and only do certain practices like once every 3 years. You wouldn't make a payment every year, but you could do a long-term contract with the authority and actually have a schedule so that if they need to do something once every 3 years, a prescribed burn or something like that, it can be in the contract as an incentive payment. But we can also do annual payments for other things.

Mr. LAMALFA. Yes, whatever makes sense in the situation.

Mr. NORTON. Right.

Mr. LAMALFA. All right. Thank you for that, Chief Norton, and I will yield back. Thank you, Madam Chair.

The CHAIR. Thank you so much.

Well, Chief Norton, thank you so much for being here today. Thank you for spending the morning with us, answering our questions, and again, we appreciate all your work as you continue to settle into the job, particularly during this challenging time. Thank you for your time, and we look forward to continued conversations with you.

Mr. NORTON. Thank you very much.

The CHAIR. Thank you.

I would now like to welcome our second panel of witnesses. Thank you for being here today.

I recognize the gentlewoman from Iowa, Representative Axne, to introduce our first witness, Mr. Palmer.

Mrs. AXNE. Thank you, Chair Spanberger. It is my honor and privilege, of course, to introduce Tim Palmer, a constituent of mine from Madison County, and President of the National Association of Conservation Districts.

Tim operates a 1,200 acre row crop and cow/calf operation, and he served on the Madison County Soil and Water Conservation District Board since 2003. In addition, he was appointed to the Iowa State Soil and Water Conservation Committee from 2012 to 2014,

and Tim has been a vocal leader for Iowa producers and has extensive knowledge of conservation practices.

Tim, I believe the last time I saw you was an event with Under Secretary Northey last August in Des Moines, if I am correct. It is great to see you now before the Committee, and I so look forward to our discussion. Thank you so much for joining us. We appreciate it.

Mr. PALMER. Thank you so much for the warm welcome.

The CHAIR. Our second witness I have the honor of introducing, Mr. Steve Patterson.

I am happy to welcome Mr. Patterson because he is a constituent of Virginia's 7th District. Mr. Patterson has served as a Senior Vice President of Marketing Communications and Government Affairs at Southern States Cooperative since 2001. His experience includes 35 years in business and agronomy, and he has earned numerous certifications in agriculture, including certified crop advisor and professional agronomist, as well as nutrient management consultant. Mr. Patterson, thank you for joining us here today. We are pleased to have you.

Our third witness is Dr. Karen Waldrop. Dr. Karen Waldrop serves as Chief Conservation Officer for Ducks Unlimited, Incorporated, and operates as a strategic leader and member of DU's executive leadership team. Dr. Waldrop received her Ph.D. in wildlife biology and forest resources, from Clemson University, and both her M.S. in wildlife biology and forest resources and B.S. in forest resources from the University of Georgia. Prior to joining DU, Dr. Waldrop served as the Deputy Commissioner for the Kentucky Department of Fish and Wildlife Resources.

Our fourth witness is Mr. Jonathan Coppess. Mr. Coppess is on the faculty at the University of Illinois at Urbana-Champaign, and the Director of the Gardener Agriculture Policy Program, and the author of, *A Legislative and Political History of the Farm Bill*. His previous roles have included Chief Counsel for the Senate Committee on Agriculture, and Administrator of the Farm Service Agency at USDA. Mr. Coppess grew up on his family farm in western Ohio and holds a J.D. from the George Washington University Law School.

We will now proceed to hearing your testimony. Each witness will have 5 minutes, and when 1 minute is left, the light will turn yellow, signaling time is close to expiring. You should be able to see that time keeper on your screen before you.

Mr. Palmer, please begin when you are ready.

**STATEMENT OF TIM PALMER, PRESIDENT, NATIONAL
ASSOCIATION OF CONSERVATION DISTRICTS, TRURO, IA**

Mr. PALMER. Chair Spanberger and Members of the Subcommittee, thank you for the opportunity to testify today. My name is Tim Palmer, and with my family, we operate a farm near Truro, Iowa, south central Iowa. We produce corn, soybeans, oats, hay, and beef cattle. Conservation has been a core tenet of our farming operation since its founding.

I currently serve as the President of the National Association of Conservation Districts. NACD represents America's 3,000 conservation districts. Conservation districts are local units of government

established under state law to carry out natural resource management programs at the local level.

While I would like to keep my oral comments today specifically to the challenges and successes of conservation programs in 2020, I would note the importance to conservation, of the conservation delivery system, and NACD's role in it.

As a farmer, I like to think of myself as an eternal optimist. I am going to begin my testimony with the successes of conservation in 2020. Although the pandemic has posed challenges to conservation delivery, the adoption of conservation practices provides opportunities to strengthen both our natural resources and our local economies. Implementing conservation practices makes operations more resilient, whether facing weather extremes or economic challenges.

In 2017, NACD and Datu Research released a set of case studies detailing the budget data on producers' adoption of soil health practices, such as cover crops and no-till. These showed that although planting costs increased by up to \$38 per acre, yearly net income increased to \$110 per acre, and efficiency is an important buttress against external shock to a farm operation, whether it is from weather events and from economic factors.

One important effect of conservation that is rarely discussed is the effect on local economies. Conservation has a positive impact on local communities. Conservation practices require technical assistance equipment, and technical assistance inputs to implement, and become a driver of economic health. And when once installed, these practices ease the burden on local infrastructure, such as bridges and culverts, assisting local governments responsible for these structures.

It is clear to me that conservation has a crucial role to play, not only for the benefits to the environment, but as an engine as we look to recover and rebuild our economy.

Now, for the challenges.

NRCS staffing continues to be a challenge. Conservation delivery relies on adequate field staff. Demand for technical assistance has remained constant or increased, while staffing levels have declined. I hope Congress will continue to support the USDA in streamlining the process of hiring new employees. Congress should encourage even greater direct hiring authority for NRCS field staff.

One tool that has allowed conservation districts to help meet landowners' needs is NACD's Technical Assistance Grant Program. Since 2018, NACD has worked in partnership with NRCS to administer grants to conservation districts and other local conservation entities. These funds are matched by state and local contributions. By empowering local decision-makers to prioritize funding where they need it, NACD's Technical Assistance Grant Program has helped temporarily improve staffing where it is needed the most.

The current COVID-19 pandemic has presented a new set of challenges for conservation delivery. NRCS and conservation districts have instituted face-to-face work that, while important, have disrupted operations. Conservation districts are also concerned about the impact of state and local budget cuts. We worry that the pandemic-caused revenue shortfalls and associated budget cuts for

state and local governments will trickle down to districts that receiving funding from our state and our county. Any cut in district staff will have a direct effect on the delivery of farm bill conservation programs.

I appreciate the invitation to speak before the Subcommittee this morning on a topic that is so close to my heart, and I look forward to answering any questions that you might have.

[The prepared statement of Mr. Palmer follows:]

PREPARED STATEMENT OF TIM PALMER, PRESIDENT, NATIONAL ASSOCIATION OF
CONSERVATION DISTRICTS, TRURO, IA

Good morning, Chair Spanberger, Ranking Member LaMalfa, and Members of the Subcommittee. Thank you for the opportunity to testify on the challenges and successes of conservation programs in 2020. My name is Tim Palmer, and with my family, we operate a farm near Truro, Iowa. We produce corn, soy, oats, hay and beef cattle.

Our farm was founded in 1958 by my father, and I joined the operation in 1974 after high school. Conservation has been a core tenet of our farming operation since its founding. In the 1960s, my father began by adding ponds, managing livestock water, and using terraces to control runoff. Now, our current conservation practices include terraces, waterways, filter strips and ponds, as well as rotational grazing for the cattle herd. On our operation, we have used the Conservation Reserve Program (CRP) and the Environmental Quality Incentives Program (EQIP). Currently, my farm is enrolled in EQIP to improve habitat for pollinators.

In 2003, my interest in conservation led me to serve on my local conservation district board—the Madison County Soil and Water Conservation District (SWCD). Like many others, I had almost no concept of my local conservation history. I ran for my district board to learn more about NRCS and state conservation programs. Learning from the long-time local board members about the county's conservation history and how the conservation partnerships within the state work was an invaluable education. I became involved with my state association of conservation districts, Conservation Districts of Iowa, serving in several leadership capacities, including state association president, and learning more about the national association in the process.

I currently serve as the President of the National Association of Conservation Districts (NACD). NACD is the nonprofit organization that represents America's 3,000 conservation districts, their state and territory associations, and the more than 17,000 men and women who serve on their governing boards. Conservation districts are local units of government established under state law to carry out natural resource management programs at the local level. Conservation districts work with millions of cooperating landowners and operators to help them manage and protect land and water resources on all private lands, and many public lands, in the United States. I first joined the NACD Board of Directors in 2009, and I have served as an Executive Board Member, First Vice-President, and I began my presidency term in February 2019.

Conservation District History

Conservation districts were created as a result of the Dust Bowl, shortly after the Soil Conservation Service (SCS), now called the Natural Resources Conservation Service (NRCS). This was a time before the major conservation programs we know today were established. The SCS was charged with demonstrating soil conservation practices for farmers whose topsoil was literally blowing away.

When the SCS was created, President Franklin Roosevelt understood that these new Federal employees would need local partners to be successful. In 1936, President Roosevelt recommended the Standard State Soil Conservation Districts Act be signed into law by all state governors. This act gave states a step-by-step guide to create conservation districts and listed their powers and responsibilities. Less than a week after receiving the draft language, Arkansas became the first state to enact legislation regarding conservation districts. The first conservation district, Brown Creek SWCD, was established in North Carolina on August 4, 1937. By July 1, 1945, all 48 states had passed district-enabling acts. There are now nearly 3,000 conservation districts across the country, including conservation districts in all U.S. territories and a number of Tribal conservation districts, all governed by a local board of supervisors.

Just as the SCS has evolved into the NRCS we know today, conservation districts have grown and evolved as well. Originally created to be the local partner for conservation, districts now have the formal role of convening and managing Local Work Groups. These groups bring together local stakeholders to set priorities for conservation programs within the conservation district based on input from the citizenry. When we discuss locally-led conservation, it is this Local Work Group process that brings the local voice to conservation programs. Input from Local Work Groups directly impacts the criteria used to rank conservation program applications and, ultimately, which applications are funded.

Although created because of the Dust Bowl, conservation districts, as well as USDA, now have a much broader focus than just soil erosion. Conservation districts address water quality, water quantity, wildlife habitat, forestry and other resource concerns. Conservation districts work with NRCS and other Federal agencies such as the Environmental Protection Agency (EPA); state agencies; and local governments and partners. Conservation districts are uniquely able to bring all of these partners together to address a range of resource concerns on both private and public lands.

Conservation Delivery in Action

It is important for the Committee to understand how important technical assistance is to the successful implementation of conservation planning and farm bill conservation programs. You cannot simply cut a check and say ‘go forth and do good;’ landowners need the technical expertise to implement these conservation systems. Often, landowners need the technical assistance as much as or more than the financial assistance provided by farm bill conservation programs. The conservation delivery partnership between conservation districts, state conservation agencies and NRCS, which has existed for decades and is trusted by landowners across the country, is the gold standard. Conservation districts and NRCS work together closely to provide conservation planning and technical assistance, implement conservation programs, and address local natural resource concerns.

Conservation districts and NRCS are usually co-located in county offices, and through cooperative agreements, many conservation districts assist in implementing NRCS programs. Conservation districts work with landowners to address resource concerns, help landowners apply to conservation programs, and implement practices on cooperators’ land. Even though they have separate employers, conservation district and NRCS employees work hand-in-hand to deliver the customer service our farmers and ranchers need and deserve. To the clients who come into the offices, there is often no distinction between the different staff that assist them.

This exceptional technical assistance requires extensive training, and many conservation districts have skilled staff who have completed the same training as NRCS employees. In fact, NACD has a cooperative agreement with NRCS to send conservation district employees to NRCS’s Conservation Planning Boot Camp in Lincoln, Nebraska. As part of this agreement, NACD is able to fund travel and expenses for conservation district employees to attend the 3 week long training course, and NRCS holds space open specifically for conservation district employees. Conservation district employees are also able to take the many courses available to NRCS employees conducted on the state level, as well as available online courses.

Challenges to Conservation Delivery

Successful conservation delivery relies on adequate field staff to work with landowners and implement programs. Currently, NRCS is about 2,000 employees short of their employment cap, based on the agency’s own workload analysis of the technical support needed to fulfill program requirements. Although over 1,000 new staff members have been hired, the agency is just keeping up with attrition. Those 2,000 unfilled positions are a hiring backlog that has persisted for several years. NRCS simply cannot hire fast enough to meet their own needs. The current staff are insufficient to meet the demand for conservation planning and implementation of farm bill conservation programs at Congressionally authorized funding levels.

Conservation districts have stepped up to help fill this gap. Conservation district staff have always been involved in implementing Federal conservation programs. However, conservation district staff are taking on a greater share of conservation delivery across the country. Although we would much rather see NRCS fully staffed, America’s conservation districts are ready and willing to continue assisting in meeting the needs at hand.

One tool that has allowed conservation districts to rise to meet landowners’ needs is NACD’s Technical Assistance Grant Program. Since 2018, NACD has worked in partnership with NRCS to administer between \$9–\$15 million per year to conservation districts, state and territory associations, and other local conservation entities

like resource conservation and development councils (RC&Ds). These funds are matched by over \$3–\$5 million during each of these 3 years through state and local contributions. This funding is used to hire staff in the highest workload priority areas to help deliver EQIP and the Conservation Stewardship Program (CSP), as well as provide Conservation Technical Assistance (CTA) to landowners. As of the end of June 2020, NACD and NRCS's funds have provided nearly 300 full and part-time positions across the country, and those grant-created positions have worked more than 640,000 hours during a period of just over 2 years. These technical assistance staffers are tasked to improve customer service and reduce workload pressure. Their efforts have assisted with more than 14,000 conservation plans and 30,000 EQIP contracts and have delivered conservation systems on more than 1.5 million acres of American working lands.

Thomas Jefferson SWCD is Virginia's first awardee from NACD's Technical Assistance Grant Program and is a prime example of what these funds are meant to address. The SWCD was awarded funding in June and has already started their work to place staff in the Louisa and Charlottesville SWCD offices to increase technical assistance and general outreach to the small farms in the area. Their goal is to increase participation in CSP for the conservation district's entire service area.

One of the hallmarks of this program is that each conservation district is able to use the funds to address their most pressing issues. The Glenn County Resource Conservation District in California has used the funds to hire engineers to design EQIP practices. Yet, the Sonoma Resource Conservation District, also in California, has taken a different approach, hiring foresters to work with landowners on management concerns. By empowering local decisionmakers to prioritize funding where they need it, NACD's technical assistance grant program has helped to temporarily improve staffing where it's needed most.

Staffing at NRCS is an issue in which this Subcommittee has taken an interest in the past. Demand for technical assistance has remained constant or increased while staffing levels have declined. I hope Congress will continue to support USDA in streamlining the process of hiring new employees. Congress should encourage even greater direct hiring authority for NRCS field staff.

The current COVID-19 pandemic has also presented a new set of challenges for conservation delivery. County service centers have remained available to customers, although they have adopted procedures to assure safety for customers as well as employees. This means customers need to make an appointment, and there are limitations on how many employees or customers can be in an office at the same time. Although meetings with producers in the field are still allowed, there are also restrictions in place on how many people can ride in a single vehicle and where they can sit. Staff have been conducting much more business by phone and online than they have in the past, and I'd say that overall, conservation district staff are rising to the challenge this new situation has posed quite admirably. However, these restrictions have proven disruptive to normal operations in many county service centers.

Another concern for conservation districts stemming from the pandemic is the impact of state and local budget cuts. Already, a number of conservation districts have needed to furlough staff members because of budget considerations. Conservation districts are concerned that revenue shortfalls and associated budget cuts for state and local governments will trickle down to conservation districts that receive funding from their state and/or county. For many conservation districts, this non-Federal funding is used to pay for a district manager and to ensure that someone is answering the phones and responding to customers. Cuts to district funding at the state and local level hit at the heart of district operations and may impact capacity for Federal conservation delivery as well.

Financial aid for state and local governments has been considered as Congress continues to debate additional COVID-19 relief legislation. There are many places where state and local governments will consider budget cuts without additional aid; please know that conservation districts are one of these places. Additional state and local government funding is needed to ensure that conservation districts can continue to deliver conservation over the next few years.

Current Opportunities

Although the COVID-19 pandemic has posed many challenges to conservation delivery, the adoption of conservation practices provides opportunities to strengthen both our natural resources and our local economies. Implementing conservation practices makes operations more resilient, whether facing weather extremes or economic challenges, like many farmers and ranchers are currently facing.

In 2017, NACD and Datu Research, LLC released a set of 3 year case studies on four corn and soybean farms in the Upper Mississippi River Basin, detailing year-

by-year budget data on their adoption of cover crops or no-till.^[1] These farmers shared decisions they made and why; how adoption affected income and yields; and what they learned. Each case study uses budget analysis to measure yearly changes in income that the farmer attributes to adoption, compared to the pre-adoption baseline.

The major takeaways were that although planting costs increased by up to \$38 per acre:

- Fertilizer costs decreased by up to \$50 per acre;
- Erosion repair costs decreased by up to \$16 per acre;
- Yields increased by up to \$76 per acre; and altogether; and]
- Yearly net income increased by up to \$110 per acre.

That increased income and efficiency is an important buttress against an external shock to farm and ranching operations, whether that's from weather events, like the derecho we experienced in Iowa this year, the catastrophic wildfires many states continue to experience in the West, or from the economic fallout of trade wars or a pandemic. NACD is currently working to expand these soil health case studies to include other regions and cropping systems across the country.

The economics of conservation are particularly important, because producers need to be profitable to invest in conservation. Even with Federal cost-share, conservation practices require a financial investment by the producer themselves. When a producer is struggling just to pay the costs of production, conservation will certainly be cut from the budget.

Conservation also has a positive economic impact on the local communities where it is underway. Conservation practices require technical assistance, equipment and inputs to implement. Local advisors, like engineers, agronomists and wildlife specialists, are employed to aid conservation adoption. Many practices require specialized equipment to plant crops or maintain structures like small watershed dams. Some practices require inputs as well, such as seed or plantings. All these necessities become a driver of economic development, helping to bolster both the land and the local economy. And once installed, these practices ease the burden on local infrastructure, such as bridges and culverts, assisting the local governments responsible for these structures. It is clear to me that conservation has a crucial role to play, not only for benefits to the environment, but as an engine as we look to recover and rebuild our economy.

I appreciate the invitation to speak before the Subcommittee this morning on a topic that is so close to my heart and look forward to answering any questions you might have.

The CHAIR. Thank you very much, Mr. Palmer.

And Mr. Patterson, please begin whenever you are ready.

Mr. PATTERSON. Can you hear me okay?

The CHAIR. Yes, we can.

**STATEMENT OF STEVE PATTERSON, SENIOR VICE PRESIDENT,
MARKETING, COMMUNICATIONS, AND GOVERNMENT
AFFAIRS, SOUTHERN STATES COOPERATIVE, HENRICO, VA**

Mr. PATTERSON. Okay. Thank you. Thank you, Chair Spanberger, and thanks to all the Members of the Subcommittee on this very important subject. I appreciate the opportunity to share some of the things we are doing in Virginia to help with conservation and water quality issues across the Commonwealth, some of which are successes and some of which are challenges.

My name is Steve Patterson. I serve as the Senior VP of Marketing, Communications, and Government Affairs at Southern States, which is a 97 year old farmer-owned cooperative based in Richmond, Virginia, and reside in the 7th Congressional District as was mentioned earlier. I am a 35 year veteran, graduate of the University of Kentucky in agronomy, which is the study of the science and economics of food and fiber production. Earlier in my

¹<https://www.nacdnet.org/soil-health-research/>.

career, I was a regional agronomist and during that tenure, I had the opportunity to earn the qualifications of certified crop advisor, certified professional agronomist, and nutrient management specialist in Virginia and Maryland. It was one of the hardest exams I have ever taken, by the way, but it was very good.

I share that information because I want you to know that I, and Southern States, understand and care about the nature of nutrients and the nature both on growing crops and for affecting water quality via leaching and/or runoff in these types of things. It is very important that we understand those things, because it affects our streams, rivers, bays, estuaries.

I also had the opportunity to be part of the launch of precision ag technology on the East Coast, which allows for much more precise applications of nutrients in farmers' fields, based on an intense soil testing methodology and variable rate equipment technology. This allows for prescriptive rates of nutrients to be applied in different parts of the same field based on intensive soil testing, whereas before this technology was available, the same amount may be applied across the whole field, which was not good for the crop or good for the farmer's economics. We now have over 1 million acres under some form of precision ag technology across our operating territory, a number of agronomy specialists that work with farmers every day on soil testing, nutrient management plans, improving crop yields, while also mitigating nutrient leaching or transport via erosion in the water system.

As leaders, we are working with new product technology that shows promise of delivering slow release nitrogen to crops, while at the same time reducing leaching of nitrogen by approximately 49 percent. This is a potential game-changing product that is coming down the pike. Better yet, this product originates from waste materials and reduces the amount of material going into landfills, creating a more circular economy and also adding more organic matter to the soil and improving soil health.

I am proud to say we are partnering with the Virginia Department of Conservation to: reduce leaching and runoff of nitrogen, phosphorus, sediment; spread the message of the importance of soil testing, nutrient management, no-till practices, utilizing grass buffer strips, cover crops; and the 4R's of nutrient management: the right source, the right rate, the right time, and the right place. Virginia's goal of achieving 85 percent of the acreage in the Chesapeake Bay Watershed to have a nutrient management plan by 2025 is definitely doable, but only if private and public organizations work together. We need continued cooperation from our partners at the NRCS, Department of Conservation and Recreation in Virginia, the Soil and Water Conservation Districts, and industry to achieve that goal.

