U.S. Department of Agriculture
Natural Resources Conservation Service

NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number	2. Amendment Number	3. Award /Project Period	4. Type of award instrument:
NR233A750004G021		Date of final signature - 04/07/2028	Grant Agreement

5. Agency (Name and Address)	6. Recipient Organization (Name and Address)
USDA Partnerships for Climate-Smart Commodities c/o FPAC-BC Grants and Agreements Division 1400 Independence Ave SW, Room 3236 Washington, DC 20250 Direct all correspondence to FPAC.BC.GAD@usda.gov	THE NATIONAL CENTER FOR APPROPRIATE TECHNOLOGY INC NCAT PO BOX 3838 BUTTE MT 59702-4506 UEI Number / DUNS Number: LG2KJGKYFNA4 / 081145500 EIN:

7. NRCS Program Contact	8. NRCS Administrative Contact	9. Recipient Program Contact	10. Recipient Administrative Contact
Name: MUSTAPHA ABOUALI (b)(6)	Name: MARIA COWLES	Name: Elise Haschke	Name: Denisse Smith

11. CFDA	12. Authority	13. Type of Action	14. Program Director
10.937	15 USC 714 et seq	New Agreement	Name: Michael Morris (b)(6)

15. Project Title/ Description: Expands markets for climate-smart wool and cotton in CA, GA, IN, MT, NC, NY, SD, TN, and WY and supports farmers' and ranchers' implementation and monitoring of climate-smart practices.

16. Entity Type: M = Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)

17. Select Funding Type

Select funding type:	☒ Federal	☒ Non-Federal
Original funds total	29,999,947.000	$4,644,614.00
Additional funds total	$0.00	$0.00
Grand total	29,999,947.000	$4,644,614.00

18. Approved Budget

Personnel	$1,999,917.00	Fringe Benefits	$879,964.00
Travel	$246,218.00	Equipment	$0.00
Supplies	$32,805.00	Contractual	$90,761.00
Construction	$0.00	Other	26,750,282.000
Total Direct Cost	28,973,888.000	Total Indirect Cost	$1,026,059.00
		Total Non-Federal Funds	$4,644,614.00
		Total Federal Funds Awarded	29,999,947.000
		Total Approved Budget	34,644,561.000

This agreement is subject to applicable USDA NRCS statutory provisions and Financial Assistance Regulations. In accepting this award or amendment and any payments made pursuant thereto, the undersigned represents that he or she is duly authorized to act on behalf of the awardee organization, agrees that the award is subject to the applicable provisions of this agreement (and all attachments), and agrees that acceptance of any payments constitutes an agreement by the payee that the amounts, if any, found by NRCS to have been overpaid, will be refunded or credited in full to NRCS.

Name and Title of Authorized Government Representative	Signature	Date
KATINA HANSON Acting Senior Advisor for Climate-Smart Commodities	KATINA HANSON Digitally signed by KATINA HANSON Date: 2023.04.10 16:49:46 -05'00'	04/10/2023
Name and Title of Authorized Recipient Representative	Signature	Date
STEVE THOMPSON Executive Director	Steve Thompson Digitally signed by Steve Thompson Date: 2023.04.10 12:39:28 -06'00'	04/10/2023

NONDISCRIMINATION STATEMENT

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require alternative means for communication of program information (Braille, large print, audiotape, etc.) should contact USDA's TARGET Center at (202) 720-2600 (voice and TDD). To file a complaint of discrimination write to USDA, Director, Office of Civil Rights, 1400 Independence Avenue, SW., Washington, DC 20250-9410 or call (800) 795-3272 (voice) or (202) 720-6382 (TDD). USDA is an equal opportunity provider and employer.

PRIVACY ACT STATEMENT

The above statements are made in accordance with the Privacy Act of 1974 (5 U.S.C. Section 522a).

Statement of Work

Purpose

The purpose of this agreement, between the U.S. Department of Agriculture, Natural Resources Conservation Service (NRCS) and National Center for Appropriate Technology (Recipient), is to build markets for climate-smart commodities and invest in America's climate-smart producers to strengthen U.S. rural and agricultural communities.

Objectives

The objectives of this project are to support the production and marketing of climate-smart commodities by providing voluntary incentives to producers and landowners, including early adopters, to implement climate-smart agricultural production practices, activities, and systems on working lands; measure/quantify, monitor and verify the carbon and greenhouse gas (GHG) benefits associated with those practices; and develop markets and promote the resulting climate-smart commodities.

Budget Narrative

The official budget summarized below and described in the attached Budget Narrative will be considered the total budget as last approved by the Federal awarding agency for this award.

Amounts included in this budget narrative are estimates. Reimbursement or advance liquidations will be based on actual expenditures, not to exceed the amount obligated.

TOTAL BUDGET $34,644,561

TOTAL FEDERAL FUNDS $29,999,947
PERSONNEL $1,828,914
FRINGE BENEFITS $804,722
TRAVEL $225,165
EQUIPMENT $0
SUPPLIES $30,000
CONTRACTUAL $83,000
CONSTRUCTION $0
OTHER $26,002,087 (includes PRODUCER INCENTIVES $18,000,000)
TOTAL DIRECT COSTS $28,973,888
INDIRECT COSTS $1,026,059

TOTAL NON-FEDERAL FUNDS $4,644,614
PERSONNEL $0
FRINGE BENEFITS $0
TRAVEL $0
EQUIPMENT $0
SUPPLIES $0
CONTRACTUAL $0
CONSTRUCTION $0
OTHER $4,474,953 (includes PRODUCER INCENTIVES $2,660,400)
TOTAL DIRECT COSTS $4,474,953
INDIRECT COSTS $169,661

Recipient has an approved Negotiated Indirect Cost Rate Agreement (NICRA) with a rate of 9.35 percent and a base of all direct costs. In accordance with the Climate-Smart program, producer incentives payments are excluded from the indirect cost base. Indirect cost base is calculated as total direct costs $28,973,888 - incentive payments of $18,000,000 = $10,973,888.

Responsibilities of the Parties:

If inconsistencies arise between the language in this Statement of Work (SOW) and the General Terms and Conditions attached to the agreement, the language in this SOW takes precedence.

RECIPIENT RESPONSIBILITIES

Perform the work and produce the deliverables as outlined in this Statement of Work and attachments.

Ensure Paperwork Reduction Act (PRA) clearance is obtained prior to conducting data collection from producers or other project participants, including data collection performed by subrecipients.

Comply with the applicable version of the General Terms and Conditions.

Submit reports and payment requests to the ezFedGrants system as outlined in the applicable version of the General Terms and Conditions. Reporting frequency is as follows:

Performance Reports: Quarterly

SF425 Financial Reports: Quarterly

Detailed Progress Report: Quarterly
(The detailed progress report is in addition to the performance and financial reports referenced above and described in the general terms and conditions)

Expected Accomplishments and Deliverables

See attached Benchmarks and associated Project Narrative.

Resources Required

See the Responsibilities of the Parties section for required resources, if applicable.

Milestones

See attached Benchmarks and associated Project Narrative.

GENERAL TERMS AND CONDITIONS

Please reference the below link(s) for the General Terms and Conditions pertaining to this award:
https://www.fpacbc.usda.gov/about/grants-and-agreements/award-terms-and-conditions/index.html

Attachments:
Budget Narrative
Project Narrative
Benchmarks
Climate-Smart Practices List and Limitations
Data Dictionary
Climate-Smart Specific Terms and Conditions

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Climate Beneficial Fiber: Building New, Accessible, and Equitable Market Opportunities for Climate-Smart Cotton and Wool

I. Executive Summary: This proposal brings together six highly experienced agricultural, scientific, social equity, and industry organizations to plan, implement, and verify climate-smart production of wool and cotton on 100 agricultural operations encompassing almost two million acres nationwide while building a robust commodity market for the premium quality fiber produced by these operations. We will expand the existing Climate Beneficial™ fiber program: an established, market-proven system for sequestering carbon, regenerating soil health and resilience, improving social equity, and bolstering America's ability to produce fiber. We will strive to achieve a 20-year greenhouse gas (GHG) impact of practices implemented on 330,332 acres during the grant period of at least three million metric tons of CO2e. Non-GHG benefits will include 20% reduction in synthetic N fertilizer on 121,000 acres along with improved soil health, soil organic matter, water holding capacity, infiltration rates, forage production, and yield stability. A newly created, open-source, Carbon Farm Planning and Verification Platform will streamline climate smart agriculture (CSA) planning and verification for producers, verifiers, and supply chain stakeholders alike.

