

Climate Change and Federal Farm Programs

Programs under the jurisdiction of the Agriculture Committee provide billions of dollars in incentives to expand conservation, forestry, and renewable energy efforts that can help address or mitigate the effects of climate change. With more than 60 percent of U.S. land in private ownership, America's farmers, ranchers, and non-industrial forestland owners have a role to play in this conversation. As Congress looks for climate solutions, legislators should look first at the successful programs farmers, ranchers, foresters, and rural small businesses are using now.

How Existing Programs Help

- **Cropland tillage practices.** Includes reduced/medium-till, no-till, ridge/strip-till versus conventional tillage, soil management/conservation, soil supplements/amendments, soil erosion controls, precision agriculture practices, and recognized best management practices.
- **Cropping techniques.** Includes crop rotations, cover cropping, precision agriculture practices, efficient fertilizer/nutrient (including manure), and chemical application.
- **Land restoration.** Includes conversion/restoration to grasslands, wetlands, or rangelands; and selected structural barriers, such as vegetative and riparian buffers, setbacks, windbreaks.
- **Manure and feed management.** Includes improved manure storage (e.g., anaerobic digestion) and methane recovery; improved feed efficiency; and dietary supplements.
- **Grazing management.** Includes rotational grazing and improved forage practices.
- **Bioeconomy.** Includes the production of biofuels, biochemicals and other biobased products and programs that incentivize research into production, applicability and purchase of products made from renewable, plant-based materials.
- **Energy efficiency and renewable energy.** Includes on-farm production and use of solar, wind, methane gas as well as farm, rural small business, and rural electric cooperative efforts at energy efficiency/conservation practices.
- **Rural infrastructure.** Includes programs to help rural communities build resilience and adapt to extreme weather events.
- **Water and waste management.** Includes projects that safeguard drinking water and help rural communities recycle and reuse waste.
- **Afforestation/Reforestation.** Includes establishing forested areas by planting trees or their seeds or creating forested areas through conversion of pastureland and cropland.
- **Forest management.** Includes practices to increase growth on some stems while releasing some carbon (total biomass growth change could be positive or negative); harvest for long-term wood products; reduced impact logging; certified sustainable forestry; thinning/release (mechanical, chemical, prescribed burning); fertilization; and pruning.
- **Avoided deforestation/forest degradation.** Includes emissions when (mostly international and tropical) forests are burned, degraded, or cleared, and large amounts of carbon are released into the atmosphere.
- **Agricultural research.** Includes programs to research new crop varieties, technologies and practices that reduce or mitigate climate-related impacts, including increased risk from plant and animal pests & diseases.
- **Crop insurance and disaster assistance.** A variety of risk management and disaster assistance programs help producers mitigate economic losses resulting from extreme weather conditions.

Specific Federal Programs that Help Fight or Mitigate Climate Change

Conservation Programs

Farm Bill Cost-Share and Payment Programs

Cost-share and payment programs encourage private land to remain in production, while encouraging various conservation practices to address natural resource concerns specific to the area. These programs provide critical opportunities to utilize voluntary, incentive based agricultural conservation activities to reduce greenhouse gas emissions, increase carbon sequestration, manage nutrients, enhance water quality, protect sensitive lands, and improve soil health.

Environmental Quality Incentives Program (EQIP)

- What it is:* EQIP provides financial and technical assistance to producers and landowners to plan and install structural, vegetative, and land management practices on eligible lands.
- How it helps:* EQIP projects help to alleviate natural resource problems. EQIP management practices are those that require active management of the land (reduced/no tillage, cropping systems, grazing systems, etc.). The practices increase the carbon content of soils, water and nutrient retention, water infiltration, rooting depth, microbial activity, and decrease erosion.
- In action:* In FY2020, 17,673,106 acres were enrolled in EQIP contracts totaling 334,621 practices. The total obligation was over 1.8 billion dollars.
- Potential:* The 2018 Farm Bill increases the program's baseline to \$2 billion by FY2023. The Farm Bill also adds soil testing and remediation as covered practices; offers increased payments for certain water quantity and quality practices; raises the organic payment cap to \$140,000 and authorizes direct program assistance to irrigation districts for the purposes of improving water use efficiencies. In FY2020, there were 33,701 completed contracts on 10,517,713 acres of land.

EQIP—Conservation Innovation Grants (CIG)

- What it is:* CIG is a subprogram of EQIP that awards competitive grants to state and local agencies, nongovernmental organizations, tribes, and individuals to implement innovative conservation techniques and practices.
- How it helps:* CIG funds innovative solutions that can help to reduce agricultural impact, like market systems for pollution reduction, demonstrating precision agriculture, capturing nutrients through a community anaerobic digester, and establishing a tribal partnership for regional habitat conservation.
- In action:* In FY2020, CIG awarded a total of \$14.6 million to 24 projects.
- Potential:* The 2018 Farm Bill designates \$25 million for new on-farm conservation innovation trials, including soil health demonstration trials, and \$37.5 million to address air quality concerns. The CIG program enables USDA to accelerate technology transfer and adoption of promising technologies and approaches to address some of the nation's most pressing natural resource concerns. In 2021, CIG began participating in a NRCS working group focused on increasing outreach and grantsmanship training opportunities for Historically Underserved (HU) producers and organizations serving HU communities. As of May 2021, the targeted outreach effort has reached 200+ organizations.

Conservation Stewardship Program (CSP)

- What it is:* CSP provides financial and technical assistance to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes on tribal and private working lands. Contracts (five years in length with the option of renewal) are based on meeting or exceeding a "stewardship threshold." CSP provides two possible payments: (1) an annual payment for installing new conservation activities and maintaining existing activities and (2) a supplemental payment for adopting a resource-conserving crop rotation. Enrollment is offered through a continuous sign-up and applications are accepted year-round.
- How it helps:* CSP incentivizes farmers and ranchers to promote the conservation and improvement of soil, water, air, energy, plant and animal life, and other conservation purposes. The program contains a special priority for soil health projects.
- In action:* All 50 states and most territories have producers participating in CSP. In FY2020, there were 4,922 active contracts covering 6,426,631.8 acres for a total obligation of \$2,219,428.90.

Potential: The Farm Bill increases payment rates for adoption of cover crop rotations and advanced grazing management activities and provides support for producers transitioning to organic production activities. NRCS is required to manage CSP with a priority for projects that enhance soil health. On January 10, 2022, NRCS announced additional flexibilities for producers to allow immediate re-enrollment in CSP following the expiration of their contract.

Regional Conservation Partnership Program (RCPP)

What it is: RCPP provides financial and technical assistance for multi-state or watershed-scale projects. The program creates partnership opportunities to target and leverage federal conservation funding for specific areas and resource concerns in a given area. Funds are also directed through "critical conservation areas" (CCA) selected by NRCS. Current CCAs include Chesapeake Bay Watershed, Great Lakes Region, Mississippi River Basin, Colorado River Basin, Longleaf Pine Range, Columbia River Basin, Prairie Grasslands Region, and California Bay Delta.

