CLEAN AIR TASK FORCE

CLEAN AIR TASK FORCE: SUMMARY OF 2023 FARM BILL RECOMMENDATIONS

CATF has identified the following priorities for the 2023 Farm Bill to support farmers, ranchers, and forestland owners and enhance climate benefits from Farm Bill programs.

1. **Natural Resource Conservation Service (NRCS) Funding and Priorities**
   USDA should: (a) maintain funding levels and streamline funding processes, (b) conduct data-gathering and research to improve estimates of conservation practices' climate impact, (c) prioritize funding of conservation practices/projects based on their expected climate impact, (d) promote the rapid review, testing, and deployment of new conservation practices, and (e) calculate and publish the estimated greenhouse gas impacts of its conservation expenditures by program and by practice annually.
2. **Reverse Auction Carbon Procurement Pilot Projects**
   USDA should be authorized to hold reverse auctions to seek bids by producers for practices to sequester carbon or reduce greenhouse gas emissions for the lowest cost per acre for a given practice to drive innovation, facilitate efficient allocation for federal funds, and ensure adequate payments to landowners implementing such practices.
3. **Carbon Cooperative Demonstration Program**
   USDA should establish a carbon cooperative demonstration program by using existing programs, such as the Regional Conservation Partnership Program (RCPP) and the Marketing Assistance Loan Program, to facilitate the development of cooperatives to manage carbon projects on behalf of a group of producers thereby reducing per-acre transaction costs, mitigating implementation risk, and increasing the likelihood of achieving cooperative-level estimated carbon outcomes.
4. **Biomass Utilization and Traceability Research**
   The changing supply and growing demand for biomass for energy production and other industrial uses have raised the need for reliable estimates of the climate impacts of biomass utilization. USDA should (a) research the amount of biomass that can be removed from farmlands and forestlands in different regions without negative impacts, and (b) study traceability options to verify the provenance and management practices of biomass feedstocks.
5. **Improved Forest Management**
   USDA should take steps to improve its management of carbon and the biophysical feedbacks to the climate in the National Forest System. Specifically, USDA should (a) manage woody residue from forest thinning to reduce carbon emissions, (b) support tree nurseries and seedbanks, (c) require federally funded afforestation and reforestation projects to plant ecologically appropriate and climate-resilient tree species, (d) undertake long term monitoring of carbon fluxes in each national forest to inform future management, and (e) undertake a pilot program for the management of current Pinyon-pine juniper forests to restore sagebrush on public lands for biophysical/climate, habitat, and water benefits.
6. **Rural Siting and Construction of New Clean Energy Projects**
   USDA should (a) create new incentives to encourage utilities, especially rural co-ops, to build power lines to unlock low-cost clean energy generation in rural areas, (b) deploy the USDA Extension Service to provide information to rural landowners on opportunities to develop renewable energy projects, and (c) support rural co-ops in using existing rights of way to build new transmission.
7. **Enteric Methane Emissions**
   Agriculture is the largest sectoral emitter of methane, and enteric fermentation makes up the largest portion of those emissions. In order to sucessfully reduce methane emissions from the livestock sector, USDA must invest in basic and applied enteric methane research, as well as fund the development and improvment of

new and current methane measurement technology. The Farm bill should include robust funding for research and investments in attainable and low-cost solutions for reducing livestock enteric methane.

CLEAN AIR TASK FORCE: DETAILED 2023 FARM BILL RECOMMENDATIONS

CATF's Farm Bill recommendations focus on opportunities for USDA to advance voluntary evidence-based land management practices to mitigate climate change by (1) expanding the knowledge base for estimating the greenhouse gas benefits of agricultural and forestry practices, and (2) streamlining programs for the public procurement of climate-beneficial practices. We also highlight ways for USDA to facilitate rural clean energy generation and transmission.

