



CLIMATE CHANGE **ADAPTATION PLAN**

July 2022

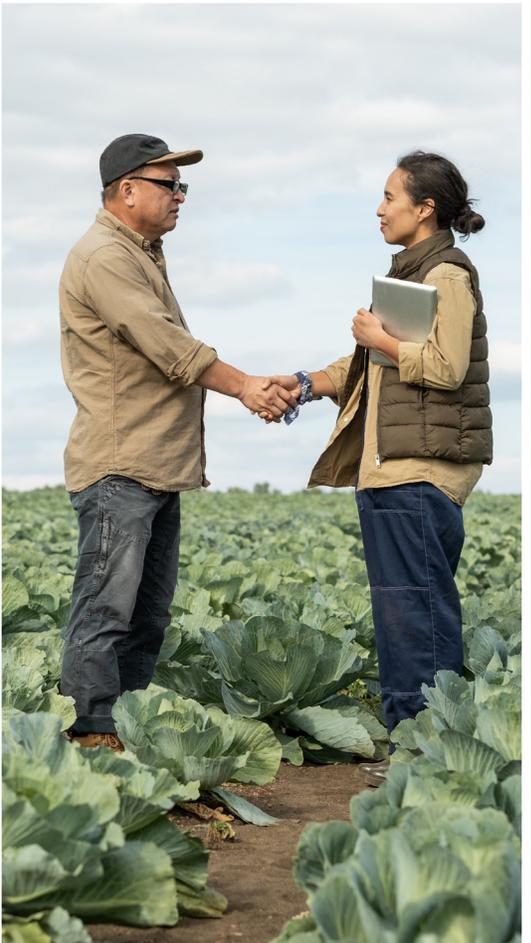


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INTRODUCTION

The Farm Service Agency (FSA) is committed to empowering farmers, ranchers, and foresters to become more resilient in the face of climate-induced disasters while helping drive innovative solutions to the climate crisis. Through the agency’s price support, safety net, conservation, disaster assistance, and loan programs, FSA staff interface with producers and stakeholders across the country, providing FSA the unique opportunity to help shape a more sustainable future for American agriculture and forestry.

FSA’s history traces back to 1933, when agricultural producers were struggling to survive the Great Depression. Although the agency has gone through several name changes, it has always been defined by its commitment to market stabilization and resource conservation.

Today, FSA’s responsibilities are organized into three deputy areas: Farm Programs, Farm Loan Programs, and Field Operations. Each of the deputy areas, along with their divisions and program areas, play a critical role in helping producers and landowners conserve natural resources.

FSA Deputy Areas

FSA’s Deputy Administrator for Farm Programs (DAFP) oversees three policy divisions and one automation division. The three policy divisions (Conservation, Safety Net, Price Support) along with the Program Delivery Division are responsible for overseeing and implementing policies and procedures that regulate the delivery of FSA farm programs. These programs help agricultural producers manage market risks, recover from disasters, and conserve and protect America’s natural resources.

When it comes to FSA’s work on climate adaptation, each Deputy Area plays a key role. Notably, DAFP’s divisions each administer a wide variety of programs, each with unique climate change adaptation and mitigation opportunities. Notable, DAFP’s Conservation Division administers FSA’s flagship conservation program, the Conservation Reserve Program. Under the CRP umbrella, the Conservation Division oversees several distinct programs; beyond CRP, the Conservation Division also administers key emergency conservation programs,

3 DEPUTY AREAS



Farm Programs



Farm Loan Programs



Field Operations

including the Emergency Conservation Program and the Emergency Forest Restoration Program.

DAFP's Safety Net Division administers commodity price support activities, including the Agriculture Risk Coverage and Price Loss Coverage Programs, along with several key programs focused on providing assistance to livestock producers impacted by disasters. The Safety Net Division also administers the Noninsured Crop Disaster Assistance Program (NAP), which provides financial assistance to producers of non-insurable crops, to ensure these producers can also receive assistance in the face of natural disasters that impact crop planting, production, and yield. DAFP's Price Support Division provides assistance through marketing assistance loans for key commodities, loan deficiency payments, and programs targeted towards building resilience in the dairy sector. DAFP has also administered—and continues to implement and administer—several billions of dollars in ad hoc disaster assistance and economic assistance programs.

FSA's Deputy Administrator for Farm Loan Programs (DAFLP) leads the Direct and Guaranteed Farm Loan Programs. Through the work of this deputy area and its Loan Making, Loan Servicing and Property Management, and Program Operations and Appraisal Divisions, FSA County Offices make and service direct and guaranteed farm ownership and operating, and emergency loans to family-sized farmers and ranchers who cannot obtain commercial credit from a bank, Farm Credit System institution, or other lenders. Guaranteed conservation loans are also available regardless of the availability of other credit. FSA loans can be used to purchase land, livestock, equipment, feed, seed, and supplies. The loans can also be used to construct buildings, make farm improvements, and promote soil and water conservation and protection. FSA loans are often provided to beginning and underserved farmers who cannot qualify for conventional loans because they have insufficient financial resources. FSA also helps established farmers who have suffered financial setbacks from natural disasters, or whose resources are too limited to maintain profitable farming operations.

FSA's Deputy Administrator for Field Operations (DAFO) is responsible for the supervision and oversight of Farm Service Agency State and County Offices and serves as the primary liaison between field and headquarters offices on agency-wide issues. DAFO staff play a critical role in the efficient, effective, and consistent delivery of FSA programs, along with essential administrative operations.

When FSA state and county staff directly help producers navigate the diversity of the agency's farm programs and farm loan programs, they establish a critical line of customer service. With more than two thousand state and county offices throughout the United States, FSA staff are the agency's most important asset to achieving its mission and vision. Only through this nationwide network of staff can FSA leverage its footprint across rural America to help promote climate smart solutions to producers. FSA field office staff work closely with producers and stakeholders daily across the country, and with the proper marketing and outreach, FSA has a unique opportunity to help reshape messaging that will help educate our farmers, ranchers, and foresters.

FSA staff across the county, state, and headquarters offices also work closely with USDA's Farm Production and Conservation Business Center (FPAC-BC), which is responsible for acquisition, human resources, information technology and administrative support for program implementation, economic and policy analysis, budget, reporting, and communications.