Contact Information: Steve Thompson, Executive Director; National Center for Appropriate Technology; 3040 Continental Drive; Butte, MT 59701; stevet@ncat.org; (406) 494-4572

List of Project Partners: (1) Carbon Cycle Institute; (2) Colorado State University Department of Soil and Crop Sciences; (3) Fibershed; (4) Seed2Shirt; (5) New York Textile Lab

List of Underserved/Minority-Focused Project Partners: Seed2Shirt

Compelling Need for Project: Textile and apparel production accounts for an estimated 4-10% of global carbon emissions, and the industry is moving to meet market demand for improved climate impact across supply chains. Growing concerns about textile-derived microplastics, land-use impacts, and human rights have also prompted an industry-wide shift to seek natural fiber sources with verified benefits to land and climate. Increasingly, traceability and carbon emission goals favor development of regional and national markets for earth-friendly fiber. Cotton (11.7 million U.S. acres) and wool represent enormous opportunities for building carbon-smart commodities. Especially in western states, climate change-fueled drought is challenging the viability of conventional wool and cotton production systems. For example, rangeland production and irrigation potential in the Central Valley of California has plummeted due to precipitous declines in the Sierra Nevada snowpack.

Approach to Minimize Transaction Costs: To minimize transaction costs, we will deliver Carbon Farm Planning on-site and in-person, providing stipends to compensate producers for time spent working with Carbon Farm Planners and their participation in CSA training events. While cost share payments for CSA implementation will be reimbursement-based, we will also offer wrap-around support to underserved producers, including the ability to apply to receive a portion of their payment up-front to facilitate purchase of materials. Overall, producers will receive $17,500,000 in the form of direct payments to offset costs of implementing climate-smart practices. Producers will also receive free training, technical assistance, and Carbon Farm Plans valued at over $2 million.

Approach to Reduce Producer Barriers to Implementing CSAF Practices: We will strengthen and expand an existing successful, regional program and further cultivate the growing market demand for Climate Beneficial™ (CB) fiber. Enhanced technical service capacity will meet rapidly accelerating producer interest in implementing climate-smart practices, while market development activities will build stronger market rewards. This project will grow a national network of Technical Assistance Providers (TAPs) for Carbon Farm Planning: hiring eight TAPs to write approximately 100 Carbon Farm Plans at no cost to producers. Enrolled producers will be eligible to apply for reimbursement-based payments for implementing CSA practices identified in their Carbon Farm Plan (CFP) and will have access to supportive incentives such as regional peer-to-peer producer networks and no-cost technical assistance.

Geographic Focus: California, Montana, Wyoming, South Dakota, North Carolina, New York, Georgia, Tennessee, and Indiana with the eventual goal of expanding nationwide. The focus will be on wool growers operating on pasture, crop, and rangelands and cotton producers farming irrigated croplands, with special support offered to Southeast Black farmers.

Project Management Capacity of Partners: The National Center for Appropriate Technology (NCAT) manages 50-60 federal and non-federal grants, cooperative agreements, and partnerships per year and has frequently partnered with NRCS in the past. NCAT's five-member accounting team stays abreast of federal regulations, using an excellent cost accounting system to tracks expenses by cost categories such as labor, fringe benefits, travel, subcontracts, and materials. Only expenses directly required to meet the scope of work are charged to a project.

- Fibershed's Climate Beneficial™ program in Northern and Central California has enrolled 73 fiber producers who steward over 187,000 acres of rangeland, pasture, and cropland.
- The Carbon Cycle Institute (CCI) has collaborated with public/private organizations to train over 200 technical assistance providers to write CFPs encompassing over 70,000 acres.
- Seed2Shirt has connected over 1,000 BIPOC (Black, Indigenous, and People of Color), beginning, and underserved farmers with key tools and resources, including USDA services.
- The Colorado State University Department of Soil and Crop Sciences has partnered with USDA to create COMET the official GHG quantification tool of USDA.
- The New York Textile Lab is a yarn and textile design company that has created a Carbon Farm Network and whose fiber is verified as Climate Beneficial through the Fibershed Affiliate Program.

II. Plan to Pilot Climate-Smart Agriculture Practices on a Large Scale

To adopt climate-smart agriculture on a large scale, wool and cotton producers need targeted technical service for planning and implementation along with catalytic incentive funding and coordinated market development. Our project will provide all of these.

Over the past six years, Fibershed and CCI have developed a Climate Beneficial™ (CB) verification program that supports producers in accelerating carbon sequestration on their working lands. Producers who participate in the CB program work closely with a Technical Assistance Provider (TAP) to write a Carbon Farm Plan that identifies all potential opportunities for carbon capture through site-specific conservation practices and supportive practices such as

fencing or water development. Plans support the needs and goals of the farm and include climate-smart practices specific to a site's natural resource conditions, ecoregional characteristics and agricultural system, as well as an action plan and timeline for implementation.

Well-established in California, the program facilitates premium markets for CB fiber products grown under verified land management practices that center carbon as the organizing principle for planning and implementation. The result is high-quality textile fiber produced in ways that mitigate the causes of climate change and build farm resilience: increasing soil organic matter, fertility, and water holding capacity while improving crop yields, forage quality, and quantity.

Partnerships between textile companies and fiber processors can transform CB-verified fiber into value-added products that meet the growing demand for climate-smart consumer goods: securing premium prices for producers while ensuring integrity and viability throughout the entire fiber-to-textile supply chain. Producers are incentivized and fairly compensated for their effort, expense, and risks associated with adopting climate-smart practices. There is growing market demand for traceable fiber products with verified GHG benefits. Building on successful market uptake of over 200,000 pounds of CB wool and 2.1 million pounds of CB cotton in just the past year, brand interest and fiber purchase commitments are increasing along with requests from producers for additional technical assistance and transition support in and beyond California.

Project partners will build regional hubs for Carbon Farm Planning and support, balancing each region's potential to scale CB fiber production with market demand and readiness for CB fiber uptake. We will expand CB production of wool and cotton in five strategic regional hubs: two existing CB wool pools in Northern California and New York's Hudson Valley, an established CB cotton producing region in the San Joaquin Valley, and new regional hubs for Southeast Black cotton farmers and Northern Great Plains wool producers.

The Carbon Farm Planning process facilitates adoption of CB practices and lays the groundwork for long-term practice maintenance and carbon stewardship. Carbon farming practices already implemented and verified through the program have drawn down over 17,000 metric tons of CO2e and will sequester approximately 80,000 metric tons CO2e over the next 20 years.

Description of Conservation Practices to be Deployed: Practices identified in Carbon Farm Plans will include the full suite of COMET-Planner conservation practices, such as reduced till and no-till, cover crops, conservation crop rotation, prescribed grazing, and emissions-reducing practices such as nutrient management and irrigation improvements. Over 30 conservation practices in COMET-Planner are known to sequester carbon and improve soil health while providing environmental co-benefits such as improved soil water holding capacity, hydrological function, farm biodiversity, and resilience to climate change impacts.

Implementation of conservation practices will be farm specific. Generally, rangeland and pasture CSA practices for wool growers may include forage and biomass planting, prescribed grazing, rangeland and pasture seeding, riparian forest buffers and herbaceous cover, compost application, and various agroforestry practices (e.g., silvopasture, hedgerow planting, windbreaks, and shelterbelts). CSA practices for dry or irrigated cropland may include reduced tillage, strip tillage, multi-species cover cropping, compost application, nutrient management, riparian restoration, and various agroforestry practices. Most of these will require minimal ground disturbance, but a few practices that might involve ground disturbance below the plow

zone are fencing for prescribed grazing, underground piping to establish water sources in prescribed grazing systems, and tree planting to install windbreaks/shelterbelts, trees/shrubs, silvopasture, riparian buffers, and other woody plantings.

All practices will be implemented on land currently used for agriculture, none of our project activities will involve confined animal feeding operations (CAFOs), and all practices will meet or at least be strongly consistent with NRCS practice standards. These standards have always been the basis for Carbon Farm Planning. We plan to promote producer innovation and may find ourselves recommending certain activities in the Carbon Farm Planning framework that have a well-known greenhouse gas benefit and we believe can be justified under the framework of existing NRCS practices. In instances where a NRCS practice standard does not yet exist, we will submit to USDA a request for modification or approval.

NRCS Conservation Practice Standards that will be used include, but are not limited to, those that are quantifiable through COMET-Planner, as well as practices identified in the USDA NRCS Climate-Smart Agriculture and Forestry (CSAF) Activities List 2023. In instances where a practice is not found in COMET-Planner, USDA Entity Scale Methods will be used to quantify GHG benefit. The following two lists include all practices that might conceivably be included in a Carbon Farm Plan and incentivized through this project, including facilitating practices that have been identified as necessary for the successful implementation of practices with direct GHG benefit. For example, 528-Prescribed Grazing might require facilitating practices such as 382-Fence, 516-Livestock Pipeline and 614-Watering Facility.