I. NATURAL RESOURCES CONSERVATION SERVICE PROGRAM DELIVERY, GHG QUANTIFICATION, AND FUNDING PRIORITIES

A. STREAMLINING CONSERVATION PROGRAM DELIVERY

The Regional Conservation Partnership Program (RCPP) is an ideal program for supporting climate-smart agricultural efforts since it focuses on partnerships between producers and outside stakeholders, and works on a regional scale (and across programmatic authorities) to provide landowners flexibility to innovate. We encourage NRCS to consider the following recommendations to enable it to be even more flexible and innovative, by more quickly moving money to partners who meet the criteria and expediting efforts on the ground:

1. Reduce the time it takes to negotiate Programmatic Partnership Agreements (PPAs);
2. Enable a private/public implementation model that empowers non-governmental organizations and private companies to recruit farmer participants and disburse funds according to plans that are consistent with NRCS guidelines;
3. Issue national guidance for PPAs binding on all states to limit confusion on differing answers grantees are receiving from different state NRCS offices;
4. Negotiate a simple memorandum of understanding listing NRCS and partner responsibilities at the time of award to help partners implement projects more quickly and eliminate confusion and duplication;
5. De-emphasize the amount of non-USDA matches as a priority when ranking RCPP applications, and emphasize carbon benefits of proposed projects in ranking and approving applications;
6. Increase NRCS's flexibility to negotiate outcomes in PPAs (rather than restrict measured outcomes to a small, predetermined list) so that partners can leverage RCPP to achieve important outcomes and not be limited by bureaucratic processes in implementing important change on the ground;
7. Raise the allowable proportion of technical assistance in an RCPP application and award, and have the type of technical assistance being provided to producers determine the appropriate proportion of technical assistance relative to financial assistance. Existing technical assistance rules restrict the ability for RCPP awardees to use technical assistance to recruit producers and fully assist them in implementing climate-smart practices. The

existing rules are overly limited given that technical assistance, such as helping a producer to understand the types of conservation practices that have the greatest climate benefit for a given soil type, climate and commodity crop, in many cases may be the most valuable form of support that producers who have little or no experience with implementing climate-friendly practices need.

B. QUANTIFICATION OF THE IMPACTS OF NRCS CONSERVATION PRACTICES ON GHG SEQUESTRATION AND EMISSION REDUCTIONS

As more and more farmers, ranchers and forest owners seek to generate revenue by sequestering carbon and/or reducing greenhouse gas emissions, questions continue to be raised by experts about the accuracy of estimating or measuring the rates of soil and forest carbon accumulation and reductions in greenhouse gas emissions. The uncertainty associated with these measurements has created reputational risks for landowners seeking to achieve and market climate-related benefits and for federal policies that encourage climate-smart practices.

The Inflation Reduction Act (IRA) provided $300 million to NRCS for greenhouse gas monitoring to reduce uncertainty and address ongoing questions about the integrity of protocols and databases used to determine the climate benefits of various agricultural conservation practices. However, more structure, incentives, and research are needed to fully explore crucial questions around 1) the climate-related impacts of various conservation practices and 2) how the adoption of climate-smart practices affects operational profitability and use the results of this research to improve USDA climate programs.

1. ***Improve data gathering.*** USDA should be authorized to offer producers applying for IRA-related NRCS funding a bonus if they are willing to undertake or allow monitoring of the greenhouse gas impacts of various agricultural practices and share that information with USDA in line with existing privacy protections. The amount of bonus should cover the cost of the monitoring as well as provide an additional amount sufficient to encourage large-scale participation in this data-gathering effort.
2. Establish a ***Science Advisory Board (SAB)*** to recommend ways for NRCS to continually improve the accuracy of its greenhouse gas estimation models and NRCS's practice approval process. The SAB should be made up of experts from state agriculture agencies, academia, and private companies, enabling NRCS to take advantage of the expertise of outside scientists. NRCS should convene such a board to advise it on ways to design a scientifically-based framework for field-based quantification and analysis that can integrate into USDA's Greenhouse Gas Inventory and Assessment Program, increase the accuracy of its GHG estimation tools and speed the NRCS approval process for new practices without sacrificing scientific rigor.
3. Through the Foundation for Food and Agriculture Research (FFAR) and the Agricultural Research Service (ARS), USDA should financially support efforts by university researchers

across the country to **monitor the outcomes of climate-smart practices** to quantify the GHG emission and/or sequestration impacts.