FSA's Mission and Vision

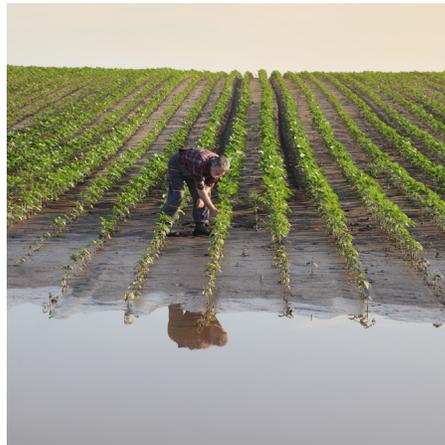
FSA is guided by a mission to equitably serve all farmers, ranchers, foresters, and agricultural partners through the delivery of effective, efficient programs. FSA strives to be a customer-driven agency with a diverse and multi-talented work force dedicated to support an abundant, market-oriented, safe, and affordable food and fiber supply while sustaining quality agricultural commodities and achieving an economically and environmentally sound future for American agriculture. The foundation of FSA's mission and vision rests upon the USDA's long-standing core values of strong ethics, customer service, teamwork, inclusive decision-making, and fiscal responsibility.

As the impacts of climate change become more frequent and intense, FSA can empower producers to both adapt to climate change and develop solutions for climate change mitigation. By empowering producers to invest in the health of their soil, water, and other natural resources, the long-term sustainability of the land can be maintained and continue to provide benefits of soil health and carbon sequestration for future generations of producers. Reducing the vulnerability and increasing the adaptive capacity of producers, ranchers, and foresters to climate change is what is needed to maintain competitiveness and sustainability in the future. FSA's Climate Adaptation Plan discusses the ways in which the agency intends to increase resilience and achieve its goals.

In January 2022, FSA established a steering committee comprised of employees from all deputy areas to revise the agency's 2014 Climate Adaptation Plan and expand upon USDA's Action Plan for Climate Adaptation and Resilience. The committee worked to determine existing and future vulnerabilities, along with actions the agency can take to develop an ambitious but feasible 2022 Climate Adaptation Plan. The steering committee carefully reviewed FSA's mission, operations, and infrastructure to determine the agency's capacity to support producers facing increasingly frequent and intense climate-induced disasters. The steering committee also assessed its goals in the context of several cross-cutting issues, including environmental justice and climate literacy. Notably, FSA

also evaluated its work within the context of the USDA Climate Hubs, which work to support USDA's department-wide Climate Adaptation and Resilience Plan.

As the steering committee developed this plan, it remained focused on FSA's commitment to serving all of its customers, including those who have been historically underserved by the USDA. Ultimately, as FSA works to address current and emerging challenges attributable to climate change, the agency is striving to help producers and landowners manage natural resources in ways that support climate change mitigation and adaptation while building both on-farm and financial resilience to future environmental challenges.



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VULNERABILITIES



Need to address climate literacy and FSA's capacity to make programs adaptation centered.



FSA infrastructure faces risks from climate change.



Increased need for improved science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.



Current FSA procedures do not fully integrate climate vulnerability assessment and adaptation planning into customer-facing services; and current investments need to be more adaptable to the impacts of climate change.



FSA does not fully leverage partnerships, networks, and collaboration within the Department to address existing climate change adaptation needs and innovate when considering future actions.



Disproportionate impacts on underserved farmers and ranchers, and underserved communities.





Vulnerability 1: Need to address climate literacy and FSA's capacity to make programs adaptation centered.

With over 10,000 employees located in state and county offices spanning the United States, FSA is uniquely positioned to act as a frontline responder when producers feel the immediate and often unexpected impacts of climate change. To address Vulnerability 1, FSA must prioritize efforts to train, empower, and retain its employees. Today, FSA employees across the country face heavy workload driven by new pandemic and disaster assistance efforts. To this end, FSA will invest in training and supporting its employees to deliver programs efficiently and effectively while maintaining customer service. This will allow employees to maintain a sustainable workload over time.



Vulnerability 2: Increased need for improved science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.

As FSA works to empower its staff with the knowledge and tools to respond to climate change, the need for more improved science, research, and data will increase. FSA staff across divisions and Deputy Areas will need to coordinate practices and procedures to effectively assess, measure, and track data that can help both the agency and its customers better respond to climate-related impacts and develop forward-thinking solutions.

Notably, FSA's Conservation Reserve Program (CRP), is one of the largest private-lands conservation programs in the United States. Lessons learned from this program can improve the agency's understanding of climate-related impacts and outcomes. Specifically, several Monitoring, Assessment, and Evaluation (MAE) projects have been used to assess the impacts of CRP enrollment on soil health, wildlife habitat, water quality, and carbon sequestration. The existing and future data collected from these projects, along with future MAE projects, will play a substantial role in further understanding these linkages and directing the practices that are offered under CRP.

Additionally, as the impacts of climate change intensify, data gaps will either emerge or become more apparent around crops, price volatility, and yields. FSA must work to address data gaps that persist across programs – to support both its employees and its customers. For FSA, part of the solution lies in working closely and collaboratively with its sister agencies, including the Risk Management Agency (RMA) and the Natural Resources Conservation Service (NRCS), along with other USDA agencies and entities like the National Institute of Food and Agriculture (NIFA). As FSA works with its partners across the Department to better align data, FSA must also consider opportunities to build flexibility into its programs to better respond to climate stressors. As weather patterns continue to change across the country, FSA must critically assess certain practices and policies that may be tied to historical realities that no longer exist. For instance, increasing variability of early-season weather conditions may require re-assessment of the feasibility of specific planting date requirements and timelines.

FSA also recognizes the benefits of tracking climate-related impacts and outcomes through the DAFLP information technology and modernization efforts. FSA is currently researching opportunities to increase data collection and identify and track Farm Loan Program funding opportunities that can be specifically geared towards achieving environmental benefits.



Vulnerability 3: Current FSA procedures do not fully integrate climate vulnerability assessment and adaptation planning into customer-facing services; and current investments need to be more adaptable to the impacts of climate change.