List of Practices with Direct GHG Benefit

327-Conservation Cover; 328-Conservation Crop Rotation; 329-Residue and Tillage Management, No Till; 332-Contour Buffer Strips; 340-Cover Crops; 345-Residue and Tillage Management, Reduced Till; 386-Field Borders; 393-Filter Strips; 412-Grassed Waterways; 484-Mulching; 585-Stripcropping; 601-Vegetative Barrier; 603-Herbaceous Wind Barrier; 590-Nutrient Management; 512-Pasture and Hay Planting; 528-Prescribed Grazing; E528P-Bale or Swath Grazing; 550-Range Planting; 311-Alley Cropping; 342-Critical Area Planting; 379-Forest Farming; 380-Windbreak and Shelterbelt Establishment; 650-Windbreak and Shelterbelt Renovation; 381-Silvopasture; 390-Riparian Herbaceous Cover; 391-Riparian Forest Buffer; 420- Wildlife Habitat Planting; 422-Hedgerow Planting; 612-Tree/Shrub Establishment; 645-Upland Wildlife Habitat Management; 666-Forest Stand Improvement; 372-Combustion System Improvement; 374-Energy Efficient Agricultural Operation; 672-Energy Efficient Building Envelope; 670-Energy Efficient Lighting System; 657-Wetland Restoration; 317-Compost Facility; 336-Soil Carbon Amendment; 511-Forage Harvest Management; 659-Wetland Enhancement

List of Supportive Practices

449-Irrigation Water Management; 382-Fence; 516-Livestock pipeline; 614-Watering Facilities.

The 100 farms enrolled will manage a combined total of 1,971,000 million acres. We anticipate

writing Carbon Farm Plans that encompass all managed acres and over the 5-year lifetime of this project we anticipate that enrolled farms will implement conservation practices in their Carbon Farm Plans on a combined total of 330,332 acres. When we say that practices will be implemented on 330,332 acres we are counting only (strictly and narrowly) the acres where those practices will be physically located. To give the most accurate possible description of our activities and their expected greenhouse gas benefits, we have been careful to distinguish between (1) the acreage where a practice is actually implemented, (2) the acreage that will be affected or impacted by these practices; and (3) the total acreage of a participating farming operation. Most practices have a holistic effect, causing greenhouse gas reductions on surrounding acreage, often (but not always) affecting the entire acreage of the farm or ranch.

Plan to Recruit Producers and Landowners: All project partners will recruit participants through their existing relationships, using press releases, podcasts, blog posts, demo reels, videos and NCAT's *Weekly Harvest* newsletter, which goes out to 20,000 subscribers. Many producers have been waiting in the CB pipeline for years, and we will recruit others who have a sense of urgency to begin implementing CSA practices.

The CB market development program will serve as another platform to recruit new producers. Fibershed and the New York Textile Lab will actively deploy annual marketing and education to textile brands as a method of onboarding brands and securing uptake contracts that will expand the number of growers and acreage supported. We will grow acreage based on market demand, protecting producers from incurring high initial production costs before they can receive price premiums that offset those costs. Our goal is to market fiber from 1,971,000 million acres, including 70,000 head of sheep, and 100 producers within five years.

Plan to Provide Technical Assistance, Outreach, and Training: Project partners will hire technical assistance providers in each of the five regional hubs as well as Carbon Farm Planning Coordinators who will coordinate and build regional carbon farm planning, implementation, and verification capacity. TAPs and Coordinators will be trained in Carbon Farm Planning by CCI with support from NCAT. Training will consist of a three-part series pairing interactive webinars with the Carbon Farm Planning Curriculum Platform developed by CCI, the Colorado State University (CSU) COMET team, and NRCS. Training provides essential background on the ecological significance of carbon farming and knowledge, tools, and ongoing support needed to write Carbon Farm Plans. Upon training completion, TAPs and Coordinators will become Certified Carbon Farm Planners who will provide specialized technical assistance to enrolled producers. The new Carbon Farm Planners will receive periodic "boots on the ground" field training and ongoing technical support from CCI and NCAT as they write their first plans. Planners will also engage with each other through the CCI Carbon Farming Planner Google Group and CCI's monthly "Café Hours" for continuing education.

Certified Carbon Farm Planners will work with producers to write Carbon Farm Plans at no cost to the producers. The Carbon Farm Planning process follows the NRCS Three Phase Planning Process. Carbon Farm Planners in each of the five regional hubs will discuss goals and expectations with each producer, conduct ecological site and soil assessments, identify all opportunities for carbon capture and storage on farm, map and quantify the GHG benefit of recommended practices, and build tables of recommended practices that include specific monitoring parameters. All of this information is compiled into a Carbon Farm Plan that the

producer can use to make initial implementation decisions and determine a timeline for implementing proposed practices. Planners will work closely with each producer to support adoption of climate-smart practices on as many farm acres as practically feasible within the 5-year project timeline (and beyond).

Planners will visit each farm at least twice per year to provide ongoing technical assistance, conduct monitoring, verify practice implementation, and facilitate connection to local NRCS Resource Conservationists, Extension agents, conservation district staff, and state soil health coalitions for additional technical assistance and funding support. Planners will also connect producers to farm business planning tools, marketing and branding assistance, risk mitigation and disaster preparedness guides, and provide information on compatible incentive programs for

State conservation practice standards will be used to plan, design and install conservation practices. Carbon Farm Planners will provide producers with technical assistance or connect producers with their local technical service provider in order to support implementation per practice standards. Carbon Farm Planners will conduct in-person and virtual site visits to ensure adopted practices meet NRCS practice standards. Only practices that have been verified by a Planner will be eligible for incentive payments through this project. We will build regional peer-to-peer producer networks to foster information exchange and regionally customized trainings and workshops that further incentivize producer participation and CSA practice implementation. Peer-to-peer networks will be open to all regional producers, whether or not they are enrolled in this program, and will foster wide exchange of useful information for anyone interested in transitioning to CSA practices. These networks may receive support from NCAT's successful national Soil for Water program (soilforwater.org), which facilitates peer-to-peer learning and provides group discounts on services such as soil testing and grazing planning software.

Seed2Shirt, Fibershed, and other partners will ensure that Black producers have access to the full suite of services and resources of the Climate Beneficial program. Additional support for these producers will include stipends for up to two members of each farm to attend a virtual CCI-led Carbon Farm Planning training, cost share for soil testing, "farm-to-market" support aligned with Seed2Shirt's market access training, farm-to-market business operations training, property succession/heirs training, and attendance at a Marketplace Development Exchange Meeting, where industry professionals and CB producers identify joint solutions to shared challenges.

In Year 3 of this project, CCI will introduce a new planning tool: the Carbon Farm Planning and Verification Portal ("Portal" or "CFPVP"), developed with the CSU COMET Team. The Portal will link mapping and data management with COMET-Planner and other quantification tools, filling a need for streamlining Carbon Farm Planning while still supporting a robust planning process. The Portal will play a central role in integrating practice recommendations with monitoring and verification data tracking, also offering database and reporting capabilities. Planners will receive on-line training and field technical support on using the Portal.

Plan to Provide Financial Assistance to Producers and Landowners: Enrolled producers will receive direct payments to implement CSA practices identified in their CFPs. Three catalytic funds will incentivize producers: (1) An Implementation Fund will provide cost share reimbursements similar to the NRCS EQIP program but not duplicating payments from any USDA program. (2) A Producer Stipend Fund will compensate producers for time dedicated to Carbon Farm Planning and sharing their knowledge and skills through peer-to-peer mentoring or

public presentations. (3) A Transition Fund will incentivize Black commodity farmers to transition to CB cotton production in their crop rotations. These producers will benefit from a CFP and associated technical support, paired with access to the Climate Beneficial™ Fiber markets. Seed2Shirt will manage the Transition Fund to help with conversion costs such as USDA certified organic seed and free wrap-around training to support getting started in CB cotton production. Access to peer-to-peer producer networks will ensure successful transitions.

The Implementation Fund pool will establish amounts for each of the five project regions based on the number of farms, targeted acreage for CSA implementation, anticipated CSA practices, estimated GHG benefit in each region, and NRCS conservation practice cost estimates and pay rates. NCAT will administer the Implementation Fund, with regional review and ranking protocol allowing a degree of regional self-governance to meet the needs of each region.

Producers will apply for reimbursement-based payments from the Implementation Fund for practices prioritized in their CFPs. Regional Implementation Teams will score applications using a ranking tool similar to the NRCS Conservation Assessment Ranking Tool, prioritizing practices with greatest GHG benefit, as well as other environmental and adaptation benefits. An impartial National Review Team will make final funding decisions based on practice impact. Producers will be required to sign an attestation asserting that they are not receiving payments or other benefits for the same practices on the same land under any other USDA conservation program, including enrollment in other Climate Smart Projects and all other USDA Programs.

We will aggressively leverage other state and Federal funding, as well as philanthropic funding, to incentivize implementation of practices in the Carbon Farm Plan. These plans are being implemented in an increasingly dynamic funding and market-driven landscape that favors agricultural products grown using practices with proven GHG benefit.

Fiber growers in the CB network will receive no-cost marketplace evaluation support and personalized strategies and training for "to-market" placement to sell directly to CB supportive buyers. We will also give CB fiber growers stipends to attend and participate in regional Climate Beneficial™ marketplace buyers' forum events.