4. Use data and analysis obtained by external researchers, including at universities, to continually **strengthen the databases of information USDA uses to develop its technical tools**, such as COMET-Farm, COMET-Planner, LandPKS, DairyGEM, GRACEnet, APEX, Rangeland Analysis Platform, CART, and FIA, as well as its forest management decision-making support tools. Doing so would help to improve the integrity of some nature-based carbon credits, and allow more producers, landowners, and technical service providers to estimate the impacts of adopting climate-smart practices more quickly and easily.
5. Promote research, development, and deployment of new, innovative conservation practices to address climate change, including the following items.
    a. ***Establish a Climate-Smart Practices Innovation Advisory Board.*** The Advisory Board would be comprised of agricultural producers, food companies that work with producers to decarbonize their producers' operations, researchers, technical service providers, USDA Extension Service Agents and other experts and would identify, review, and quantify the benefits from new practices that improve carbon sequestration and/or reduce GHG emissions from producer operations. The board should meet regularly and make recommendations to Agricultural Advanced Research and Development (AgARDA) and Food and Agriculture Research Foundation (FFAR) regarding the types of research that are needed to meet the practical near-term needs of producers seeking to address climate change, including developing better technologies to remotely monitor emissions and rates of carbon sequestration in soils and forests.
    b. ***Develop New Practices to Reduce Greenhouse Gas Emissions.*** Make the study and development of new practices that reduce emissions of greenhouse gases a priority for AgARDA and substantially increase funding for this program. Modeled after the successes of the Defense Advanced Research Projects Agency (DARPA) and the Biomedical Advanced Research and Development Authority (BARDA), AgARDA was authorized in the 2018 Farm Bill to foster research and development that could result in significant benefits across the U.S. food and agriculture value chain. This program, which relies on its specialized statutory hiring authorities and contracting vehicles, should be amended to expand its scope to include speeding innovation in the development of climate-smart conservation practices, and fully fund it.
    c. ***Study Soil Carbon Sequestration.*** Work closely with the FFAR to encourage it to fund university research into soil carbon sequestration, building on the work the foundation is already doing with soil health.
    d. **Fast-Track Review of New Climate-Smart Practices.** Once AgARDA and FFAR have undertaken sufficient research to support new climate-smart practices, NRCS should establish a process to fast-track their review so that the agency and technical service providers can encourage produces to adopt them as soon as is feasible.

e. **Rapidly Disseminate Information on New Climate-Smart Practices to technical service providers and USDA Extension Service Agents (Extension Agents).** Establish a process to ensure that the certified technical service providers network and the USDA Extension Service Agents are provided with information about practices that are developed by AgARDA and universities funded by FFAR in real time and are encouraged to share that information with producers, including making educating producers about Climate-Smart practices a formal mission of the Extension Service. This could involve a separate ***Climate-Smart Certification for technical service providers and Extension Agents***, and a registry of those who have obtained that certification.

f. Pilot a research-practitioner collaborative to help farmers measure changes in carbon associated with practices through the ***Long-Term Agricultural Network*** and monitor GHG emission impacts to determine which practices are most effective.

C. PRIORITIZATION OF NRCS FUNDING

1. NRCS should use the estimation tools above to **prioritize funding of conservation practices based on their estimated GHG benefits per USDA dollar** invested for programs such as RCPP, EQIP, Conservation Reserve Program (CRP), and the Conservation Stewardship Program (CSP).
2. In EQIP, USDA should **provide higher levels of federal cost-share** for practices that have greater GHG benefits.
3. In addition, USDA should use these resources to calculate and **publish the estimated greenhouse gas impacts of its conservation expenditures** by program and by practice annually.
4. Explore ways, including providing more technical assistance to landowners, for the Agriculture Conservation Easement Program (ACEP) to work with landowners to quantify and **value the carbon storage of the land being considered for an easement**, based on practices such as rotational grazing and forest conservation; authorize USDA to pay more for easements on lands based on the quantity, rate and value of sequestered carbon.

II. REVERSE AUCTION CARBON PROCUREMENT PILOT PROJECTS

USDA should be authorized to hold reverse auctions to seek bids from producers to sequester carbon and/or reduce greenhouse gas emissions for the lowest cost per ton to drive innovation and to give producers more experience implementing practices that benefit the climate. USDA should then pay producers for the greenhouse gas benefits/credits associated with these projects and retire the tons. This would enable USDA and participating producers to gain experience with innovative new practices and cost-efficient methods for monitoring, reporting and verifying climate benefits while they are being refined to help ensure the integrity of future climate-related agriculture projects.