All program areas will need to review their programs and services to find ways to better compensate and reward producers for climate-smart investments. As climate actions and ecosystem services become revenue streams for producers, FSA needs to look for ways to provide protection for those revenue streams, similar to processes by which the agency provides protection from market volatilities through its commodity programs.

As adverse weather events become more frequent and extreme, the damage to farmland and forestland increases. Increased weather extremes will have significant budget implications for both ad hoc and standing disaster programs, such as the Emergency Conservation Program (ECP) and the Emergency Forest Restoration Program (EFRP), as damage costs increase above historic norms.

Today, disasters are no longer aberrations but rather part of the regular cadence of agricultural production; given this new reality, FSA must work to adapt its programs and services to address this challenge and ensure producers have the tools they need to build resilience.

One way to begin supporting this work is through pilot projects and programs. FSA's Conservation Division has experience piloting programs in key geographic regions before releasing them nationwide, through both the Clean Lakes, Estuaries, And Rivers (CLEAR30) pilot and the Soil Health and Income Protection Program (SHIPP) pilot. These pilots have demonstrated the value of first testing technology and automation before programs are released nationwide to all county offices. Pilots also provide the opportunity to gain insight from stakeholders, participating producers, and FSA employees to determine what should be repeated and what should be amended in future, more expansive iterations of the pilot. As FSA looks to expand its efforts to empower producers to be part of the climate solution, the agency can look to developing additional pilot projects and programs.



Vulnerability 4: FSA infrastructure faces risks from climate change.

A changing climate with more intense storms and changing weather patterns puts FSA current and future infrastructure at risk. This infrastructure includes physical structures and facilities, communications systems, information technology (IT) systems and components, and vehicles within the FSA fleet. Much of the physical structures will require a coordinated effort with USDA's Office of Property and Environmental Management (OPEM) along with other FPAC agencies, since many locations are co-located with NRCS, RMA, Rural Development, and state conservation district offices.

FSA will focus ongoing efforts to improve climate adaptation and resilience on several current investments. FSA will work towards achieving these goals by investing in energy and water efficiency, net zero energy facilities, and

renewable energy projects. The agency is also focused on transitioning away from traditional sources of electrical energy generation to those originating from agricultural products and other renewable sources.

FSA also has an opportunity to improve its sustainability through its vehicle fleet. FSA is interested in incorporating alternative and renewable fuel sources into the fleet composition and is committed to reducing the overall number of conventional fuel vehicles, while increasing the percentage of low-greenhouse gas emitting sub-compact and compact sedans and mid-size SUVs.



Vulnerability 5: FSA does not fully leverage partnerships, networks, and collaboration within the Department to address existing climate change adaptation needs and innovate when considering future actions.

Climate adaptation is a relatively new subject for many FSA staff, partners, and customers. As a result, the agency needs to work to ensure each of the Deputy Areas and their divisions have opportunities to collaborate and help define FSA's approach to addressing climate change mitigation and adaptation. Close partnerships across Deputy Areas and divisions will be necessary to continue to promote efforts to both reduce greenhouse gas emissions and increase carbon sequestration on working lands, while ensuring that producers are building resilience to a changing climate. FSA also has the potential to collaborate with a wide array of groups and producers to better coordinate responses to climate change.

Beyond its own staff, partners, and customers, FSA must also commit to stronger and more creative partnerships with other USDA agencies and entities to address existing climate change adaptation needs and shape future actions. FSA must work closely and collaboratively with existing partners such as RMA, NRCS, and the USDA Climate Hubs to develop proactive versus reactive strategies to support producer-led climate adaptation. Much of this work will hinge on improving and aligning data collection, and subsequently making sure data analyses are shared across USDA agencies.



Vulnerability 6: Disproportionate impacts on underserved farmers and ranchers, and underserved communities.

Underserved farmers and ranchers, and underserved communities in general, are often disproportionately impacted by environmental stressors, including pollution, increased exposure to extreme weather events, poor air quality, habitat fragmentation, and poverty.

For example, according to the 2017 Agricultural Census, Hispanic producers are more likely to raise specialty crops.¹ These crops are generally more sensitive to extreme weather relative to grain crops. More than other commodities, specialty crop production also often requires hand-harvesting; farmers continue to face challenges accessing a stable workforce, and farmworkers face increasing challenges as extreme heat and other climate-induced conditions impact their ability to work safely. Climate change has a multiplier effect on these and other stressors, so FSA must be prepared to support farmers, including underserved farmers, and their workforce, to ensure they have equitable access to FSA programs and resources.

FSA programs need to be structured in ways that serve more diverse types of farmers, farms, and markets, and that encourage ongoing and new climate resilient practices for producers, particularly in underserved communities. To that end, FSA has established several working groups, including a working group specifically focused on studying diversity, equity, and inclusion issues within Farm Loan Programs. In addition, through increased outreach efforts, FSA has the opportunity to increase employee and producer education on existing barriers to diversity, equity, and inclusion, with the goal of ultimately improving both program delivery and program participation.

In 2021, Executive Order 14008 established the Justice40 Initiative to deliver at least 40 percent of the overall benefits from federal investments in climate and clean energy to historically underserved communities. FSA is treating this initiative as an opportunity to think broadly about equity in the agency's programs. FSA is working across its entire portfolio to consider program policy, procedure, and outreach changes to increase access to its resources, reduce barriers and pain points for underserved producers, and improve overall customer experience. FSA is also considering how its programs impact underserved communities as a whole—not just the impact the agency has on its customers, but also the downstream economic, soil health, and water quality effects that its programs have on the communities in which people live.



CLIMATE ADAPTATION ACTIONS

6 ACTION AREAS



Enhance FSA climate literacy and capacity to make programs adaptation centered.



Address the risk that FSA infrastructure faces from climate change.



Improve science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.



Integrate climate vulnerability assessment and adaptation planning into customer-facing services



Leverage partnerships, networks, and collaboration to address existing climate change adaptation needs and innovate when considering future actions.



Address disproportionate impacts on underserved farmers and ranchers, and underserved communities.