How it helps: RCPP helps implement large scale conservation projects that may focus on water quality and quantity, soil erosion, wildlife habitat, drought mitigation and flood control or other regional priorities.

In action: Since its inception in 2014, RCPP has made 579 awards involving over 3,000 partners. Currently, there are 408 active projects, with at least one in every state and area

Potential: The 2018 Farm Bill provides \$300 million dollars per year in mandatory funding for RCPP. The Farm Bill allows 50% of fund to be devoted to critical conservation areas and authorizes the Secretary to award 50% of funds based on state or multistate projects. In FY2018, the total amount of funding requested was three times the amount available. During the pre-proposal round, 164 proposals were received requesting \$683 million with a partner match of \$1 billion. On January 13, 2022, USDA announced up to \$225 million in funding available for conservation partners through RCPP. There are two types of funding opportunities: RCPP Classic and RCPP Alternative Funding Arrangements (AFA). RCPP Classic projects are implemented using NRCS contracts and easements with producers, landowners, and communities, in collaboration with project partners. Through RCPP AFA, partners have more flexibility in working directly with agricultural producers to support development of new conservation structures. Partners are expected to offer value-added contributions to amplify the impact of RCPP funding in an amount equal to or greater than the NRCS investment.

Agricultural Management Assistance (AMA)

What it is: AMA provides cost-sharing assistance under contracts of one to 10 years to producers in Connecticut, Delaware, Hawaii, Maine, Maryland, Massachusetts, Nevada, New Hampshire, New Jersey, New York, Pennsylvania, Rhode Island, Utah, Vermont, West Virginia, and Wyoming, where participation in the federal crop insurance program has been historically low. Producers use this assistance to construct or improve water management and irrigation structures, plant trees, control soil erosion, practice integrated pest management, practice organic farming, develop value-added processing, and enter into futures, hedging, or options contracts to reduce production, price, or revenue risk.

How it helps: AMA helps to incentivize farmers and ranchers to implement certain practices within their operations that can include climate-smart agriculture strategies.

In action: In 2020, \$8.1 million was obligated over the entire program.

Potential: In 2020 projects covered 6,608 acres.

Conservation Compliance

What it is: Farmers must comply with certain soil and wetland conservation standards in order to participate in many USDA programs. Conservation compliance is linked to commodity programs (such as ARC/PLC and marketing loans), conservation programs, some Farm Service Agency credit programs, disaster programs, and crop insurance premium subsidies.

How it works: Conservation compliance requirements on these programs incentivize conservation practices for erosion, effectively prohibit the conversion of wetlands, and disallow the destruction of native sod. These practices improve the broader ecosystem and encourage better land management which helps to combat climate change.

In action: Soil erosion from U.S. cropland declined by 38 percent in the first ten years that conservation compliance requirements were tied to farm programs. The adoption of soil conserving practices likely also had a spillover effect onto other methods of stewardship that help to address climate change.

Potential: The 2018 Farm Bill closed loopholes in conservation compliance requirements. The bill made production of an insurable crop on native sod in the Prairie Pothole region ineligible for crop insurance subsidies for

the first four crop years within 10 years of when that native sod was first put into crop production. This change removed the ability of a farmer to avoid crop insurance penalty by planting and harvesting a perennial crop, like alfalfa, on land previously in native sod.

Farm Bill Short-Term Contracts and Easements

Short-term contracts and easements provide Federal payments to private agricultural landowners for temporary changes in land use or management to achieve environmental benefits. Conversely, conservation easements impose a permanent or long-term land-use restriction that is voluntarily placed on the land in exchange for a government payment. **The Conservation Reserve Program and Agricultural Conservation Easement Program** play a critical role in climate change mitigation and adaptation, by protecting and improving agricultural land, which contributes significantly to carbon sequestration and storage.

Conservation Reserve Program (CRP)

- What it is:* CRP provides annual rental payments, usually over 10 years, to producers to replace crops on highly erodible and environmentally sensitive land with long-term resource-conserving plantings. Embedded in the CRP are several small and more focused subprograms and initiatives to address specific resource topics.
- How it helps:* CRP can help to integrate climate-smart practices on lands such as strategies to focus on concentrated resource problems in a portion of a state, protection of small isolated agricultural wetlands, or improvement of habitat for upland game birds.
- In action:* Producers and landowners enrolled 4.6 million acres into CRP signups in 2021, including 2.5 million acres in the largest Grassland CRP signup in history. As of January 2022, there are 22.1 million acres enrolled. In 2021, FSA introduced a new Climate-Smart Practice Incentive for CRP general and continuous signups that aims to increase carbon sequestration and reduce greenhouse gas emissions through practices such as establishment of trees and permanent grasses, development of wildlife habitat, and wetland restoration.
- Potential:* The 2018 Farm Bill increased the acreage cap from 24 to 27 million acres by 2023. FSA is aiming to reach the 25.5-million-acre cap statutorily set for FY22. The 2018 bill also expands permissible haying and grazing on enrolled acreage and transition incentives for beginning farmers. The bill also creates two pilot programs: CLEAR30, a program to allow land in expiring contracts to be enrolled in 30-year contracts, and SHIPP, a program to rehabilitate soil, water, and wildlife habitat in Prairie Pothole states.

CRP—Conservation Reserve Enhancement Program (CREP)

- What it is:* This subprogram of CRP, CREP is a public-private partnership program, allowing states, Tribal governments, non-profit and private entities to partner with FSA to implement CRP practices that address high priority conservation and environmental objectives. Partners work with FSA to develop CREP agreements designed to address conservation goals on agricultural lands in specific geographic areas.
- How it helps:* CREP can help to protect acreage within a watershed where environmental or resource concerns are more concentrated.
- In action:* There are 34 CREP agreements in 26 states, enrolling a total of 860,000 acres, as of December 2021.
- Potential:* The 2018 Farm Bill gave FSA the authority to work with a broader array of partners that will allow for new opportunities to implement conservation on working lands. In December 2021, USDA announced a change in CREP to increase flexibility for partners by allowing partners to negotiate how they provide their matching requirements between cash, in-kind, technical assistance, or a mix of the three.

CRP—Farmable Wetland Program

- What it is:* This subprogram of the CRP enrolls small isolated agricultural wetlands. On a single tract of land, enrollment is set at a maximum of 40 contiguous wetland acres. "Flooded farmland" has a 20-acre limit. Eligible lands include wetlands that were cropped in three of the preceding 10 years (and include buffers sufficient to protect them) on which the hydrology will be restored and a vegetative cover established.
- How it helps:* CRP Farmable Wetland helps to restore hydrology and vegetative cover on previously-farmed wetlands and wetland buffer.
- In action:* As of January 2022, there are contracts on 362,017 enrolled acres.
- Potential:* As of January 2022, the average rental payments for the Farmable Wetland Program was \$166 per acre.