More Detailed Explanation of the Basis for Determining Payment Amounts: Enrolled producers will be eligible to receive direct payments to increase climate smart agricultural practices on their properties through an Implementation Fund, a Producer Stipend Fund, and a Transition Fund. Each of these is explained below:

The $17,579,500 **Implementation Fund** will be the funding source for implementing the climate beneficial practices in this project, providing cost-share reimbursements to producers for implementing high priority actions identified in their Carbon Farm Plans. Wherever possible, the cost-share program will utilize existing NRCS standards, practices, processes, and cost-share rates as described in the state-specific NRCS Field Office Technical Guides. For innovative CSA practices being trialed through this project, we will engage technical experts from within and outside our team to draft appropriate Conservation Practice Standards Information (https://www.nrcs.usda.gov/getting-assistance/conservation-practices). Disbursement of cost-share funds will be decided through an impartial, transparent, outcome-based Climate-Smart Fiber Conservation and Equity Ranking Tool, patterned after NRCS's Conservation Assessment Ranking Tools. Ranking criteria will be restricted to meeting the specific deliverables of this

project, i.e., GHG benefits and engaging underserved producers in climate-smart agriculture. Producer payments will incentivize the highest ranked climate beneficial practices.

The $280,5000 **Producer Stipend Fund** will compensate producers for time dedicated to Carbon Farm Planning and to sharing their knowledge and skills through peer-to-peer mentoring or public presentations. Each farm or ranch enrolled in this project will be eligible to receive an average of $2,000 in compensation, with the exact amount dependent upon time expended and the type of engagement.

The $140,000 **Transition Fund** will incentivize 10-14 Black commodity farmers to transition to Climate Beneficial cotton production in their crop rotations. These producers will benefit from a CFP and associated technical support, paired with access to the Climate Beneficial™ Fiber markets. Black farmers will also have access to training and on-farm advising on best practices of implementation of carbon farming, access to peer-to-peer exchanges where farmers to share best practices through onsite or virtual events, and direct support with market placement.

Plan to Enroll Underserved and Small Producers: This project aims to meet the equity goals of the Justice40 Initiative, directing at least 40% of project benefits to small, beginning, socially disadvantaged, veteran, limited resource, and women farmers, as well as producers growing specialty crops. We anticipate that at least 600 of these producers will participate, and we aim to provide $7 million to them in direct technical and financial assistance.

Our approach is specifically designed to overcome the historic under-representation of small scale, traditionally underserved farmers, and especially Black cotton producers, within conservation programs. Black farmers have borne the burden of centuries of systemic, racially biased land loss, succession hurdles, resource constraints, and market access issues. Experimenting with new crops or practices is not a realistic option for most Black farmers, who face persistent struggles just to maintain their existence. Barriers to adopting CSA practices include continually eroding access to acreage, heirs' succession, limited trusted technical assistance, and lack of unimpeded access to market-based financial incentives. Systemic lack of access to necessary resources, such as non-extractive capital, equipment, and training, are other benchmark hurdles Black farmers face in the U.S. — and this includes the Black cotton farmer. Additionally, Black farmers and Black communities more broadly are disproportionately impacted by the consequences of climate change. This exclusion and lack of support can best be corrected by a true focus on farm-forward solutions specific to the needs and challenges faced by Black farmers.

Seed2Shirt will continue supporting and recruiting Black farmers into climate-smart agriculture as well as Black commodity farmers who are interested in transitioning to CSA practices including Climate Beneficial™ cotton production. We will develop a pipeline of Black producers who wish to adopt climate-smart agricultural practices and participate in Carbon Farm Planning. A Transition Fund will support the conversion to CB cotton production for Black farmers who do not yet have cotton in their rotation. Our project will also prioritize supportive engagement with Native American and other underserved wool growers.

At-a-Glance: Plan to Pilot Climate-Smart Agriculture (CSA) Practices.

Activities & Partners

- Hire CSA Planners and Coordinators; recruit wool and cotton producers; build regional peer-to-peer producer networks. (*NCAT, Fibershed, CCI, Seed2Shirt, NY Textile Lab)*
- Write CFPs and provide ongoing, on-farm technical assistance to support CSA practice implementation. (*Planners, Coordinators)*
- Provide cost-share payments to producers to implement CSA practices. (*NCAT)*
- Provide BIPOC and underserved farmers with supportive wrap-around assistance and incentives. (*Seed2Shirt, NY Textile Lab, Fibershed, CCI, NCAT*)
- Conduct trainings and boots-on-the-ground technical assistance for trained Planners. *(CCI)*

Objective 1: Accelerate adoption of CSA practices among wool and cotton fiber producers.

Outcomes

- 8 Planners and 3 Regional Coordinators hired and fully trained to write, implement, and verify Carbon Farm Plans.
- 79 wool farms on >1,891,000 acres with at least 70,000 head of sheep enrolled.
- 21 cotton farms on 80,000 acres enrolled.
- 100 CFPs written for Climate Beneficial fiber producers.
- Approximately $17,500,000 distributed to producers to implement CSA practices in their CFP.
- 5 regional peer-to-peer producer networking communities created and facilitated.

Objective 2: Improved efficiency, productivity, and sustainability of underserved and small producers.

Outcomes

- Aim to direct 40% of all technical assistance and training to underserved and small producers.
- At least 11 Black farmers recruited, enrolled, and supported by project partner Seed2Shirt.

Objective 3: Nationwide reach for Carbon Farm Planning and the Fibershed Climate Beneficial™ Fiber certification and verification program.

Outcomes

- Three virtual trainings conducted for Carbon Farm Planning with a total of 150 attendees and two in-person "boots on the ground" site visit trainings with technical assistance.
- 30 regional attendees will go on to write Carbon Farm Plans in the 5-year grant period.

III. Measurement/Quantification, Monitoring, Reporting, and Verification (MMRV) Plan

Approach to Greenhouse Gas Benefit Quantification: The Climate Beneficial™ (CB) program uses a reliable and robust practice-based protocol to quantify GHG benefits, monitor implementation of practices, verify practice success, and record GHG benefits. In the initial Opportunity Assessment Phase, the Planner works with the producer to develop a comprehensive Carbon Farm Plan for the operation, identifying as many potential opportunities as possible for implementing CSA practices given site constraints and management considerations. The Carbon Farm Planning process is modeled after the NRCS conservation planning process and uses a whole-farm planning approach to ensure that recommended practices represent real opportunities for GHG impact, are site- and management- specific, and have a high likelihood of success. This planning phase, guided by a trained Planner, is also an important way to build awareness and buy-in with the producer.

The Carbon Farm Planning process will be greatly facilitated by the Carbon Farm Planning and Verification Portal, which will enable Planners to map and describe all recommended practices in one integrated open-source platform, including spatial, quantitative, and qualitative data for each recommended practice (e.g., location, dimensions, and specific design requirements). 6 Table 1 in the Appendix describes the core functions and capabilities of the Portal.

Through the planning process, producers prioritize practices they wish to implement based on potential GHG benefit, alignment with farm goals, and feasibility. Once a recommended practice is entered into the Portal, the Portal automatically quantifies potential GHG benefit of that practice by calculating its dimensions and querying practice- and location-specific GHG factors, including estimated annual rate of carbon sequestration and avoided GHG emissions. Table 2 in the Appendix describes the different GHG quantification methods to be used for specific practices and fiber systems. Briefly: COMET-Planner (http://comet-planner.com/) will be used for many soil-based rangeland (wool) practices; COMET-Planner and the USDA Entity Scale Methods (Eve et al. 2014) will be used for many cropland (cotton) practices, and COMET-Planner, i-Tree (https://www.itreetools.org/) and the COMET-Farm tool (https://comet-farm.com/) will be used for agroforestry practices. For quantification methods requiring detailed input and expertise (e.g., COMET-Farm, i-Tree), CCI will work with the Planner to parameterize

the model and develop appropriate GHG estimates for that specific practice. When neither COMET-Planner nor other models provide needed data, we will consult regionally relevant peer-reviewed research. As partners on this project, the CSU COMET-Planner developers will receive immediate feedback on data that is missing for practices in specific regions.

The pace of implementing recommended practices varies widely. In this proposal, we have conservatively estimated GHG benefits based on an assumption that recommended practices will be implemented on 16% of acreage during the five-year project period. GHG benefits will continue to accumulate beyond the five-year timeline of the project. In fact, our experience is that, once implemented, many of these practices will continue for decades, multiplying the GHG benefits of each dollar invested and steadily reducing the cost per metric ton of CO_2e. Carbon accumulation in soils will eventually plateau although other benefits such as GHG emissions reductions and non-GHG environmental benefits will continue indefinitely.

Climate-smart agricultural practices also generate non-GHG environmental co-benefits, such as improved soil structure and function, increased soil fertility, enhanced above- and below-ground biodiversity, restored native wildlife habitat, increased resilience to flood and drought, and enhanced water quality. Where appropriate, we will connect producers to programs that address resource and wildlife concerns. For example, Northern Great Plains wool growers may wish to engage with the USDA/USDI Sage Grouse Initiative. This proactive conservation program offers customized grazing plans that can be appended to the Carbon Farm Plan to support improved nesting, rearing, and wintering habitat for sage grouse as well as improved forage production and livestock performance. As another example, wool and cotton growers may benefit from participation in NCAT's NRCS-funded Soil for Water program (soilforwater.org), which supports the regenerative agriculture community in efforts to catch and hold more water in soils through peer-to-peer learning and adaptive management following soil health principles.