The following section includes actions that FSA is proposing to address the vulnerabilities discussed above. The action areas are organized around each of the six vulnerabilities and will support FSA staff and producers to better adapt to climate vulnerabilities.



Action Area 1: Enhance FSA climate literacy and capacity to make programs adaptation centered.

Vulnerability: Need to address climate literacy and FSA's capacity to make programs adaptation centered.

Key Actions

- ▶ Develop climate trainings so that employees can build their climate-related resources.
- ▶ Develop universal curriculum for onboarding and training new employees.
- ▶ Develop virtual jump teams to be activated to help with disasters.

FSA has a large footprint in rural America and works with the agricultural sector on a regular basis. Thus, FSA can make significant progress towards its climate goals by providing its employees with the knowledge and training they need to better discuss climate-smart practices—the economics of implementing these practices with producers. FSA's employees are the agency's greatest assets, and an educated employee can be a trusted advisor with producers in their county. If FSA staff have the opportunity to engage in climate trainings and work with the USDA Climate Hubs, they will be better empowered to develop climate literacy and serve as a resource to producers interested in being part of the climate solution.

FSA also has an opportunity to build climate literacy into new employee onboarding and training. To this end, FSA plans to provide a universal curriculum for new employees' during onboarding; this training can then be tracked in AgLearn. Employees and supervisors can then work together to determine specific goals and metrics related to climate literacy; and together monitor success through completed trainings.

FSA also plans to develop virtual jump teams to be activated in the wake of natural disasters. These teams will add additional personnel and resources when county offices need them most. These teams will be vital resources

to address workload challenges and relieve stress during disaster events. In order to support these virtual jump teams, FSA will need to develop a process by which requests from local offices are flagged for state and national leadership.



Action Area 2: Improve science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.

Vulnerability: Increased need for improved science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.

Key Actions

- ▶ Continue to use Monitoring, Assessment, and Evaluation (MAE) of CRP to improve science, research, and data.
- ▶ Pursue ongoing efforts to quantify the greenhouse gas reduction benefits of CRP and subsequently use this data to inform a department-wide dashboard on CRP greenhouse gas mitigation potential to help measure and track the climate-related impacts of the program.
- ▶ Pursue research opportunities with existing software and through future technology and modernization to increase data collection and data analysis with a focus on climate-change efforts and the impacts that Farm Loan Program participation has on the climate.
- ▶ Pursue opportunities to better understand the relationship between FSA's standing disaster programs (including LFP, LIP, and NAP, along with its ad-hoc disaster assistance programs) and FSA's broader goals around climate change adaptation and mitigation.
- ▶ Review climate data to determine if dates (such as planting dates) in policy are still relevant and if they can become more flexible to changing climate needs.

Monitoring, Assessment, and Evaluation (MAE) projects help build resilience to climate change across landscapes with investments in soil and forest health on Conservation Reserve Program (CRP) land. In Fiscal Year 2021, three Carbon Monitoring Projects were funded that will assess grasslands, forests, and wetlands to measure and monitor

soil carbon and climate resilience impacts on CRP. Projects will begin soil carbon sampling in 2022, and we plan to expand on this work toward the buildout of a national soil carbon monitoring network. The information gained from these studies will help support USDA tools, including DayCent and COMET, that county offices and partners can then use to assess carbon sequestration and greenhouse gas emissions. FSA will continue to use MAE projects to develop new ways to utilize CRP for climate adaptation and greenhouse gas mitigation. Ultimately, the data collected through the MAE projects will help strengthen current estimates on the potential to reduce greenhouse gas emissions through climate-smart practices; and FSA will work with USDA's Office of the Chief Information Officer (OCIO) to visualize these estimates through a Tableau-powered climate dashboard. This dashboard will more effectively communicate the climate-related outcomes of CRP to the Office of the Secretary.

FSA also plans to partner with its sister agencies to educate and provide information to field staff and producers related to ways that Farm Loan Programs can be utilized for climate adaptation and the resulting benefits to producers' operations. FSA is researching and developing strategies to utilize existing technology, along with potential future technology and modernization, to collect more data, which can then be analyzed to measure and better understand the relationship between Farm Loan Program participation and climate outcomes.

Within FPAC, opportunities exist for DAFP to collaborate with EPAD and other agencies to pursue climate-related research within several farm programs, including the Livestock Indemnity Program (LIP), the Livestock Forage Program (LFP), and the Non-insured Crop Disaster Assistance Program (NAP). LIP looks at death losses in livestock; LFP assesses forage drought loss; and NAP determines crop production losses due to natural disasters. Research on these programs could be focused on investigating how climate impacts affect livestock and crop losses; by better understanding current trends, FSA program staff may be better equipped to propose and develop program flexibilities to better respond and adapt to climate stressors.

FSA will also review climate data to determine if dates delineated in policy are still relevant under changing climate needs. This may include the dates that define grazing seasons, along with planting and harvest dates for all crops that are affected by disasters. Additionally, all FSA Deputy Areas and divisions are interested in accessing and understanding data on the specific crops and crop varieties

most impacted by climate changes, along with prices and yields for those crops. FSA plans to work with USDA partners to determine the possibility of providing more program eligibility and enrollment flexibility in these circumstances.



Action Area 3: Integrate climate vulnerability assessment and adaptation planning into customer-facing services

Vulnerability: Current FSA procedures do not fully integrate climate vulnerability assessment and adaptation planning into customer-facing services; and current investments need to be more adaptable to the impacts of climate change.

Key Actions

- ▶ Review all programs to see where policies and can incentivize climate-smart agriculture practices, provide protection of revenue received from climate actions and ecosystem services, and allow FSA to become proactive versus reactive to climate events, while identifying which programs have the flexibility to integrate or enhance climate considerations into their work, and which programs will require Congressional action to enhance their climate focus.
- ▶ Create learning environments within deputy areas using pilots.

FSA will review all programs to see where policies and procedures may assist with climate-smart agriculture practices, provide protection of revenue received from climate actions and ecosystem services, and allow programs to become proactive versus reactive to climate events. FSA will evaluate policy flexibilities that can be implemented to address acute climate events. For example, FSA will amend the policy handbook for Farm Storage Facility Loans (FSFL) to include a change to the FSFL application form, CCC-185, to ask the producer if the FSFL project will include energy efficient activities. FSA will investigate decreasing the FSFL application fee, through a regulation update, for producers using energy efficient equipment.