As I already mentioned, continue to increase funding for conservation programs from the state and Federal Governments is needed to reach those goals. This is especially true in a time of a pandemic and prolonged downturn in the farm economy, which farmers have limited resources. Nutrient management is the kind of practice we embrace. It aligns with our goal to recommend products and services that are agronomically-sound, environmentally-responsible, and cost-effective for our farmers. They are site-spe-

cific and based on factors such as soil and manure samples, timing and rate of application. We, along with all these organizations we mentioned, including land-grant universities, provide crucial technical assistance to our farmers to implement these practices, but there remains a shortage of qualified planners that needs to be addressed moving forward. That is one of our big challenges. We need more trained professionals in the field providing these services to our farmers.

It is very important as we move forward that agriculture has a seat at the table discussing climate change, that decisions are based on sound science, and that decisions protect the economic livelihood of our farmers. We are proud to work with organizations such as the Ag Retailers Association, the National Council of Farmer Cooperatives, Farm Bureau, and Virginia Agribusiness Council on these issues, because we are all much stronger working together *versus* a fragmented approach across various organizations.

American agriculture is a modern-day success story. Our farmers produce the world's safest, most abundant food supply for consumers at prices far lower than the world average. Cooperatives have been at the forefront of proactive work to improve the environment in the communities they serve. From pest management to nutrient management, from the development of cutting-edge technologies to the implementation of wide area conservation practices, farmer cooperatives have the expertise and the credibility to serve as the best source for information regarding production practices. This is the reason we have been around for almost 100 years. Our farmer-owners trust us to help them with the complexities of crop and livestock production, and the necessity of improving water quality in our respective states while producing profitable and sustainable yields.

Thank you again for the opportunity to be here today, and I will stop there and take any questions at the right time. Thank you very much.

[The prepared statement of Mr. Patterson follows:]

PREPARED STATEMENT OF STEVE PATTERSON, SENIOR VICE PRESIDENT, MARKETING, COMMUNICATIONS, AND GOVERNMENT AFFAIRS, SOUTHERN STATES COOPERATIVE, HENRICO, VA

Thank you, Chair Spanberger, and thank you to all the Members of the Conservation and Forestry Subcommittee for being here today.

I appreciate the opportunity to be with you and to share some of the things we are doing in Virginia to help with conservation and water quality issues across the commonwealth.

My name is Steve Patterson, and I currently serve as the Senior Vice President of Marketing, Communications and Government Affairs at Southern States Cooperative, a 97 year old farmer owned cooperative based in Richmond, Virginia and reside in the 7th Congressional District.

I am a 37 year veteran of Southern States, a graduate of the University of Kentucky in Agronomy, which is "the study of the science and economics of growing food and fiber," and earned an MBA from Virginia Commonwealth University.

Earlier in my career, I served as a regional agronomist for Southern States and during that tenure, I had the opportunity to earn the qualifications of Certified Crop Advisor and Professional Agronomist via the American Society of Agronomy, along with becoming a Nutrient Management Specialist in the states of Maryland and Virginia.

I share that information because I want you to know that I, and Southern States, understand, and care about the nature of nutrients and the effect they have both

on growing crops and on the water quality of our streams, rivers, bays and estuaries.

I also had the opportunity to be part of the launch of precision agriculture technology on the East Coast, which allows for much more precise applications of nutrients in farmers' fields based on an intense soil testing methodology and variable rate equipment technology. This allows for prescriptive rates of nutrients to be applied in different parts of the same field, based on intensive soil testing, whereas before this technology was available, nutrients would not be properly applied to the crop or good for the farmer's economics.

Today we have over 1 million acres under some form of precision ag technology, a number of Certified Crops Advisors and agronomy specialists that work with farmers every day on soil testing, nutrient management plans, and improving crop yields while also mitigating nutrient leaching, volatilization or transport via erosion in the water system and eventually into the Chesapeake Bay. As leaders, we are working with new product technology that shows promise of delivering slow release nitrogen to crops while at the same time reducing leaching of nitrogen by approximately 50%, a potential game-changing event. Better yet this product originates from waste materials and reduces the amount of material going into landfills, creating a more "circular economy."

I am proud to say we are partnering with the Virginia Department of Conservation to work together to reduce leaching and runoff of nitrogen, phosphorus and sediment, and spread the message of the importance of soil testing, nutrient management plans, no-till practices, utilization of grass buffer strips and cover crops, and the "4Rs" of nutrient management (the right source, right rate, right time and right place.) Virginia's goal of achieving 85% of the acreage in the Chesapeake Bay watershed to have a Nutrient Management Plan by 2025 is definitely doable—but only if private and public organizations work together toward that common goal. We need continued cooperation from our partners at the Natural Resource Conservation Service (NRCS), DCR, the Soil and Water Conservation Districts and industry to achieve that goal. Continued and increased funding for our conservation programs from both the state and Federal Governments is needed to reach the goals. This is especially true in a time of pandemic and a prolonged downturn in the farm economy, in which producers have limited resources.

Nutrient management planning is the kind of practice Southern States embraces—it aligns with our company's goal to recommend products and services that are agronomically-sound, environmentally-responsible and cost-effective for our growers. They are site specific and based on factors such as soil and manure samples, timing and rate of application. We, along with NRCS, Soil and Water Districts as well as our land-grant universities, provide crucial technical assistance to our farmers to implement these practices, but there is still a shortage of qualified planners that will need to be addressed moving forward. We need more trained professionals in the field providing these services to our farmers.

It is very important as we move forward that agriculture has a seat at the table discussing climate change, that decisions are based on sound science, and that decisions protect the economic livelihood of our farmers.

We are proud to work with organizations such as the Ag Retailer's Association, National Council of Farmer Cooperatives, Farm Bureau, and the Virginia Agribusiness Council on these issues, as we all are much stronger working together *versus* a fragmented approach across various industries and organizations.

- American agriculture is a modern-day success story. America's farmers produce the world's safest, most abundant food supply for consumers at prices far lower than the world average. Farmer cooperatives are an important part of the success of America's food supply chain.
- Farmer cooperatives like Southern States have been at the forefront of proactive work to improve the environment in the communities they serve. Our goal is to support science-based, achievable, and affordable environmental policies and initiatives. From pest management to nutrient management, from the development of cutting-edge technologies to implementation of area-wide conservation practices, farmer cooperatives have the expertise and the credibility to serve as the best source for information regarding production practices.

This is a reason we have been around for almost 100 years—our farmer owners trust us to help them with the complexities of crop and livestock production and the necessity of improving water quality in our respective states while producing profitable and sustainable yields.

Thank you for the opportunity to present this to you today and please advise how we can help, going forward.



STEVE PATTERSON,
Senior Vice President, Marketing, Communications, and Government Relations,
Southern States Cooperative.

The CHAIR. Thank you so much, Mr. Patterson.
And thank you, Dr. Waldrop. Please begin when you are ready.
Dr. WALDROP. Thank you very much. Can you hear me okay?
The CHAIR. We can.

**STATEMENT OF KAREN A. WALDROP, PH.D., CHIEF
CONSERVATION OFFICER, DUCKS UNLIMITED, MEMPHIS, TN**

Dr. WALDROP. Great, wonderful. Chair Spanberger, Ranking Member LaMalfa, and Members of the Committee, thank you so much for providing this opportunity for Ducks Unlimited to testify today.

It certainly has been a challenging year, so we really appreciate the chance to talk to you today about some of the great conservation work that we have been able to deliver during these very trying times.

Since 1937, Ducks Unlimited has conserved, managed, and restored wetlands and associated habitats for North America's waterfowl. However, wetlands also provide a lot of benefit for people in ways that we have not even really, a lot of people are not aware of, either directly or indirectly, from things like flood control or water quality improvement, erosion control, or even recreation like hunting, kayaking, and wildlife watching. We can only achieve our mission of conserving waterfowl habitat through diverse public and private partnerships. Specifically, the USDA and NRCS have been fantastic partners in our conservation delivery efforts throughout the years, and we certainly cannot appreciate them enough during these difficult times with the pandemic.

Ducks Unlimited and many other midsize nonprofits have been hit particularly hard by COVID-19 restrictions on gatherings. For example, at Ducks Unlimited we had to cancel thousands of events this past year—fundraising events that cost millions in event income that we were expecting for our budget this past year. However, a bright spot during these difficult times has been our continued conservation delivery by our dedicated team who—they stayed in campers and trailers and ice fishing houses to be able to continue their important conservation work throughout this pandemic, and we are very proud of the work that they have done and the sacrifices that they made.

Much like our friends in the farming and ranching community who have been severely impacted by COVID-19, DU continues to deliver, no matter the hurdles that we face. Some ag groups are even doubling down, like the National Cattlemen's Beef Association. They are working on sustainable multiple use practices. And we even just recently signed an MOU with them outlining our shared commitment to cultivate healthier ecosystems, wildlife populations, and economies through active management like cattle grazing.

It is not only through the partnerships that we have created with producers and the dedicated NRCS staff, without those partnerships and those dedicated NRCS staff across the country, we wouldn't have been able to deliver our conservation efforts and continue them today.

Just 2 weeks ago, NRCS announced that DU and our partners had been awarded an \$8.7 million RCPP grant to develop a producer-focused program to improve soil quality in the prairies of the Dakotas and in Montana. And this program will offer interested farmers and ranchers technical assistance and financial assistance to adopt soil health practices, and this was alluded to earlier by Chief Norton and Congresswoman Pingree as well.

One area where our partnerships are really taking off, another area is in Iowa, and where we have been working with the Iowa Department of Agriculture and Land Stewardship recently to help deliver and aid in Iowa's nutrient reduction strategy. Additionally, in coordination with these great government partners, we have been able to team up with some great corporate partners like Nestlé Purina, Wells Fargo, and Microsoft to kind of help scale up the conservation delivery in the area because it is to meet effort demand by producers as well.

These wetlands, as they are created, natural wetlands help reduce the nitrates in the water, resulting in cleaner water. But also since approximately 1.5 million gallons of water can be held in just 1 acre of wetland, wetlands also do an amazing job of reducing flooding and soil erosion during heavy rainfall events.

Another partnership that DU is extremely proud of—it has been mentioned a couple of times—is our ongoing collective rice efforts that are vitally supported by NRCS and through the RCPP. USA Rice, Ducks Unlimited, and supporters are in the process of delivering conservation on nearly 800,000 acres in six major rice-producing states, mostly in the Southeast and in California. The Rice Stewardship Partnership was created to support farmers first, and that is something that DU takes a lot of pride in. In fact, Al Montna, DU's Senior Vice President for Policy, is deeply involved in the Rice Stewardship Program, and he is a prominent rice farmer in the Sacramento Valley as well.

DU strongly believes in these and other voluntary incentive-based conservation programs like ACEP. When producers are given economically viable options to improve their land through conservation practices, they support and seek these programs, and DU will continue to follow the lead of our agriculture partners and urge Congress to continue to support these critical conservation tools.

In closing, Ducks Unlimited is proud and grateful to be carrying on our mission during this pandemic. We greatly value our producer partners who are stewards of these lands, and we rely on our partners to help to conserve and restore waterfowl habitat to benefit both wildlife and people. Thank you for the opportunity to speak to you today, and we look forward to continuing our partnership with NRCS and helping America's farmers and ranchers sustainably produce the food, fiber, and fuel that we all depend on. I would be happy to answer any questions at this time.

[The prepared statement of Dr. Waldrop follows:]

PREPARED STATEMENT OF KAREN A. WALDROP, PH.D., CHIEF CONSERVATION OFFICER, DUCKS UNLIMITED, MEMPHIS, TN

Chair Spanberger, Ranking Member LaMalfa, and Members of the Committee, thank you for providing Ducks Unlimited the opportunity to testify today to discuss the "Challenges and Successes of Conservation Programs in 2020." This year has certainly been different than any of my previous 17 years in conservation, so we really appreciate the opportunity to talk about the important work we've been able to deliver under these trying times.

I am Dr. Karen Waldrop, Chief Conservation Officer of Ducks Unlimited. I operate as the strategic leader for our national and international conservation programs, including science and habitat conservation operations, as well as lead our regional offices across the country that focus on conservation delivery. I received my Ph.D. in Wildlife Biology/Forest Sciences from Clemson University and both my M.S. in Wildlife Biology/Forest Resources and B.S. in Forest Resources from University of Georgia. Prior to joining DU in 2019, I served as the Deputy Commissioner for the Kentucky Department of Fish and Wildlife Resources.

Ducks Unlimited is the world's leader in wetlands and waterfowl conservation. DU got its start in 1937 during the Dust Bowl when North America's drought-plagued waterfowl populations had plunged to unprecedented lows. Starting in 1937 and continuing to today, Ducks Unlimited conserves, restores and manages wetlands and associated habitats for North America's waterfowl. These habitats also benefit other wildlife and people. We know that Ducks Unlimited can only achieve our vision of wetlands sufficient to fill the skies with waterfowl today, tomorrow and forever through diverse public and private partnerships to address the full range of factors that affect waterfowl habitat. U.S. Department of Agriculture (USDA) and the Natural Resource Conservation Service (NRCS) are fantastic partners for this nation's conservation delivery.

Wetlands benefit people in many ways, either directly or indirectly through flood control (by storing water during flood events), water quality improvement (by naturally removing nitrogen and phosphorus), erosion control, and provide opportunities for other forms of recreation, like hunting, fishing, kayaking or wildlife watching. Wetland protection and restoration work conducted by DU, NRCS and producers provide wetland-based water solutions for people and wildlife. For example, when we build or restore wetlands in the Mississippi Alluvial Valley, these wetlands can temporarily store flood waters during high runoff events, preventing downstream flooding and erosion. Or when our teams construct wetlands in the Midwest, the result is lower levels of contaminants in the water because of the natural ability of wetlands to filter out these pollutants. Similarly, when rice fields are flooded, not only is food available for ducks but flooding helps prevent erosion and controls weeds, so fewer chemicals are needed.

Ducks Unlimited and many other mid-sized nonprofits have been hit particularly hard by many of the government closures and restrictions to prevent the spread of [COVID]-19. Not being made eligible for the Paycheck Protection Program because we had over 500 employees when the COVID-19 pandemic started has certainly limited available financial relief, either. As it has across the world, the coronavirus pandemic has negatively affected Ducks Unlimited, especially in our fundraising efforts. DU relies heavily on our event-based fundraising that generates more than \$50 million on an annual basis. Our events bring in tens of millions of dollars in major gift payments, as well as thousands of regular memberships that are normally renewed through local event attendance. This spring, the pandemic severely limited our traditional event fundraising and it continues to do so today. Due to government restrictions, DU has been forced to cancel over 2,000 in-person events losing at least \$17 million in expected event income through June 30 alone. Furloughs, drastic budget cuts, and unfortunately layoffs are becoming part of the new reality for most nonprofit organizations around the country. That includes DU. However, a bright spot during these difficult times has been our continued conservation delivery. It is only through the partnerships we've created with producers and the dedicated NRCS staff throughout the country that this conservation has been possible. Much like our friends in the farming and ranching community, DU continues our important work in the countryside where fresh air and open spaces limit the dangers presented by a virus.

Just 2 weeks ago, NRCS announced that DU and our partners had been awarded a \$8.73 million Regional Conservation Partnership Program (RCPP) grant to develop a producer-focused program, Scaling Soil Health in the Prairie Pothole Region (PPR). The program will offer farmers and ranchers technical and financial assistance, advanced training and mentorship to increase the adoption of soil health practices in the PPR of North Dakota, South Dakota and Montana. This will be a signifi-

cant opportunity for DU to help more producers access the education and financial support they need to adopt soil health practices. Along with our great partners, we will work with interested farmers and ranchers to help them improve soil quality and wildlife habitat on their lands and produce positive economic results. A diverse array of partners on the project include the South Dakota Grassland Coalition, North Dakota Grazing Lands Coalition, U.S. Fish & Wildlife Service, Beadle Conservation District, Millborn Seeds, state game & fish agencies and others. This type of partnership and collaboration on behalf of America's farmers, ranchers and wildlife would not be possible without the help and foundation that is the NRCS.

Partnership is what drives DU's conservation delivery. One area of the country where our partnerships are really taking off is in Iowa, where DU has been working with the Iowa Department of Agriculture and Land Stewardship (IDALS) to help deliver the Conservation Reserve Enhancement Program (CREP). Many of the wetlands created through this program collect tile drain water and use natural wetland processes to breakdown nitrates into inert nitrogen gas. A properly designed wetland can remove 30–70% of nitrates and 90% of herbicides. So far, the CREP program has constructed just over 100 wetlands treating approximately 100,000 acres of farmland in central Iowa over 15 years. To meet the goals of Iowa's Nutrient Reduction Strategy, we will need approximately 5,000 wetlands to treat runoff from 5–10 million acres. The popularity of this program continues to grow as farmers receive an easement payment to restore wetlands on what is most often marginal farmland. DU, in coordination with IDALS and USDA have been able to bring in diverse corporate partners like Wells Fargo, Microsoft and Nestlé Purina to help scale up the conservation delivery effort to meet producer demand.

An example of partnership driven conservation delivery work that DU is extremely proud of is our ongoing collective rice efforts that have been vitally supported by NRCS through the RCPP. USA Rice, California Rice Commission and Ducks Unlimited are in the process of delivering conservation on more than 790,000 acres on nearly 1,000 farms. Ducks Unlimited and USA Rice Federation's Rice Stewardship Partnership was created to support farmers first, and this is an effort that DU takes pride in. Coordinating with NRCS field offices and Soil and Water Conservation Districts, DU's conservation staff is improving customer service by meeting farmers right in the field where they are to better understand their challenges and opportunities. These on the ground conservation practices address a number of natural resource concerns but, perhaps most importantly, support farmers' livelihoods by minimizing their risk and offering income diversification to their farming operations. These practices are especially important this Summer in the face of multiple storms impacting the Gulf Coast. Approximately 1.5 million gallons of floodwater is stored in 1 acre of wetland. When Hurricane Sally, Hurricane Laura, and other storms made landfall in these Gulf states, existing wetlands created by these very same farm bill programs played an important role in limiting the severity of flooding in some areas. For example, when Sandy hit the Atlantic coast in 2012, an estimated \$625 million in flood damage was prevented across 12 states in the Mid-Atlantic region of the United States thanks to coastal wetlands. While it would be unrealistic to suggest that the presence of wetlands could ever eliminate flooding caused by hurricanes and tropical storms entirely, they have proven to help save millions of dollars by protecting our coastlines and acting as natural reservoirs during severe storms.

Last month, Ducks Unlimited signed a Memorandum of Understanding (MOU) with the National Cattlemen's Beef Association, The Public Lands Council and Safari Club International to outline the groups' shared commitment to conservation of natural resources through sustainable multiple use. The MOU outlines the groups' efforts to cultivate healthier ecosystems, wildlife populations, and economies through active management like livestock grazing. Hunting, fishing and managed grazing are all key components of successful, comprehensive management plans for our nation's lands and resources. The MOU highlights decades of successful voluntary conservation programs and formalizes a partnership to allow these groups to coordinate projects in the future. Cattle and beef producers, hunters and other conservationists, will continue to engage in conservation partnerships that maintain wildlife habitat, honor the cultural and historical value of landscapes and empower local communities and rural economies. Cows and ducks get along great. We know that when we have ranchers and cattle on the landscape, we have grasslands and wetlands. That means waterfowl and other wildlife have places to nest, breed, forage, rest and migrate. Conservationists and ranchers are linked arm in arm in keeping family farms on the landscape, with vibrant grasslands intact and functioning for the good and well-being of us all.

Increasing and improving conservation delivery during the COVID-19 crisis drives economic activity to rural areas and provides ecosystem services like flood protection

to urban areas at the same time. One such project that is a good example of this is the instillation of two bridges in the Yolo Bypass Wildlife Area in California. A 350 ton hydraulic truck crane placed precast concrete bridges that replaced narrow pipes regularly blocked by beavers and debris, improving drainage and water supply to the wildlife area. The bridges are part of a \$4 million project scheduled for completion in October. The investments in infrastructure will create 200 acres of new wetlands, improve management for rice fields, reduce on-site flooding and improve access for environmental education programs.

Another great example of conservation on working lands is USDA's newly released Prairie Pothole Water Quality and Wildlife Program, which will invest millions into voluntary protection of wetlands in the Prairie Pothole Region. Producers will be eligible to receive payment for wetlands less than 2 acres in size wholly within privately owned working cropland. This new program will be carried out through our continued partnership with producers and NRCS to get the most value out of each acre for farmers and ranchers while also conserving waterfowl habitat.

Ducks Unlimited believes strongly in the idea of voluntary, incentive-based conservation programs. When given an economically viable opportunity to improve their land through conservation practices, producers have proven to have a strong appetite for these programs year after year. Voluntary, perpetual wetland and agricultural land easements offered through NRCS are great examples of popular conservation programs that producers continue to seek out. Best among these "working lands" easements are those that protect wetlands, prime soils, and other conservation values without compromising a landowner's ability to sustainably, and prosperously, produce food and fiber. In fact, there continue to be waiting lists of producers to gain access to wetland easements as demand far exceeds supply. DU will continue to follow the lead of our partners in agriculture and urge Congress' continued support of these critical conservation tools.

We often talk about the good work of DU in regions like the Lower Mississippi River, but DU is also helping to deliver innovative Wetland Reserve Easements in Northern California. Through a collaborative effort between NRCS, Feather River Land Trust, Northern Sierra Partnership and the Nature Conservancy; Ducks Unlimited is working to rehabilitate the Decker Dam in the Sierra Valley of northern California. This area is an important spring and fall migration area and supports important local nesting and brood-rearing. The dam structure has existed since the 1930s to provide water for livestock and flood irrigation to more than 330 acres of wet meadow pasture in the immediate vicinity, but also to help maintain irrigation capacity to over 1,000 acres of wet meadow pasture upstream of the structure on neighboring ranches. Over time, the structure has become dilapidated and no longer functions at its original intended capacity. DU is providing technical engineering services to help design a rehabilitated structure that will restore the original capacity for flood irrigation purposes and wildlife habitat benefits.

Agricultural Land Easements have also proven to be an important tool in the toolbox for producers and conservationists alike in California and across the country. More than 95% of the historic wetlands in the Sacramento Valley have been lost, and wintering waterfowl, shorebirds and other waterbirds are now heavily dependent upon rice lands to meet their nutritional needs.