CRP—Grassland

- What it is:* This subprogram of the CRP enrolls grassland—including rangeland, pastureland, and certain other lands—while maintaining the area as grazing. Contracts are for 10 or 15 years.
- How it helps:* Healthy grasslands sequester carbon, enhance food production, protect biodiversity, and improve water management with respect to flood control and reduced waterway pollution.
- In action:* In 2021, 2.5 million acres were enrolled for Grassland CRP—the largest signup in history.
- Potential:* As of January 2022, the average rental payments for CRP Grassland was \$15 per acre.

Water Bank Program

- What it is:* The Water Bank Program (WBP) offers 10-year, nonrenewable rental agreements to landowners to maintain wetlands in lieu of draining the land for agricultural production. Applications are ranked based on land use type and flooding impact.
- How it helps:* The program incentivizes farmers to maintain wetlands, rather than drain them for production.
- In action:* In 2019, Congress appropriated \$4 million to WBP, and \$4 million was also included in the FY22 Appropriations bill. NRCS opened eligibility to Minnesota, North Dakota, and South Dakota.
- Potential:* The purposes of the WBP include: 1) preserving and improving major wetlands as habitat for migratory waterfowl and other wildlife; 2) conserving surface waters; 3) reducing soil and wind erosion; 4) contributing to flood control; 5) improving water quality; 6) improving subsurface moisture; and 7) enhancing the natural beauty of the landscape. Program priorities are broken into three categories: high, medium, and low. The high priority category includes cropland impacted by flooding and has a payment rate of \$50 per acre per year; the medium priority category includes pasture, hay, and range lands impacted by flooding and has a payment rate of \$35 per acre per year; the low priority category includes forest and other lands impacted by flooding and has a payment rate of \$20 per acre per year.

Agricultural Conservation Easement Program (ACEP)

- What it is:* ACEP provides financial and technical assistance through two types of easements: Agricultural Land Easements (ALE) that limit nonagricultural uses on productive farm or grass lands, and Wetland Reserve Easements (WRE) that protect and restore wetlands.
- How it helps:* ALE gives priority to grasslands with particular environmental significance, while WRE helps to protect and restore wetlands. Healthy wetlands sequester carbon and provide resilience to hazards such as flooding, storm surge and coastal inundation.
- In action:* In 2020, NRCS obligated over \$490 million in the program, of those obligations over \$378 million were financial and over \$114 were for technical assistance.
- Potential:* In 2020, ACEP enrolled over 230,000 acres in 437 easements, 212 of these easements were WRE easements and 225 were ALE easements.

Healthy Forests Reserve Program (HFRP)

- What it is:* HFRP assists landowners in restoring and enhancing forest ecosystems using 10-year agreements, 30-year contracts, 30-year easements, and permanent easements.
- How it helps:* HFRP incentivizes forest landowners to enhance and restore forest ecosystems.
- In action:* Cumulatively, 104 agreements have been enrolled, encompassing approximately 676,131 acres.
- Potential:* The 2018 Farm Bill provides \$12 million in discretionary annual funding for the Healthy Forests Reserve Program and maintains its eligibility within the RCPP.

Emergency Programs

Emergency conservation programs provide disaster assistance for farmland rehabilitation and impairments to watersheds. Programs are usually funded through supplemental appropriation acts. Emergency conservation programs play a critical role in helping producers across the country build resiliency and adapt to extreme weather events, which are increasing as a result of climate change.

Emergency Conservation Program (ECP)

- What it is:* ECP is an ad hoc assistance program that provides emergency funding and technical assistance to producers to rehabilitate farmland damaged by natural disasters (e.g., hurricanes, floods, wind, and erosion) through activities such as removing debris, and implementing emergency water conservation measures in response to severe droughts.
- How it helps:* ECP helps farmers to respond to the increasing incidence of natural disasters, including those related to weather, many of which are made worse by climate change.
- In action:* During FY2019, ECP was funded at \$558 million.

Emergency Forest Restoration Program (EFRP)

- What it is:* EFRP is an ad hoc assistance program that provides cost-share assistance to private forestland owners to repair and rehabilitate damage caused by a natural disaster on nonindustrial private forest land. Natural disasters include wildfires, hurricanes or excessive winds, drought, ice storms or blizzards, floods, or other resource-impacting events, as determined by USDA.
- How it helps:* EFRP helps foresters to respond to the increasing incidence of natural disasters, including those related to weather, many of which are made worse by climate change.
- In action:* In FY2019, EFRP was funded at \$480 million.
- Potential:* EFRP is an emergency program that responds as needed and necessary.

Emergency Watershed Protection (EWP)

- What it is:* EWP is an ad hoc assistance program that provides technical and financial assistance to reduce hazards to life and property in watersheds that have been damaged by natural disasters. Assistance includes disaster cleanup and recovery activities and purchasing easements in floodplains that will benefit natural resources such as wetlands, while reducing the risk of exposure to future natural disasters.
- How it helps:* EWP helps to respond to the increasing incidence of natural disasters, including those related to weather, many of which are made worse by climate change.
- In action:* EWP was provided \$300 million in the Infrastructure Investment and Jobs Act.
- Potential:* EWP is an emergency program that responds as needed and necessary.

Technical Assistance Programs

Technical Assistance programs provide landowners with science-based conservation information and technical expertise (e.g., engineering and biological). Technical assistance helps to address climate change, both through adaptation (greater resiliency to climate variability to minimize risk associated with extreme weather events or changing climate in a region) and mitigation (via reduced greenhouse gas emissions and/or increased carbon sequestration).

Conservation Operations (CO) & Conservation Technical Assistance (CTA)

- What it is:* Conservation Operations (CO) is the primary account funding technical assistance within NRCS. More than 88% of CO funding is for Conservation Technical Assistance (CTA), which provides conservation planning and implementation assistance through field staff placed in almost all counties within the United States and territories. This assistance is provided to producers and landowners who voluntarily apply natural resource conservation systems, consisting of one or more practices, on private and other nonfederal lands. The main components of CO include the Soil Survey, Snow Survey, and Water Supply Forecasting, and Plant Materials Center.
- How it helps:* CO and CTA provide resources to those who voluntarily apply systems within their operations to conserve natural resources. CO funds are used to support salaries and expenses for NRCS staff, technology development, conservation system design, compliance reviews, grants to partners for additional technical assistance capacity, and resource assessment reports.
- In action:* In FY2020, CTA received \$735.6 million out of \$829.6 million appropriated for all CO. In FY2021, the Biden-Harris Administration requested \$729.5 million for CTA out of \$830.2 million for all CO.
- Potential:* The Conservation Technical Assistance (CTA) program helps landowners become better stewards of their natural resources by assisting them with resource assessment, practical design, planning, and monitoring of conservation practices. NRCS uses CTA funding, along with farm bill programs, to hire the critical staff in local NRCS offices who work directly with landowners. In order to continue assisting our nation's agricultural producers to be the best stewards of their natural resources, continued investments in CTA are required.

Watershed Programs

Through programs funded in the Watershed and Flood Prevention Operations account, NRCS cooperates with State and local agencies, tribal governments, and other Federal agencies to prevent damage caused by erosion, floodwater, and sediment, to further the conservation, development, utilization, and disposal of water, and advance the conservation and utilization of the land. Watershed programs provide relief from the impact of weather extremes and provide stronger and safer rural communities.