Pilot programs can also help create learning environments within Deputy Areas and divisions. FSA staff can develop programs and receive feedback from producers and employees to determine if a given program would be useful

nationwide. FSA has already begun exploring collaboration with RMA to use NAP data for developing new crop insurance policies, including the creation of a pilot policy to provide an “on-ramp” for Whole Farm Revenue crop insurance coverage. FSA and RMA are also discussing possible models of risk management that recognize the risk benefits of climate-smart practices. Increasing NAP and RMA crop insurance participation would result in improved resiliency in the event of large-scale natural disasters by providing producers with more recovery assistance. In turn, producers would have more resources to then invest in additional climate smart practices. Conservation Division has already been successful with piloting programs such as CLEAR 30 and SHIPP, so these pilots could be used as an example for other pilot programs.



Action Area 4: Address the risk that FSA infrastructure faces from climate change.

Vulnerability: FSA infrastructure faces risks from climate change.

Key Actions

- ▶ Support fleet resilience through improved tracking of utilization standards, service center enhancements, use of mobile workstations, and improved fuel efficiency and procurement.
- ▶ Explore alternative communication systems to have multiple forms available.
- ▶ Ensure national and regional datasets used in identification and assessment of climate change impacts are protected from loss.
- ▶ Work with FPAC-BC to ensure a comprehensive FPAC resilience portfolio exists to provide a unified mission area framework for tracking, evaluating, and managing risks to facilities and accessibility, including via COOP plans.
- ▶ Continue the focus on alternative energy sources for infrastructure improvements.

Critical to FSA’s continued effectiveness in responding to producers’ infrastructure needs. Whereas existing infrastructure may be taken for granted on a day-to-day basis, emergency circumstances tend to highlight the vulnerability of this infrastructure, not only for day-to-day activities, but also for carrying out activities that may

become necessary to respond to extreme weather events. Much of this infrastructure has shared needs by FPAC sister agencies, as well as partners, such as Conservation Districts.

Many of these recommendations will require a coordinated effort with NRCS, RMA, FPAC-BC, and the Office of the Chief Information Officer, and will rely on guidance from the Office of Contracting and Procurement and the Office of Property and Environmental Management where applicable. Although FSA recommends several actions in this area, the agency recognizes that it may not be the lead implementing agency for several of these activities and must instead offer its assistance and participation in activities that would be more appropriately handled by the FPAC-BC.

FSA has identified various aspects of infrastructure development and deployment that need to adapt to reduce ongoing and future vulnerabilities caused by climate change, including the importance of maintaining active communication channels during disasters. FSA proposes to review and identify not only alternative communication methods, but also where redundancy in systems can maintain communication in the event of loss of another. For instance, if communication is compromised, FSA must ensure that staff can continue communications with higher authorities via another means.

FSA maintains many sources of data housed within IT systems, including geospatial data, tabular data used in calculations, historical data used for databases, among others. Additionally, FSA has agreements with external entities that may be the main repository for similar data. Here, FSA’s action is twofold. First, data, regardless of format, needs to be updated regularly to keep pace with climate change. For FSA IT business tools to remain up to date, this data must also be updated by data keepers outside of FSA. Second, that data must be protected, particularly in the face of events that could potentially lead to loss of data. Achieving this goal will require not only updates and continued protections but also working with partners and other outside entities to make sure the same level of protection is consistently applied.

FSA proposes that physical structures, such as offices, be evaluated through a dashboard to identify vulnerabilities and what can be done to adapt. This will also include keeping an up-to-date Continuity of Operations Plan (COOP). Currently, the COOP is required to be reviewed annually. FSA recommends that sections of the COOP be identified that need a more frequent cadence of review and

update, such as points of contact. Like physical structures, vehicles are a large portion of FSA's property portfolio which can be improved upon. This not only includes purchase of alternative energy vehicles, but also careful consideration to other forms of transportation and emergency backup generators.



Action Area 5: Leverage partnerships, networks, and collaboration to address existing climate change adaptation needs and innovate when considering future actions.

Vulnerability: FSA does not fully leverage partnerships within the Department to address existing climate change adaptation needs and innovate when considering future actions.

Key Actions

- ▶ Partner with other USDA agencies to identify places that have been at a higher risk for adverse weather events (possibly utilizing loss claim and disaster program data) and pre-position assets to manage workload increases in those areas.
- ▶ Research opportunities for data collection, along with ways to incorporate technologies or software by sister agencies.
- ▶ Develop promotional campaign similar to the soil health campaign for climate-smart agriculture and forestry.

FSA can improve its services by partnering with agencies, such as RMA, NRCS, and USDA Climate Hubs, on several fronts, including data collection, as described above.

Additionally, FSA can leverage partners to promote its work and opportunities for producers to sign up for programs. USDA successfully established a promotional campaign focused on soil health for climate-smart agriculture and forestry, and FSA could pursue similar campaigns to elevate opportunities at the agency. In doing so, the agency can help ensure that messaging and outreach from both FSA and its partners are consistent and use common language. As part of these campaigns, FSA can share success stories, emails, blogs, radio spots, social

media posts, and fact sheets to promote principles of climate-smart agriculture. In any instance where FSA is promoting new information, agency headquarters should also ensure that program staff develop specific talking points for county and state office staff.



Action Area 6: Address disproportionate impacts on underserved farmers and ranchers, and underserved communities.

Vulnerability: Disproportionate impacts on underserved farmers and ranchers, and underserved communities.

Key Actions

- ▶ Create more cooperative partnerships with organizations that already have established trusted relationships with members of underserved communities, such as Tribal nations and third-party environmental education and outreach groups, which can provide technical assistance and increase the impact of FSA's outreach efforts.
- ▶ Recruit members of underserved communities and underserved farmers and ranchers to serve as FSA Committee members or as advisors to FSA Committees.
- ▶ Ensure outreach and meaningful engagement with vulnerable communities and that recommendations they provide are used to update and revise policy where possible.
- ▶ Increase awareness, skills, and abilities of FSA staff and producers on equity and environmental justice issues.