III. CARBON COOPERATIVE DEMONSTRATION PROGRAM

The USDA should create options for coalitions of producers, NGOs, and/or private companies to form carbon cooperatives ("co-ops") and receive financial support from USDA for adopting practices to reduce greenhouse gas emissions and/or sequester carbon. Enabling multiple farmers, working with NGOs and/or private companies, to come together and establish carbon co-ops would spread out transaction costs and risks to the deployment of practices. Like a dairy co-op, these carbon co-ops would allow farmers to band together to create larger-scale carbon sequestering projects. Carbon co-ops would facilitate knowledge and equipment sharing, lower per-acre transaction costs, reduce uncertainty, increase the likelihood of achieving cooperative-level estimated carbon outcomes, and mitigate individual risk associated with potential project failures. Producers would receive financial support to cover the costs of undertaking the projects, including monitoring and measuring the amount of carbon sequestered. Since USDA would be paying producers for practices that are estimated to sequester carbon or reduce GHG emissions, they would not be able to generate marketable carbon credits for sale in the voluntary carbon market as the practice would not be "additional" at that point. Cooperatives also would be supported to and required to measure the carbon outcomes associated with various practices and share the data with USDA to enable the agency to improve and refine its carbon sequestration models and online estimation tools. These cooperatives could be developed through two existing programs.

A. RCPP APPROACH TO CARBON COOPERATIVES

The Inflation Reduction Act (IRA) provides an additional $4.95 billion for RCPP through Fiscal Year 2026. The IRA includes language regarding this funding which states: "The Secretary shall prioritize partnership agreements under section *1271C(d) of the Food Security Act of 1985 (16 U.S.C. 3871c(d))* that support the implementation of conservation projects that assist agricultural producers and nonindustrial private forestland owners in directly improving soil carbon, reducing nitrogen losses, or reducing, capturing, avoiding, or sequestering carbon dioxide, methane, or nitrous oxide emissions, associated with agricultural production." This language would allow projects to develop carbon co-ops, and similar language being included in the Farm Bill would allow for additional use of the RCPP for these purposes. The IRA also includes additional language which would remove the limitation on the number of grants awarded annually which was previously capped at fifteen.

B. MARKETING ASSISTANCE LOAN APPROACH TO CARBON COOPERATIVES

An alternative approach could be basing carbon co-ops on the existing Marketing Assistance Loan (MAL) program, either by amending MAL to allow carbon credits to qualify as a "loan commodity" or by creating a separate marketing loan program for carbon credits. Either would enable farmers to take out nonrecourse loans based on their climate-smart practice(s), and if the market carbon credit price is below the loan rate, permit the farmer to "forfeit" the carbon credit to USDA while keeping the loan funds, or repay at the lower rate. In effect, this incentivizes climate-smart practices (and retires carbon credits if forfeited) while the marketplace matures.

Current law allows peanut farmers to form specific marketing cooperatives to obtain loans for farmers within their co-op; a similar option could be created to allow carbon co-ops to apply for MAL, which could be an easy way to realize some of the benefits discussed above. USDA has significant experience operating such programs as they have been in operation since the 1930s and the structures already largely exist. Historical experience has demonstrated that price-supporting, nonrecourse loans provide strong incentives to farmers and have often encouraged increased production of the commodities for which loans are available. Moreover, the loan program provides the farmer with operating cash in advance and can be timed to help assist near the time practice costs are incurred. Finally, the loan mechanism permits some flexibility and gives time for verification of the practice adoption, possibly allowing for better measuring and estimating of outcomes over time. The repayment or forfeiture could be dependent upon actual adoption and some level of verified performance. Alternatively, the existing MAL program could offer an option for farmers to receive a higher loan rate for their commodity crops based on adopting climate smart practices. One important note is that the forfeiture mechanism in the MAL program is the key mechanism that permits USDA to hold and retire carbon credits. With forfeitures, USDA operates as the buyer of last resort at the loan rate. The program could be designed to permit or require forfeiture as an option and instruct USDA on retirement or other options.