About 68% of the nutritional needs of wintering waterfowl in the Central Valley are being met by agricultural lands, primarily rice. However, most of the rice lands in this area have no long-term protection and the Central Valley is one of the nation's most threatened farming regions. Establishing conservation easements on wildlife-friendly agricultural lands is an effective way to provide long-term protection to important Pacific Flyway habitat while allowing those lands to remain in private ownership and wildlife-friendly agricultural production. Easements help to keep farmers and ranchers on the land, help producers manage risk, and give ranch and farm families the opportunity to raise the next generation on the farm.

ACEP-WRE is one of our nation's most successful voluntary conservation programs. The program restores previously converted wetlands and provides willing landowners and producers a financially viable alternative to farming marginal land with low or negative profits while still retaining property ownership. It is also a sound investment of taxpayer dollars and serves to help focus Federal investment in commodity and crop insurance on the most productive lands for agriculture. In fact, a study recently conducted by Doug Lawrence, a noted natural resource program economist, suggested that when land is voluntarily enrolled in WRE, there is a significant savings in government expenditures of commodity and crop insurance programs on these lands. This analysis estimates that enrolling 100,000 acres of cropland in WRE would save approximately \$292 million over 10 years. For example, enrollment of 1 acre of cropland in WRE saves \$53 per acre per year from those programs. 100,000 acres of enrolled cropland will yield a savings of approximately

\$292 million. In addition to these benefits to taxpayers, WRE also improves water quality and creates habitat for migratory birds, at-risk species, and resident wildlife, which in turn boosts rural economies as sportsmen and other wildlife enthusiasts recreate on these lands.

Ducks Unlimited has been uniquely successful in continuing to carry on our mission during the COVID-19 pandemic. We seek to help farmers and ranchers that face similar immense financial challenges to continue to feed and provide for our nation. DU greatly values our producer partners who are the stewards to the wetlands and grasslands needed for waterfowl to feed and nest successfully. Whether through the obvious recreation opportunities and waterfowl habitat protections offered by wetlands, or the more discrete benefits provided by the many ecosystem services that the average person likely doesn't even know they benefit from, wetlands are the answer for a lot more problems than you'd think. Perhaps now more so than ever, we rely on our public and private partnerships to continue to deliver on our mission to conserve and restore waterfowl habitat that provides countless benefits for both people and wildlife.

Thank you for the opportunity to speak with you today. Please don't hesitate to ask if you have any questions that I may be able answer.

The CHAIR. Thank you, Dr. Waldrop.

And Mr. Coppess, please begin when you are ready. You are recognized for 5 minutes.

STATEMENT OF JONATHAN W. COPPESS, J.D., ASSISTANT PROFESSOR OF LAW AND POLICY, DEPARTMENT OF AGRICULTURAL AND CONSUMER ECONOMICS, UNIVERSITY OF ILLINOIS, URBANA, IL

Mr. COPPESS. Great. Thank you, Chair Spanberger, Ranking Member LaMalfa, and Members of the Subcommittee. Greetings from the kind of weirdly quiet campus of University of Illinois, and thank you very much for inviting me to testify today.

I am going to focus my remarks on working lands conservation, and I want to try to use a lens based on competition. If I may, I would like to ground my remarks a little bit in the learned experiences of my dad, Bill Coppess. My family's farm, as you mentioned, is in western Ohio, and I got to admit that most of what I know about farming and conservation, I can credit to him. Look, I am not at all objective, but I would argue that my dad represents the best in American farmers. He is a natural contrarian and experimenter, as well as a committed conservationist who has lived out the basic concept that is he sees it as his responsibility to leave things better than he found them.

A couple of examples: In 1998, he convinced my grandfather at the time to go all in on no-till, replacing all the tillage equipment to avoid even being tempted to go back on no-till. He is also one of the first in our area, if not the first, to start experimenting with cover crops. In fact, he and my brother added wheat to the operation, corn and soybean farm, around 2007 in order to break up the rotation and improve the ability to establish cover crops. We have had some pretty amazing experiences with cover cropping over the years.

But you know, they have never really done better than break even on the wheat, even as they progressed around cover cropping itself. And that leads me to this comment I want to make about competition.

Here is another story. About a dozen years ago, they took on a new lease. The soils on the fields were in pretty bad shape, and so they went to work using no-till and cover crops to improve soil

health and soil quality. A couple of years ago then, one of the larger, more aggressive farmers in the area wanted that lease and offered them much higher cash rent. Now look, to the landlord's credit, he appreciated what Dad and my brother were doing and he stuck with them and they kept the lease. But please recognize that had the other farmer succeeded, years of work and sunk in costs invested to improve the health and quality of those soils would have gone to the next farmer, the new tenant, who would benefit from that work but was probably unlikely to continue it. And this is kind of that tough reality around competition, particularly at the local level on things like cash rent, as well as what farmers are willing and able to pay for those rare fields that actually come up for sale. These are common advantages for larger investment farmers who are able and willing to bid up and then spread out the costs on a larger acreage footprint. I wouldn't dismiss some of the contribution we are seeing from the expanded amount of payments going in.

Look, conservation takes work. It adds risk and management complexity. The farmer has to be willing to experiment and learn by trial and error. And more, right after more than 30 years of no-till and more than a dozen years of using cover crops, Dad still hears significant skepticism around the area. The self-assured assuring themselves and anyone who will listen that it just won't work.

Conservation comes with costs, real costs. It is an investment that will not likely be returned at any crop year, and probably unlikely to ever exceed the total cost.

Consider some of the budget analysis that I want to highlight from my colleague, Dr. Gary Schnitkey, here at Illinois, looking at Midwest corn and soybean farms. He is finding right now negative returns for 2018 and 2019. Those returns have been offset somewhat by the positive returns for soybeans, but it is a negative on corn and positive on soybeans. But much of the worst of this has been prevented by the really large payments that we have seen come out the last couple of years. And so, as he looks forward with 2020 and 2021, he is forecasting a worsening situation, the degree of bad really depending on the amount of payments that may or may not be there.

For example, in 2019 for Illinois, if we blend the corn and soybean budgets together to 50/50 rotation, the farm would lose about \$100 per acre without any Federal payments, but falls just above the break-even point, around \$5 an acre with those payments. We see that significant situation. It should go without saying that losing money per acre makes for a rather difficult management situation. Now try adding costs for conservation practices. If you are investing in conservation, you are unlikely to have room in the budget to pencil out top-dollar land purchases or top-dollar cash rents. You are not out there buying the new equipment, and that can have a cascading series of consequences, some of which may be more painful than others. And there are only so many options for cutting costs. Each can have implications for the farmers' ability to compete, and that can be magnified as we add costs through conservation.

But how do we help farmers adopt conservation and stay competitive? Clearly, cost-share Federal systems can really help, if it is available. For example, Illinois EQIP might pay \$45 an acre for cover crops, which would make up the difference for the cost of that, but is there ever enough funding available to hit the acreage we need? For example, the last 10 years or so we have averaged about \$13 million per year, so at \$45 an acre, that is only 288,000 acres. Half of it for livestock, we are down to less than 150,000 acres. In a state like Illinois that has 24 million acres of cropland, it would probably take about \$1 billion a year just to cover the cover crops.

This is kind of where I am sort of making an argument for rethinking in some form or fashion some of the working lands conservation policies and doing so in a way that better blends elements of risk: Price, yield, revenue. Those are the focus of farm programs and crop insurance.

I also want to briefly raise the need for more research, and in particular, more and better data. The 2018 Farm Bill made strides in that way around data. The data that crosses the lines between conservation and crop insurance, risk management, financial management and more that really is comprehensive around this farming operation.

I also just want to highlight a couple quick examples around research and demonstration, one of which is the Precision Conservation Management Project led by the Illinois Corn Growers, and has received RCPP funding and is really designed to help blend that financial management and the conservation adoption management process. And also, I get kind of lucky timing. Today, a project I am a part of is launching a web-based cover crop decision support tool for farmers in Illinois to allow them to get a sort of dashboard readout of what modeling work or simulated cover crops are doing in those fields. We will have a *farmdoc daily* article on that later today that will provide the website and more information.

Let me just conclude with reiterating this perspective from the farmer around working lands conservation. The importance of those policies being relevant to issues of risk and competition and helping adopt conservation and better compete in what is becoming an increasingly difficult farm economy, which has been discussed across the board. Policies that better blend farm risk and conservation should result in a much better return on that taxpayer investment, and there are as many ways to achieve this as there are program components. Ultimately, the challenge we have here is we look at these policies as on the farm program and support side, these are very relevant to the farmers' operation, but they raise questions about the returns to the taxpayers. On the conservation side, we have clear return to the taxpayer, cleaner water and less soil erosion. But, we're challenged at times if it's relevant to the farmer and this focus on issues of risk and management. Blending these and looking for ways to do so, and I have a few ideas in my written testimony. I am happy to take questions about them. But, there is a lot here that we can explore and work with or work towards, particularly should the next farm bill discussion begin anytime in the near future.

With that, I am sorry I went over. I appreciate the opportunity to be here and take questions. Thank you.

[The prepared statement of Mr. Coppess follows:]

PREPARED STATEMENT OF JONATHAN W. COPPESS, J.D., ASSISTANT PROFESSOR OF LAW AND POLICY, DEPARTMENT OF AGRICULTURAL AND CONSUMER ECONOMICS, UNIVERSITY OF ILLINOIS, URBANA, IL

Chair Spanberger, Ranking Member LaMalfa, and Members of the Subcommittee:

Thank you for inviting me to testify today in this hearing on the “Challenges and Successes of Conservation Programs in 2020.” I am currently on faculty at the University of Illinois in the Department of Agricultural and Consumer Economics.

The focus of my work is on Federal agricultural policy and agricultural law; I teach two courses and have a partial Extension appointment with much of that dedicated to working with the *farmdoc* project team, including articles for *farmdoc daily*. Much of my research is on the history and development of American farm policy, including conservation.

My remarks today will seek to discuss contemporary conservation issues with some application of the history and development of policy. I will focus my remarks almost exclusively on working lands conservation.

If I may, I would like to begin with a bit of a story. Much of what I understand about farming and conservation I credit to my father, Bill Coppess. I grew up on my family’s farm in western Ohio and, while I’m not at all objective, I would argue that my Dad represents the best in American farmers. He is a natural contrarian and experimenter, as well as a committed conservationist who lives out a basic concept: he sees it as his responsibility is to do leave things in a better place than when he found them.

In 1988, as he and my Grandfather were guiding the farm out of the economic crisis of that decade, Dad convinced Grandpa that they should switch to no-till farming. Up to that point, I have strong memories of riding tractor in the fall to plow the harvested field and multiple times in the spring, tilling it up before planting. I recall snow with layers of dirt in it blowing against the barn wall in winter; and the pulverized soil ahead of the soybean drill.

As Dad tells it, he convinced Grandpa that they had to dive all the way in and not merely transition. They sold all of the tillage equipment to purchase a no-till planter and drill, and they never looked back. But to this day, Dad can talk about the farmers in the area who swear no-till simply won’t work and the landlords he had to convince that it wasn’t trash on the fields, that he wasn’t being lazy, but that it was important for the soil even if it didn’t look as nice as the well-tilled fields.

I remember the pride he took in the return of earthworms to the field in large numbers and what they were doing for the soil.

He put in grass waterways and buffer strips along the creeks and ditches and was an early adopter of the Conservation Security Program after it was created in the 2002 Farm Bill.

In fact, CSP helped he and my brother add wheat to the corn and soybean rotation around 2007 in large part to begin cover cropping practices because they established better in July than in the fall.

He was one of the first, if not the first, to start experimenting with cover crops in our area. This practice has also been met with much skepticism; the self-assured assuring themselves and anyone who would listen that it just would not work, as well as having to explain it to landlords.

Cover crops really brought out his experimental side, from adding radishes and field peas only to have the rotting plants in the spring raise concerns that there were gas leaks, to various grasses and mixtures.

One spring when he couldn’t terminate annual rye in time, they went ahead and drilled soybeans into the standing rye; it turned out to be some of the best soybean yields they have yet had and the mat of dead rye helped suppress weeds.

Walking fields at home a fence line isn’t necessary, I can tell when one of our fields ends and the neighbor’s begins by the feel of the dirt and the sounds—in our fields are insects but it is eerily quiet in the neighbor’s.

I tell these stories not just to brag on Dad—although I’m happy to do that—but for a point about what it currently takes for conservation to succeed in farming and what it takes for a farmer to succeed with conservation.

It takes more work and it takes more than work; you have to be willing to experiment and tinker; learn by trial and error, often no small amount of error. You have

to be willing to have those around you tell you that you are wrong and explain it (sometimes painstakingly).

It also takes money.

While I would consider the family farm successful, I'd guess that Dad has never made as much money as some of the larger, more aggressive farmers in our area. He didn't buy new pickup trucks or turnover equipment regularly; we never owned a boat.

But, it is another anecdote on which I want to focus because it continues to run through my head.

Over a decade ago, they began leasing a new farm and the soil was in bad shape. He had to convince the landlord to accept no-till and cover cropping but over quite a few years he could show some improvements in the soil in those fields.

But a new challenge hit; one of the large, aggressive farmers in the area wanted the acres and offered a much higher cash rent, at a level Dad wasn't paying and couldn't pay.

With the larger farmers this is not an uncommon advantage; they are often able and willing to bid up cash rent and then spread out the additional costs across a larger acreage footprint. I also wouldn't dismiss how increasing farm program payments might contribute to this as well.

To the landlord's credit, he had come to respect what Dad was doing for the soil and while the rent increased it didn't increase all the way and Dad kept the lease.

But, had the other farmer succeeded, he would have taken over the lease and benefitted from nearly a decade of work and investment to improve the soils. And he likely would have returned it to the state Dad found it in when he first began farming it.

And these are what make functional and strong conservation policy incredibly important but also realistically difficult.

It is a lot of work. But it is also an investment, one that will not pay off for years and many practices are unlikely to ever cover their costs.

It adds risk, like not being able to terminate a cover crop in time. Waterways, buffers and filter strips take acreage out of production that would produce a crop, even if at lower yields; but they also mean having to plant and harvest around them.

But it is the competitive risk that I would argue does not get talked about enough; this competitive risk is certainly not considered sufficiently in farm policy, conservation, payments and crop insurance.

The farmer adopting conservation books additional cost in the operation's management and finances; cost-share only goes so far and, as will be discussed below, can be incredibly limited.

The 5 year contracts under CSP are helpful, but the program has long been challenged with paperwork issues and other bureaucratic costs (changing rules; spotty implementation; *etc.*). And it struggles in the reality of leasing, landlords and tenancy.

But even a CSP payment may not make up the difference.

And like my landlord story, it is very possible that a farmer and the taxpayer can invest in years of conservation on a farm but have it all lost to a more aggressive farmer who will pay a higher cash rent, skip the conservation work and maximize what he can get out of the ground.

Farming is hyper competitive, especially at the local level and among neighbors. Much of it comes through competition over cash rents and the increasingly rare farmland sales. If you are investing in cover crops and conservation you are unlikely to have the room in the budget to pencil out top dollar land purchases or cash rent; and that has a cascading series of consequences, some more painful than others.

If anecdote is insufficient, the numbers bear this out.

My colleague, Dr. Gary Schnitkey is arguably the foremost expert on Midwest row crop farm management and budgeting issues. I'm including his revenue and cost projections for central Illinois corn and soybean farms for 2018 through the 2021 projections from a recent *farmdoc daily* article (*Figure 1*).¹

¹Schnitkey, G., K. Swanson and N. Paulson. "Release of 2021 Crop Budgets."* *farmdoc daily* (10): 143, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 4, 2020, <https://farmdocdaily.illinois.edu/2020/08/release-of-2021-crop-budgets.html>.

***Editor's note:** the article titles are hyperlinked. However, the hyperlink for the article also follows the date of publication; historically, the hyperlinks are published in parenthesis, in this publication they are not.

Figure 1. Schnitkey, *et al.* (2020), crop budgets, *farmdoc daily*

Table 1. Revenue and Cost Projections for Central Illinois, Northern Illinois, 2018–2021P

	Corn				Soybeans			
	2018	2019	2020P	2021P	2018	2019	2020P	2021P
Yield per acre	214	191	210	212	67	58	62	62
Price per bu	\$3.60	\$3.66	\$3.25	\$3.40	\$9.27	\$8.81	\$8.25	\$8.50
	\$/acre	\$/acre	\$/acre	\$/acre	\$/acre	\$/acre	\$/acre	\$/acre
Crop revenue	\$770	\$699	\$683	\$721	\$621	\$511	\$512	\$527
ARC/PLC	0	10	35	30	0	10	35	30
MFP payments	1	75	0	0	111	75	0	0
CFAP payments	0	26	0	0	0	11	0	0
Other Federal aid ¹	0	0	80	0	0	0	80	0
Crop insurance proceeds	6	12	0	0	6	10	0	0
Gross Revenue	\$777	\$822	\$798	\$751	\$738	\$617	\$627	\$557
Fertilizers	126	134	125	123	32	34	31	31
Pesticides	61	54	60	60	36	33	36	36
Seed	112	107	112	113	66	63	73	73
Drying	15	28	15	15	0	1	1	1
Storage	10	10	10	10	4	4	4	4
Crop insurance	24	23	23	22	16	15	15	14
Total direct costs	\$348	\$356	\$345	\$343	\$154	\$150	\$160	\$159
Machine hire/lease	24	26	26	26	21	22	22	22
Utilities	6	6	6	6	5	5	5	5
Machine repair	28	27	27	27	24	23	23	23
Fuel and oil	21	17	17	17	18	14	14	14
Light vehicle	2	2	2	2	1	2	2	2
Mach. depreciation	63	58	58	57	54	49	56	56
Total power costs	\$144	\$136	\$136	\$135	\$123	\$115	\$122	\$122
Hired labor	23	23	23	23	20	20	20	20
Building repair and rent	6	9	9	9	3	4	4	4
Building depreciation	16	15	17	17	8	8	8	8
Insurance	10	10	10	10	10	10	10	10
Misc.	10	9	9	9	10	9	9	9
Interest (non-land)	23	26	26	27	19	22	22	22
Total overhead costs	\$88	\$92	\$94	\$95	\$70	\$73	\$73	\$73
Total Non-Land Costs²	\$580	\$584	\$575	\$573	\$347	\$338	\$355	\$354
Operator and Land Return³	\$197	\$238	\$223	\$178	\$391	\$279	\$272	\$203
Cash rent	253	253	253	253	253	253	253	253
Farmer Return⁴	-\$56	-\$15	-\$30	-\$75	\$138	\$26	\$19	-\$50

¹ Other Federal aid is built in for 2020 based on expectations. No programs have been legislated or announced.

² Sum of direct, power, and overhead costs.

³ Equals gross revenue minus total non-land costs, and represents a return to the land owner and farmer.

⁴ Equals Operator and land return minus cash rent.

Source: Historical values come from Illinois Farm Business Farm Management (FBFM). Summaries can be found in a paper entitled "Revenues and Costs for Illinois Grain Crops" available in the management section of *farmdoc*.

That budget analysis for 2019 corn includes \$699 per acre in crop revenue, with \$356 per acre in direct operating costs, another \$136 per acre for power costs, and overhead costs of \$92 per acre. Once cash rent is factored in at \$253 per acre, the farm would be losing \$138 per acre. In 2019, he is factoring in the \$123 per acre in Federal assistance for the farm budget to get back close to break-even (–\$15/acre).

Soybeans fare a bit better at \$26 per acre return but only because of Federal payments and lower costs for soybeans: take out the payments and the \$511 per acre in crop revenue is consumed by costs, with cash rent being the largest and the farmer loses \$80 per acre.

If we blend these into a 50/50 corn and soybean rotation, the farm comes out at a loss of \$109 per acre without Federal payments but barely pulls above break-even at \$5.50 per acre.

It should go without saying that losing money per acre makes for a difficult management situation.

Try adding costs for conservation.

There are only so many options for cost reductions: for corn, fertilizer, pesticide and seed costs make up a significant share.

Gary and the team have done a lot of work on cost cutting efforts, including: tillage;² fertilizer;³ and harvest operations.⁴

And, still, cash rents remain a substantial factor in the budget.⁵ And it is one that may be increasingly difficult to manage as record levels of Federal payments are made to farmers—it is tough to negotiate lower rents when the landlord knows you are getting \$80 to \$100 per acre in Federal payments promoted with great publicity.

The most straight forward practice is adding cover crops to the rotation. Previous work with Gary and other colleagues on this for the 2018 budgets remains informative. If the corn budget estimate at the time was about an \$89 per acre loss, adding a cereal rye cover crop and including a credit for nitrogen pushes the loss to \$108 per acre, or about an additional \$20 per acre loss.⁶

Figure 2. Swanson, *et al.* (2018), *farmdoc daily*

Table 3. Corn Revenues and Costs, Central Illinois High Productivity 2018 Baseline Corn Budget Compared to Budget with Cover Crops

	Baseline Budget	Cereal Rye	Rye + N Credit	Rye/Vetch Blend	Rye/Vetch + N Credit
Yield per acre	205	205	205	205	205
Price per bu	\$3.60	\$3.60	\$3.60	\$3.60	\$3.60
Gross revenue	\$738	\$738	\$738	\$738	\$738
Fertilizers	130	130	130	130	130
N Credit	0	0	-9	0	-18
Cover Crop Seed	0	15	15	45	45
Total direct costs	\$372	\$387	\$378	\$417	\$399
Drilling	0	13	13	13	13
Total power costs	\$121	\$134	\$134	\$134	\$134
Total non-land costs	\$563	\$591	\$582	\$621	\$603
Operator and land return	\$175	\$147	\$156	\$117	\$135
Farmer Return	-\$89	-\$117	-\$108	-\$147	-\$129

To be fair, these are merely estimates and averages across multiple (although actual) farms and they are only snapshots; much depends on individual farm management.

But the challenge for conservation on working lands is clear: it adds costs, more work, additional risk and more management complexity. And these get translated into the competition issue as amongst farmers, locally, nationally and around the world.