Climate change planning provides an opportunity to take immediate and long-term action to strengthen and create resilience in ecosystems services, food production, conservation, and emergency response in the most vulnerable communities, who are often disproportionately impacted because of climate change.

FSA will look at outreach efforts with underserved farmers and ranchers, and underserved communities as part of this plan. Outreach efforts can be strengthened by creating more cooperative partnerships and recruiting diversified

members and advisors for the FSA Committees, which in turn can result in recommendations and feedback to revise policies where appropriate.

Working through its outreach office, FSA will also be focused on providing employee training to increase employees' awareness related to advancing equity and

environmental justice. FSA will continue to review efforts and acknowledge further development on these topics as necessary, while working in close partnership with members of the FSA team leading the agency's Justice 40 Initiative.





WHAT FSA HAS ALREADY ACHIEVED: A DEEPER DIVE INTO THE CONSERVATION RESERVE PROGRAM

As noted above, CRP is one of the world's largest voluntary conservation programs with a long track record of preserving topsoil, improving water quality, sequestering carbon, and reducing nitrogen runoff, as well as providing healthy habitat for wildlife. The voluntary program contracts with agricultural producers so that environmentally sensitive agricultural land is not farmed or ranched, but instead devoted to achieving conservation benefits. CRP participants establish long-term, resource-conserving plant species, such as approved grasses and trees (known as "covers") to control soil erosion, improve water quality, and develop wildlife habitat. In return, FSA provides participants with rental payments and cost-share assistance for the length of the program being between 10 and 15 years. The covers established on private lands through CRP provides a unique opportunity for carbon sequestration on agricultural land. CRP is a powerful tool when it comes to climate mitigation, and acres currently enrolled in the program mitigate more than 12 million metric tons of carbon dioxide equivalent (CO₂e).²

FSA's Conservation Division have been innovative by adding climate solutions into the programs that they oversee. In fiscal year (FY) 2021 the division was able to release through the CRP general and continuous signups a Climate Smart Incentive that aims to increase carbon sequestration and reduce greenhouse gas emissions through increased enrollment in CRP. Climate-Smart CRP practices include establishment of trees and permanent grasses, development of wildlife habitat, and wetland restoration. CRP also increased payment rates from ten

percent to twenty percent for practices benefiting water quality, such as grassed waterways, riparian buffers, and filter strips. Conservation Division also moved its State Acres for Wildlife Enhancement (SAFE) program back into Continuous CRP to allow for year-round sign up. This same team also updated CRP to allow the Highly Erodible Land Initiative (HELI) to be available in both the general and continuous sign ups.

Grassland CRP is a working lands program, helping landowners and operators protect grassland, including rangeland and pastureland, while maintaining the areas as working grazing lands. Protecting grasslands contributes positively to the economy of many regions, provides biodiversity of plant and animal populations, and provides important carbon sequestration benefits to deliver lasting climate outcomes. In 2021, Conservation Division established a minimum Grassland CRP rental rate of \$15/acre across the country and had the largest signup in the program's history. In 2022, Conservation Division once again established a high minimum Grassland CRP rental rate of \$13/acre; signup is ongoing but the team expects strong numbers once again.

In 2021, FSA's Conservation Division expanded the Clean Lakes, Estuaries, And Rivers 30 Pilot Program, called CLEAR30, from the Great Lakes and Chesapeake Bay watersheds to a nationwide opportunity. This water-quality focused program allows producers to receive incentives for a 30-year commitment to water quality practices.



CROSS-CUTTING ADAPTATION ISSUES AND CONSIDERATIONS

Environmental Justice

Executive Order 14008 Tackling the Climate Crisis at Home and Abroad talks about securing environmental justice and spurring economic opportunity for disadvantaged communities that have been historically marginalized and overburdened by pollution and underinvestment in housing, transportation, infrastructure, and health care. These are all important considerations as part of the Climate Adaptation Plan. FSA is working to incorporate tools (i.e., a Climate and Economic Justice Screening Tool) that are being developed in response to this order. All Deputy Areas and divisions have been assessing opportunities to address environmental justice as part of the Justice 40 implementation process. Here are a few areas where overlap is occurring:

- ▶ FSA will work closely with FPAC Economic Policy and Analysis Division to support the agency's analysis of program impacts on underserved communities;
- ▶ Farm Loan Programs has started an IT modernization initiative that includes expanding its data collection and analytics capabilities. These capabilities will improve the ability of Farm Loans to analyze the participation level of underserved customers in programs that finance climate-smart practices and technologies, which may assist in targeting technical assistance and outreach.
- ▶ Farm Loan Programs is also developing outreach materials tailored to support climate-smart and precision agriculture initiatives, including materials targeted at increasing awareness on conservation loans for wind and solar energy investments. Under Direct Operating Loans, the maximum operating loan

term will be extended to allow additional flexibility for the adoption of climate-smart practices. The Farm Loan Programs team is also researching the pathways to and benefits of expanded use of Direct and Guaranteed Conservation Loan Programs, noting that use of the Direct Conservation Loan Program would require an appropriation.

- ▶ In coordination with the FSA Outreach office, the Agency will develop employee training on emerging agricultural issues and opportunities for working with small and diversified operations. All programs will look for ways to increase outreach and technical assistance to enable program participation;
- ▶ Conservation Division has proposed (and now implemented) increasing the ranking factor points in Grassland CRP for historically underserved producers and communities;
- ▶ FSA will work with its Outreach Office and sister agencies to advertise a notice of funding opportunity for the Transition Incentive Program. The program assists with the transitioning of expiring CRP land from an owner or operator to a beginning, veteran, or socially disadvantaged farmer or rancher that is not their family member, to return land to production for sustainable grazing or crop production;
- ▶ ECP will explore the opportunity to increase the ability of the program to help producers build more resilient operations. Potential activities include:
 - Conducting a design/research sprint with limited resource and historically underserved customers in a disaster-prone area that suffered a recent disaster. The learning from the sprint

could be used to pilot a streamlined advanced payment process following future disasters that result in expedited funds for producers.