Watershed and Flood Prevention Operations (WFPO)

- What it is:* Also referred to as the Small Watershed Program, WFPO consists of projects built under two authorities—the Watershed Protection and Flood Prevention Act of 1954 (P.L. 83-566) and the Flood Control Act of 1944 (P.L. 78-534). The vast majority of the projects have been P.L. 566 projects, in which NRCS provides technical and financial assistance to state and local organizations to plan and install measures to prevent erosion, sedimentation, and flood damage and to conserve, develop, and utilize land and water resources.
- How it helps:* Through WFPO, NRCS provides technical and financial assistance to state and local organizations to plan and install measures to prevent erosion, sedimentation, and flood damage and to conserve, develop, and utilize land and water resources.
- In action:* There are 2,100 active or completed P.L. 566 projects in 50 states and U.S. territories.
- Potential:* The 2018 Farm Bill provides \$50 million per year in permanent mandatory funding for the P.L. 566-Small Watershed Program. The Infrastructure Investment and Jobs Act includes an additional \$500 million for the program.

Watershed Rehabilitation Program

- What it is:* The Watershed Rehabilitation Program provides technical and financial assistance for planning, design, and implementation to rehabilitate aging watershed dam projects (including upgrading or removing dams) in communities to address health and safety concerns. Only dams constructed under the Watershed and Flood Prevention Operations program are eligible. Small watershed project dams have a 50-year design life. As of the end of 2017, 5,450 of these dams have reached or exceeded that time span. By the end of 2018, this number is expected to rise to 5,922.
- How it helps:* As the incidence of strong storms and related flooding increases due to climate change, the WRP helps update aging flood control infrastructure to protect adjacent communities.
- In action:* The program received \$10 million in the Consolidated Appropriations Act of 2021 and \$118 million in the Infrastructure Investment and Jobs Act.
- Potential:* In FY2020, NRCS provided funding to 41 new and 12 backlog projects in 24 States.

Forestry Programs

The farm bill authorizes numerous programs at USDA to support the management of state and private forests. Forestry programs may provide support for planning and implementing forestry and related land management practices; assistance for forest restoration projects that involve more than one jurisdiction and address regional or national priorities; and support for protecting forestlands from wildfires, insects and diseases, and from converting forested land to non-forest uses. Forests play a critical role in absorbing carbon emissions. Over the last decade, forests in the United States have continued to sequester more carbon than they emit each year through removal and storage in forests and forest products. This powerful emission sink offsets nearly 15 percent of total U.S. carbon emissions.

Landscape Scale Restoration Program (LSR)

- What it is:* This program provides assistance for projects that cross ownership jurisdictions, allowing forestry priorities to be addressed on a larger scale. The program provides 50% cost-share grants for cross-boundary projects that address regionally, or nationally significant issues or landscapes as identified in State Forest Action Plans.
- How it helps:* LSR addresses threats to forest sustainability on a large scale, which creates more resilient forests and benefits adjacent lands.
- In action:* LSR received \$14 million in funding for FY2020.
- Potential:* LSR was authorized in the 2018 farm bill with up to \$20 million in annual authorizations through FY2023. Prior to the 2018 farm bill, the program operated under a broad authority provided in the 2008 farm bill.

Forest Legacy Program (FLP)

- What it is:* FLP provides funding to protect environmentally significant forests from being converted to non-forest uses. The program provides up to 75% cost-share grants to states to acquire eligible private forest lands, either through fee-simple purchases or conservations easements. Landowners with FLP conservation easements on their property must manage the land consistent with the purposes for which the land was enrolled in the program, and may include timber production, hiking, hunting, and fishing. Financial assistance may also be provided to the states to administer the program.
- How it helps:* Keeping land forested sequesters carbon, protects watersheds, and provides wildlife habitat.
- In action:* By the end of FY 2018, the FLP had conserved a total of 2.8 million acres, including 66,000 acres in that fiscal year. The conserved acres include more than 176,000 acres of water bodies and 3,300 miles of streams.
- Potential:* FLP received \$94.3 million for FY2021.

Community Forest and Open Space Conservation Program/Community Forest Program (CFP)

- What it is:* CFP provides financial assistance to local governments, tribes, and qualified NGOs to purchase private forestlands and establish community forests. The lands to be purchased must be privately owned, at least five acres, 75% forested, and threatened by conversion to nonforest uses, such as residential development, mineral extraction, industrial use, or commercial uses other than timber production. The purchased lands must be managed for public economic, recreational, environmental, or education benefits to communities and provide public access.
- How it helps:* CFP provides incentives for local entities to purchase private forestlands under threat of conversion to non-forest uses and establish community forests.
- In action:* In FY 2021 the program was funded at \$ 4 million over 2,115 acres.
- Potential:* Interest in CFP continues to grow nationally. The greatest participation in this program has been in the Northeastern US with New Hampshire, Vermont and Maine accruing more than \$22 million in acquisitions through the program. To address the increase and select projects that best address conservation and community benefit objectives, the Forest Service is working to develop a more robust process to adequately review, evaluate, and prioritize projects, including an updated project scoring and selection process.

Collaborative Forest Landscape Restoration Program (CFLRP)

- What it is:* CFLRP provides cost-share grants of up to \$360,000 for forest restoration projects to reduce the threat of catastrophic wildfires, reestablish fire regimes, preserve old and large trees, replant deforested areas, and increase small-diameter tree utilization on public and tribal lands in New Mexico.
- How it helps:* CFLRP helps to reduce the threat of and recover from catastrophic wildfires, which have become more common as a result of climate change.
- In action:* Projects involve over 200 local partners who support shared priorities and coordinate work across the landscape. CFLRP attracts significant partner investments. between 2010 and 2019, CFLRP projects attracted more than \$470 million in partner funding and in-kind contributions. In 2020, the program received \$13.787 million. CFLRP received \$100 million in the Infrastructure Investment and Jobs Act.
- Potential:* The 2018 Farm Bill reauthorized CFLRP and increased its funding authorization from \$40 million to \$80 million.

Urban and Community Forestry Assistance Program (UCF)

- What it is:* UCF was created to establish, manage, and protect trees, forests, green spaces, and related natural resources in and adjacent to cities and towns. The program provides financial, technical, and related assistance to conduct tree inventories; prepare management plans; plant and care for trees; disaster planning, mitigation, response, and recovery; support workforce development; and host community activities, such as youth summer camps.
- How it helps:* UCF helps establish, manage, and protect trees, forests, green spaces, and related natural resources in and adjacent to cities and towns.
- In action:* In 2018, UCF joined with several public and private partners to fund 59 forest and watershed restoration projects through the work of community volunteers. The projects addressed water quality improvement, water resource protection, and enhanced wildlife habitat.
- Potential:* The UCF program received \$31.9 million for FY2021.