Approach to Monitoring Practice Implementation: Implementation will be monitored by a trained Planner, ensuring that practices are implemented in accordance with state conservation practice standard criteria. The Implementation Monitoring Phase begins when a producer implements one or more practices recommended in their Carbon Farm Plan. The Planner will conduct a site visit to ensure practices meet NRCS practices standards and verify implementation dimensions. Only practices that have been verified and quantified by a Planner will be eligible for incentive payments through this project. Monitoring visits by Planners will provide additional opportunities for producers to ask questions and receive support in ongoing maintenance and implementation of practices. Planners monitor each practice according to practice-specific methods and monitoring schedules. Many practices require only one field visit to confirm successful implementation (e.g., cover crop establishment, windbreak installation). For practices requiring long term monitoring (e.g., agroforestry or no-till projects), the Planner will return to the site on a multi-year, practice-specific monitoring schedule to verify ongoing maintenance and success of the practice.

Planners will use the Portal to record results of each monitoring visit for each practice: recording the practices as having been implemented, making any adjustments necessary to recorded dimensions, confirming modeled GHG benefits of the practice as implemented and adding pertinent details such as cost of implementation, species planted, and planting density.
Approach to Reporting and Tracking of Greenhouse Gas Benefits: The Portal database architecture will allow for anticipated and realized GHG benefits to be queried by project,

region, commodity, or dollar expended, allowing these data to be aggregated and analyzed at various scales. To determine GHG benefits by dollar expended, the cost of implementation will be recorded for each practice upon verification of implementation. The anticipated longevity of GHG benefits for each specific practice will be determined by regional and national experts and integrated into the Portal's accounting architecture. The Portal database will be structured to enable supply chain and market development stakeholders to access relevant verification and GHG data while ensuring privacy and anonymity of the producers and their operations.

Ownership of GHG benefits (such as carbon credits) will remain in the hands of producers; this project will not generate or transfer ownership of carbon credits through the supply chain. We will provide communication that is typically lacking between growers and the market supply chain, providing brands with verification of projected GHG reductions and implementation data (such as acreage and/or linear feet) that can be used in communications and marketing.

Approach to Verification of Greenhouse Gas Benefits: The rigorous and proven Climate Beneficial verification process requires three main steps: (1) An enrolled producer works with a TAP to develop a Carbon Farm Plan. (2) The producer annually implements carbon farming practices identified through the Carbon Farm Planning process. (3) A TAP annually verifies that practices have been implemented in accordance with relevant NRCS Conservation Practice Standards or other criteria identified through the planning process.

For soil-based practices in grazing systems (wool), impact verification will use trends in forage productivity as an indicator of trends in soil organic carbon. The extremely high spatial variability in soil organic carbon in rangeland soils, along with the need for long-term sampling data, make direct soil sampling infeasible as a verification method for these practices. Annual forage productivity will be obtained using publicly available Landsat NDVI-based estimates (Jones et al. 2021), standardized per unit of annual precipitation. Post-implementation trends in precipitation-corrected forage productivity will be compared to a pre-implementation baseline, with increases in productivity over time compared to baseline trends indicating an increase in soil carbon concentrations due to the strong role of organic carbon in soil water infiltration and water holding capacity (Derner et al. 2018).

For soil-based practices in cropping systems (cotton), impact verification will be based on soil samples collected by the Planner over time. Prior to practice implementation, and every five years thereafter, the Planner will collect soil samples and bulk density measurements according to region-specific sampling protocols developed by regional experts with support from CCI. Repeated samples will be taken from the same GPS locations and using the same sampling protocols over time. An increasing trend in soil carbon over time will indicate carbon sequestered by the implemented practices.

For agroforestry practices in grazing and cropping systems, visual inspections and photography will be the basis of practice verification. Planners will verify the ongoing success of agroforestry practices by inspecting plantings, maintenance, and plant mortality rates. Planners will carry out multi-year verification on the same schedule as monitoring visits, recording photographs of practices over time in the Carbon Farm Planning and Verification Portal. Table 2 below describes verification methods for other practices, such as compost applications to grazing lands and nutrient management on crop lands. Planners will use the Portal to record verification data, which will be made available to the CSU COMET Team for model validation purposes. While

not strictly speaking a COMET tool, the Portal will include COMET Planner as a function to quantify the greenhouse gas benefits of conservation practices.

Agreement to Participate in Partnerships Network: We agree to designate a project representative to serve as a member of the "USDA Partnerships for Climate-Smart Commodities Learning Network" and participate in virtual and in-person meetings. The project team looks forward to contributing to and learning from a community of fellow Partnerships for Climate-Smart Commodities awardees.

At-a-Glance: Plan to Measure, Monitor, Report and Verify GHG/Carbon

Activities & Partners

- Document baseline conditions and practices of enrolled farms prior to implementing Climate Beneficial (CB) practices; conduct on-farm and ranch monitoring and verification on practice-specific, regularly scheduled intervals. (*Planners)*
- Develop and deploy a Carbon Farm Planning and Verification Portal; utilize Portal for data collection, analyses, and reporting. (*CCI, CSU, NCAT, Trainer*)
- Connect producers to non-GHG benefit programs that promote CSA practices and support accelerated adoption of CSA practices. (*Planners, Coordinators)*

Objective 1: Improve on-the-ground technical capacity for planning, monitoring, and verification of GHG and non-GHG benefits associated with Carbon Farm Plan implementation.

Outcomes

- 100 farms and ranches reached.
- 330,332 acres put into direct CSA practice management.
- 100 CFPs incorporate streamlined planning, quantification, monitoring, verifying, and reporting through the Portal tool.

Objective 2: Accurately quantify the amount and longevity of GHG benefits of CSA practices implemented.

Outcomes

- 3,100,000 metric tons of CO_2e benefit over the 20-year lifespan of GHG impact: 2,370,000 metric tons CO_2e for wool and 730,000 total metric tons CO_2e for cotton.
- Average of 31,000 metric tons CO_2e per farm.
- 10 metric tons CO_2e per $100 invested by USDA.

Objective 3: Accurately quantify non-GHG benefits of CSA practices.

Outcomes

- 0.5-1.8% avg. increase in soil organic matter on 334,000 acres over 20 years, with increases in soil water-holding capacity, infiltration rates, forage production, yield stability.
- 20% reduction in synthetic fertilizer on 121,000 acres.
- 9,400 acres with habitat and biodiversity improvements.

IV. Plan to Develop and Expand Markets for Climate-Smart Commodities

Partnerships Designed to Market Climate Beneficial™ Fiber: Market expansion will build on successful market uptake already established in California and New York. CB wool and cotton have been marketed to commercial-scale textile companies over the past two years through two programs developed by Fibershed. The **CB Fiber Pool** is now uptaking wool from 84,000 acres enrolled in Northern California by five producers with 21,000 sheep and four growers managing 923 acres in New York's Hudson Valley, currently serving 46 apparel, home textile, designer, and artisan brands that are purchasing and using CB-verified wool in their products. The **California Cotton and Climate Coalition (C4)** has eight participating textile brands who have signed pre-harvest purchase agreements to support partnering farms' conversion practices, with carbon farming practices implemented on 6% of the 10,000 acres of irrigated croplands enrolled in the program. In 2021, 1.2 million pounds of cotton were purchased through the C4 program. Seed2Shirt is developing relationships and identifying market uptake potential with two farms in the Southeast representing about 1.6 million pounds of cotton.

Our project will expand existing partnerships with corporate brands already sourcing Climate Beneficial™ wool and cotton, such as Coach and The North Face, while cultivating new relationships. We will also strengthen public-private partnerships to accelerate the production of wool and cotton grown using climate-smart practices and promote these commodities in markets. For example, the CB Verification program has built and leveraged strong relationships with California Resource Conservation Districts and NRCS offices to provide wool and cotton producers with Carbon Farm Planning as well as continued technical assistance for CFP implementation, monitoring, and verification of GHG benefit.

Our comprehensive market development activities will be augmented by annual on-farm textile brand education and producer networking events to bring together farmer participants and industry procurement professionals in a collaborative setting to build support and understanding of needs across the supply chain. We will include events featuring each of the regions and producer groups within this project: CA wool growers and cotton producers; Northern Great Plains wool growers; Southeast cotton producers; NY wool growers. These events, along with other ongoing communication and collaborative meetings, will build long-term, mutually beneficial partnerships between fiber producers and buyers/brands.

We will reinforce technical support that producers receive to maximize fiber quality, including guidance on best practices to improve fiber quality and handling for their products. These events will also complement ongoing market development targeting uptake partners for other products of the enrolled farms and ranches, such as meat, hides, produce, and other crops on the same enrolled acreage. Fibershed's brand coordinator and other staff at Fibershed, New York Textile Lab, and Seed2Shirt will conduct outreach, education, and networking to cultivate market support for other products in the crop rotation or farm systems that are integrated with fiber production.