IV. BIOMASS UTILIZATION AND TRACEABILITY RESEARCH

With the change in the supply of woody biomass associated with fuelwood management to reduce wildfire risks and with the passage of new tax credits, there is an increasing number of projects being pursued to utilize biomass to reduce greenhouse gas emissions from energy production and other industrial processes. These projects include biomass energy with carbon capture and sequestration (BECCS), biofuels, and sequestering the carbon from biomass (including woody biomass and crop residue) in the form of bio-oil, biochar, and other materials. Growing demand for biomass for these purposes has raised the need for research into the methods of accessing and utilizing this biomass while avoiding adverse climate impacts, including from land use changes or removing biomass from forest and agricultural systems at rates that are not sustainable. To address these questions USDA should:

A. BIOMASS UTILIZATION

Undertake research that assesses the impacts of biomass removal from forest and agricultural systems. Specifically, USDA should amend ***Title VII (Research) of the Farm Bill*** to authorize the agency to undertake an 18-month study of the 1) carbon and other greenhouse gas impacts, 2) effects on soil and ecosystem health, 3) water and fertilizer demands, and 3) long-term farm operation economics of removing biomass from a wide variety of forest and agricultural systems across a range of biomes to determine the rates of biomass removal beyond which adverse impacts are likely to occur. This study should include a full system-level assessment of projects that remove biomass from agricultural systems and return byproducts as soil amendments. The results of the study would be published and made available to the public. NRCS should require producers who apply for grants to implement conservation practices to adhere to the biomass

removal standards identified in the above-mentioned study and to annually verify compliance with those standards.

B. BIOMASS SOURCING TRACEABILITY STUDY

Conduct a feasibility study, along with Argonne National Laboratories and other appropriate entities, on biomass traceability options from field to satellite and the viability of establishing a voluntary traceability program for operations that wish to verify biomass sourcing and management practices for those landowners who volunteer to participate in federal funding programs or who want a premium for their product to sell to biomass-energy or biomass-carbon sequestration operations, including whether removals are consistent with current scientific evidence.

V. IMPROVING FOREST MANAGEMENT

USDA should take steps to improve its management of carbon fluxes associated with the management of the National Forest System, to reduce carbon emissions and enhance carbon sequestration. Below are three steps that Clean Air Task Force recommends be included in the 2023 Farm Bill to help achieve this goal.

A. MANAGE WOODY BIOMASS

USDA should consider the most climate-beneficial approaches to managing woody biomass residues from forest thinning and fuel treatments to reduce carbon emissions. The U.S. Forest Service should prepare a report to Congress on the management of residue and other material from thinning, logging and other treatments, including how this material is currently handled, the carbon emissions associated with that management, and options to reduce carbon emissions, such as approaches that result in net carbon removal accounting for full lifecycle carbon emissions.

B. AFFORESTATION AND REFORESTATION

1. Require federally funded afforestation and reforestation projects to plant ecologically appropriate tree species in locations that will maximize their long-term survival, considering the anticipated effects of climate change over a 100-year time horizon. This will help ensure that the federal investment in reforestation and afforestation is effective in sequestering carbon for as long as possible and promotes the conservation of biodiversity.

2. Support seedbanks and tree nursery infrastructure to ensure that adequate seeds and seedlings are available for afforestration and reforestation needs. Building back this capacity could also have the benefit of reducing imports of seedlings that could harbor forest pests and pathogens.

C. CARBON FLUX MEASUREMENTS

Require the Forest Service to undertake long-term measurements of carbon fluxes in each National Forest, including collecting data needed to evaluate the carbon response to various management practices and natural disturbances, to inform future management to protect U.S. forests as carbon sinks and minimize GHG emissions from forestlands and forestry operations.

D. PINYON-PINE JUNIPER PILOT PROGRAM

USDA should undertake a pilot program for the management of current Pinyon-pine juniper forests to restore sagebrush on public lands for climate and habitat benefits. Research suggests that sagebrush restoration would have the benefit of reducing surface albedo with positive biophysical feedbacks for climate change. Such a program could also enhance sage grouse habitat and reduce water demands through lower evapotranspiration.

VI. FACILITATING RURAL SITING AND CONSTRUCTION OF NEW CLEAN ENERGY PROJECTS

A. FACILITATE NEW TRANSMISSION TO ACCESS RENEWABLE ELECTRICITY

Incentives are needed to encourage utilities, especially rural co-ops, to build power lines to unlock low-cost clean energy generation in rural areas. There are several approaches that could help achieve this goal.