Wood Innovation Program

- What it is:* Also known as the Biomass Utilization or Wood Utilization Assistance program, the Wood Innovation Program consists of several authorities and programs to promote and market innovative uses of wood products, including stimulating or expanding wood energy technologies, uses, and markets, in an effort to remove hazardous fuels and other wood residues from National Forest System lands, reduce the costs of forest management on public and private forest lands, and to promote economic and environmental health of forest-dependent communities.
- How it helps:* The program funds research into wood products in an effort to remove hazardous fuels and other wood residues from National Forest System lands, and thereby reduce the amount of deadfall and other fuels that can accelerate wildfires. Wood products like cross-laminated timber have the potential to reduce the carbon footprint of new buildings by replacing concrete, which has a much higher carbon footprint.
- In action:* The Forest Service announced they would award \$8 million in Wood Innovation Grants for FY 2022.
- Potential:* The 2018 Farm Bill established a new program to promote research and development for Wood Innovation Grants.

Forest Health Protection (FHP): Federal Lands and Cooperative Lands

- What it is:* The Federal Lands subprogram surveys and monitors forest health conditions on federal lands, performs pest suppression efforts on federal lands (including lands managed by other federal agencies and tribal governments), and coordinates an integrated pest management program and specific prevention and suppression programs for major insects, diseases, and invasive species across all landownership types.
- How it helps:* The program provides for the survey and monitoring of forest health conditions on federal lands and performs pest suppression efforts on federal lands. This helps to manage the threat from pests due in part to the effects of climate change.
- In action:* FHP received \$46.2 million in funding for FY2021 (\$15.5 million for Federal Lands; \$30.7 million for Cooperative Lands).
- Potential:* Cost-share grants enable partner projects and programs to address specific challenges.

Forest Inventory and Analysis (FIA)

- What it is:* FIA is a forest census program that covers every state and provides data on tree numbers/species, forest health, and forest landownership to assist with forest management planning. FIA data is essential to ensuring long-term forest health and managing forest resources.
- How it helps:* FIA can help to evaluate the quality of wildlife habitat, forecast the impact of forest stressors such as climate change and drought on forests, and evaluate the sustainability of certain management practices.
- In action:* The Forest Service conducts annual forest sampling in all 50 states and the U.S. territories.
- Potential:* FIA received \$17.621 in the Consolidated Appropriations Act of 2021.

State Fire Assistance (SFA)

- What it is:* The Forest Service assists State Foresters and local communities with wildland fire management by helping to implement mitigation, prevention, control, and wildfire suppression programs.
- How it helps:* Helps State Foresters and local communities manage the increased incidence of wildfires, due at least in part to the effects of climate change.
- In action:* In 2018, SFA helped approximately 15,000 localities with fire management plans, risk assessments, and Community Wildfire Protection Plans.
- Potential:* SFA received at least \$88 million in the Infrastructure Investment and Jobs Act.

Volunteer Fire Assistance (VFA)

- What it is:* RFC gives financial and technical assistance to train and equip volunteer fire departments in communities that have populations under 10,000. This helps to ensure that those communities are prepared to fight wildfires in their area.
- How it helps:* RFC helps to ensure that small communities are prepared to fight the wildfires, made more prevalent as a result of climate change.
- In action:* In 2018, the program helped nearly 14,000 communities train over 20,000 firefighters.
- Potential:* VFA received at least \$20 million in the Infrastructure Investment and Jobs Act.

Forest Stewardship Program

- What it is:** Forest Stewardship, provides technical and financial assistance to private forest owners to actively manage their land and implement conservation practices. Technical assistance includes activities such as landowner outreach and education, development of forest stewardship management plans, and fostering stewardship planning across multiple owners for a landscape-level approach.
- How it helps:** The program provides technical and financial assistance to private forest owners to implement conservation practices.
- In action:** The Forest Stewardship Program assists over 300,000 private forest owners each year to develop stewardship and conservation plans for their land.
- Potential:** Forest Stewardship Program funding was \$11.9 million for FY2021.

Energy Programs

BioPreferred Program

- What it is:** The program requires the federal government to give preference to those items that are composed of the highest percentage of biobased products practicable.
- How it helps:** BioPreferred products can provide greenhouse gas savings and improve air quality. Biomass absorbs CO₂ (carbon dioxide) during its growth, which is released again during the use phase or waste phase.
- In action:** The program now includes 139 federal purchasing categories, listing about 15,000 biobased products. Additionally, the USDA Certified Biobased label now appears on more than 3,000 products. More than 1.5 million American workers produce biobased products, generating over \$127 billion in sales.
- Potential:** Continues to authorize appropriations of \$3,000,000 for each of fiscal years 2019 through 2023 and sets mandatory funding at \$3,000,000 for each of fiscal years 2019 through 2023.

Biorefinery, Renewable Chemical, and Biobased Product Manufacturing Assistance Program

- What it is:** The program assists in the development, construction, and retrofitting of new and emerging technologies for advanced biofuels, renewable chemicals, and biobased products by providing loan guarantees up to \$250 million.
- How it helps:** Biofuels like ethanol and biodiesel have considerably lower GHG emissions than gasoline.
- In action:** New Energy Blue announced its planned construction in Iowa of a biomass refinery designed to produce renewable carbon-negative automotive fuel, which replaces gasoline supported by USDA's phase-one Section 9003 for a construction loan guarantee. The company is developing New Energy Freedom biomass refinery on a 155-acre site near Mason City, Iowa. 275,000 tons of crop residue (cornstalks and wheat straw) will be locally sourced, then converted into 20 million gallons of cellulosic ethanol and 95 tons of lignin, a solid biofuel and natural binder. Half the greenhouse-gas reduction comes from replacing petroleum products, the other half from sequestering soil carbons through best farming practice.
- Potential:** The Biorefinery Assistance Program includes \$50 million in mandatory funding for 2019 and \$25 million for 2020 (previously a total of \$200 million across fiscal years 2014 through 2016) and authorizes appropriations of \$75 million per fiscal year to continue through 2023.

Advanced Biofuel Payment Program

- What it is:** The program supports an expanding production of advanced biofuels by providing payments to eligible advanced biofuel producers and operators of methane digesters.
- How it helps:** Biofuels sequester carbon during growth and have lower GHG emissions than traditional gasoline or first-generation biofuels.
- In action:** Scientists at Oak Ridge National Laboratory unintentionally uncovered a process that uses tiny bits of carbon and copper to convert the greenhouse gas carbon dioxide into ethanol fuel. While the research remains in its preliminary phase, it could represent a breakthrough for renewable fuel operations in Iowa. By their nature, ethanol plants produce excess carbon dioxide through the distillation process. If commercialized, the new process could allow ethanol producers to make even more ethanol fuel from the CO₂ that's otherwise wasted.
- Potential:** Continues to authorize appropriations of \$20 million per fiscal year for 2019 through 2023, and sets mandatory funding at \$7 million per fiscal year, down from the \$15 million for 2014 to 2018.