Detailed Description of Marketing Plan: Representatives from each region comprising a marketing leadership team will coordinate activities and timeline for outreach and marketing activities, and will annually review the marketing activities and plan to evaluate whether the goals of the plan have been met and what adjustments are needed in the following year. We will generate annual market reports tracking the following metrics:

- Annual outreach activities

- Number of new brands and total brands engaged in outreach activities including farm tours, webinars, in-person and virtual presentations and meetings
- Number of new brands and total brands engaged in purchase agreements for Climate Beneficial™ verified fiber products
- Volume of cotton and wool sold through the Climate Beneficial verified supply chain
- Annual marketing activities will include on-farm tours, speaker panels, workshops, and other targeted outreach events, with on-farm events customized and tailored to each production region. Digital marketing activities will include: online marketing of Climate Beneficial fibers and fiber products, articles and other publications, newsletters, email list development for customized industry sectors, podcasts, social media platforms (IG/ FB/ LinkedIn / TikTok).

Our marketing plan includes four key components described in detail below:

1. Partnership Development: As described in the original Project Narrative, existing partnerships for marketing climate smart cotton and wool include: Fibershed, the NY Textile Lab, Seed2Shirt, Torus Circularity, and over 50 enrolled brands. The existing Climate Beneficial Fiber Pool currently has established partnerships with 46 apparel, home textile, designer and artisan brands, who are already purchasing Climate Beneficial wool and cotton annually. We will expand our partnerships to textile brands of multiple sizes through providing companies with pre-competitive supply chain support– including the co-development of value-added yarns.

2. Tracking Climate Beneficial commodities through the supply chain: All collaborating partners will implement a tagging and supply chain validation process. Our partnership with Torus Circularity will support customization of cotton bale tracking software to efficiently monitor and utilize the entire harvest from participating farms. Other innovative supply chain tracking tools (such as DNA markers and innovative software) will be reviewed and implemented as appropriate.

3. Economic benefits for producers: As described in the original Project Narrative, the Climate Beneficial Fiber program has, within its pilot stage, provided growers with an average of $20 more per ewe and depending on the commodity pricing of cotton– an average of 48% above that commodity pricing. The increase in global cotton prices is a factor in determining the most appropriate market tolerant premiums. Our project will evaluate the costs to implement carbon farming within our partnering regions and continually refine premiums across the grant period.

4. Post-project potential: Over the five year period, project partners will build carbon farm planning and implementation capacity within each region, while constructing a centralized online portal to enhance the transparent sharing of data between working farms/ranches and supply chain uptake partners. Project partners will transition over the course of the grant period to a more predominantly market supported program, enabling the program to become increasingly self-sustaining. The long-term viability of these efforts is reliant upon strategic development among regional, state, and federal partners to align and target investments in regional textile milling systems. Fiber processing will, in many cases, need to be reshored to fully realize the economic benefit of climate-smart domestic fiber systems. Members of our project team are directly engaged in economic development work to support the establishment of this needed fiber processing infrastructure.

Plan to Track Climate-Smart Commodities through the Supply Chain: The Climate Beneficial™ Verification Program quantifies information about carbon sequestration potential and verified practice implementation impacts at a field or farm level and makes this information available to fiber purchasers. The Carbon Farm Planning and Verification Portal developed through our project will improve tracking and delivery of this information, providing reporting at the farm scale for use by producers, verifiers, buyers, and market partners.

The ability to maintain tracking of individual bales of fiber from farm gate through all stages of processing and delivery to customers is critical for this program. For cotton, bale identification and quality data must be attributed at the gin and tracked across the supply chain to ensure that individual bales with varying quality specifications are accurately traced from field to mill. This project will support customization of cotton bale tracking software to efficiently monitor and utilize the entire harvest from all participating farms and ensure that field-level identity of processed fiber is maintained across the supply chain.

In the CB framework, ownership of GHG benefit is not transferred through the supply chain. Instead, premium pricing reflects a higher value of the CB commodity: offsetting embedded costs of climate-smart practices implemented by producers. The farm retains the inherent and embodied value of the GHG and ecosystem benefits, and the producer has verification of these benefits to use in negotiating prices with buyers. The benefits remain tied to the land base, and support for this internalized benefit is carried across the supply chain. To ensure the integrity of CB practices throughout the supply chain, we will develop legally binding communication agreements to accompany all purchase agreements developed in the program. Templates for the legal documents developed in this project will be made available open source for use elsewhere.

Estimated Economic Benefits for Participating Producers: The CB Fiber pilot program has provided growers substantial economic benefit, provided textile brands access to domestic natural fiber commodities, and has already established climate benefits that have been monitored, verified, and reported. Within each fiber commodity and region, we help producers negotiate a price premium that provides enhanced commodity value for Climate Beneficial fiber while building stronger and more resilient direct market relationships. Our approach is informed by market pricing thresholds and production costs that include the price of Carbon Farm Planning and implementation.

CB wool growers who are currently enrolled in the program receive greasy wool price premiums tied to their wool quality and annually verified implementation of additional practices within their CFPs. CB wool growers receive an average of $20 per ewe per year net revenue gain on their flocks. A portion of the price premium has typically been allocated to cost-share on new CSA practice implementation, supporting the ongoing and deepening value of the wool in association with climate-smart land stewardship.

Cotton growers who are currently implementing CFPs receive premium pricing that averages 48% above current cotton commodity pricing. CFP implementation costs are currently being determined in cotton systems in our first pilot demonstration farms in the San Joaquin Valley of California. Growers are seeking multi-year contracts where production costs have been fully analyzed across multiple production cycles. Fibershed is currently working with growers to develop a price per pound that can persist across multiple years, cover production costs, and

provide a premium for the work to implement carbon farming. Rapidly escalating global cotton prices are also a factor in determining appropriate market tolerant premiums.

Post-Project Potential: Building Carbon Farm Planner capacity in five regions will greatly increase producer engagement and practice implementation for long-term impact. Educational materials and curricula developed with this grant will be strategically deployed by CCI and NCAT throughout the country. The open-source Carbon Farm Planning and Verification Portal we develop will facilitate efficient Carbon Farm Planning and verification across the nation.

This pilot project will provide invaluable lessons to inform future USDA actions to encourage climate-smart fiber commodities. After the five-year period of this grant, participating farms and ranches (especially those enrolled in the first cohort) will have achieved refinement of protocols for new practices and groups of practices as well as improved soil carbon levels such that the continuation of CSA practices is likely, especially given the expansion of markets and premium pricing that is dependent upon that continuation. The project partners have the capacity to scale up rapidly to meet growing market demand.

This program will also support movement toward organic farming practices, as these are more easily achieved by farmers after a period of building soil and ecosystem health. CB verification and climate-smart farming embody environmentally centered farm practices that may increase valuable ecosystem services, providing an even greater market position. Planners will connect interested producers to USDA National Organic Program workshops and programs on transitioning to organic, with touch points on how organic methods and certification are related to applicable practices from their CSA training.

Project partners will develop a plan for transitioning into a self-sustaining and more predominantly market-supported program. We will explore a co-op model for pooling CB commodity fiber, using market premium pricing to cover administrative and core support costs.

The long-term viability of the program will include ongoing strategic development among regional, state, and federal partners (including USDA) regarding investments in regional textile milling systems. Fiber processing must be increasingly re-shored to fully access the economic benefit for farmers and to fully realize the potential of climate-smart domestic fiber systems.

At-a-Glance Plan to Develop and Expand Markets

Activities & Partners

- Deploy educational collateral for market partners including textile brands, buyers, and designers; contractually match supply and demand to generate security for producers adopting new CSA practices; develop domestic supply chain agreements and fiber bale tracking protocols for farm-forward textile development; develop legally binding purchase agreements and communication agreements. (*Fibershed)*
- Annually report impact for textile brands through the Portal; host on-farm textile brand education and producer networking events. (*Fibershed, NY Textile Lab, Seed2Shirt)*

Objective 1: Establish market-driven incentivization of commodity fibers grown with CSA practices.

Outcomes

- Develop open-source, legally binding templates for purchase agreement and communication agreement.
- Develop and implement customized tracking software for cotton bales to promote farm-forward marketing & supply chain traceability.

Objective 2: Pilot a robust, full life-cycle system that ensures climate beneficial fiber producers receive enhanced market value.

Outcomes

- CB wool growers receive $20 average per ewe per year net revenue gain.
- CB cotton producers receive 50% average price premium over conventional commodity cotton.

Detail About the Timing of Project Expenses

Year 1

- New staff and contractors are recruited, hired, trained in Carbon Farm Planning, and fully grounded in the shared goals, values, practices, and process of this project.
- Carbon Cycle Institute conducts a virtual Carbon Farm Planning Training and Curriculum for newly hired Planners and key project partners.
- The producer application and applicant scoring rubric will be developed to evaluate and prioritize farmer and rancher enrollment in the Climate Beneficial Fiber Project.
- A conservation and equity ranking tool – designed specifically to achieve the goals of this project and patterned after NRCS's Conservation Assessment Ranking Tools – will be developed, refined through peer and expert review, and adopted as the process for effectively apportioning cost-share payments made to producers.
- Regionally appropriate Producer Incentive payment rates and schedules will be developed, reviewed, and refined in consultation with local, state, and/or regional NRCS staff. These payment rates and schedules will generally align with existing, local NRCS payment schedules but may offer either higher or lower cost-share.
- Producer agreements for participation in the project and to receive cost-share payments will be developed. The agreements will include a binding self-attestation that producers are receiving no other federal payment for the specific project for which they are requesting cost-share (a "no double-dipping" clause).
- Each Carbon Farm Planner initiates at least 1 Carbon Farm Plan.
- Yr. 1 producers are selected and onboarded into the project; target is to enroll 20 farmers and initiate at least 15 Carbon Farm Plans in Yr. 1. The first incentive payment distributions may be made.