1. Require USDA to focus on expanding electricity transmission to connect rural areas with low-cost renewable energy to regions with high electricity costs. This could be enhanced by specifying that one or more grant programs within USDA be designated for rural renewable integration into the national grid.
2. Require USDA Rural Development and USDA Rural Utility Service to work with DOE to develop a plan to enhance access to low-cost renewable energy to rural areas across America. This plan should take into account the important role that rural areas rich in renewable resources can play in the development of the DOE's National Transmission Study.
3. Require USDA's Rural Development to study the benefits of forming a National Renewable Energy Transmission Cooperative similar to the National Renewable Cooperative Organization (NRCO). While co-ops have been working with NRCO to develop renewable projects, more could be done to develop regional transmission co-op(s) with the intent of moving renewable power from rural communities to urban markets.

B. ADVISE RURAL LANDOWNERS ON OPPORTUNITIES TO DEVELOP RENEWABLE ENERGY PROJECTS

The USDA Extension Service should be tasked with providing information to landowners about the revenue that can be gained by hosting renewable energy projects the steps necessary to undertake that development, and resources at USDA and DOE that support landowners' renewable energy investments. Require USDA to compile and publish on its website a list of

approved third-parties that can advise rural landowners about opportunities to develop renewable energy project (similar to how the *Growing Climate Solutions Act* functions).

C. SUPPORT RURAL CO-OPS IN USING EXISTING RIGHTS OF WAY TO BUILD NEW TRANSMISSION

Building new transmission lines that cross counties and states inevitably will run into local opposition. USDA should be requested to explore how its programs could be used to incentivize new transmission line construction on existing linear rights of way (including transmission, highways, rail, etc.).

VII. REDUCE ENTERIC METHANE EMISSIONS

Agriculture is the largest sectoral emitter of methane, and enteric fermentation makes up the largest portion of those emissions. In order to successfully reduce these emissions, USDA must invest in basic and applied enteric methane research, as well as fund the development and improvement of new and current methane measurement technology. The Farm bill should include between $350,000,000 and $500,000,000 over the five-year term for research and investments in attainable and low-cost solutions for reducing livestock enteric methane.

CATF also supports SPARK Climate Solutions's 2023 Farm Bill recommendations, which we echo below and can be found at https://www.sparkclimate.org/enteric.

A. FUND BASIC AND APPLIED LIVESTOCK ENTERIC METHANE RESEARCH

Developing science-based solutions to reducing enteric methane emissions requires detailed understanding of cattle microbiology and optimization for easy to adopt solutions. USDA, through the National Institute of Food and Agriculture (NIFA), Division of Animal Systems, should increase funding for basic research in livestock methane biology and applied livestock methane solutions research based on the gained biology knowledge.

USDA should aim to transform research in this area from current modes (small, short-term studies of specific interventions, financed by backers of the interventions) into a more rigorous effort designed to produce credible, reliable data on the long-term, full life-cycle impacts and benefits of proposed interventions.

B. CREATE PUBLIC FEE-FOR-SERVICE TESTING FACILITIES FOR LIVESTOCK METHANE

Lack of acccess to research and testing facilities limits how many innovative ideas are able to be developed, and their efficacy confirmed, and slows research and commercilization efforts for new technologies in this space. USDA, through both the Agricultural Research Service (ARS) and National Institute of Food and Agriculture (NIFA), Division of Global Climate Change, should establish a nationwide network of fee-for-access livestock methane reserach facilities and a national center for pre-livestock testing and screening of potential productions.

USDA should also engage farmers and other impacted communities on researching the economic and social barriers, as well as on opportunities for implementation of new mechanisms and tools in American farms and ranches.

C. **DEVELOPMENT OF LOW-COST CATTLE METHANE MEASUREMENT TECHNOLOGY**

Current livestock methane measurement equipment is prohibitibely expensive for many, with costs of procurement running over $100,000. This high cost makes this equipment inaccessible to many farmers and most researchers, slowing, blocking, and adding cost to all research efforts. USDA, through the NIFA, Division of Animal Systems, should develop lower-cost measurement systems to turn enable research barns to more effectively and efficiently undertake livestock methane emissions measurements. NIFA should also develop farm-integrable measurement systems to make methane emissions visible to US farmers, as well as low-cost proxies for livestock methane.