²Swanson, K., G. Schnitkey, N. Paulson, C. Zulauf and J. Coppess. "Cost Management: Tillage Operations." *farmdoc daily* (10): 151, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 18, 2020, <https://farmdocdaily.illinois.edu/2020/08/cost-management-tillage-operations.html>.

³Schnitkey, G., L. Gentry and S. Sellars. "Cutting Fertilizer Rates to Save Costs." *farmdoc daily* (10): 155, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 25, 2020, <https://farmdocdaily.illinois.edu/2020/08/cutting-fertilizer-rates-to-save-costs.html>.

⁴Swanson, K., G. Schnitkey, N. Paulson, C. Zulauf, J. Coppess "Cost Management: Harvest Operations." *farmdoc daily* (10):158, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 1, 2020, <https://farmdocdaily.illinois.edu/2020/09/cost-management-harvest-operations.html>.

⁵Schnitkey, G., K. Swanson, C. Zulauf, N. Paulson and J. Coppess. "Cash Rents in 2020 and 2021." *farmdoc daily* (10): 147, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, August 11, 2020, <https://farmdocdaily.illinois.edu/2020/08/cash-rents-in-2020-and-2021.html>; Schnitkey, G., D. Lattz, K. Swanson and C. Zulauf. "Cash Rents in 2020 and 2021 Projections." *farmdoc daily* (10): 165, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, September 15, 2020, <https://farmdocdaily.illinois.edu/2020/09/cash-rents-in-2020-and-2021-projections.html>.

⁶Swanson, K., G. Schnitkey, J. Coppess and S. Armstrong. "Understanding Budget Implications of Cover Crops." *farmdoc daily* (8): 119, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, June 28, 2018, <https://farmdocdaily.illinois.edu/2018/06/understanding-budget-implications-of-covercrops.html>.

I argue that these are the critical factors relevant to working lands conservation policy and it all can be understood by the issue of competition.

Look again at cover crops. This is a critical practice for reducing nutrient loss from farm fields, especially tile-drained fields in places like central Illinois. The research on this is relatively clear and getting better.⁷ In short, a cover crop growing during the fallow season scavenges residual nitrogen (or nitrogen applied in the fall) and stores it in the plant biomass. Nitrogen held by the plant is not available for export by precipitation and spring melt and is thus prevented from being lost to waterways. Among the benefits, cover crops can improve the overall health of the soil by adding soil organic matter, improving water retention or holding capacity and potentially provide some weed suppression. They also capture and store carbon in their biomass.

The benefits to the farmer are likely small and incremental, taking years of cost to get improvements in soil health while other farmers make up deficiencies with fertilizer and intensity in the short run allowing them to out-compete.

For cover crops, the most immediate and significant benefits accrue off the farm, however. Less nitrogen in the waterways improves drinking water, lakes and rivers, and should contribute to a decrease in hypoxic or dead zones such as in the Gulf of Mexico, or algal blooms such as in western Lake Erie.

A cost-share program such as the Environmental Quality Incentives Program (EQIP) can certainly help; at \$45.34 per acre for a basic cover crop practice in Illinois the payment should cover the cost differences.⁸ According to NRCS data, Illinois has averaged about \$13 million per fiscal year in EQIP financial assistance. At that payment rate, the program could pay for 288,677 acres of cover crops in Illinois; according to the Census of Agriculture, there is just over 24 million acres of cropland in Illinois. By statute, 50% of EQIP funds are marked for livestock cutting the total potential for EQIP cover crops down to 144,339 acres or about 0.6% of the cropland in the state.

This highlights another challenge for conservation policy; there has yet to be enough funding available to sufficiently meet the need. For EQIP to pay for cover crops on all 24 million acres of cropland in Illinois would cost over a \$1 billion each fiscal year.

Nationally, we've averaged just over 330 million acres of total cropland used for crops and about 250 million in the major row crops; 320 million acres of harvested cropland per the 2017 Census.

Take the Conservation Stewardship Program as another example; at the \$18 per acreage average payment rate, the 320 million acres of harvested cropland would require \$5.76 billion each fiscal year, which exceeds the entire baseline for conservation programs in the farm bill (average \$5.4 billion per fiscal year).

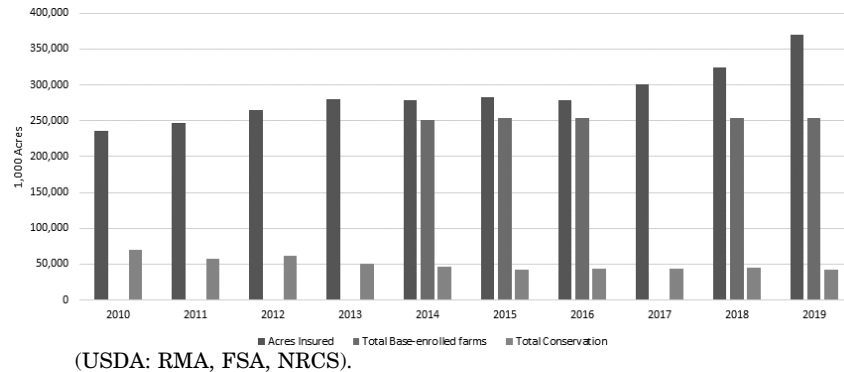
The Congressional Budget Office estimates that the 2018 Farm Bill will spend an average of \$20 billion each fiscal year on farmers through ARC/PLC program payments, crop insurance and conservation.⁹ This comes out to about 42% of the funds on crop insurance, 31% of the funds on ARC/PLC, and the \$26.8 billion for conservation over 5 years constitutes 27% of the funds.

According to USDA records, the average acres insured by crop insurance from 2010 to 2019 was 286 million and the average base acres for ARC/PLC was 253.5 million, while the average acres under conservation contracts was just over 50 million; working lands programs account for about half (24 million acres) of the conservation total. *Figure 3* provides the annual acreage per category.

⁷I pulled together a lot of it for an earlier law review article. See, Coppess, Jonathan W. "A Perspective on Agricultural Policy in the Age of Nutrient Loss." *Drake J. Agric. L.* 23 (2018): 29. Some of the best work on cover crops is being led by Dr. Shalamar Armstrong at Purdue University. See e.g., Ruffatti, M.D., Roth, R.T., Lacey, C.G., & Armstrong, S.D. (2019). "Impacts of nitrogen application timing and cover crop inclusion on subsurface drainage water quality." *Agricultural Water Management*, 211, 81–88. Nevins, Clayton J., Corey Lacey, and Shalamar Armstrong. "The synchrony of cover crop decomposition, enzyme activity, and nitrogen availability in a corn agroecosystem in the Midwest United States." *Soil and Tillage Research* 197 (2020): 104518. Roth, Richard T., et al. "A cost analysis approach to valuing cover crop environmental and nitrogen cycling benefits: A central Illinois on farm case study." *Agricultural systems* 159 (2018): 69–77.

⁸U.S. Dept. of Agric., Natural Resources Conservation Service, *Illinois Payment Schedules*, https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/programs/financial/?cid=nrcs_eprd1328235 (accessed, Sept. 28, 2020).

⁹Congressional Budget Office, "Details About Baseline Projections for Selected Programs: USDA Mandatory Farm Programs" (March 2020): <https://www.cbo.gov/system/files/2020-03/51317-2020-03-usda.pdf>.

Figure 3. Total Acres by Category (USDA)*Total Program Acres*

Clear from this overview, the acres enrolled in conservation programs lag far behind the other two categories and far in excess of the differences in funding. If we use harvested cropland in the 2017 Census for comparison, insured acres are 89% of total harvested, base acres are 79% and conservation acres are 16% of total harvested.

The history of each category of policy development may offer some insights into these disparities. All three categories of programs originated with the New Deal efforts of the 1930s.

Farm support policy was enacted in 1933 with the Agricultural Adjustment Act. Within 5 years, the Agricultural Adjustment Act of 1938 had established the basic parameters of the parity system: price supporting, non-recourse loans (forfeiture if prices were below loan rates); acreage allotments for reduction or diversion; and marketing quotas if approved by farmer referendum. In 1973, Congress modified the system significantly by prioritizing income supporting deficiency payments when prices were below a target price. Loan rates were established below target prices as a further backstop on low prices. Finally, the system of payments was decoupled by the 1996 Farm Bill, which was modified in 2002 by reintroducing target prices; the 2008, 2014 and 2018 Farm Bills also included revenue-based (prices times yields) policy, known known as Agriculture Risk Coverage (ARC). Throughout the more than eighty years of farm support policy, low prices has been the overwhelming focus.

Crop insurance was first created in the Agricultural Adjustment Act of 1938 but was initially only for wheat. It would develop slowly; little used, expensive and ineffective, the George H.W. Bush Administration proposed eliminating it in favor of *ad hoc* disaster assistance in 1990. It was the Agricultural Risk Protection Act of 2000 that installed crop insurance as the primary risk management vehicle. Critical were the permanent inclusion of revenue-based insurance policies with major crops in many areas able to insure up to 85% of their revenue, as well as a substantial increase in the amount of the insurance premium covered by the Federal Crop Insurance Corporation. Today, on average, 62% of total premiums are paid for by the Federal taxpayer. Here again, the increase in crop insurance participation can be partially linked to the inclusion of price risk in the form of revenue policies.

Conservation policy developed in an entirely different manner. It first came into existence as a soil erosion control policy during the catastrophic dust storms of the Dust Bowl with the Soil Erosion Control Act of 1935. Less than a year later when the Supreme Court nullified the 1933 AAA as unconstitutional, Congress responded immediately by enacting the Soil Conservation and Domestic Allotment Act of 1936. The 1936 Act paid farmers to reduce planting of crops considered soil-depleting (*e.g.*, corn, wheat and cotton) and increase planting of soil-conserving crops (*e.g.*, grasses and legumes). Notably, Congress appropriated roughly \$500 million for the program, which adjusted for inflation to 2020 dollars would be over \$9 billion per fiscal year. The goal of the program, however, was less about conservation than about helping farm income by reducing planted acres of oversupplied crops.¹⁰

¹⁰See, Coppess, J. "The Conservation Question, Part 2: Lessons Written in Dust." *farmdoc daily* (9): 200, Department of Agricultural and Consumer Economics, University of Illinois at

Conservation was effectively replaced by the 1938 AAA and then largely lost during World War II and the Korean War. It was the Soil Bank program created in the Agricultural Act of 1956 that re-instituted a version of conservation policy. The Soil Bank included two programs: (1) the acreage reserve paid farmers to reduce planted acres of oversupplied program crops by diverting them into conservation purposes in a short-term (3 years or less) contracts; and (2) a conservation reserve paid farmers to remove less productive acres from farming and place them in a long-term (up to 10 years) contract and under conservation cover. The Soil Bank was inexplicably short-lived; the acreage reserve was not renewed for the 1959 crop and the conservation reserve was allowed to expire after 1960.¹¹ At its peak, the acreage reserve removed just over 21 million acres from production and the conservation reserve peaked at 28.7 million acres in 1960.¹²

Importantly, both the 1936 and 1956 programs used conservation as a method to remove acres from production because of an oversupplied commodity situation; this was conservation in service to price support policy. It was the Food Security Act of 1985 that built the foundation of modern conservation policy. During the depths of the 1980s farm economic crisis, Congress created the modern Conservation Reserve Program (CRP), as well as conservation compliance. CRP pays an annual rental payment to remove environmentally sensitive acres from production for 10 to 15 years. Conservation compliance is a quasi-regulatory policy that requires compliance for eligibility for Federal farm payments and, since 2014, for the crop insurance premium subsidy. Compliance is based on having a plan to control erosion in place for highly erodible land (HEL), and for wetlands, eligibility is lost if wetlands are drained for farming or if previously drained wetlands are used for production.

CRP as created in 1985 was also an acreage reduction program, albeit with a stronger focus on conservation and the environment. Working lands conservation was not implemented until decoupling of farm policy in 1996 with EQIP, and then with a major increase of funding in the 2002 Farm Bill, as well as creation of the Conservation Security Program (CSP). The 2008 Farm Bill modified CSP and renamed it the Conservation Stewardship Program, with a goal of increasing acres by roughly 10 million each year.

A review of the history and development of these policies helps highlight the significant challenges for working lands conservation policy. Acres enrolled in conservation are far below program and insured acres but bringing them to an equivalent level with payments would likely be prohibitively expensive in the baseline. As such, funding is insufficient to meet the need on the scale of acres that remain in production.

Possibly more important, working lands conservation lacks any connection to farm risk issues that are the most relevant to the farmers who would necessarily undertake the conservation practices. Farm support programs have always involved market price risk in some form or fashion; crop insurance acceptance and popularity took off when price risk was incorporated through revenue-based policies. Working lands conservation policies do not incorporate price or yield, or revenue, risks.

And here we arrive at the most fundamental issue for all of farm policy. Farm program payments are relevant to the farmer but cannot answer the toughest ques-

Urbana-Champaign, October 24, 2019, <https://farmdocdaily.illinois.edu/2019/10/the-conservation-question-part-2-lessons-written-in-dust.html>; Coppess, J. "The Conservation Question, Part 3: Lessons in Settling Dust." *farmdoc daily* (9): 210, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, November 7, 2019, <https://farmdocdaily.illinois.edu/2019/11/the-conservation-question-part-3-lessons-in-settling-dust.html>.

¹¹ See, Coppess, J. "The Conservation Question, Part 5: Seeds of the Soil Bank." *farmdoc daily* (10): 3, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 9, 2020, <https://farmdocdaily.illinois.edu/2020/01/the-conservation-question-part-5-seeds-of-the-soil-bank.html>; Coppess, J. "The Conservation Question, Part 6: Development of the Soil Bank." *farmdoc daily* (10): 13, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, January 24, 2020, <https://farmdocdaily.illinois.edu/2020/01/the-conservation-question-part-6-development-of-the-soil-bank.html>; Coppess, J. "The Conservation Question, Part 7: Losing the Soil Bank." *farmdoc daily* (10): 31, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, February 20, 2020, <https://farmdocdaily.illinois.edu/2020/02/the-conservation-question-part-7-losing-the-soil-bank.html>.

¹² See, Coppess, J., G. Schnitkey, N. Paulson, K. Swanson and C. Zulauf. "Production Controls & Set Aside Acres, Part 1: Reviewing History." *farmdoc daily* (10): 117, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, June 26, 2020, <https://farmdocdaily.illinois.edu/2020/06/production-controls-set-aside-acres-part-1-reviewing-history.html>; Coppess, J. "The Conservation Question, Part 4: An Overview of Acres." *farmdoc daily* (9): 215, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, November 14, 2019, <https://farmdocdaily.illinois.edu/2019/11/the-conservation-question-part-4-an-overview-of-acres.html>.

tion: what is the return on the taxpayer's investment? The massive increase in payments by the Trump Administration only magnifies this challenge. Crop insurance can answer this question better because it is an insurance program helping farmers remain in operation after disaster strikes in a crop year (yield losses or in-crop year price losses).

Conservation policy can answer that question, funds paid to achieve conservation on working lands represent an important return on the taxpayer investment. Working lands are a large source of nutrient loading that cause problems for water quality, as well as for soil erosion and for the need for irrigation in the drier climates. Working lands conservation policy is not, however, as relevant to the farmer because it does not incorporate prices or yield risk, and with insufficient funding it is not able to reach the scale and scope necessary for the conservation challenges. At the farm level, the lack of relevance to risk and the shortfalls in funding limit the ability of conservation policy to help those farmers adopting conservation practices on working lands compete with other farmers who do not.

One argument for reconsidering conservation policy results from these observations. If working lands policies incorporated elements of price and yield (or revenue) risk, they would be more relevant to the farmers. For one thing, conservation assistance would increase in years of low prices and incomes (or revenue) but decrease in years when the farmer received strong revenue or income from higher prices. It would also help with scale and cost; more acres could receive conservation practices but at a far lower cost in the CBO baseline, similar to how farm programs and crop insurance operate.

An example can be found in a concept introduced during the 2018 Farm Bill debate but which was not included in the bill. Illinois Representatives Bustos and Bost introduced H.R. 4988, the "Conservation Assistance Loan Act of 2018." In full disclosure, I had the privilege to work on this concept with Illinois Farm Bureau, and they advocated including it in the 2018 Farm Bill. I raise it here more as an example and for general consideration.

In short, the conservation option in the MAL program would permit farmers who agree to undertake conservation practices to receive a higher loan rate. The bill used a floating average based on 75% of the national average marketing year average price for the previous 5 years to set the loan rate. For example, for corn in 2020 that loan rate would be \$2.67 per bushel instead of \$2.20 per bushel. In addition, if the producer agreed to plant cover crops the loan rate would include an additional \$0.20 per bushel.

Critical to this is how the loan program works. The farmer borrows at the loan rate on bushels already harvested and in the bin. Nine months later when the loan is to be repaid, the average prices at the time determine repayment. If prices are above the loan rate, the farmer repays the entire loan (plus minimal interest). If, however, the prices are below the loan rate the farmer pays back at the lower market price and the rest of the loan is forgiven (a loan gain). This provides some buffer against price risk and for a farmer adopting conservation, the higher loan rate would be a better buffer.

It is an example of one way to begin thinking about incorporating price and/or yield risk into working lands conservations (or *vice versa*). It also serves as an example about how programs could be designed to help level the competitive playing field; a farmer receiving a higher loan rate because she or he is implementing conservation practices would improve their competitive position as compared to farmers who did not implement the practices and received a lower loan rate. The basic aspects of this concept could be generally applicable across programs or policies.

For what it is worth, I tend to think that a loan concept holds particular appeal for working lands conservation policy. In short, it provides funding to the farmer in advance and likely as many conservation implementation costs are being implemented (*e.g.*, cover crops). It also avoids some of the bureaucratic challenges about having farmers check all the boxes in advance; because repayment of the loan can be tied to performance on conservation practices, the check on farmer compliance can happen later and based on actual efforts. There are, of course, many details and issues that would have to be worked out on any policy along these lines. I raise it not as a fully designed concept but merely a matter for consideration; food for thought about how working lands conservation and price or yield risk can be blended into a single program.

Before I close, and at the risk of crossing Subcommittee jurisdictional lines, I would like to highlight the vital importance of research, education, extension, demonstration and outreach to conservation in general, and to working lands conservation, in particular. Land-grant universities and the Extension system are critical partners and leaders but the challenges in the wake of the [COVID]-19 pandemic are magnifying many underlying issues and challenges.

For conservation and research, the critical need is data; data that crosses over with farm programs and crop insurance/risk management; data from farms and field trials that can be used to demonstrate further to other farmers; remote sensing data and more. The 2018 Farm Bill took a big, important step on this front, but more is needed.

In addition, I want to highlight a couple of projects. The Illinois Corn Growers have taken a significant step towards advancing conservation and nutrient loss reduction with the Precision Conservation Management (PCM) project that was accepted in the Regional Conservation Partnership Program. This is an effort to combine farm financial data and business operational management with conservation adoption, implementation and management. It has incredible and outstanding potential to advance conservation and is already producing great data and information for farmers to use. Full disclosure, I have had a minor role in the project and continue to provide in-kind contributions. For those interested, please check out the website: <https://www.precisionconservation.org/>.

Finally, I have been working with a group of programmers and researchers at the University of Illinois on a project to develop a web-based decision support tool for cover crop practices in Illinois. I'm proud to announce that we are launching the web-based tool today and it can be found here: <https://covercrop.ncsa.illinois.edu/>. This project has been a partnership with the National Center for Supercomputing Applications (NCSA) on campus to take open-source modeling for in-field cover crop growth and make it usable, accessible and understandable in a web application. More information will be forthcoming in a *farmdoc daily* article that will be published today. This is merely the first (beta) version of the tool and we will be improving it, adding functionality and features, and expanding it as we go forward. I want to thank the Illinois Nutrient Research & Education Council for generous funding and technical advice on this project, as well as the project team that has done such great work. I think it holds potential not just for farmers and the increasing adoption of cover crops, but as a potential example of a method for advancing the demonstration and translation of agricultural research, helping move more of it from the laboratories and field trials into the farmer's hands and fields.

In conclusion, I appreciate the Subcommittee offering the opportunity to provide extensive thoughts on this important topic. As you undertake efforts to further consider, and reconsider, working lands conservation policy, I want to reiterate my encouragement for taking into that consideration issues of farm-level competition and the relevancy of the policies and programs to the farmer. Better incorporation of farm risks such as prices and yields can help with program design, making it more relevant to the farmers needed to adopt the practices and likely helping them better compete in the increasingly difficult farm economy. Doing so might also help expand conservation practices to far more acres without a substantial increase in Federal spending. Policies that better blend farm risk issues and conservation should result in a much better return on the taxpayer's investment in agriculture. There are as many ways to achieve this as there are program design components.

The CHAIR. Thank you so much, Mr. Coppess.

At this time, Members will be recognized for questions in order of seniority, alternating between Majority and Minority Members. We will be recognized for 5 minutes each in order to allow us to get to as many questions as possible. Please keep your microphones muted until you are recognized in order to minimize background noise. When 1 minute is left, the light will turn yellow, signaling time is close to expiring.

I will begin by recognizing myself for 5 minutes, and I would like to draw on a theme that I heard from Mr. Coppess and Mr. Patterson.

Mr. Coppess, you told a brief story about the efforts that your father began undertaking on his farm as early as 1998. New practices, no-till, cover crop. You mentioned some of the skepticism that he still continues to experience from his neighbors.

And then Mr. Patterson, you were talking about the shortages of qualified professionals, and I was wondering if both of you could comment on what you see in terms of workforce needs, in terms of expertise. What are those shortages that we should be looking at

that would ensure that we could continue moving forward in the conservation space in a place that benefits the local economy, benefits farmers and producers; and certainly, has the overall positive benefits of conservation practices?

And I will open it up to either of you to begin with your feedback to that very general question.

Mr. COPPESS. Steve, go ahead.

Mr. PATTERSON. Excuse me?

The CHAIR. I believe he opened it to you, Mr. Patterson, first.