- Development of the Carbon Farm Planning and Verification Portal is initiated to streamline Carbon Farm Planning and monitor, verify and track implementation and expected GHG impacts of climate-beneficial practices adopted by enrolled producers.
- Three annual market growth and carbon farm tours for buyers are held by three Subawardees – Fibershed, New York Textile Lab and Seed2Shirt.
- New marketing channels developed for the sale of premium Climate Beneficial wool and cotton, and existing marketing channels expanded.

Year 2
- Carbon Farm Plans initiated in Yr. 1 are completed.
- Yr. 2 producers are selected and onboarded into the project; target is to enroll at least 30 more producers (for a total of 50 producers), and their Carbon Farm Plans initiated.
- Carbon Farm Planners complete at least one on-farm visit to each enrolled producer per year to provide technical assistance, verify implementation and outcomes of prescribed practices, and adapt the Carbon Farm Plan as needed.
- Producer Incentive payments are made based on the conservation and equity ranking tool and the payment rates and schedules that have been established for each region.
- Producer Transition payments are made to Black commodity farmers who wish to transition to Climate Beneficial cotton production in their crop rotations.
- Carbon Cycle Institute conducts a second virtual Carbon Farm Planning Training and Curriculum for Planner newcomers and key project partners.
- Peer-to-peer learning networks will be established in the five regions. Carbon Farm Planners, regional coordinators, and project partners provide learning modules and facilitate exchanges tailored to climate beneficial ag practices and wrap-around support of enrolled producers.
- Software for tracking cotton bales from field to mill is developed/refined to maintain traceability of fiber with quality specs into specific market use parameters.
- Three annual carbon farm tours for buyers and market growth events are held by three Subawardees – Fibershed, New York Textile Lab and Seed2Shirt.
- New marketing channels developed for the sale of premium Climate Beneficial wool and cotton, and existing marketing channels expanded.

Year 3
- Carbon Farm Plans initiated in Yr. 2 are completed.
- Yr. 3 producers are selected and onboarded into the project; target is to enroll at least 30 more producers (for a total of 80 producers), and their Carbon Farm Plans initiated.
- Carbon Farm Planners complete at least one on-farm visit to each enrolled producer per year to provide technical assistance, verify implementation and outcomes of prescribed practices, and adapt the Carbon Farm Plan as needed
- Producer Incentive payments are made based on the conservation and equity ranking tool and the payment rates and schedules that have been established for each region.
- Producer Transition payments are made to Black commodity farmers who wish to transition to Climate Beneficial cotton production in their crop rotations.
- Sheep Save our Soil Conference is held in the Northern Great Plains.

- 10 videos pertinent to climate beneficial, fiber-related ag practices are planned, shot, and produced in Yr. 3-5.
- The Carbon Farm Planning and Verification Portal is launched and Carbon Cycle Institute conducts a training on how to use the new planning and data management tool.
- Three annual carbon farm tours for buyers and market growth events are held by three Subawardees – Fibershed, New York Textile Lab and Seed2Shirt.
- New marketing channels developed for the sale of premium Climate Beneficial wool and cotton, and existing marketing channels expanded.

Year 4
- Carbon Farm Plans initiated in Yr. 3 are completed.
- Yr. 4 producers are selected and onboarded into the project; target is to enroll 20 more producers (for a total of 100 producers), and their Carbon Farm Plans initiated.
- Carbon Farm Planners complete at least one on-farm visit to each enrolled producer per year to provide technical assistance, verify implementation and outcomes of prescribed practices, and adapt the Carbon Farm Plan as
- Producer Incentive payments are made based on the conservation and equity ranking tool and the payment rates and schedules that have been established for each region.
- Producer Transition payments are made to Black commodity farmers who wish to transition to Climate Beneficial cotton production in their crop rotations.
- Outreach efforts share results of the project to date and highlight benefits of climate-beneficial practices to producers, textile supply chain businesses, and the general public. Release of the first videos.
- Three annual carbon farm tours for buyers and market growth events are held by three Subawardees – Fibershed, New York Textile Lab and Seed2Shirt.
- New marketing channels developed for the sale of premium Climate Beneficial wool and cotton, and existing marketing channels expanded.

Year 5
- Remaining Carbon Farm Plans are completed, bringing the total to 100.
- Carbon Farm Planners complete at least one on-farm visit to each enrolled producer per year to provide technical assistance, verify implementation and outcomes of prescribed practices, and adapt the Carbon Farm Plan as needed
- Producer Incentive payments are made based on the conservation and equity ranking tool and the payment rates and schedules that have been established for each region.
- Producer Transition payments are made to Black commodity farmers who wish to transition to Climate Beneficial cotton production in their crop rotations.
- Three annual carbon farm tours for buyers and market growth events are held by three Subawardees – Fibershed, New York Textile Lab and Seed2Shirt.
- New marketing channels developed for the sale of premium Climate Beneficial wool and cotton, and existing marketing channels expanded.
- Final project report submitted to NRCS.

Milestones/benchmarks:

Required Quantitative Targets by Quarter (Cumulative) – some initial quarters may be zero:

- Number of producers involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 15). Year 2 (Q1 = 20, Q2 = 20, Q3 = 50, Q4 = 50). Year 3 (Q1 = 50, Q2 = 50, Q3 = 80, Q4 = 80). Year 4 (Q1 = 80, Q2 = 80, Q3 = 100, Q4 = 100). Year 5 (Q1 = 100, Q2 = 100, Q3 = 100, Q4 = 100).

- Number of underserved producers involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 6). Year 2 (Q1 = 8, Q2 = 8, Q3 = 20, Q4 = 20). Year 3 (Q1 = 20, Q2 = 20, Q3 = 32, Q4 = 32). Year 4 (Q1 = 32, Q2 = 32, Q3 = 40, Q4 = 40). Year 5 (Q1 = 40, Q2 = 40, Q3 = 40, Q4 = 40).

- Number of acres involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 300k). Year 2 (Q1 = 400k, Q2 = 400k, Q3 = 800k, Q4 = 800k). Year 3 (Q1 = 800k, Q2 = 800k, Q3 = 1.4M, Q4 = 1.4M). Year 4 (Q1 = 1.4M, Q2 = 1.4M, Q3 = 1.97M, Q4 = 1.97M). Year 5 (Q1 = 1.97M, Q2 = 1.97M, Q3 = 1.97M, Q4 = 1.97M).

- Number of head involved (if applicable): Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 4,000). Year 2 (Q1 = 14,000, Q2 = 14,000, Q3 = 35,000, Q4 = 35,000). Year 3 (Q1 = 35,000, Q2 = 35,000, Q3 = 56,000, Q4 = 56,000). Year 4 (Q1 = 56,000, Q2 = 56,000, Q3 = 70,000, Q4 = 70,000). Year 5 (Q1 = 70,000, Q2 = 70,000, Q3 = 70,000, Q4 =70,000).

- Dollars provided to producers: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 2 (Q1 = $500k, Q2 = $1M, Q3 = $2.5M, Q4 = $3.5M). Year 3 (Q1 = $5M, Q2 = $6M, Q3 = $7M, Q4 = $8.5M). Year 4 (Q1 = $9M, Q2 = $10.5M, Q3 = $12M, Q4 = $13.5M). Year 5 (Q1 = $14.5M, Q2 = $15.5M, Q3 = $16.5M, Q4 = $17.5M).

- GHG Benefits (Metric Tons of CO2e Reduced or Sequestered): Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 2 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 3 (Q1 = 200k, Q2 = 200k, Q3 = 400k, Q4 = 400k). Year 4 (Q1 = 800k, Q2 = 800k, Q3 = 1.2M, Q4 = 1.2M). Year 5 (Q1 = 1.6M, Q2 = 1.6M, Q3 = 3.1M, Q4 = 3.1M).

- Number of new marketing channels* established: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 3). Year 2 (Q1 = 3, Q2 = 3, Q3 = 3, Q4 = 6). Year 3 (Q1 = 6, Q2 = 6, Q3 = 6, Q4 = 10). Year 4 (Q1 = 10, Q2 = 10, Q3 = 10, Q4 = 14). Year 5 (Q1 = 14, Q2 = 14, Q3 = 14, Q4 = 16).

Explain

This represents number of new brands that will be drawn in as buyers of premium quality Climate Beneficial™ Fiber (wool and cotton).