- Training a virtual jump team to send out as surge capacity in areas where disasters strike to work alongside local county office staff. Training would involve ability to do rapid program implementations as well as cross-training on use of other USDA programs to help producers build a more resilient operation in the face of future disasters.

Workforce Climate Literacy

FSA considers its employees its greatest asset. Educating employees in climate resilience and climate issues facing producers and ranchers in their communities will strengthen awareness. FSA will work to provide resources to enable staff to be an advisor to our producers and ranchers. Climate literacy for all employees will be beneficial to deliver assistance when dealing with climate extremes, especially disasters.

The Office of the Chief Economist's Climate, Agriculture, and Forestry Seminar Series has been shared with staff to bolster their climate literacy throughout 2022. The series aims to inform USDA employees about the scientific foundation of climate. The Administration will consider providing training materials in AgLearn that educate employees on climate. FSA is also looking at developing employee materials and training to help staff understand climate issues and how loan products can be used to achieve a customer's environmental and conservation goals.



Footnotes:

¹ Census of Agriculture Highlights https://www.nass.usda.gov/Publications/Highlights/2019/2017Census_Hispanic_Producers.pdf

² Farm Service Agency news release April 21, 2021, USDA Expands and Renews Conservation Reserve Program in Effort to Boost Enrollment and Address Climate Change.

³ Wiener, S., Roesch-McNally, G.E., and Schattman, R.E. (2018). National survey of USDA Field Staff on Climate and Weather; Results from a survey of Natural Resources Conservation Service and Farm Service Agency Employees. Washington, DC: USDA Climate Hubs.

USDA Climate Hubs

USDA's Climate Hubs are a unique collaboration across the department's agencies. They are led and hosted by the Agricultural Research Service and Forest Service located at ten regional locations, with executive committee members from agencies such as NRCS, FSA, APHIS, and RMA. The Climate Hubs link USDA research and USDA agency programs to support regional delivery of timely and authoritative tools and information to agricultural producers and professionals. Through the Climate Hubs, FSA sees opportunities to integrate its work and data with existing Climate Hubs tools like Grass-Cast and AgRisk Viewer, to better forecast disaster impacts and the need for FSA assistance.

A national survey was conducted by the Climate Hubs, FSA, and the University of Vermont. The survey identified three potential areas of further collaboration between the Climate Hubs and FSA: (1) provide training and support for FSA employees to work with and understand weather and climate data, tools and resources; (2) better integrate specific weather and climate tools into specific FSA program areas; (3) hone outreach and education on climate- and weather-related issues by linking them to existing programs that help producers reduce climate-related risks on their land (such as the Conservation Reserve Enhancement Program).³

The Climate Hubs have science and data synthesis developed into regional assessments for all ten regions. The Climate Hubs and FSA can work together to support employees and producers as they adapt to more variable and extreme weather associated with climate change. FSA employees can access timely climate information out to their producers. The Climate Hubs have a vast library of resources that will provide climate literacy to our employees. FSA will assess where the Climate Hubs maps, tools, and technology may be integrated into FSA's programs, loans, and field operations. FSA supports the USDA Climate Hubs and will continue to work with them to develop tools, trainings, and products that are beneficial to our employees and our producers.

TABLE OF FSA ADAPTATION ACTIONS TO ADDRESS CLIMATE CHANGE EFFECTS AND VULNERABILITIES

| VULNERABILITY | ACTION TITLE/ DESCRIPTION | TYPE OF ACTIVITY | LEAD OFFICE | TIMEFRAME | COORDINATION | PROGRESS METRICS | ACCOMPLISHMENTS TO DATE |
|--|---|----------------------|--------------------|---------------------|-------------------------|---|--|
| Vulnerability 1: Need to address climate literacy and FSA's capability to make programs adaptation centered. | Develop climate trainings so that employees can build their climate resources. | Ongoing | CD, Chief of Staff | 2022 and continuous | OCE-OEEP, AgLearn | | Distributed OCE climate seminar series to all employees |
| | Universal curriculum for onboarding and training new employees. | Proposed and Ongoing | DAFP, DAFLP | 2022 and continuous | Internal | Develop committee to assess | |
| | Develop virtual jump teams to be activated to help with disasters. | Proposed and Ongoing | DAFP, DAFLP, DAFO | 2023 and continuous | Internal | Develop committee to assess | |
| Vulnerability 2: Increased need for improved science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes. (continued on next page) | Continue to use Monitoring, Assessment, and Evaluation (MAE) of CRP to improve science, research, and data. | Ongoing | CD, EPAD | 2022 and continuous | ARS, NRCS | Incorporate results of projects into CRP program. | Multiple projects have been completed to bolster climate adaptation and mitigation with CRP. Currently assessing soil carbon through three projects. |
| | Pursue ongoing efforts to quantify the greenhouse gas benefits of CRP and subsequently use this data to inform a department-wide dashboard on CRP GHG mitigation potential to help measure and track the climate-related impacts of the program. | Ongoing | CD, EPAD | 2022 and continuous | OCE, NRCS | Incorporate results of projects into CRP program and USDA | |
| | Pursue research opportunities with existing software and through future technology and modernization to increase data collection and data analyzation with a focus on climate-change efforts and the impacts that Farm Loan Program participation has on the climate. | Proposed and Ongoing | DAFLP | 2022 and continuous | FPAC, RMA, Climate Hubs | Incorporate results into programs and loan process where feasible | |