Mr. PATTERSON. Okay. I think one of the biggest challenges based on visiting with people that work with the Commonwealth of Virginia—the nutrient management specialists that work with the Commonwealth of Virginia. One of the bigger challenges is just the number of people that write plans, the people that [inaudible], and the ability to partner with each other to make sure we get as much acreage out of these plans we possibly can. It does go back to what has been mentioned today, which is more funding, both in the state and the Federal level, going forward.

The CHAIR. And Mr. Coppess, would you want to add anything to that?

Mr. COPPESS. Well, I absolutely agree that the personnel on this is incredibly important. I want to just say briefly that having had the chance to work with Chief Norton when he was a detailee on the Senate Agriculture, Nutrition, and Forestry Committee, I appreciated hearing and seeing him today, even virtually, and know he does great work.

But, as an example of the kind of incredible effort that comes out of the agencies to help out and help farmers as they sort through the variety of issues that you need around managing and putting in place and maintaining conservation practices. So, that is critical. Natural—the water conservation districts are incredibly important as well, and investing in these infrastructures, particularly at this time with stressed state budgets, as was mentioned, state and local budget challenges. I see a lot of opportunity there to invest in the people that help carry this out and help farmers adopt.

The CHAIR. Thank you very much, Mr. Coppess.

And that leads me beautifully into my next question, which is focused on COVID-19 and the public health crisis. As you mentioned, state and local budgets have been hit hard, and especially when some had only just begun recovering from a prior economic recession. I have been a strong advocate for Federal support to state and local governments in any future COVID relief related package, and given the Soil and Water Conservation Districts and their dependence on state and local funds, in addition to Federal resources.

Mr. Palmer, could you comment on what challenges we might see if there is not additional support to state and local governments, and what that might mean for conservation efforts across the country?

Mr. PALMER. Yes, Madam Chair. I thank you for the opportunity to address this. We have a system that is put in place based on partnerships. The relationship between the citizenry of my county with our local Soil and Water Conservation District board, and our relationship with our state and national partners. And then that

all helps the producers to better tend their land and provide that safe and secure food supply that we all rely upon.

Given the fact that budgets are being stressed because of these outside influences from COVID, the sales tax that is coming into the State of Iowa is going to be very, very light compared to what it was just because so many businesses have been closed. Those dollars, they are going to have to readjust budgets. They are going to have to look at where they can cut prices, places where they can make budget cuts. We are very afraid that that can affect our local county budgets in many ways, and put more of the management onto the shoulders of our local citizenry with property taxes and other ways.

The CHAIR. Thank you very much, Mr. Palmer, and thank you to the witnesses again for your answers and for being here today.

I now recognize the gentleman from Georgia for 5 minutes.

Mr. ALLEN. Thank you, Madam Chair, and thank you, panel, for being with us today.

My first question is to all of the panelists, and of course, we heard about the problems with staffing. But from the standpoint of challenges that you have witnessed that prevent producers from adopting conservation practices, what is the resistance to adopting these practices? Could all of you comment on that, please?

Mr. PATTERSON. I can comment on that. This is Steve Patterson.

I specifically asked that question of an individual [inaudible] here in Virginia, and his answer was kind of surprising to me. He goes I almost hate to admit this, but the producer who struggles—myself to talk about himself. Well, for us, Southern States, the opportunity there is we—I really think that we need to start communicating more together, and that means sitting down with the Department of Conservation, sitting with the NRCS more often. Understanding challenges and deciding to help bridge the gap. I think we'll get there so we can help bridge the gap.

Mr. ALLEN. Would any of the other panelists care to comment on the challenges with farmers adopting these programs, farmers and ranchers?

Mr. PALMER. Yes, I would take a shot at that. One thing that we are dealing with is a generational transition from older farming ways and habits to different equipment, different technologies that we are able to work with today, but that conception that has been supported over time by nutrient recommendations, other things that we have gotten over time that have not caught up with the innovation now are still a hold back to the way things are done.

Also, the disappearance of [inaudible] from our landscape in Iowa, for example, has really changed the way that light could be utilized. Where I could use cover crops in my operation to grow beef, others don't have that luxury, and it makes it difficult for them to think about growing something that is going to compete with a crop and the management that comes along with it without being able to fully realize the long-term effects of something that they are going to be starting on the soil and the effects it has on the soil.

Mr. ALLEN. Mr. Patterson, with regard to the staffing issue and the advent of technology in dealing with conservation practices, can you tell me what we have been able to do technically to accelerate

this program and to be good conservationists, and how that affects staffing and the abilities of staff to deal with new technologies in the conservation area?

Mr. PATTERSON. If I understand your question right, I think the technologies are being adaptive. I think that I would say agreement that technology industry into the fields, such as precision ag technology, communication technology. Once again, it is a matter of more of a team effort between government and industry working together to make sure the producers have all ends available. And I am not sure I answered your question.

Mr. ALLEN. Right. Yes, what I was trying to tie together is the staffing issues *versus* technology. As we know, technology can reduce the requirement of the number of people involved in a process in manufacturing and other industries are adopting that. But you bring up a really good point, and I will finish up as my time runs out with this.

It sounds like—well, the biggest problem I have with the Federal Government is this one size fits all top down approach, and it really looks like we need to empower our farmers and ranchers to work together with the Federal Government to come up with the right practices.

Thank you, Madam Chair, and I yield back.

The CHAIR. The chair now recognizes the gentlewoman from Maine for 5 minutes.

Ms. PINGREE. Thank you, Madam Chair, thank you to all the panelists. I really appreciated hearing from all of you, and thought there was a lot of interesting information there.

Mr. COPPESS, you talked a little bit about the point that programs are about doing the right thing, but also conservation needs to make financial sense for the farmers, which is certainly a huge challenge. What potential do you see for additional incentives for things like carbon sequestration, either government letter from the private-sector in addressing that issue, as opposed to another revenue source?

Mr. COPPESS. Yes, thank you, Congresswoman. I actually see incredible potential there, because what we are talking about setting up a market or getting that market jump-started, is no small hurdle. I don't want to underplay that. But the idea that those practices began—whether it is ecosystem services or private market, those practices at the farm level, that extra work, that extra time, the complexity in management the farmer puts into it, gets rewarded back based on what they are doing. It is an incredible opportunity.

I talked about the competitive aspect of farmers. I think of the idea of a carbon market or ecosystem market as really turning that farmer competition in a healthy way towards trying to maximize what they can restore in soils through cover crops and that sort of thing. I think it is a great opportunity.

Ms. PINGREE. Just a quick follow-up. A lot of conversation goes on about the best kinds of measurements. Is it about inputs or about performance? Also, who should be engaged in there? Is there a fair amount of gains? Is this a role for the USDA? Do you have an opinion on those topics?

Mr. COPPESS. USDA would have an important role in all of that, helping measure it, in helping work with the farmers, and particularly that technical assistance around adopting those practices in the field.

A shameless plug, our land-grant universities and extension system are an incredible partner, along with the Soil and Water Conservation Districts as well.

Ms. PINGREE. And I hope I can at least support your shameless plug, all the important and under-funded and underutilized.

Just another thing—and while I appreciate all the other panelists, I don't want to shun them, but I just have another question from your perspective.

You have done some analyses on farmers' financial decision making as we were talking about it, and how these practices fit into management and budget choices. Can you talk a little bit about how you consider climate change-related risk, for example, reduced yields for extended drought like most states are experiencing—we are even experiencing it in Maine, which is unusual—when you are conducting those analyses, and just as a second part of that, how do we make sure the crop insurance programs recognize the climate-related risks and better incorporate conservation practices that might mitigate them, two big explosive topics?

Mr. COPPESS. That is a very big and difficult question. I appreciate it.

We have to do a better job, just to be perfectly frank, across the board as we examine risks for farming. And it is not just droughts and wildfires and floods, it is things like the incredibly short planting season being drastically impacted by spring rains and that sort of thing. And if you think about a cover crop practice that you have to terminate in that same time period, this just adds to that set of challenges. Beginning to do a lot more, the data issue, the data needs, like the 2018 Farm Bill included more work around data. To me, particularly with crop insurance, it is a data intensive effort, so a lot of that has to be moving in that direction. But it is a challenge. It is such an unknown, and the more we build in resilience efforts, the more we are thinking about this not just in terms of can I get in this year and make it through, although that can't be discounted, but what does this mean longer-term? If I can work this in and begin to be more resilient over the longer-term, those are important factors. But I don't want to discount the difficulty that is going to have.

Ms. PINGREE. Absolutely, but it is really important.

One last little sort of section of this, and this has come up with a couple of other people. And again, I am just going to ask you the question. This whole issue about when you are a tenant farmer, you are renting, you do those inputs. You really had a great example of your father's experience. But do you have a little bit more to say about how to get more landowner buy-in in those programs, and what way to incentivize that?

Mr. COPPESS. Well, I am not sure how necessarily to incentivize. I think that is a question that is one really to chew through and work on and wrestle over.

One of the things we have been trying to do through the Farm Back Project that I also know some schools have been doing as well

is working on that lease. Can we—so we have created conservation addendums for this sort of model farm leases that we provide out that are available on the website, and we have done some webinars around that to say look, this is a contract between you and the farmer or you and the landlord. The more you negotiate and talk about these things, explain what you are doing—which again is an experience my Dad had. The more you explain no-till, that it is not just leaving trash on the field, but it is actually doing beneficial work for the soil, or why is something growing green in early March, right? Working through those issues in advance in that lease is a huge step forward for the farmers and the landlord, because they are working those issues out, and everybody can then better understand it.

That is one area having the near-term incentives and all that is a difficult topic to work out.

Ms. PINGREE. I totally understand, and again, thank you. I am out of time, but again, I have a couple of other questions and I will submit it for the record.

But thank you again to the other panelists, and a particular shout-out to Ducks Unlimited. You guys do such great work in all of our states, and I appreciate your plowing through during this challenging time.

Thank you, Madam Chair. I yield back.

The CHAIR. The chair now recognizes the Ranking Member for 5 minutes.

Mr. LAMALFA. Thank you again, Madam Chair.

For Dr. Waldrop from Ducks Unlimited, again, thank you for being part of this panel here. I wanted to ask you a couple thoughts about the issue with the Klamath Lake and Klamath Basin and the refuge up there, and what are your thoughts on, and what is Ducks Unlimited's view, on what should be going on there, and what can they do to help push for the water supply that we need, *et cetera*? What is DU's involvement on that?

Dr. WALDROP. I don't have a lot of details for you on Klamath. I know we are involved up there and we are working with partners and everything. I would have to defer to our regional specialist for details regarding any of the issues. Is there something specific regarding that? Are you talking like as far as water supply and everything else?

Mr. LAMALFA. Well, we have, as you know, a terrible duck kill up there on the lake with a water supply problem that we could go all day on that itself here. But the water has to come through the agricultural system up there in order to reach the refuges, and the supply was short this season, even though many of us thought there was plenty of water in the lake. Is DU part of advocacy for more water through the ag system into the refuge? Because again, we have a disaster in the Pacific Flyway in the making with the duck kill going on up there.

Dr. WALDROP. Yes, sir. In that respect, absolutely we are working, again, with partners and doing other things that we can do to help deliver water. That is a lot of what we have been working on as far as projects to help with that water delivery and to help with the Klamath Lake and refuge, and ensure that those water supplies are there.

Of course, water is a huge issue in California, as well as all throughout the western states, so it is something that is always being worked on and improved. But, through the partnerships that were encouraged to work on projects that will help with the water delivery in that situation.

Mr. LAMALFA. Yes, absolutely.

Dr. WALDROP. You are right, it is a big problem, and with all of the ag partners out there, whether it is rice or anything else and being able to flood those waters at different times to provide important nutrients in food and water for waterfowl is extremely important, which goes back to a lot of those programs that are so critical in that area and throughout that region to ensure not only good ag production, but also with habitat, food, water for waterfowl as well.

Mr. LAMALFA. Yes, the rice is, of course, ½ million acres of it 2, 3 hours, 4 hours south of that area is a good partner. A lot of the nesting goes on up north there into Klamath, but it does emphasize that we need to work with NRCS to have more nesting and cover to be able to be set-aside, maybe actually in rice country too, since the lake situation is pretty dire. Again, I was up there some weeks ago there. We went out on an airboat and we were recovering a lot of dead duck carcasses, but also saved some live ones that were surviving. And they had a duck hospital up there on one edge of the lake area, and they were getting a 90 percent recovery on the rescued sick ducks. It was pretty amazing.

But we do need to have maybe more partnership opportunities with NRCS down in rice country for fallowed ground, and the ability to have more nesting and more habitat farther down in the valley too and spread this risk out.

Dr. WALDROP. I think that would be a fabulous idea, and with a lot of the wetlands being lost all through, Sacramento Valley and all through there, that rice really has become a very important part of the nutrient availability, whether it is in nesting or food availability, much more than it was decades ago. So, it is very important to those programs.

Mr. LAMALFA. All right. Well, I have already eaten up all my time, so thank you for that.

I will yield back.

The CHAIR. The chair now recognizes Representative Axne from Iowa.

Mrs. AXNE. Thank you, Chair Spanberger, and thank you to all of our witnesses for being here today. I am going to go straight to my Iowa friend.

Tim, I first want to quickly talk about the derecho that hit Iowa just a few weeks ago, and certainly I am thankful that most of our district wasn't as impacted as other parts of Iowa. But with your position in Iowa agriculture, what have you been hearing about the recovery efforts for our farmers?

Mr. PALMER. Thanks for that question, Congresswoman. I don't think anybody knows really what we are dealing with right now. The recommendations to destroy a crop or try to harvest it, it is going to be a trail of tears until we get through well into next year trying to figure out what the effects of leaving a crop and working it into the soil as opposed to trying to harvest it. There is just no way to plan for something like that. Every conservation practice in

the world wouldn't offset the damage that was done there. Hopefully the nutrients that are recaptured can help buffer the producers that didn't harvest this year, and with the addition of the crop insurance, they can survive to grow another year. But it is going to be very difficult.

Mrs. AXNE. Well, thank you for that update. My colleagues have heard me talk about this before, but just so that everyone who is watching and who is on this is aware, Iowa has suffered a rare derecho which swept across the Midwest. We have never seen this storm before, and unfortunately, we had hardly any notice to prepare for it. It destroyed farmland, buildings, equipment, leaving millions without power. Actually for weeks, thousands still didn't have power. And then of course, last year we had historic flooding in my district well into Missouri, which folks are still recovering from. This couldn't be a more appropriate hearing today because we are seeing these unusual weather events due to changes in climate happening more and more, and the more that we can do from a conservation perspective to help protect against this impact, the better off we will be.

Tim, I wanted to ask you. You touched upon this in your written testimony, but I would be interested to have you expand a bit on it. How can conservation programs make operations more resilient to help farmers recover from disasters after they occur?

The CHAIR. And if I may interrupt quickly? Could all the witnesses mute their microphones if they are not answering? We are getting some feedback in the hearing room. Thank you.

Mr. PALMER. Okay. Okay now?

The CHAIR. Perfect.

Mr. PALMER. Thanks again for the question, Congresswoman.

When you are utilizing the current conservation practices that we have, we have longstanding conservation practices that have been vetted and enhanced over for decades. Terraces and ponds and the structures that we have put on the landscape that help mitigate the effects of flooding, our P.L. 83-566 Program. A lot of producers are not in those areas maybe under an organized watershed program, but their ability to have access to the technical support to build terraces and waterways and buffer areas is going to help retain their soil, if they can retain their soil, it is going to be there for production for the next year, and more sustainable. And if they add in the current knowledge that we have with cover crops and soil health measures, being able to store carbon with growing plants more of the year, it is going to eventually affect their bottom line because of the reduced inputs that they are going to be putting into a crop.

Mrs. AXNE. Well thank you, and I also want to make sure that farmers are part of any climate-focused efforts in Congress and that our farmers have buy-in as well so we can work towards that more resilient environment to ensure our farmers have that opportunity.

Your written testimony succinctly laid out how landowners work with conservation districts, and you called it a gold standard. I am so grateful for that.

Can you speak a little bit more to how districts and local working groups help inform NRCS in delivering the programs available

through the farm bill that can help us create more buy-in from producers?

Mr. PALMER. Dealing with the COVID problem has really opened a door for us with outreach to more people with the Zoom technology where we have the capability of producers and general citizens that haven't been involved or haven't had an understanding of what conservation districts can do to make their own little environment better. We have had the opportunity to reach out to them and get their input without trying to set up a meeting where they had to drive and sit there and wonder what this was all about. But the one-on-one that we have had the opportunity with is really important. That local input of what is desired at Madison County, for example, what resources do we need to treat? We need to be environmentally sound in our ag production, but the resource area, the oak savannahs, the wetlands, the things that we can provide as natural habitat that also have recreational opportunities, we take that input from them. We turn that into a plan, but we pass that on to our state headquarters in Des Moines, it is part of the overall planning for Madison County and for the state and for the country to take all that local information, turn it into programs that fit those priorities.

Mrs. AXNE. Well thank you. We are out of time so I yield back, but I am looking forward to working with you more on this in the future.

Mr. PALMER. Absolutely. Thank you.

The CHAIR. The chair now recognizes the gentleman from Ohio.

Mr. BALDERSON. Thank you, Madam Chair.

My question is for Mr. Coppess. Mr. Coppess, good morning.

While we passed the most recent farm bill not even 2 years ago, the next farm bill is always in front of us. This summer, you and your colleagues at *farmdoc* wrote a piece that world market conditions suggest set-asides are not an effective farm policy for corn and soybeans. What led you to this conclusion, and in your view, if the next farm bill were to go all in on supply management programs such as acreage set-asides, what would be the impact on our farmers, our rural communities in the U.S. as an ag exporter?

Mr. COPPESS. Thank you, Congressman, and certainly, the set-aside issue is no easy matter to unfold. It has a long history, and so we were trying to break down what the variety of challenges are. All right, so if you take acres out of production in America for world-traded commodities, then we are going to see acreage expand somewhere else. Brazil is a great example, and if they continue burning rain forests to plant soybeans, we have not helped anybody's situation out much.

What we were really focusing on was the historic set-aside. Every farmer puts ten or 15 percent in a set-aside program in order to be eligible for program assistance, and we find that it is a challenge around the world market situation. It is a challenge around even controlling supply. In fact, historically, set-aside acres have been less than effective in controlling supply, largely because what you are going to do is put your worst acres under set-aside and you end up maximizing production on the acres that remain in farming.

And so, one of the things that we see is just that this policy, the set-aside, not to reuse the word, it was terminated in 1996 when we went decoupled acres in a different farm policy setup. And so, we do not think that there is a real value, particularly if we are looking to improve prices and those things.

That being said, I also think, again, talking about conservation, there may be avenues in which it isn't a set-aside program, but there are a lot of things we can do in fields across this country from buffers and waterways and other things that will be both conservation-focused and work in on the acres that are farming.

We continue to try to sort this out, and this is a question that has come up quite a bit from farmers. It is also indicative of just the tough economic environment they find themselves in to ask about set-aside.

Mr. BALDERSON. Okay, thank you.

My follow-up question, you pretty much answered that. I was asking for what lessons we can learn from the acreage set-aside programs from the 1960s, 1970s, and 1980s. If you want to add to that you could, but thank you.

Mr. COPPESS. Thank you, sir. I don't know if I have anything more I can add to that, so I appreciate it.

Mr. BALDERSON. Madam Chair, I yield back. Thank you.

The CHAIR. Excellent. Before we adjourn, I invite the Ranking Member to share any closing comments that he may have.

Mr. LAMALFA. Thank you, Madam Chair. Again, I am appreciative of the panel and of Chief Norton's time here today, as the conservation programs that we know in ag and rural America have been very helpful in achieving the goal of habitat for wildlife and waterfowl, as well as make great partnerships for farmers to keep farming.

As we heard today from USDA Natural Resource Conservation Service, as well as our partners like Ducks Unlimited and what that means to us in northern California, but across the whole fruited plain, it is extremely important. I appreciate this opportunity today, Madam Chair, for being able to hear them out and have an interaction and advise and know that our doors are open for continued work and streamlining improvement and how the process works.

Thank you again, and I will yield back.

The CHAIR. Thank you very much.

And to our witnesses, thank you for your testimony today. This conversation has been so interesting. I have notes surrounding me, particularly in light of how we could look to conservation being part of the solution as we look to resolve and solve for resource challenges, presenting by a rapidly changing climate and certainly the COVID-19 public health crisis.

I would like to thank USDA staff and the entire conservation community, including our farmers who are out there pushing forward on innovative, on-farm conservation practices, even amid the uncertainty that we have outlined today. I thank them for their work in these tremendous times, and I thank all of the witnesses for your work, your research, your dedication, and your focus on these vitally important issues. I look forward to continuing to work

with all of you all, as well as with my colleagues here on the Committee.

As we continue to implement conservation programs under the 2018 Farm Bill, take active measures to continue to protect the environment and combat the climate crisis, and as we look ahead to work together towards our economic recovery, these conversations are so vitally important. And certainly in the back of all of our minds, informing our future work on future farm bills. It is a pleasure to have welcomed you all here today. Thank you for being with us. Thank you for your testimony, and thank you for your time, and thank you for your work.

Under the Rules of the Committee, the record of today's hearing will remain open for 10 calendar days to receive additional material and supplementary written responses from the witnesses to any question posed by a Member.

This hearing of the Subcommittee on Conservation and Forestry is adjourned.

[Whereupon, at 11:54 a.m., the Subcommittee was adjourned.]

[Material submitted for inclusion in the record follows:]

SUBMITTED QUESTIONS

Response from Kevin D. Norton, Acting Chief, Natural Resources Conservation Service, U.S. Department of Agriculture

Questions Submitted by Hon. Abigail Davis Spanberger, a Representative in Congress from Virginia

Question 1. While I was pleased to hear in your testimony about how NRCS was able to step up and help farmers as they adjusted to market and other disruptions caused by the ongoing COVID-19 public health emergency, I am concerned about how economic and other uncertainty may have impacted farmers and producers considering conservation. As such I am curious to learn more about how conservation programs are being utilized during this pandemic. To that end, I'd like to request you provide the Subcommittee with the following data:

The number of qualified and complete applications, both successful and otherwise, for NRCS conservation programs over the last five years including 2020. Please also include, if available, the percentage of these that came from first-time applicants to these conservation programs.