Biodiesel Fuel Education Program

- What it is:* The Biodiesel Education program focuses on educational programs that support advances in infrastructure, technology transfer, fuel quality, fuel safety and increasing feedstock production.
- How it helps:* The increased use of biodiesel and increased efficiency in infrastructure transferring and producing biodiesel reduces energy use in production of biodiesel.
- In action:* With funding through the program, the National Biodiesel Board conducted a successful 2018 Biodiesel Conference that addressed key issues and barriers to adoption of B20 blends by OEM and fleet managers.
- Potential:* Authorizes appropriations of \$2 million per fiscal year 2019 through 2023, up from \$1 million per fiscal year, but discontinues the \$1 million in mandatory funding provided annually from 2008 to 2018.

Rural Energy for America Program (REAP)

- What it is:* REAP provides guaranteed loan financing and grant funding to agricultural producers and rural small businesses for renewable energy systems or to make energy efficiency improvements.
- How it helps:* Energy efficiency leads to fewer emissions and lower energy costs but often has a high up front/installation cost. REAP helps farmers increase energy efficiency and reduce emissions themselves.
- In action:* A 2019 grant to Oregon Trails Electric Consumers Co-op was used to accelerate the adoption renewable energy to help meet local demand in rural Baker, Grant, Harney, and Union counties in eastern Oregon. Oregon Trails Electric Co-op will use the USDA project to conduct energy audits and solar energy site assessments for rural small businesses and agricultural producers while providing information about renewable energy adoption and incentives. Overall, this project will help approximately 25 ag producers and small businesses in rural eastern Oregon reduce their monthly utility bill and improve their operation's finances through the adoption of renewable energy.
- Potential:* Mandatory funding remains at \$50 million per fiscal year; authorized appropriations continue at \$20 million per fiscal year.

Biomass Crop Assistance Program (BCAP)

- What it is:* BCAP provides financial assistance to owners and operators of agricultural and non-industrial private forest land who wish to establish, produce, and deliver biomass feedstocks.
- How it helps:* Turning what would be waste into biomass feedstocks to be converted into energy not only increases an operation's efficiency but gets more output from production and displace use of fossil fuels as energy. Additionally, when compared to conventional cropping systems, energy crop production can have neutral to positive impacts on ground and surface water quantity and quality.
- In action:* Aloterra worked with farmers in Northeast Ohio and Northwest Pennsylvania to establish 5,000 acres of a perennial grass on idle cropland. Aloterra secured \$20 million in private funds—\$4 in private capital for every \$1 in federal funds—to build two manufacturing facilities in Ashtabula County, Ohio, creating more than 60 full-time jobs in the region.
- Potential:* Appropriations of \$25 million annually are authorized for the Biomass Crop Assistance Program for fiscal year 2019 through 2023, but mandatory funding is eliminated.

Carbon Utilization and Biogas Education Program

- What it is:* The Carbon Utilization and Biogas Education Program provides education to the public about the benefits of permanent sequestration or utilization of carbon dioxide and provides education to agricultural producers about opportunities for aggregation of organic waste from multiple sources into a single biogas system.
- How it helps:* Public education on Carbon Utilization and Biogas helps the public make more informed choices in their individual lives and community efforts.
- In action:* This is a new program in the 2018 farm bill that has not received any appropriations.
- Potential:* No mandatory funding and discretionary funding is authorized to be appropriated at \$2 million per fiscal year for 2019 to 2023.

Research Programs

Specialty Crop Research Initiative (SCRI)

- What it is:* SCRI provides grants for specialty crop research, including fruits and vegetables, nuts, and nursery crops.
- How it helps:* Grants fund research that can help develop specialty crop varieties that can adapt to climate change through advancements in genetics and increased pest pressures.
- In action:* The University of California researchers received an SCRI grant to enhance research utilization for lettuce production. Funds were also used in 2021 to coordinate an approach to coffee leaf rust and other pest mitigation.
- Potential:* Soil health is directly tied to carbon sequestration, and the 2018 Farm Bill made projects focused on understanding the soil rhizosphere microbiome eligible for funding.

Organic Agriculture Research & Extension Initiative (OREI)

- What it is:* OREI funds research, education, and extension into organic agriculture.
- How it helps:* Many projects focus on resource management and improving soil health, and conventional growers can often adopt practices developed through OREI.
- In action:* Researchers at Lincoln University received an OREI grant to determine how cover crops impact soil health.
- Potential:* The 2018 Farm Bill added a new emphasis on soil health to OREI and increased funding to \$50 million by FY23.

Agriculture and Food Research Initiative (AFRI)

- What it is:* AFRI is USDA's largest agriculture research program, authorized at \$700 million annually.
- How it helps:* Within AFRI, the Sustainable Agricultural Systems program area supports projects that are seeking to sustainably increase our food and agricultural production with the challenges of climate change, extreme weather, and diminishing land and water resources.
- In action:* As growers increasingly depend on groundwater because of climate change induced droughts and heat stress, the University of California researchers received a grant on sustaining ground water and irrigated agriculture in the Southwestern United States.
- Potential:* The 2018 Farm Bill expands AFRI to include a specific focus on soil health.

Agriculture Advanced Research and Development Authority Pilot (AGARDA)

- What it is:* The 2018 Farm Bill established AGARDA as a pilot program that will focus on developing/deploying solutions to protect against threats to domestic agriculture. Part of that focus will include looking for ways to enhance sustainability and extreme weather resiliency in agriculture.
- How it helps:* AGARDA will be able to support research & development on how farms can prepare to survive extreme weather.
- In action:* AGARDA is a new program and has not received Federal appropriations for implementation, so no results to report yet.
- Potential:* Established in the 2018 Farm Bill, and authorized appropriations at \$50 million through FY23.

Foundation for Food and Agriculture Research (FFAR)

- What it is:* The 2014 Farm Bill created FFAR and provided a fund of \$200 million to support additional innovation in agricultural research. The 2018 Farm Bill added \$185 million to FFAR.
- How it helps:* FFAR leverages public and private funding to support research related to agricultural problems of national and international significance. FFAR requires matching funding from non-federal partners for all FFAR grant projects. FFAR mobilizes funds quickly and has unique flexibility in the research it can fund.
- In action:* FFAR has already invested \$50 million in projects advancing research to reduce GHG emissions from agriculture. Climate related investments include climate-resilient wheat, ecosystems markets, and crops of the future.
- Potential:* With partners, FFAR launched AgMission in 2020 to mobilize farmers, ranchers, scientists, data providers, stakeholders and funders to develop and implement climate-smart solutions.

Biomass Research and Development Initiative (BRDI)

- What it is:* BRDI provides grants to companies, universities, and government research centers to conduct research and development (R&D) and demonstration projects on new ways to refine various types of feedstocks into biofuels or biobased chemicals and products.
- How it helps:* Developing the use of cast off or less efficiently used biomass into feedstocks for animals and energy sources displaces other energy sources and requires less for equal or greater outputs.
- In action:* The Energy Department's National Renewable Energy Laboratory (NREL) played crucial roles in developing the technology that has led companies such as DuPont, POET, and Abengoa to open commercial-scale facilities to turn biomass into clean transportation fuels.
- Potential:* The 2018 Farm Bill amends the definition of "biobased product" to include carbon dioxide intended for permanent sequestration that is a byproduct of certain commercial and industrial products. Mandatory funding of \$3 million per fiscal year is eliminated and authorized appropriations of \$30 million per fiscal year continue for 2019 through 2023.