| VULNERABILITY | ACTION TITLE/ DESCRIPTION | TYPE OF ACTIVITY | LEAD OFFICE | TIMEFRAME | COORDINATION | PROGRESS METRICS | ACCOMPLISHMENTS TO DATE |
|---|---|----------------------|-------------|---------------------|-------------------------------|---|---|
| <p><i>(continued)</i></p> <p>Vulnerability 2: Increased need for improved science, research, and data for understanding, measuring, and tracking climate-related impacts and outcomes.</p> | <p>Pursue opportunities to better understand the relationship between FSA's standing disaster programs (including LFP, LIP, and NAP, along with its ad-hoc disaster assistance programs) and FSA's broader goals around climate change adaptation and mitigation.</p> | Proposed and Ongoing | DAFP, EPAD | 2022 and continuous | FPAC, RMA, Climate Hubs, REE | Incorporate results into programs and loan process where feasible | |
| | <p>Review climate data to determine if dates (such as planting dates) in policies are still relevant and if they can become more flexible to adapting to changing climate needs.</p> | Proposed and Ongoing | DAFP, DAFLP | 2023 and continuous | FPAC, RMA, NRCS, Climate Hubs | Incorporate results into programs and loan process where feasible | |
| <p>Vulnerability 3: Current FSA procedures do not fully integrate climate vulnerability assessment and adaptation planning into customer-facing services; and current investments need to be more adaptable to the impacts of climate change.</p> | <p>Review all programs to see where policies and procedures may assist with climate-smart ag practices, provide protection of revenue received from climate actions and ecosystem services, and allow programs to become more proactive versus reactive to climate events, while identifying which programs have the flexibility to integrate or enhance climate considerations into their work and which programs will require Congressional action.</p> | Ongoing | All | Continuous | Internal | Incorporate results into programs and loan process where feasible | Regular Maintenance, Now on Regular Cycle |
| | <p>Create learning environments within deputy areas using pilot programs.</p> | Planned and proposed | DAFP | 2022 and continuous | Internal | Incorporate results into programs and loan process where feasible | CD used pilot programs with CLEAR30 and SHIPP |

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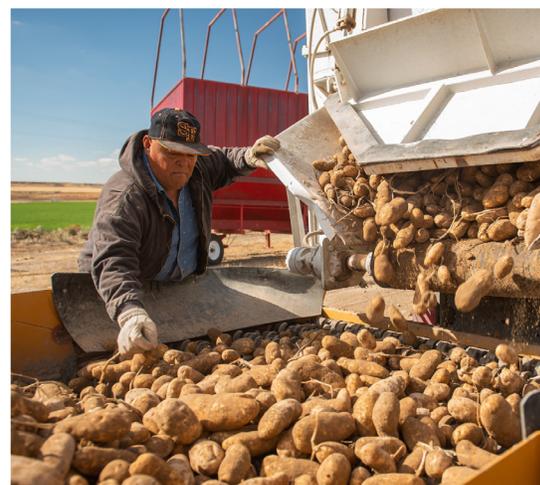
| VULNERABILITY | ACTION TITLE/ DESCRIPTION | TYPE OF ACTIVITY | LEAD OFFICE | TIMEFRAME | COORDINATION | PROGRESS METRICS | ACCOMPLISHMENTS TO DATE |
|--|---|----------------------|--------------------|------------------|--------------|------------------|-------------------------|
| Vulnerability 4: FSA infrastructure faces risks from climate change. | Support fleet resilience through improved tracking of utilization standards, service center enhancements, use of mobile workstations, and improved fuel efficiency and procurement. | Proposed and Ongoing | DAFO and FPAC | 2022 and Ongoing | FPAC | | |
| | Explore alternative communication systems to have multiple forms available. | Proposed and Ongoing | DAFO and FPAC | 2022 and Ongoing | FPAC | | |
| | Ensure national and regional datasets used in identification and assessment of climate change impacts are protected from loss. | Proposed and Ongoing | DAFO and FPAC | 2022 and Ongoing | FPAC | | |
| | Work with FPAC-BC to ensure one FPAC resilience portfolio to provide a unified mission area framework for tracking, evaluating, and managing risks to facilities and accessibility, including via COOP plans. | Proposed and Ongoing | DAFO, OMS and FPAC | 2022 and Ongoing | FPAC | | |
| | Continued focus on alternative energy sources for infrastructure improvements. | Proposed and Ongoing | DAFO and FPAC | 2022 and Ongoing | FPAC | | |

(continued)

| VULNERABILITY | ACTION TITLE/ DESCRIPTION | TYPE OF ACTIVITY | LEAD OFFICE | TIMEFRAME | COORDINATION | PROGRESS METRICS | ACCOMPLISHMENTS TO DATE |
|--|---|----------------------|-----------------------------|------------------|-------------------------------|---|-------------------------|
| Vulnerability 5: FSA does not fully leverage partnerships, networks, and collaboration within the Department to address existing climate change adaptation needs and innovate when considering future actions. | Partner with other agencies within USDA to identify areas that have been at a higher risk for adverse weather events. This could be based upon loss claims and program participation. Pre-position assets to manage increases in workloads related to loss adjustments and requests for assistance. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, RMA, NRCS, Climate Hubs | Incorporate results into programs and loan process where feasible | |
| | Research opportunities for data collection, and ways to incorporate technologies or software by sister agencies. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, RMA, NRCS, Climate Hubs | Incorporate results into programs and loan process where feasible | |
| | Develop promotional campaign similar to the soil health campaign for climate-smart agriculture and forestry. | Proposed and Ongoing | Outreach and Public Affairs | 2022 and Ongoing | FPAC | Develop committee to assess | |

(continued)

| VULNERABILITY | ACTION TITLE/ DESCRIPTION | TYPE OF ACTIVITY | LEAD OFFICE | TIMEFRAME | COORDINATION | PROGRESS METRICS | ACCOMPLISHMENTS TO DATE |
|---|--|----------------------|-------------|------------------|--------------|------------------|----------------------------|
| Vulnerability 6: Disproportionate impacts on underserved farmers and ranchers, and underserved communities. | Create more cooperative partnerships with organizations that already have established trusted relationships with members of underserved communities, such as Tribal nations and third-party environmental education and outreach groups, which can provide technical assistance and increase the impact of FSA's outreach efforts. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, FSA | | |
| | Recruit members of underserved communities and underserved farmers and ranchers to serve as FSA Committee members or as advisors to FSA Committee. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, FSA | | |
| | Ensure outreach and meaningful engagement with vulnerable communities and that recommendations they provide are used to update and revise policy where possible. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, FSA | | |
| | Increase awareness, skills, and abilities of FSA staff and producers on equity and environmental justice issues. | Proposed and Ongoing | All | 2022 and Ongoing | FPAC, FSA | | |



USDA is an equal opportunity provider, employer, and lender.

[July 2022]