Answer. Under the Agricultural Management Assistance (AMA), Conservation Stewardship Program (CSP), and Environmental Quality Incentives Program (EQIP), NRCS received a total of 822,404 applications between FYs 2016 and 2020. Of these, 267,950 became contracts, constituting 33 percent of the applications received.

A total of 159,772 qualified applications remained in eligible, preapproved, and approved status. In addition, NRCS evaluated and categorized 300,073 applications as canceled, deferred, or ineligible. This set of applications was not funded.

Note: The information regarding first-time applicants is not readily available from our contracting system. We will analyze our records and provide a follow-up report that is focused on first-time applicants.

NRCS Conservation Programs Percentage of Applications Contracted for Fiscal Years 2016–2020

NRCS Program by Fiscal Year	Applications	Contracts	Percent of Applications Contracted
Agricultural Management Assistance (AMA) FY 2020	1,056	449	43%
Fiscal Year 2019	783	217	28%
Fiscal Year 2018	839	168	20%
Fiscal Year 2017	1,452	377	26%
Fiscal Year 2016	965	291	30%
<i>Total AMA</i>	<i>5,095</i>	<i>1,502</i>	<i>26%</i>
Conservation Stewardship Program (CSP) ¹ FY 2020	34,572	12,142	35%
Fiscal Year 2019 ¹	35,615	15,539	44%
Fiscal Year 2018 ²	23,081	10,878	47%
Fiscal Year 2017	26,577	12,342	46%
Fiscal Year 2016	30,404	12,336	41%
<i>Total CSP</i>	<i>150,249</i>	<i>63,237</i>	<i>42%</i>
Environmental Quality Incentives Program (EQIP) ³ FY 2020	129,690	35,082	27%
Fiscal Year 2019	155,365	43,462	28%
Fiscal Year 2018	101,013	45,374	45%
Fiscal Year 2017	138,837	41,079	30%
Fiscal Year 2016	142,155	38,214	27%
<i>Total EQIP</i>	<i>667,060</i>	<i>203,211</i>	<i>30%</i>
Grand Total	822,404	267,950	33%

Data Source: ProTracts—REAP Approved

¹ Includes CSP—Grasslands Conservation Initiative, and CSP—Regional Conservation Partnership Program data.

² Includes CSP—Regional Conservation Partnership Program data.

³ Includes EQIP—Regional Conservation Partnership Program data.

NRCS Conservation Programs Application Status for Fiscal Years 2016–2020

NRCS Program by Fiscal Year	Applications Status					
	Pre-approved	Approved	Eligible	Deferred	Ineligible	Cancelled
Agricultural Management Assistance (AMA) FY 2020	0	0	186	69	38	177
Fiscal Year 2019	1	0	152	36	52	186
Fiscal Year 2018	1	0	117	70	58	261
Fiscal Year 2017	2	0	183	332	77	354
Fiscal Year 2016	0	0	77	259	63	163
<i>Total AMA</i>	<i>4</i>	<i>0</i>	<i>715</i>	<i>766</i>	<i>288</i>	<i>1,141</i>
Conservation Stewardship Program (CSP) ¹ FY 2020	7	0	6,238	1,079	2,923	5,322
Fiscal Year 2019 ¹	25	0	4,940	113	3,1479,994	
Fiscal Year 2018 ²	0	0	1,291	97	2,318	7,081
Fiscal Year 2017	7	9	2,098	513	2,820	6,786
Fiscal Year 2016	7	0	6,607	926	2,585	5,974
<i>Total CSP</i>	<i>46</i>	<i>9</i>	<i>21,174</i>	<i>2,728</i>	<i>13,793</i>	<i>35,157</i>
Environmental Quality Incentives Program (EQIP) ³ FY 2020	29	3	36,457	7,585	6,611	20,002
Fiscal Year 2019	682	0	47,418	2,710	10,172	26,366
Fiscal Year 2018	10	4	1,511	15,288	12,349	25,715
Fiscal Year 2017	464	17	24,805	18,038	12,429	25,899
Fiscal Year 2016	729	0	25,695	23,208	12,738	27,090
<i>Total EQIP</i>	<i>1,914</i>	<i>24</i>	<i>135,886</i>	<i>66,829</i>	<i>54,299</i>	<i>125,070</i>
Grand Total	1,964	33	157,775	70,323	68,380	161,370

Data Source: ProTracts—REAP Approved

¹Includes CSP—Grasslands Conservation Initiative, and CSP—Regional Conservation Partnership Program data.

²Includes CSP—Regional Conservation Partnership Program data.

³Includes EQIP—Regional Conservation Partnership Program data.

Question 1a. The share of contracts through EQIP with dropped practices over the last five years including 2020. Please also include information on the percentage of these contracts that were “single practice,” “multiple practices, partial completion,” and “multiple practices, zero completion.” For those contracts with dropped practices, please also provide, if available, the percentage of first-time applicants to the EQIP program included in that category.

Answer. Under the Environmental Quality Incentives Program (EQIP), the Natural Resources Conservation Service contracted a total of 203,211 applications between FYs 2016 and 2020. During contract administration, 99,769 contracts were completed, 10,992 canceled, and 1,482 terminated. The EQIP contract period is, at a minimum, from the date of obligation through the last scheduled conservation practice or activity but may not exceed 10 years.

Note: Single and multiple practice contracts and first-time applicant data are not readily available through the NRCS application/contract system. We will analyze our records and provide a follow-up report that is focused on first-time applicants.

Environmental Quality Incentive Program Contract Status for Fiscal Years 2016–2020

Contract Status	Number of Contracts by Fiscal Year					Total
	2016	2017	2018	2019	2020	
Active	4,893	9,775	17,931	24,673	33,696	90,968
Completed	29,337	27,391	24,275	17,418	1,348	99,769
Cancelled	3,388	3,396	2,877	1,294	37	10,992
Terminated	596	517	291	77	1	1,482
Total	33,321	31,304	27,443	18,789	1,386	203,211

Data Source: ProTracts (October 19, 2020).

Question 2. Are there additional flexibilities that this Subcommittee should consider for conservation programs that would help maintain farmer engagement and reduce uncertainty fueled by the economy or the pandemic?

Answer. NRCS conservation programs embody significant flexibility to address natural resource concerns. While the NRCS program portfolio meets a myriad of

natural resource concerns at various levels of stewardship, these programs focus on implementation of practices that address long-term conservation objectives and were not designed for expeditiously meeting producers' acute needs for economic recovery following market disruptions or other economic uncertainty as a result of a pandemic.

However, given the administrative burden associated with the statutory requirement that producers meet payment eligibility determinations, NRCS assistance often cannot be delivered to impacted producers as quickly as the circumstances warrant. Therefore, we ask that you consider disconnecting conservation compliance and adjusted gross income provisions for payments that are directly related to resolving producers' imminent resource concerns associated with inventory disruptions resulting from a pandemic. Although there was a small number of producers requesting such assistance through EQIP in Fiscal Year 2020, a narrow statutory exemption would enable us to remove some of the administrative burden for producers who are new customers but who have imminent needs that need to be addressed quickly. Authority for USDA, with producer consent, to confirm adjusted gross income with the Department of the Treasury directly would also expedite assistance to producers who require time-sensitive adoption of conservation practices. Additionally, we offer for consideration adjusting the provisions 1240B(d)(7) of the Food Security Act of 1985, as amended, to add "(v) addresses resource concerns related to market disruptions as a result of a pandemic or other national catastrophe."

Question 3. The Great Plains is home to iconic species, Native nations, and rural communities and is an ecosystem in which nature is essential to culture and livelihoods. A healthy prairie provides clean water, stores carbon, supports wildlife, and provides livelihoods for communities; yet since 2014 we've been losing them at an average rate of four football fields per minute. Drawing on spatial cropland data collected by USDA, the World Wildlife Fund's (WWF) *2020 Plowprint Report* found that approximately 2.1 million acres of intact grassland habitat in the U.S. and Canadian Great Plains were plowed for row-crop production in 2018. In the Northern Great Plains (NGP) region alone, approximately 550,000 acres were tilled—with wheat production the greatest driver of grassland loss (41 percent of newly-tilled land) followed by corn (9 percent) and soy (7 percent). Restoration projects are our best tool for repairing disturbed grasslands, but there is no real substitute for landowners, the private sector, and government working together to keep healthy grasslands from falling under the plow in the first place.

Please describe how USDA will accelerate the protection of intact native grasslands, given their importance to producers as well as conservation and climate objectives?

Answer. USDA is committed to helping America's producers protect the health and productivity of Great Plains grasslands. Through NRCS, USDA is working with our partners to identify and address the primary threats to intact grasslands through science-based technical assistance and strategic Farm Bill conservation program delivery. These approaches allow agricultural producers to maintain and improve the productivity of their operations while also enhancing and conserving grasslands.

As you mention, grasslands are being lost through conversion to cropland. One of the important programmatic tools that the Farm Bill provides for conserving grasslands is the Grasslands of Special Significance flexibility available under the Agricultural Conservation Easement Program (ACEP) Agricultural Land Easements (ALE). So far, NRCS has enrolled over 450,000 acres into grassland easements, providing permanent protection from conversion to cropland or development.

For example, through the Working Lands for Wildlife Sage Grouse Initiative, NRCS funded and used a model to identify those grasslands most at risk for conversion to cropland. By using this science to target enrollment in the Northern Great Plains of Montana, NRCS partnered with land trusts and producers to accelerate protection of intact grasslands using ACEP-ALE grassland easements. Targeted efforts to protect these critical grasslands accounted for fully one third of the acres enrolled in this program during the 2014 Farm Bill. Among other outcomes, this effort helped to conserve the longest known migration route for Greater sage-grouse and contributed to the protection of a major pronghorn migration pathway.

Technological innovations, fueled by USDA investments, also shed light on another less well-known source of grassland loss. Data from the Rangeland Analysis Platform identifies where woody plant encroachment is threatening intact grasslands at a scale similar to that of cropland conversion, with trees increasing on over 108 million acres of Great Plains grasslands. Woody plant encroachment by trees, like eastern red cedar, takes land out of productive grazing lands and grassland wildlife habitat.

To address this challenge, NRCS is teaming up with producers and partners across the Great Plains states to develop a new grasslands conservation strategy in the coming year. This plan will focus on ways to reduce the two major threats to grasslands in the region: woody plant encroachment and cropland conversion. Leveraging Rangeland Analysis Platform data on woody plant encroachment and cultivation risk, the strategy focuses on identifying large grassland cores where proactive Farm Bill investments can keep intact, but vulnerable, grasslands healthy.

Question 4. How will you work with colleagues across the agency, and with Congress, to review and align incentives to achieve sustainable production goals that benefit people and the planet? The Sodsaver provision is a good example of this in practice, although it only applies to six states and could be expanded nationwide.

Answer. NRCS has tailored the flexibility available through its financial assistance and easement programs to facilitate a producer's transition to comprehensive sustainable management of their operations. In particular, through the Environmental Quality Incentives Program (EQIP), a producer may address significant natural resource concerns. Building upon successfully addressing these resource concerns, NRCS can then offer an EQIP incentive contract where a producer wishes to address resources more comprehensively on part of their operation. When a producer wishes to raise the overall stewardship across the entirety of their operations, NRCS can offer enrollment in the Conservation Stewardship Program. NRCS easement enrollment options, through the Agricultural Conservation Easement Program and the Regional Conservation Partnership Program, fully support these efforts by protecting agricultural lands and restoring and protecting environmentally sensitive lands for future generations. These programs are currently available across the entirety of the United States.

Interest in voluntary conservation programs remains high with only one in three applications being selected for funding. Given the strong competition for funding, NRCS is remaining focused on the locally led conservation process where priorities and criteria for selection are identified and influenced at the local levels through local work groups and State Technical Committees. It is at the local level where discussions on effective incentives and approaches to conservation adoption and adaptation begin. The working groups' and committees' knowledge of local conditions, motivations and partnership opportunities, coupled with NRCS outcomes information that is released through the Conservation Effects Assessment Project (CEAP) reports and through other avenues, analysis available from partners, and feedback we receive from producers and stakeholders, shapes national policy and recommendations we provide to USDA leadership for congressional engagement. In addition, the information we learn from the Conservation Innovation Grants provides valuable information regarding the effects of conservation efforts on agriculture production and the condition of our natural resources. We are working to make the results of these grants available more readily to the public through a public database that is targeted for release in calendar year 2021.

The Farm Service Agency's (FSA) Conservation Reserve Program (CRP) is another key tool in achieving sustainable production goals. CRP helps protect the long-term health of soil by taking environmentally sensitive lands out of production and establishing land cover. In addition to conserving and improving the soil, land enrolled in CRP improves water quality, enhances wildlife population, provides pollinator forage habitat, sequesters carbon, and reduces downstream flood damages. FSA works closely with stakeholders on how best to manage the program while maximizing agricultural and environmental benefits.

Question 5. Chief Norton, the 2018 Farm Bill authorized increased payments for ten high-priority practices under EQIP with flexibility for state determination of these practices. Up to 90% of the total cost of a practice may be covered for practices that improve water quality and quantity—which as you know, is pressing resource concern across Virginia. Can you touch on how NRCS is working with State Conservationists and Technical Committees to identify eligible practices and make payments available to producers?

Answer. State Conservationists, in consultation with the State Technical Committees, may select up to ten high priority practices for increased payment rates of up to 90 percent. NRCS State Conservationists must publish their list of conservation practices designated as high priority practices and the payment rates on the NRCS State website.

NRCS developed the following national guidance for selection of high priority practices in FY 2020—

A high priority practice must meet at least one of the following criteria:

- Addresses specific causes of impairment relating to excessive nutrients in ground or surface water;

- Addresses the conservation of water, to advance drought mitigation and declining aquifers;
- Meets other environmental priorities and other priority resource concerns identified in habitat or other area restoration plans; or
- Is geographically targeted to address a natural resource concern in a specific watershed.

In addition, states also could use the following optional criteria:

- Practices that are identified through assessments already completed at the area or state level and which have the greatest impact on that resource concern;
- Practices that have high potential for conservation benefit, but which are underutilized; or
- Practices that already are widespread and common should be avoided, unless the State determines the practice provides a specific purpose or identifies a geographic region for which the practice is underutilized.

Further, states are not required to select high priority practices, but if they choose to, states can select from one to ten high-priority practices. Additionally, States can choose a rate that best meets the objectives and incentivizes the use of the high priority practices, up to 90 percent.

The payment process to producers for high priority practices under EQIP is based on the completed practices being certified as meeting NRCS standards and specifications as part of an EQIP contract.

Question 6. NRCS has recently deployed the Conservation Assessment Ranking Tool (CART) to facilitate conservation planning and delivery. Can you provide us with an update on the integration/rollout of CART? What benefits have been achieved? What efficiencies have been gained?

Answer. NRCS integrated the Conservation Assessment Ranking Tool (CART) with our Conservation Desktop and launched CART in January 2020. CART enables conservation planners to implement Farm Bill programs more efficiently and effectively by providing enhanced methodologies to assess resource concerns and to rank customer applications against multiple funding pools simultaneously.

At the end of the FY 2020, NRCS used CART through 5,000 users and completed 127,000 ranked assessments on over 79 million acres, evaluating over 11 million resource concerns. This was 159 percent of the prior year's planning. FY 2020 was a transition year requiring field staff and partners to learn a new system. As the comfort level with CART continues to grow, efficiency gains will be fully realized and are expected to exceed those observed in FY 2020. As we look towards future implementation of CART, we are excited about adding additional enhancements and integrations, such as integrating the environmental reviews, adding detailed surveys, improving outcomes reporting and client products, incorporating the ability to import and export user data, and increasing access for partners and Technical Service Providers (TSPs).

Through CART, NRCS planners are able to help address a variety of 47 resource concerns, across seven land uses, and for 353 conservation practices, enhancements, and bundles simultaneously. It has modernized and streamlined NRCS' conservation planning and program delivery, reduced workload on field staff, and improved the customer experience by creating an efficient application process. CART methodologies include utilizing national and local geospatial data, configurable resource concern questions, configurable conservation practice resource concern impact points, and configurable funding pools that can be modified to address local needs.

In addition, CART offers multiple benefits over previous program-specific conservation planning systems, including:

- Streamlined delivery of services and integration of all financial assistance programs, resulting in one application and one contract, regardless of program;
- A centralized system for financial and technical assistance, including planning, applications, and ranking;
- A simplified, integrated planning and program application process;
- Improved conservation delivery through a program neutral resource assessment, evaluation of alternatives, and application ranking in one unified system;
- Reduced time between program application and conservation implementation by eliminating duplicative data entry processes; and
- Locally-led program flexibility, state customization, and program prioritization based on planning and outcomes.

Traditionally, NRCS clients have had to submit separate applications for each of NRCS program offerings. CART has established a system where clients can submit one application for consideration under different program enrollment options simultaneously (e.g., EQIP—General, EQIP—Socially Disadvantaged, EQIP—Beginning Farmer, EQIP—Air Quality, EQIP) thereby reducing the amount of paperwork on our clients and the administrative workload on our field offices. States have reported processing time for an application is about 15 minutes. This results in an estimated 7,500 hours reduction in staff time needed to help clients progress into the planning process in preparation for program contracting more quickly.

Additionally, NRCS has traditionally employed over 120 technical tools to run in the conservation planning process (e.g., Revised Universal Soil Loss Equation 2 (RUSLE-2), Wind Erosion Prediction System, Stream Visual Assessment Protocol 2, Pasture Condition Score). The advent of CART enables planners to take advantage of almost 90-geospatial layers of data to automate processing calculations during conservation planning. For example, NRCS conducts two RUSLE-2 runs to estimate the Soil Conditioning Index for Cover Crop, our highest invested conservation practice, taking an estimated 60 minutes to run. This practice was applied 221,672 times in FY 2020; which means to run RUSLE-2 twice for this practice approximately 221,672 hours were needed during planning. CART allows planners to select targeted questions, along with employing geospatial layers, to reduce this amount of time to a fraction of previous estimates. These gained efficiencies enable a planner to move a client from program application to program contract much quicker than in past years.

Question 7. The Conservation Assessment Ranking Tool (CART) has only been in use since the beginning of this year. As we all learn more about this new tool, can you discuss CART's role in the Conservation Delivery process? At which points in the process does CART come into play? Does CART have any functionality to assess program impacts after practices have been implemented?

Answer. NRCS traditionally has a nine-step conservation planning and delivery process that is broken into three phases—

- Phase I—Collect and Analyze: (1) Identify Problems and Opportunities, (2) Determine Objectives, (3) Inventory Resources, (4) Analyze Resource Data
- Phase II—Decision Support: (5) Formulate Alternatives, (6) Evaluate Alternatives, (7) Make Decisions
- Phase III—Implementation and Evaluation: (8) Implement the Plan, (9) Evaluate the Plan

CART fits into Phases I and II. For Phase I (Collect and Analyze), planners answer questions in CART about the existing condition of the client's site and identify potential resource concerns for assessment. Thresholds are used to compare the existing condition of the site to ideal conservation levels that meet NRCS planning criteria. For Phase II (Decision Support), planners can select planned conservation practices in CART and compare the overall results to formulate and evaluate alternatives to help client's meet conservation objectives.

CART, along with Conservation Desktop, supports the conservation planner through the entire Conservation Planning Process. Initially CART assists the conservation planner with capturing resource inventory information from the farm, obtained either through a field visit or client interview. CART uses this information to assess the conservation needs on the farm and helps the planner explore various conservation practices, activities, and systems to address the concerns. CART then evaluates all NRCS programs for assistance options and ranks the plan within all the relevant programs.

CART is geared towards better science and data driven conservation planning, which is in line with the multi-agency Conservation Effects Assessment Project that quantifies the environmental effects of conservation practices and programs. Presently, CART provides more information about the landscape in which conservation practices are applied and the proposed effects. NRCS is currently working to further integrate Conservation Effects Assessment Project effects with this information to better report the impacts of conservation practices.

Question 8. I understand that USDA service centers are gradually beginning to reopen, with some available for in-person appointments and some available only for phone appointments. What factors are counties taking into account before the decision is made to reopen a USDA service center for in-person appointments? What percentage of USDA service centers are offering in-person appointments?

Answer. Factors that we consider before the decision is made to reopen a USDA service center for in-person appointments include:

- The operational need to return employees to the office;
- Availability of masks for returning employees;
- Availability of cleaning supplies or a scheduled cleaning service;
- The ability of a facility to increase the number of employees present and still maintain appropriate social distancing;
- The status of state and local orders regarding COVID-19; and
- The evaluation of community readiness for reopening, focusing on a 14 day downward trend in new COVID-19 or no new COVID-19 cases in the community in the last 14 days.

As we have progressed through the COVID-19 pandemic, we have discovered that a simple downward trend in cases is not a full assessment of community readiness. We have added an analytical dashboard that provides a current 7 day rolling average of the number of new COVID-19 cases per 10,000 residents in each county. Drawing on several of the major risk models, we have utilized a rate of 1 case per 10,000 residents per day as a trigger level for additional assessment. A facility with a 2 week downward trend in cases and a case rate below 2.0 per 10,000 residents per day can request reopening. If the number is above 1.0 per 10,000 residents per day, we examine the change in the number of new cases over a 14 day period and whether there are any mitigating factors (such as a prison, college or nursing home with a high case load).

USDA's Farm Production and Conservation Mission Area (FPAC) is using a multi-phase reopening plan, in accordance with USDA guidance. All facilities which reach Phase 2 can admit visitors by appointment. FPAC is tracking 2,730 total facilities. As of October 14, 2020, 1,243 or 45 percent have reached Phases 2 and 3 and are allowing in-person visitors.

Question 9. In the aftermath of Hurricane Laura, many Louisiana and Arkansas producers are still assessing and repairing damage to their farms. Can you discuss the NRCS emergency programs that are available to help farmers recover from hurricane damage?