Rural Development Programs

Water and Environmental Programs

- What it is:* Programs including the Circuit Rider Program, Special Evaluation Assistance for Rural Communities and Households, Water & Waste Disposal Grants to Alleviate Health Risks on Tribal Lands and Colonies, Water & Waste Disposal Loan & Grant Program, and Water & Waste Disposal Predevelopment Planning Grants help provide technical and financial assistance to small and financially distressed rural communities for the purposes of managing their water and waste disposal infrastructure.
- How it helps:* Funding and technical assistance through each of these programs helps communities to safeguard drinking water and correctly manage their waste, to include recycling and reuse of resources, thereby helping to reduce the material and carbon footprints of those communities.

Electric Infrastructure Loan & Loan Guarantee Program

- What it is:* The electric program makes insured loans and loan guarantees to nonprofit and cooperative associations, public bodies, and other utilities.
- How it helps:* These loans enable utilities to provide energy-saving services to those they serve.
- In action:* South Dakota's Northern Electric Cooperative is receiving a \$24.8 million loan to build or improve 360 miles of line. The loan includes \$351,000 to incorporate smart grid technologies such as computer applications, two-way machine-to-machine communications, geospatial information systems and other tools to increase the reliability and efficiency of electric power systems. Northern Electric serves more than 6,300 consumers over 2,600 miles of line in 10 counties in northeastern South Dakota and one county in southern North Dakota.

Rural Energy Savings Program

- What it is:* The program helps rural families and small businesses achieve cost savings by providing loans to qualified consumers to implement durable cost-effective energy efficiency measures
- How it helps:* The program incentivizes consumers and businesses to implement energy-efficient practices in their homes, on their farms and in their businesses.
- Potential:* The 2018 Farm Bill authorizes \$75 million each fiscal year, same as in 2014, but allows off the grid renewable energy projects.

Energy Efficiency and Conservation Loan Program (EECLP)

- What it is:* EECLP provides loans to finance energy efficiency and conservation projects for commercial, industrial, and residential consumers. Allows for utilities to relend RUS funds to consumers that can implement energy efficiency upgrades behind the meter and repay the loan through their electric bill.
- How it helps:* EECLP ensures energy efficiency and conservation are active elements in the development and construction of residential and commercial projects in rural areas.

Grassroots Source Water Protection Program (GSWPP)

- What it is:* Grassroots Source Water Protection Program is operated by NRCS and provides funding to the National Rural Water Association for technical assistance to operate state's source water protection program.
- How it helps:* GSWPP funds local programs that encourage the voluntary adoption of practices that prevent drinking water pollution.
- In action:* GSWPP has \$6.5 million in funding for FY2018. GSWPP completed 183 source water plans in FY2018, providing protection measures for 596 public drinking water sources.
- Potential:* The 2018 Farm Bill provides \$5 million in mandatory funding to address water quality for drinking water sources.

Risk Management and Disaster Assistance Programs

Federal Crop Insurance Program

- What it is:* The Federal Crop Insurance Program (FCIP) is a privately administered, customizable risk management tool available to farmers and ranchers across the country to protect against production losses. USDA's Risk Management Agency (RMA) administers crop insurance by contracting with Approved Insurance Providers (AIPs) that sell and service crop insurance products through agents, and RMA manages the Federal Crop Insurance Corporation (FCIC). The AIPs and RMA share in the risks associated with production losses that results for extreme weather events or other indemnifiable conditions. The premium costs of crop insurance products are generally shared between the producer and the Federal government. There are variety of types of underlying coverage available to producers who also choose what coverage levels to purchase. There are also supplemental coverage options available to producers for which they must pay a premium to help further production risks.
- How it helps:* Particularly given the growing extreme weather conditions affecting farmers and ranchers in recent years, the FCIP is a tool available to help them manage the risk associated with climate change, and to tailor their coverage to the unique needs facing their region of the country.
- In action:* In 2021, producers purchased over 2.2 million crop insurance policies with premiums of over \$13.7 billion and liabilities over \$136.6 billion. Indemnities for 2021 were more than \$8.371 billion.

Non-insured Crop Disaster Assistance Program (NAP)

- What it is:* [NAP](#) provides financial assistance to producers of non-insurable crops in the event of low yields, loss of inventory or prevented planting. Eligible crops must be commercially produced agricultural commodities, including crops grown for food or livestock consumption, crops grown for fiber (except trees), greenhouse crops, specialty crops, industrial biomass crops, and others.
- How it helps:* For situations where crop insurance is unavailable, NAP is a risk management tool that helps producers manage the growing extreme weather conditions and risks associated with climate change.
- In action:* The 2018 Farm Bill reinstated higher levels of coverage available to producers, from 50 to 65 percent of expected production in 5 percent increments, at 100 percent of the average market price.

Livestock Indemnity Program (LIP)

- What it is:* LIP was reauthorized in the 2018 Farm Bill and provides assistance to livestock producers for livestock deaths in excess of normal mortality due to eligible loss conditions.
- How it helps:* Eligible loss events includes adverse weather, along with eligible disease and attacks by animals reintroduced to the wild by the federal government or protected by federal law, providing a resource to producers to mitigate the impacts associated with extreme weather.
- In action:* This program makes payments to producers based on 75 percent of the market value of the applicable livestock, or 75 percent of the national average input costs or the applicable livestock for contract growers. The 2018 Farm Bill included updates to the program, including adding losses due to extreme cold as an eligible loss.

Livestock Forage Program (LFP)

- What it is:* LFP provides payments to producers of grazed forage crop acreage that experience a loss of forage due to qualifying drought during the normal grazing period. The 2018 Farm Bill established a maximum annual per person and legal entity payment limitation for LFP of \$125,000.
- How it helps:* This program helps producers mitigate the economic impacts associated with varying levels of drought conditions.
- In action:* LFP was one of a variety of critical tools available to producers in 2021 to address the impacts of severe drought conditions impacting much of the country in 2021 and other recent years.

Emergency Assistance for Livestock, Honeybees, and Farm-Raised Fish Program (ELAP)

- What it is:* Reauthorized in the 2018 Farm Bill, ELAP provides assistance for producers of livestock, honeybees, and farm-raised fish for losses due to eligible conditions, including certain adverse weather events like blizzards and wildfires, as well as for losses due to disease. Assistance is provided for losses not covered by LIP or LFP.
- How it helps:* ELAP functions as a mechanism to help producers mitigate the economic impacts of severe weather events.
- In action:* The 2018 Farm Bill made several updates to ELAP, including removing ELAP for the combined ELAP/LFP payment limit, increasing the reimbursement up to 90 percent for socially disadvantaged, limited resource, beginning, and veteran farmers and ranchers, among other changes. Additionally, USDA took administrative action in 2021 to provide assistance through ELAP for feed transportation costs caused by drought.