Answer. NRCS makes available the Emergency Watershed Protection Program (EWP Program), including EWP Program—Recovery and EWPP—Floodplain Easements for states impacted by hurricanes. NRCS conducts a damage assessment of the area impacted by the hurricane and works with local sponsors to implement recovery measures. NRCS may also work directly with landowners impacted by repeated flooding by offering EWP—Floodplain easements.

Though not an emergency program, NRCS State Offices have also responded by using EQIP funds and conservation practices that can be implemented quickly to assist farmers and ranchers respond to resource concerns created by hurricane damage. Recognizing the trend and the need to be able to respond more quickly, NRCS updated its EQIP policies to give States additional flexibilities to assist producers with addressing the unique resource concerns created by natural disaster events. This includes expedited announcement of funding opportunities and delegating authorities.

At this time, Arkansas and Louisiana have not requested additional EWP funds or EQIP funds above their general EQIP allocation to address Hurricane Laura, but States can still request additional assistance once their damage assessments are completed.

Question 10. This has been an especially challenging year for wildfire, with over 42,000 fires having burned more than 7 million acres nationwide so far. Can you discuss the role of NRCS programs in wildfire recovery and restoration?

Answer. NRCS makes available the Emergency Watershed Program (EWP) for states impacted by wildfires. NRCS conducts a damage assessment of the area impacted by wildfire and works with local sponsors to implement recovery measures.

Although not an emergency program, NRCS State offices have also responded by using EQIP program funds and conservation practices that can be implemented quickly to assist farmers and ranchers in addressing the resource concerns created by damage from wildfire. Recognizing the trend and the need to be able to respond more quickly, NRCS updated its EQIP policies to give States additional flexibilities to assist producers to recover from natural disaster events. This includes quicker announcement of funding opportunities and delegating authorities.

At this time, California, Colorado, Idaho, and Washington have requested additional EQIP funds above their general allocation to address wildfires. States can still request additional assistance once their evaluations are complete.

Question 11. Since the launch of *farmers.gov* in 2018, it seems USDA has placed increased focus on making services available to farmers online. Can you talk more

about the features that are available to producers via the *farmers.gov* website? What feedback has the department received from producers? Do you anticipate any difficulty as USDA transitions from the Conservation Client Gateway to *farmers.gov*?

Answer. USDA launched the *Farmers.gov* website in February 2018 to provide farmers, ranchers, and forest landowners with online self-service applications, educational materials, engagement opportunities, and business tools to increase efficiency and productivity while preserving and fostering long-held traditional relationships between local USDA Service Centers and producers.

The public-facing website also serves as a customer gateway and informational counterpart to an authenticated, transactional *Farmers.gov* portal where USDA customers can apply for programs, process technical and financial transactions, and manage accounts.

USDA has used feedback from farmers and ranchers—as well as USDA employees who work directly with customers—to iteratively build the *Farmers.gov* website. Major releases are detailed below.

- USDA released the original *Farmers.gov Disaster Assistance Discovery Tool* (<https://www.farmers.gov/recover/disaster-assistance-tool#step-1>) in June 2018. Farmers who have suffered damage or loss due to a natural disaster can answer five simple questions about the disaster event, its impact, and their location. After submitting their answers, farmers are given information on USDA disaster assistance programs targeted to the needs of their specific operation. This tool is meant to provide immediate online support in times when local USDA Service Centers could be closed. It is not an eligibility tool, but instead provides insights into USDA resources for our customers during a time when support is critical.
- The *Farmers.gov* authenticated portal provides farmers and ranchers a personalized account to securely conduct business with USDA from their home or agricultural operation.
- The *Farmers.gov* Market Facilitation Program (MFP) page was launched in September 2018. MFP provided critical financial support for farmers and ranchers whose commodities were directly impacted by retaliatory tariffs, resulting in the loss of traditional export markets.
- USDA launched the original *Farmers.gov H-2A Visa Program Page* (<https://www.farmers.gov/manage/h2a>) and *H-2A Visa Checklist* (<https://www.farmers.gov/manage/h2a/h2a-checklist>) in March 2019. The H-2A temporary agricultural workers program helps American farmers who anticipate a lack of available domestic workers fill employment gaps by hiring workers from other countries. USDA partnered with the United States Digital Service to develop the H-2A Visa Checklist tool, which brings program requirements, fees, forms, and important dates into one location. The checklist tool steps producers through the process of applying to the program with reminders for specific deadlines. The subsequent *H-2A Visa Case Tracker* (<https://h2a.farmers.gov/SelfService/UI/case-tracker>) was launched in 2020. This tool allows producers to check the approval of their H-2A cases with the Department of Labor or U.S. Citizenship and Immigration Services.
- The “My Financial Information” feature was launched in April 2019. This feature gives farmers and ranchers the ability to view their farm loan information, interest payments for the current calendar year (including year-to-date interest paid for the past five years, loan advance and payment history) and paid-in-full and restructured loans via their secure *farmers.gov* portal account. Account alerts give borrowers important notifications regarding their loans. For example, an account alert will be displayed if a loan is past due.
- In July 2019, USDA introduced the *Farmers.gov Farm Loan Discovery Tool* (<https://www.farmers.gov/fund/farm-loan-discovery-tool>) to help producers find information on USDA loans that best fit their business needs. The Farm Loan Discovery Tool was developed in collaboration with GSA’s Customer Experience Center of Excellence. Over two years, they talked with over 100 customers—both internal and external—to identify commonly asked questions producers have when meeting with a loan officer. Producers interested in USDA farm loans can answer five simple questions about what they are looking to fund and how much money they’d like to borrow. Based on these answers, they receive farm loan information tailored to their operation.
- In February 2020, the new *Conservation at Work* video series was launched on *Farmers.gov*. Under the “Conserve” tab, *Conservation at Work*, presents short and easy to understand videos about popular conservation practices directly from the farmers and ranchers applying them. These videos explain how an in-

dividual conservation practice helps their land and why they are using it, and accompany a suite of new conservation-focused information on *Farmers.gov* including a new Conservation Concerns Tool to be launched later this year.

- In 2020, *Farmers.gov* served as a critical online resource for America's farmers, ranchers, and private forest landowners working with USDA during the coronavirus pandemic. *Farmers.gov/coronavirus* was published in March 2020 to deliver information on USDA program flexibilities and services in response to the pandemic, including updates to USDA Service Center status. The associated *Service Center Status Dashboard* (<https://www.farmers.gov/coronavirus/service-center-status>) was published in June 2020 to provide up-to-date county-level information on USDA Service Centers across the country. The initial *Coronavirus Food Assistance Program* (<https://www.farmers.gov/cfap1>) (CFAP) page was published in April 2020. CFAP provides direct relief to producers who faced price declines and additional marketing costs due to COVID-19. The *Coronavirus Food Assistance Program 2* (<https://www.farmers.gov/cfap>) (CFAP 2) page was published in September 2020 along with a new tool, the *CFAP 2 Eligible Commodities Finder* (<https://www.farmers.gov/cfap/tool>).
- USDA enhanced the *Farmers.gov* portal in 2020 to enable producers to manage conservation activities and request assistance from USDA's NRCS. Through their secure portal accounts, farmers and ranchers can now view, upload, download, and e-sign documents; request conservation assistance; request financial assistance, including submitting a program application; view and request application details; reference technical terms and submit questions; access information on current and past conservation practices; report practice completion and request practice certification; view detailed information on all previous and ongoing contracts, including the amount of cost-share assistance received and anticipated; and have authority for FSA and NRCS customers to work in the portal and act on behalf of their active power-of-attorney entitlements and their current authorities for business entities. Dedicated customer pages provide map and tabular views of prior Conservation Assistance Requests, the customer's Conservation Practices portfolio, their Conservation Documents, and Conservation Program Contracts including tabular and map views. The system routes customer requests and signed documents to servicing NRCS Servicing Offices view direct connections to the Employee Conservation Desktop. Customers and employees receive notifications of actions warranting their attention.

Feedback

USDA manages *Farmers.gov* according to user centered design principles and engages with America's farmers and ranchers to inform decisions made for the site.

USDA has leveraged analytics tools, such as Google Analytics and Google Tag Manager, to better understand the overall performance of the site and target improvements for specific priority pages. For example, analysis of searches that did not lead to click throughs led USDA to add acronyms to program pages and fix bugs related to the service center locator. USDA also uses a tool to learn how users interact with them by collecting three main metrics: mouse movement, clicking, and scrolling. These three metrics are used to generate heat maps that USDA has used to redesign webpages to make more intuitive for customers.

USDA collected direct feedback from farmers on the initial prototypes for the H-2A tool. This feedback was analyzed and captured in a findings and recommendations report which allowed us to address vital concerns before the development process, and before the tool was available to the public. Prior to the development of the Farm Loan Discovery Tool, members of the GSA Customer Experience Center of Excellence conducted field research across eight states to better understand the experience of applying for and receiving a direct farm loan. This research informed development of our Application Quick Guides and Farm Loan Discovery Tool. And through the use of a feedback tool on the site, the *Farmers.gov* team has received relevant information regarding issues with the site, resulting in improvements like the new service center locator.

USDA also collected feedback through customer and employee interviews in multiple states to inform the new conservation features on the *Farmers.gov* portal. Customers also provided feedback on key workflow pre-development visual designs. Staff conducted conservation content working software pre-release evaluations and demos with small sets of producers that were well received. Internal evaluations were conducted with employees, including employees that are also agricultural producers. Effective communications outreach, demos and media events in conjunction with *Farmers.gov* conservation content releases in late May, August and early October have resulted in a 423% increase and over 7,400 new *Farmers.gov* portal users compared to the prior levels in earlier 2020.

Most recently, FPAC fielded the producer survey from August 2020 through September 2020 to collect feedback from customers at the transactional and relationship levels. FPAC will conduct analysis of the FY 2020 survey results and develop action plans to address areas of opportunity for improvement.

Transition from Conservation Client Gateway

USDA does not anticipate any difficulty as we transition from the Conservation Client Gateway to *Farmers.gov*. This new system is more intuitive than any previous product released, and also includes an enhanced mobile functionality. The most recent *Farmers.gov* Conservation Content Release on October 8, 2020 culminated a series of releases over the prior 18 months to provide and improve upon all the key customer facing content formerly available through the NRCS Conservation Client Gateway. USDA initiated a robust communications strategy that involved notifying existing Client Gateway customers of the change, posting news of the transition to *Farmers.gov* on the Client Gateway website, and website re-direction.

Existing customers can use the same login and password credentials to access *Farmers.gov* as they used in the past for Conservation Client Gateway and FSA farm+. Web page guidance and an online Service Desk are in place to assist new and existing customers with questions and issues that may arise in creating secure access credentials.

Question 12. Field visits are a crucial piece of the conservation planning process, and I understand that NRCS has continued to carry out field visits during the public health crisis. Have any adjustments been made to enable NRCS to continue this very important aspect of conservation planning? What precautions is NRCS taking to ensure that employees and farmers both remain safe while performing field visits during the COVID-19 pandemic?

Answer. NRCS staff have been able to continue conservation planning and implementation activities during COVID-19. All NRCS field staff have observed all requirements called for in the USDA Playbook for COVID-19. Staff have been able to carry out conservation planning activities while observing social distancing requirement.

At the discretion of the State Conservationist, NRCS employees traveling to site visits that require more than one employee may travel in a government vehicle with up to two people. Employees traveling in a vehicle with more than one person must wear a paper or cloth face covering while in the vehicle. The wearing of disposable gloves is encouraged. Time spent in the vehicle should be minimized. The interior of the vehicle must be cleaned with a disinfectant at the conclusion of the trip. Employees are reminded that they should maintain social distancing when outside of the vehicle.

The USDA and FPAC COVID Playbooks limit travel to “mission essential, time sensitive” events.

Travel and training by Facility Status

Phase	Overnight Travel	Local Travel/Field Work	Local Training	Large Gatherings
Phase Zero	Overnight travel to or from a location in Phase Zero is not permitted. Critical operational exceptions must be approved at the State or HQ level.	Critically needed work only. All precautions must be followed. NRCS mission delivery field work will continue following appropriate precautions.	Conducting or attending training in a location in Phase Zero is not permitted.	Attendance at conferences and trade shows in a Phase Zero location or while the attendee's facility is in Phase Zero is not permitted.
Phase One	Overnight travel to or from a location in Phase One is not permitted. Critical operational exceptions must be approved at the State or HQ level.	Work that cannot be deferred to Phase Two or later is permitted. All precautions must be followed. NRCS mission delivery field work will continue following appropriate precautions.	Conducting or attending training in a location in Phase One is not permitted.	In person attendance at conferences and trade shows is not permitted.
Phase Two	Overnight travel to or from a location in Phase Two should be kept to an absolute minimum and must be approved at the State or HQ level.	Routine field work is allowed. All precautions must be followed.	Conducting or attending training in a location in Phase Two is not permitted.	In person attendance at conferences and trade shows is not permitted.

Travel and training by Facility Status—Continued

Phase	Overnight Travel	Local Travel/Field Work	Local Training	Large Gatherings
Phase Three	Overnight travel to or from a location in Phase Three must be for an operational need that cannot be deferred and must be approved at the State or HQ level.	Routine field work is allowed. All precautions must be followed.	Virtual training is preferred. Conducting training in a location in Phase Three is discouraged, but if essential, must adhere to FPAC mask, social distancing and hygiene requirements. If any of these conditions cannot be met, the training should not occur.	In person attendance at conferences and trade shows is not permitted. Exceptions must be approved at the State or HQ level.

Our precautions have been successful. Following the cautionary guidelines above, field staff have been able to cover more than 53 million acres with our clients this year in developing conservation plans. Historically, this number is about 35 million acres. Additionally:

- Over 11 million resource concerns have been evaluated.
- 114,798 assessments have been completed.
- Millions of acres and thousands of producers have been accepted for enrollment in NRCS programs.

Question 13. USDA launched a customer experience survey last month to improve services from high impact providers, including NRCS. Has NRCS received any initial feedback about conservation program delivery?

Answer. We do not anticipate having the results of the survey until the end of November.

Question 14. The Conservation Agricultural Mentoring Program is a state-driven program that matches an experienced producer who is passionate about conservation with an NRCS field employee that is new to the job or new to the area. The program goal is to have employees go out on the land with their producer mentor 6–12 times per year. How has the COVID-19 pandemic impacted the program? Are these field visits still able to happen?

Answer. COVID-19 has not substantially altered the timelines or implementation schedule for the Conservation Agricultural Mentoring Program (CAMP). Social distancing requirements did not hinder the process of mentor and mentee selection and pairing. Also, initial interactions and subsequent meetings were able to be held virtually either through telephone calls or other virtual means. Additionally, mentees were able to meet with mentors on their property in an outdoor setting and observing social distancing guidelines.

Question 15. As farmers and ranchers across the country and in my district look to access conservation assistance and benefit from many of the important changes included in the 2018 Farm Bill, it is critical that we are working to reach and support those who have historically struggled to access USDA assistance, including beginning, socially disadvantaged, limited resource, women, and veteran farmers and ranchers. How has the COVID-19 pandemic affected NRCS's ability to do outreach, particularly to these historically under-served groups?

Answer. Outreach assistance through our partners was modified due to the COVID-19 pandemic. Entities were able to conduct many of the outreach activities using virtual technologies. They also conducted activities in person by limiting group sizes to ensure social distance requirements and provided PPE materials to attendees. States continued to utilize partnership efforts with Conservation Districts and Community Based Organizations to ensure the continuation of outreach efforts during the COVID-19 pandemic. Efforts were conducted via email, phone and other virtual meeting platforms to provide conservation assistance to historically under-served groups.

Question 16. Staffing for NRCS has continued to decline in recent years. A number of vacancies are at the local field office level. What impact have these vacancies had on the ability of NRCS to administer conservation programs and activities for farmers and ranchers?

Answer. NRCS is a locally-led agency and the majority of our vacancies are in customer facing positions. The impact of these vacancies on providing technical assistance and delivery of conservation programs at the local field office level has been extensive in some cases.

The primary impacts include extended wait times and delays for:

- Conservation technical assistance to support farm bill programs, including conservation practice design, layout and certification, payment processing, *etc.*;
- Development of conservation plans to address resources concerns across farm bill programs;
- Delivery of up-to-date core science and technology information for societal and agency needs;
- Soil survey, snow survey, and plant materials center activities;
- Follow-up with new request(s) for service;
- Effective assistance to key conservation partners, such as local Soil and Water Conservation Districts; and
- Extended response time to natural disasters.

In October 2020, NRCS received approval through the Office of Personnel Management to fill 1,525 positions through Direct Hire Authority. Most of these are located in field offices and, when filled in FY 2021, will fully address the concerns listed above.

Question 17. I know that NRCS has set optimal staffing levels. Can you tell me the number of current vacancies compared to those optimal staffing levels? If NRCS is not currently meeting its staffing goals, when will it be?

Answer. As of October 13, 2020, the current staff onboard was 9,398, resulting in 1,613 vacancies. NRCS received approval on October 9, 2020, to hire 1,525 employees via Direct Hire Authority and is working aggressively to fill these positions by September 30, 2021. Coupled with ongoing hiring actions, NRCS projects to reach its staffing cap by February 2022.

Question 18. Today, U.S. forests and forest products annually sequester and store almost 15% of U.S. carbon emissions from burning fossil fuels, how can we utilize conservation programs to build on the nearly 3 million jobs produced by America's forest sector?

Answer. Through conservation technical and financial assistance, NRCS provides farmers, ranchers and nonindustrial private forestland owners direct assistance for implementation of conservation measures. This assistance ensures economically viable and productive forest lands as well as protection of critical natural resources. Conservation implementation results in planting an average of 114,000 acres per year at an average of 300 trees per acre that sequester approximately half a million metric tons of carbon per year.

Financial Assistance is provided through the Environmental Quality Incentives Program (EQIP), the Conservation Stewardship Program (CSP), and the Regional Conservation Partnership Program (RCPP). In each case, NRCS partners with private landowners to achieve their objectives and meet conservation goals. The programs create jobs in rural communities by increasing demand for private forestry consultants, field foresters, and other professionals.

The most common practices installed include:

- Tree and Shrub Establishment—planting trees and shrubs to meet the objectives of the landowner to re-establish productive forests and provide wide-ranging benefits such as improving soil health, improving air quality and providing habitat.
- Riparian Forest Buffers—tree planting also occurs as part of riparian buffer establishment, allowing forested buffers to capture sediment, nutrients, and pollutants from runoff, to maintain water quality in streams and lakes, and improve wildlife habitat.
- Windbreak and Shelterbelt Establishment—planting rows of trees and shrubs to reduce wind erosion and to provide shelter and habitat for livestock and wildlife.
- Silvopasture—planting and managing a combination of trees and forages to meet forestry and livestock management goals.

Partnerships and collaboration are key for NRCS's success on private forest lands. NRCS works very closely with each state forestry office to ensure reforestation technical goals are well communicated and coordinated. NRCS consistently partners with the USDA Forest Service to collaborate on forestry conservation projects across the country including reforestation planting for ecological restoration on both Federal and private lands. Together, with the USDA Forest Service, NRCS staffs the National Agroforestry Center in Lincoln, Nebraska. The Agroforestry Center provides technical assistance on windbreak and silvopasture practices that reduce soil erosion and enhance agricultural and livestock production. Further, NRCS partners with the Farm Service Agency by providing technical assistance to their programs

such as the Conservation Reserve Program (CRP). NRCS also partners with many nonprofit and private entities, where there are shared goals of voluntary conservation assistance to private lands.

Questions Submitted by Hon. Marcia L. Fudge, a Representative in Congress from Ohio

Question 1. Across the farm sector, the coronavirus has severely disrupted supply chains, further exacerbating food insecurity. This experience places renewed emphasis on the resilience and productivity of local food systems. Can you outline NRCS' efforts to strengthen local food systems amid the ongoing coronavirus pandemic? Any efforts specific to northeast Ohio?

Answer. Despite the COVID-19 pandemic, NRCS has continued to deliver its programs and provide service to its customers from rural to urban communities. Following national guidance and safety guidelines, employees have continued to work with landowners, stakeholders, and partners using creative and increasingly virtual methods. This continuity of service has allowed the agency to provide solutions so agricultural producers can protect and improve natural resources and agricultural operations. Working through the locally-led approach, community stakeholders stayed involved in the planning and implementation processes to accomplish community goals.

NRCS strengthens local food systems by directly providing assistance to producers who grow our food, from corn and soybeans, to apples and blueberries, to eggs and dairy, to sheep and hogs, and includes organic producers. Through well-known conservation programs such as the Environmental Quality Incentives Program (EQIP) and the Conservation Stewardship Program (CSP), NRCS continues to provide financial and technical assistance to farmers, ranchers, and forestland owners. NRCS's conservation practices are used nationwide by our customers and impact the productivity and resiliency of an agricultural operation, regardless of size. During FY 2020, NRCS delivered new tools to farmers through new interim conservation practice standards and completed review of all conservation practice standards.

Soil health is foundational to every producer's enterprise, impacts all other NRCS resource concerns, and is at the heart of NRCS conservation programs. Healthy soils provide weather and pest resilience, reduce production risk and environmental impacts, increase productivity and economic and social viability. Throughout the coronavirus pandemic, NRCS has continued to train its staff and partners on the components of soil health management systems including sector-wide training, integration into technology, policy, standards for assessment and management, outcome monitoring, soil survey databases, and processes for continuous improvement. Working with community leaders through the locally-led process, agricultural producers who best know their land, and staying relevant with an array of technical knowledge and tools, NRCS has continued to strengthen key components of the local food system and supply chain—the land, the grower, and the community.

The establishment of Box and OneSpan allows NRCS customers to conveniently access, sign, and share documents online. This has facilitated continued planning and contracting with our producers, who supply the agricultural products in the food system.

At all levels, and especially at the state and local level, there are targeted outreach efforts for historically under-served (HU) producers, which includes individuals identifying as beginning farmer or rancher, socially disadvantaged farmer or rancher, veteran farmer or rancher, or limited resource farmer or rancher. NRCS has continued to engage with and encourage program participation of all producers who are eligible. In addition, the 2018 Farm Bill included provisions that address needs unique to HU producers. For example, NRCS gives priority consideration for proposals that provide outreach to HU groups through the Regional Conservation Partnership Program (RCPP). Through EQIP, NRCS offers HU producers the option to use the advance payment option to increase program accessibility and reduce the initial burden of paying for up-front costs.

Since February 2020, NRCS has awarded 51 new agreements nationwide through the Conservation Collaboration Grants (CCG) competitive process with many projects containing an urban component to develop urban gardens and establish Seasonal High Tunnels to increase access to healthy foods in food insecure areas in many states across the U.S. The CCG opportunity emphasized projects that targeted agricultural producers in multiple states, including American Indian, socially disadvantaged, limited-resource or beginning farmers and ranchers as well as veteran farmers or ranchers.

Through the new Office of Urban Agriculture and Innovative Production (OUAIP), USDA launched a competitive grants program, cooperative agreement projects in 10 states, and is in the process of establishing 10 new FSA County Committees for

urban agriculture. In Fiscal Year 2021, we will be establishing a Federal Advisory Committee for urban agriculture. Both the grants and agreements opportunities were to support the development of urban agriculture and innovative production and were targeted to different eligible entities including nonprofits, American Indian tribes and local governments, and schools across the country. Both competitive funding programs provided new opportunities to directly engage and support urban and suburban growers and stakeholders in their efforts to actively participate in and strengthen aspects of their local food system.

The OUAIP grants program supports a wide range of activities that include operating community gardens and nonprofit farms, increasing food production and access in economically distressed communities, providing job training and education, and developing business plans and zoning. Priority was given to projects located in or targeting an Opportunity Zone, which is a census tract designation for low-income communities. On August 25, 2020, USDA announced its awarding of \$1.14 million for three Planning Projects and approximately \$1.88 million for seven Implementation Projects from across the nation, including the Famicos Foundation in Ohio.

At the same time, USDA announced that it invested approximately \$1.09 million in Community Compost and Food Waste Reduction projects. The 13 selected pilot projects develop and test strategies for planning and implementing municipal compost plans and food waste reduction. Priority was given to projects that anticipate or demonstrate economic benefits, incorporate plans to make compost easily accessible to farmers, including community gardeners, integrate other food waste strategies, including food recovery efforts, and collaborate with multiple partners.

The OUAIP also made notable progress towards establishing the National Advisory Committee for the Secretary of Agriculture (FACA Committee) and creating 10 new Urban and Suburban FSA County Committees (UCOCs). OUAIP worked closely with the Farm Service Agency (FSA) to identify locations for the UCOCs, develop outreach plans, UCOC business and operation plans, and develop policies—as well as conduct national trainings and outreach sessions. The County Committees will play a critical role in advising FSA on how programs meet the needs of urban growers.

Approximately 500 applications were submitted in response to the UAIP competitive funding announcement. Of those, 13 were selected for funding, including the Ohio-based Famicos Foundation's proposal. Famicos Foundation's mission is to improve the quality of lives in Greater Cleveland through neighborhood revitalization, affordable housing, and integrated social services. Community gardens have long been a critical part of Famicos's work to improve the health and well-being of people in the neighborhoods it serves. The Community Produce Garden project activities will include reinvigorating the garden at Michael R. White STEM School using emerging technologies to produce food to create healthy, fresh food for area residents, to provide a STEM education opportunity for area students, to offer jobs to local youth, and generate income at Famicos's Gateway 105 Market.

Cleveland, Ohio was also selected as one of the first five new Urban and Suburban FSA County Committees. Additionally, Seasonal High Tunnels, also called hoop houses or high tunnels, allow crops to grow in colder weather. Urban farmers can apply for NRCS technical and financial assistance to purchase and construct Seasonal High Tunnels. In FY 2020, Ohio NRCS obligated 24 contracts in NE Ohio that included high tunnels systems for \$210,534. By making local produce available for more months in the year, fewer resources are used to transport food to plates. Our vision is to make a difference in these communities by fostering an urban agriculture movement that eliminates food deserts and helps change the narrative for urban farming.

Question 2. This past August the Farm Service Agency announced the creation of new county committees focused exclusively on urban agriculture—including a county committee to be located in my district in Cleveland, Ohio. My understanding is these committees are organized through USDA's Office of Urban Agriculture and Innovative Production. Can you provide us with an update on the formation of these new committees, including the purpose and how the committee members will be selected? How does USDA plan to engage/work with local urban agriculture leaders in Cleveland to ensure the committee adequately represents and understands the needs of the urban agriculture sector in the area? Additionally, is the Office of Urban Agriculture engaging in any cross-agency activity with the Agricultural Marketing Service or any other USDA agency? Please specify.

Answer. The farm bill authorized the Secretary to establish ten new Urban and Suburban Farm Service Agency (FSA) County Committees (UCOCs) as part of a 5 year or longer pilot project. OUAIP worked closely with FSA to identify locations for the UCOCs, develop outreach plans, UCOC business and operation plans, and

develop policies—as well as conduct national trainings and outreach sessions. The new UCOCs will help identify the needs of the growing urban agriculture market and help the USDA determine how our programs can be enhanced to meet those needs and provide recommendations to help shape future opportunities. Members will include local farmers with ties to urban agriculture, innovative practices, should reflect diversity, including historically under-served producers, and will be nominated by their peers. Committees typically include 3 to 11 members who serve 3 year terms.

FSA began accepting nominations on September 8, 2020, for the first five urban and suburban county committee members. Urban farmers who participate or cooperate in an FSA program, or are pursuing opportunities to work with FSA in the county selected were eligible to either be nominated or nominate themselves or others as a candidate. Organizations, including those representing beginning, women, and minority producers, were also encouraged to nominate candidates. To be considered, a producer must sign an FSA-669A nomination form. The form and other information about FSA county committee elections are available at fsa.usda.gov/elections or farmers.gov/urban. The deadline for submitting nomination forms for these first five urban and suburban county committees was October 2, 2020. The remaining five will be established in FY 2021.

These new UCOCs have the opportunity to be dynamic in their role through this pilot project—existing in ways that are unlike traditional county committees by engaging with a new customer base, being a voice of that customer base and helping the USDA shape the future in our assistance and support of this growing market. Likewise, these new UCOCs will also serve to fulfill some of the more traditional roles of a county committee by making decisions on producer applications, making determinations on production, listening to appeals, and helping manage the local FSA office.

The new members will receive an in-depth UCOC training on their roles, rules, policies, programs, and guidelines of FSA and NRCS programs by working directly with FSA and NRCS staff and/or local committees and councils. These local committees and councils include but are not limited to, local USDA Outreach Committees, State Technical Advisory Committee, State Civil Rights Committee, State Food Advisory Council, State Public Affairs, Outreach and Program Staff. The UCOCs will meet quarterly to discuss urban agriculture related issues, the market and needs, and provide feedback and input on how FSA or other USDA programs can best meet the needs of the urban agriculture community and to review current FSA programs. Urban growers, gardeners and partners include municipal entities, nonprofits, representatives from an institution of higher education or extension program, individuals who represent business and economic development, individuals with supply chain experience, which may include a food aggregator, wholesale food distributor, food hub, or individuals who have direct-to-consumer market experience are actively recruited to participate in these discussions, as well.

The UCOCs will work with state FSA and NRCS leaders to identify key gatekeepers to invite to the general sessions as well as work with state NRCS and FSA outreach and communications staffs to develop outreach and communication tools for promoting these meetings. The UCOCs, FSA, NRCS and other USDA agencies and local relevant partners, leaders, councils, and committees will assist the UCOCs in developing a UCOCs Urban Agriculture and Innovative Production Project Analysis for their site-specific location. The Project Analysis should be completed by the end of Fiscal Year 2021.

USDA has established an internal urban agriculture advisory committee with membership from USDA agencies that have a mission which services urban agriculture and innovation. The OUAIP Committee will provide guidance to the OUAIP Designated Federal Official and develop recommendations on applicable policy for USDA leadership. To ensure the committee's success, members have been appointed with skills to engage technical, subject matter, and policy expertise in the area of urban agriculture. This collaboration across all relevant USDA agencies highlights USDA's commitment to fulfilling these requirements.

The agencies represented on the committee are: Agricultural Marketing Service, Agricultural Research Service, Animal Plant Health Inspection Service, Economic Research Service, Farm Service Agency, Food and Nutrition Service, Foreign Agricultural Service, Forest Service, National Agricultural Statistics Service, National Institute of Food and Agriculture, Natural Resources Conservation Service, Risk Management Agency, Rural Development, Office of the Chief Economist, Office of Partnership and Public Engagement, and the Office of Tribal Relations.

The OUAIP Committee will develop an outreach plan and provide specific details on resources and commitments of the individual agencies to carry out collaborative efforts supporting urban and innovative agriculture. Additionally, the OUAIP Com-

mittee will develop recommendations on priorities and mechanisms for achieving statutory requirements.

Question 3. In an effort to assist under-served & socially disadvantaged minority farmers, USDA established a technical assistance cooperative agreement program. Many awardees are minority Community Based Organizations (CBO's) such as the Federation of Southern Cooperatives. However, it has recently come to my attention that at least 12-15 of these established agreements are currently experiencing delays in having their awards executed. Some CBO's like the Federation of Southern Cooperatives, who assists with the coordination of the Seasonal High Tunnel program in the district that I represent, have been approved since March but have yet to receive their award. Can you provide us me with a status update on the existing agreements between USDA and minority CBO's, including those impacting my district?

Answer. Due to the sheer volume of agreements to be processed, several were not completed by September 30, 2020. Twelve agreements did not get processed. Of these, nine were minority Community Based Organizations. The grants team identified issues that needed further clarification, and those issues are currently being addressed. Specifically, NRCS is working with the FPAC Business Center to get the remaining agreements expeditiously executed, including the Cleveland High Tunnel project.

In FY 2020, NRCS entered into 44 national-level partnership agreements with minority organizations with an investment of approximately \$23 million to assist the agency in conducting program outreach to historically under-served populations. By strengthening existing partnerships and establishing new partnerships with public and private entities, NRCS extended its reach to a broader cross-section of the American public. Through these partnership efforts, NRCS is successfully demonstrating how its many unique conservation programs play a vital role in helping address natural resource, economic and social challenges faced in rural, suburban and urban landscapes. As a result, NRCS is: (1) Demonstrating the connection between food, agriculture, community and a sustainable environment; (2) Expanding access to affordable fresh and local foods; and (3) Stimulating economic development.

Question 4. The 2018 Farm Bill established the Clear Lakes Estuaries and Rivers initiative or the CLEAR30 pilot program. The program is devoted to practices that offer water quality protection and is limited to the Great Lakes and the Chesapeake Bay regions. Can you please explain the role of NRCS in providing land eligibility determinations, conservation planning, and practice implementation?

Answer. The FSA is responsible for the land eligibility determination for all of Conservation Reserve Program (CRP) offers, including CLEAR30 offers. The NRCS conducts a field visit and provides to FSA a technical description of the CRP practice condition at the time of CLEAR30 enrollment. If the cover has been maintained and managed, then FSA will ask NRCS to write up a conservation plan for the CLEAR30 offer. If additional practices are needed, NRCS will provide technical assistance to the producer for practice implementation.

Questions Submitted by Hon. Chellie Pingree, a Representative in Congress from Maine

Question 1. I've been pushing for NRCS to adopt composting as a conservation practice for several years now. I was encouraged to see that you recently issued an interim conservation practice for soil carbon amendments, including compost and biochar.

Can you give me an update on that interim practice? What feedback have you gotten from stakeholders so far? How many states have adopted it? When could we expect to see this as an approved practice nationwide?

Answer. The practice is in the early stages of planning. While none have been installed yet, use of the interim practice standard will be available for EQIP incentive payments in the states that have adopted it in FY 2021. There has been a tremendous amount of positive feedback from stakeholders across the country, including Organic Farming Research Foundation, National Center for Appropriate Technology, National Sustainable Agriculture Coalition, and National Sugarbeet Association. In addition, West Sugar Association, Crystal Sugar Cooperative, US Biochar Initiative, and US Composting Council expressed interest.

Interim conservation practice standard Soil Carbon Amendment (Code 808) has been authorized for use in CA, CO, CT, DE, HI, ID, IL, IN, MA, MD/DC, MI, MT, NE, NH, NJ, NY, OR, UT, VT, and Caribbean Area (Puerto Rico and Virgin Islands). Interim standards are approved for states to use for 3 years. At the end of the 3 year trial, states can then recommend that the interim be converted to a national standard or archived based on experience with the interim standard. Any

state can add the existing interim practice if it fits their need and provide evaluation of the interim practice.

Question 2. The 2018 Farm Bill requires NRCS to offer conservation practice payments in advance to limited resource, socially-disadvantaged, veteran, and beginning farmers when they enroll in EQIP.

What outreach has NRCS done to make sure these producers are aware of this option? How many producers enrolling in EQIP have been able to take advantage of the advance payments?

Answer. NRCS has taken this farm bill provision very seriously and has developed a campaign to ensure historically under-served (HU) producers (including limited resource, socially disadvantaged, veteran and beginning farmers and ranchers) are made aware of the advance payment option. NRCS has provided more than 110-contact hours (almost three full weeks) of training to State, Area, and Field Offices related to provision of the 2018 Farm Bill. Advanced Payments have been included in this training to inform states how internal information technology applications are being updated to incorporate this provision, which cost components of a conservation practice (e.g. materials, labor, equipment for installation) are eligible for advanced payments.

Field Offices provide advanced payments recipients with a copy relevant fact sheets, and other conservation practice implementation requirements to help them ensure practice installation follows established standards and specifications. Historically under-served producers who elect to take advantage of this provision will have up to 90 days to finalize conservation practice installation. Participants who elect to waive this provision have this information documented in their conservation plan schedule of operations. With the training provided, field offices are conveying information to applicants who qualify for this provision on an individual basis.

To ensure each HU producer program participant is aware of the advance payment option, NRCS has updated business tools to record the HU producer's election to receive an advance payment, on a contract item basis, at the time of obligation. This business tool update also applies to any future contract modifications. Additionally, if a HU producer elects not to receive an advance payment at the time of obligation, the HU producer can still request the advance payment prior to implementing the practice.

Since passage of the 2018 Farm Bill, NRCS has 1,478 contracts that include obligations in the amount of \$60.4 million. The agency anticipates these numbers will increase during the course of the 2018 Farm Bill as more participants become aware of this provision and field offices become more proficient with communicating, executing, and certifying these business practices.

Response from Jonathan W. Coppess, J.D., Assistant Professor of Law and Policy, Department of Agricultural and Consumer Economics, University of Illinois

Questions Submitted by Hon. Abigail Davis Spanberger, a Representative in Congress from Virginia

Question 1. Drawing on your experiences, how can economic downturns, like the one we are currently facing, impact decisions farmers are making regarding conservation practices? Do we generally anticipate farmers or producers to increase or decrease their usage of conservation practices during economic downturns? Would you say conservation programs today are resilient to the variable economic climates faced by farmers?

Answer. Much depends on the individual farmer and farm management, as well as the severity of the downturn. In general, an economic downturn would be expected to significantly challenge decisions regarding conservation practice adoption and the management of conservation efforts. Farmers who have adopted conservation practices and incorporated them successfully in their farm management are unlikely to make drastic changes to reverse what has been adopted, but they may hold off on further adoption or expansion. Farmers who were looking to adopt are likely to hold off or reconsider. The challenge for conservation practices are that much of the benefit is incremental and spread out over a longer time horizon while the costs are immediate and annual; management complexity and additional risk are also immediate and ongoing. Similar to any investment in the farm, the farmer will need to weigh additional investments against the financial and other challenges in the downturn.

One method for thinking through these issues is around the topic of competition and, in particular, competition as it plays out on the local level with matters like cash rent. A farmer investing in conservation efforts (both time and money) will have fewer resources to invest in additional rental acres or increased cash rent; con-

servation investments might have to take priority over other capital investments like equipment or storage. While this is unlikely to drive a farmer out of farming right away, it could slowly erode the farmer's competitive position or make it difficult to weather downturns and other challenges. Farmers are, however, very good at adapting and innovating such that the competition issue should not be overstated or misunderstood. It is likely a longer run issue where the farmer adopting conservation will experience an erosion in their competitive position. At the very least, the competition issue raises substantial questions for farmers and for policy and it is an area that would benefit from further analysis and evaluation.

As for current conservation programs, I would argue that they represent important and valuable investments. For working lands programs, there are opportunities to improve their responsiveness to economic changes faced by farmers which will, in turn, make the policies and programs more relevant to more farmers. Looking to commodity programs and crop insurance, we have a long history highlighting the critical factor that crop prices play in policy design and the counter-cyclical elements of commodity policies. Crop insurance, for example, similarly gained popularity with the introduction of revenue policies that incorporated crop year price risk. From these lessons, there is much to learn for conservation policy and program design.

Question 2. In your testimony you mentioned the bill from Reps. Bustos and Bost, H.R. 4988, the "Conservation Assistance Loan Act of 2018." Are there any other pieces of legislation that you would encourage this Subcommittee to consider to better ensure that conservation programs address farm-level competition and remain more relevant to decisions being made by farmers on a daily basis?

Answer. With the caveat that I have not reviewed all bills or proposals, there are some notable examples of which I am currently aware. One example is "The Farmer-Driven Conservation Outcomes Act" introduced by Representatives Fudge and Thompson (H.R. 6182), as well as Senators Casey and Capito (S. 3429). Additionally, legislation that looks to increase and improve Federal investments in soil health will be important, especially those that seek innovative methods for helping farmers with the investments necessary. I note specifically your bill "The Healthy Soil, Resilient Farmers Act of 2020" (H.R. 8057) and Senator Wyden's "Healthy Soils Healthy Climate Act" (S. 4850). These bills are valuable contributions to the discussion and further the thinking around conservation policies and programs.

Question 3. In your opinion, do you believe our conservation programs provide enough certainty or support for farmers and producers who wish to engage in conservation over the long run? If not, what could be done to increase certainty for farmers and producers as it pertains to conservation?

Answer. Much depends on the program; long-term contracts such as under CSP or CRP provide plenty of certainty. For working lands, I contend that the policies need to better incorporate risk issues like market prices to better perform in a counter-cyclical manner, helping the farmer in downturns when the costs for conservation investments are likely to be more significant. This might, somewhat ironically, appear to decrease certainty in terms of level of support each year but would be more relevant to farm risk issues and could improve certainty to farm management over the longer-term.

Question 4. In your testimony you describe a model of working lands conservation programs that would better internalize *yield and price risks* into their design. Given the current economic downturn, could you describe how policies of this type might help ensure that conservation incentives are more resilient to economic shocks?

Answer. Including price risk, for example, would peg the conservation assistance to market prices. In short, this would mean that conservation assistance would increase as prices decreased in a counter-cyclical manner much like title I commodity programs currently operate.

Question 5. Are there any other changes you'd recommend we make to conservation programs that would both increase farmer participation and make them more resilient to uncertainty—whether economic, or related to the impacts of the climate crisis on crops, or otherwise?

Answer. I hesitate to make recommendations in general. I would like to have more analysis and debate about the potential for a counter-cyclical design in working lands policies. This would also apply to policies designed to address the climate crisis through the potential for capturing carbon in soils and fields.

Question 6. As you know, conservation programs can help build farm resilience, boost profits, and stimulate local economies. Obviously, the COVID-19 crisis has presented farmers with a set of challenges unlike any they may have seen before. How can conservation programs be used as a tool to help farmers through the current public health crisis?

Answer. Conservation programs represent important Federal, public investments in farming and food production. To the extent they help farmers manage through downturns like what we are experiencing with COVID-19, they are incredibly important tools. They not only help the farmer through the crisis but they are also investments in conserving, sustaining, improving and making more resilient our vital natural resources such as soil and water. A crisis can often risk these longer-term and important efforts; short-term thinking in a crisis can create longer-term problems. Conservation can help avoid such problems and may offer further methods for supporting farmers and conserving natural resources that provide important returns on the taxpayer investment.

Question 7. I often say that farmers are the original environmentalists and conservationists. However, too often, the work of our nation's growers and producers goes unnoticed in the context of combating the climate crisis through the management of natural carbon sinks. While there are outside markets for carbon offsets generated through healthy soil and other agriculturally based practices, these markets can be difficult to navigate and require farmers to follow rigid protocols that are not always designed with the farmer in mind. It's for this reason that I joined my colleague Rep. Bacon (R-NE) and Senators Braun (R-IN) and Stabenow (D-MI) in introducing H.R. 7393, the *Growing Climate Solutions Act* which would create a certification process for third-party verifiers of carbon offsets at USDA. The bill also creates a virtual one-stop shop to help connect farmers with these markets and provide information about carbon offset protocols that would be managed by USDA with the farmer in mind.

Would passing something like the *Growing Climate Solutions Act* help farmers access carbon offsets? How might this additional revenue source change on-farm decisions regarding participation in USDA's working-lands conservation programs?

Answer. I think that the "Growing Climate Solutions Act" and other potential legislative vehicles could help advance on-farm efforts to address the climate crisis by moving forward the ability of farmers to receive revenue for their efforts. As mentioned before, farmers are incredible competitors and Federal policies that incentivize competition around addressing carbon and climate, as well as supporting farmers who innovate in that space will help unleash the competitive nature of farmers on this vast, complex problem. Even early steps present the potential for substantial changes and advances; investments magnified by competition across agriculture.

Question 7a. It is important that the price of carbon offsets always reflect the benefits they offer to the climate. However, were USDA to add climate mitigation to its existing mandate for conservation programs or in the future were to establish a climate-specific program, how might we ensure that the category of on-farm risks, like price and yield, that you reference in your testimony are also internalized into the program without risking the integrity of a carbon price signal?

Answer. I would argue that incorporating farm risk factors into any such efforts represent a critical question and area for further evaluation and analysis. I do not have answers but welcome the questions and efforts in this direction. I think one place to start would be the incredible work and thought along these lines that currently exists, and continues, at universities. I also think there are important lessons from the history and development of current policies that can be applicable, as well as provide cautionary lessons.