Tree Assistance Program (TAP)

- What it is:* TAP provides financial assistance to qualifying orchardists and nursery tree growers to replant or rehabilitate eligible trees, bushes, and vines damaged by natural disasters.
- How it helps:* TAP assists growers impacted by varying weather conditions and allows their operations to recover more quickly.
- In action:* The Bipartisan Budget Act of 2018 increased the number of acres that growers are eligible to be partly reimbursed for losses on per program year to 1,000 acres, double the previous acreage.

Agricultural Disaster Assistance in Continuing Resolution

- What it is:* The Continuing Resolution enacted on September 30, 2021, included agricultural disaster assistance for producers that experienced severe weather conditions in 2020 and 2021. This funding will provide financial assistance to producers with disaster-related production losses on both insured and non-insured crops. The causes of loss include derechos, winter storms, polar vortexes, freeze, smoke exposure, and quality losses for crops in addition to losses previously eligible under the Wildfire and Hurricane Indemnity Program Plus (WHIP+).
- How it helps:* This program will provide producers with additional opportunities to receive financial assistance if they are affected by extreme weather conditions associated with climate change.
- In action:* The Continuing Resolution enacted on September 30, 2021, provided \$10 billion in funding to continue WHIP+ for 2020 and 2021 losses.

Administrative Actions

Partnerships for Climate Smart Commodities

- What it is:* On February 7, 2022, USDA announced that it will finance partnerships to support the production and marketing of climate-smart commodities via a set of pilot projects lasting 1 to 5 years that provide voluntary incentives through partners to producers and landowners, including early adopters.
- How it helps:* Pilots must provide voluntary incentives to producers and landowners to (1) implement climate-smart practices on working lands, (2) measure/quantify, monitor, and verify the carbon and greenhouse gas

benefits associated with those practices, and (3) develop markets and promote the resulting climate-smart commodities.

In action: Up to approximately \$1 billion will be made available for the pilot projects.

Potential: There are two funding pools—one for proposals from \$5 million to \$100 million and one for proposals from \$250,000 to \$4,999,999.

Agriculture Innovative Mission for Climate (AIM for Climate)

What it is: AIM for Climate was launched on November 2, 2021. This initiative is uniquely focused on increasing investment and enabling greater public-private and cross-sectoral partnerships, intended to both raise global climate ambition and underpin transformative climate action in the agriculture sector in all countries. The objectives of this initiative are to (1) demonstrate collective commitment to significantly increase investment in agricultural innovation for climate-smart agriculture and food systems over five years (2021-2025); (2) support frameworks and structures to enable technical discussions and the promotion of expertise, knowledge, and priorities across international and national levels of innovation to amplify the impact of participants' investments; and (3) establish appropriate structures for exchanges between Ministers, chief scientists, and other stakeholders as key focal points and champions for cooperation on climate-related agricultural innovation, to engender greater co-creation and cooperation on shared research priorities.

How it helps: AIM for Climate focuses on increasing and accelerating investment in, and other support for, climate-smart agricultural innovation in the areas of scientific breakthroughs via basic agricultural research, public and private applied research, and development, demonstration, and deployment practical, actionable, and innovative products, services, and knowledge to producers and other market participants.

In action: President Biden committed \$1 billion in investment in climate-smart agriculture and food systems innovation over five years (2021-2025).

Potential: The U.S. and United Arab Emirates launched AIM for Climate alongside 31 countries and over 48 non-governmental partners.

Confronting the Wildfire Crisis: A Strategy for Protecting Communities and Improving Resilience in America's Forests

What it is: On January 18, 2022, the Forest Service launched the "Confronting the Wildfire Crisis: A Strategy for Protecting Communities and Improving Resilience in America's Forests." The Forest Service will work with other federal agencies, Tribes, states, local communities, private landowners, and other partners to focus fuels and forest health treatments more strategically and at the scale of the problem.

How it helps: The Forest Service will use risk-based information to engage with partners and create shared priorities for landscape scale work, to equitably and meaningfully change the trajectory of risk for people, communities, and natural resources, including areas important for water, carbon, and wildlife.

In action: The Infrastructure Investment and Jobs Act provided nearly \$3 billion to reduce hazardous fuels and restore America's forests and grasslands, along with investments in fire-adapted communities and post fire reforestation.

Potential: The strategy calls for the Forest Service to treat up to an additional 20 million acres on national forests and grasslands and support treatment of up to an additional 30 million acres of other federal, state, Tribal, private, and family lands.

Administrative Flexibility on Haying and Grazing on Prevented Plant Ground in Crop Insurance

What it is: Prevented planting is a type of insurance indemnity available to producers if they are unable to plant a crop by certain deadlines due to an eligible cause of loss. Under previous rules, if a producer were to hay, graze, or chop those cover crops prior to November 1, their prevented planting indemnity would be reduced by 65 percent. On July 6, 2021, RMA administratively removed this penalty to enable producers to hay, graze, or chop those cover crops at any time and not be penalized.

How it helps: Depending on the field conditions, producers might later be able to plant a cover crop on that ground for soil and moisture conserving purposes. Additionally, these cover crops have served as a valuable feed source for livestock producers, particularly in years like 2021 in which drought conditions were particularly extreme. This action by RMA to enable producers to maintain their full prevented planting indemnity serves as an incentive to producers to plant cover crops on prevented planting ground and not risk the

potential of snowfall threatening their ability to access those cover crops as a feed source if they had to wait until November to hay, graze, or chop.

Pandemic Cover Crop Program

- What it is:* In June 2021, USDA announced the Pandemic Cover Crop Program (PCCP), which provides a \$5 per acre crop insurance premium subsidy for producers that planted cover crops. USDA announced in February 2022 that the program would be available again for the 2022 crop year.
- How it helps:* To partially address the cost associated with planting cover crops, and to acknowledge the soil health benefits associated with cover crops, this initiative has provided financial support to producers in the form of lower crop insurance premium costs.
- In action:* For 2021, interest far outpaced expectations with payments totaling \$59.5 million on 12.2 million acres of cover crops being enrolled. For the 2022 crop year, producers must report their cover crop acreage by March 15, 2022.

Post-Application Coverage Endorsement

- What it is:* This new stakeholder-driven policy will provide a risk management tool to corn farmers in certain states and counties to more efficiently apply nitrogen during the growing season. Producers can purchase this product on top of several underlying crop insurance policies.
- How it helps:* There are different nitrogen needs at different stages of the corn production cycle, and so there are production and water benefits associated with doing multiple applications in a targeted manner. However, there are risks associated with doing multiple applications, including the risk that excessive rainfall might prevent a farmer from making a second application and threaten yields. This crop insurance product protects the farmer from that potential yield loss if they cannot make the additional fertilizer applications.
- In action:* 2022 is the first year for which this product is available, and producers have until March 15, 2022, to purchase this option.