- Number of marketing channels* expanded:
  Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 2 (Q1 = 40,000lbs wool / 300,000lbs, Q2 = 40,000lbs wool / 300,000lbs of cotton, Q3 = 40,000lbs wool / 300,000lbs of cotton, Q4 = 40,000lbs wool / 300,000lbs of cotton). Year 3 (Q1 = 90,000lbs wool / 450,000lbs cotton, Q2 = 90,000lbs wool / 450,000lbs cotton, Q3 = 90,000lbs wool / 450,000lbs cotton, Q4 = 90,000lbs wool / 450,000lbs cotton). Year 4 (Q1 = 120,000lbs wool / 600,000lbs cotton, Q2 = 120,000lbs wool / 600,000lbs cotton, Q3 = 120,000lbs wool / 600,000lbs cotton, Q4 =

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Explain

These numbers represent additional volume of Climate Beneficial™ Fiber that will move into the Climate Beneficial Fiber market as a result of this project – 225,000 pounds wool and 1,500,000 pounds cotton.

- Number of measurement tools utilized: Year 1 (Q1 = 0, Q2 = 4, Q3 = 4, Q4 = 4). Year 2 (Q1 = 4, Q2 = 4, Q3 = 4, Q4 = 4). Year 3 (Q1 = 4, Q2 = 4, Q3 = 5, Q4 = 5). Year 4 (Q1 = 5, Q2 = 5, Q3 = 5, Q4 = 5). Year 5 (Q1 = 5, Q2 = 5, Q3 = 5, Q4 = 5).

Explain

For this project we will use the (1) COMET-Planner to quantify the estimated GHG benefit of specific conservation practices to be included in each Carbon Farm Plan. The (2) COMET-Farm tool and (3) USDA Entity-Scale Methods are additional tools that may be used to quantify the estimated GHG benefit of specific conservation practices. Soil tests (4) will be an optional tool that producers may wish to use to track soil organic carbon as well as other indicators of soil health, and Planners will be able to provide technical assistance for creating an on-farm soil sampling protocol, collecting soil samples, sending off to an appropriate soil lab, and interpreting the results to drive farm management decisions. In Year 3, CCI and CSU will roll out a (5) Carbon Farm Planning and Verification Portal, a streamlined planning and tracking database that will be used to identify, map and describe conservation practices, quantify associated GHG benefits, verify and track implementation, and monitor and record the benefits of implemented practices.

Other Required Benchmarks that may be quantitative or qualitative:

- Outreach, training and other technical assistance (cumulative): Year 1 (Q1 = 15 activities, Q2 = 30 activities, Q3 = 45 activities, Q4 = 60 activities). Year 2 (Q1 = 75 activities, Q2 = 90 activities, Q3 = 105 activities, Q4 = 120 activities). Year 3 (Q1 = 140 activities, Q2 = 160 activities, Q3 = 180 activities, Q4 = 200). Year 4 (Q1 = 220, Q2 = 240, Q3 = 260, Q4 = 280). Year 5 (Q1 = 300, Q2 = 320, Q3 = 340, Q4 = 360).

Explain

Activities will include:

- Sheep Save the Soil workshop in the Northern Great Plains, hosted by NCAT
- Three virtual Carbon Farm Planning and Curriculum trainings, hosted by Carbon Cycle Institute
- Five regional Peer-to-Peer producer networks will be established by Year 2 and meet-up regularly in all five regions
- Ongoing outreach through NCAT, CCI, Fibershed, New York Textile Lab, and Seed2Shirt communication channels (direct emails, newsletters, podcasts, blogs, conference attendance, etc)

  - Ongoing direct Technical Assistance provided to enrolled producers by project Carbon Farm Planners

- Other MMRV and supply chain traceability attributes: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 2 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 1). Year 3 (Q1 = 1, Q2 = 1, Q3 = 1, Q4 = 3). Year 4 (Q1 = 3, Q2 = 3, Q3 = 3, Q4 = 3). Year 5 (Q1 = 3, Q2 = 3, Q3 = 3, Q4 = 3).

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By Year 2, Subawardee Seed2Shirt will contract out development (1) SourceTrace Agriculture Commodity Full Life Cycle Traceability to allow for appropriate farm level COMET data collection as well as buyer data. Subawardee Fibershed will contract out the (2) adapting of existing industry software for use in tracking cotton bales from field to mill to maintain traceability of fiber with quality specs into specific market use parameters, to be completed by Year 3. Also to be completed in Year 3 is the (3) Carbon Farm Planning Verification Portal, which will serve as a farm-level MMRV tracking database that will be a tool to inform supply chain traceability software developed by Fibershed and Seed2Shirt.

- Other measurements of work related to marketing of commodities Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 3). Year 2 (Q1 = 3, Q2 = 3, Q3 = 3, Q4 = 6). Year 3 (Q1 = 6, Q2 = 6, Q3 = 6, Q4 = 9). Year 4 (Q1 = 9, Q2 = 9, Q3 = 9, Q4 = 12). Year 5 (Q1 = 12, Q2 = 12, Q3 = 12, Q4 = 15).

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For this project, work related to the marketing of commodities includes:

  - Annual 2-day On-Farm Tour for textile brands in California, hosted by Fibershed
  - Annual Carbon Farm Tour for farmers and brands/designers in New York, hosted by New York Textile Lab
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Explain

All Subawardees will submit to NCAT quarterly progress reports towards metrics enumerated in each Subawardee's individual contract. In addition, other indicators demonstrating partner engagement will include attendance at monthly Team meetings and detailed activity reporting on invoices.

- Climate smart technologies employed (if applicable) (cumulative): Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 20). Year 2 (Q1 = 50, Q2 = 100, Q3 = 150, Q4 = 200). Year 3 (Q1 = 250, Q2 = 300, Q3 = 350, Q4 = 400). Year 4 (Q1 = 450, Q2 = 500, Q3 = 550, Q4 = 600. Year 5 (Q1 = 650, Q2 = 700, Q3 = 750, Q4 = 800).

Explain

Here we understand climate smart technologies to be approaches that are appropriately scaled for the producers whom this project serves. As such, that includes all 39 NRCS CSAF conservation practices that have a quantifiable GHG benefit, as well as additional practices that have quantifiable GHG benefit per evidenced-based research cited in the peer-reviewed literature. We anticipate each producer will adopt, on average, 8 practices in their Carbon Farm Plan during the 5-year project life cycle; producers enrolled earlier in the project will likely adopt more and producer enrolled later in the project will likely adopt less.

Other specific project benchmarks/milestones

- Number of Carbon Farm Plans written (cumulative): Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 0). Year 2 (Q1 = 5, Q2 = 20, Q3 = 20, Q4 = 30). Year 3 (Q1 = 35, Q2 = 50, Q3 = 50, Q4 = 60). Year 4 (Q1 = 65, Q2 = 80, Q3 = 80, Q4 = 90). Year 5 (Q1 = 90, Q2 = 90, Q3 = 90, Q4 = 100).

TOTAL BUDGET: $34,644,561

TOTAL BUDGET **$34,644,561**

FEDERAL FUNDS **$29,999,947**
PERSONNEL **$1,828,914**
FRINGE BENEFITS **$804,722**
TRAVEL **$225,165**
EQUIPMENT **$0**
SUPPLIES **$30,000**
CONTRACTUAL **$83,000**
OTHER **$26,002,087**

- Producer Incentive $18,000,000
- Subawards $7,030,678
    - CSU $1,042,848
    - CCI $1,881,059
    - NY Textile Lab $530,678
    - Fibershed $1,329,172
    - Seed2Shirt $2,246,921
- Other Direct Costs $971,409
    - Sheep Save Our Soil Workshop $23,300
    - Allocated Direct Costs $948,109

TOTAL DIRECT COSTS **$28,973,888**
INDIRECT COSTS **$1,026,059**

NON-FEDERAL FUNDS **$4,644,614**
PERSONNEL **$0**
FRINGE BENEFITS **$0**
TRAVEL **$0**
EQUIPMENT **$0**
SUPPLIES **$0**
CONTRACTUAL **$0**
OTHER **$4,474,953**

- Producer Incentive (20%)$2,660,400
- Subawards $1,814,553
    - CCI: $503,820
    - NY Textile Lab: $119,560
    - Fibershed: $1,130,994
    - Seed2Shirt: $60,179

TOTAL DIRECT COSTS **$4,474,953**

INDIRECT COSTS **$169,661**

Citations

Eve, M., D. Pape, et. Al., (Eds). 2014. Quantifying Greenhouse Gas Fluxes in Agriculture and Forestry: Methods for Entity-Scale Inventory. Technical Bulletin Number 1939. Office of the Chief Economist, U.S. Department of Agriculture, Washington, DC.

Jones, Matthew O., Nathaniel P. Robinson, et. al. 2021. "Annual and 16-Day Rangeland Production Estimates for the Western United States." Rangeland Ecology & Management 77 (July): 112–17.

Derner, Justin D., Alexander J. Smart, et. al. 2018. "Soil Health as a Transformational Change Agent for US Grazing Lands Management." Rangeland Ecology & Management 71 (4): 403–8.

Appendix

Table 1. Core Functions & Capabilities of Carbon Farm Planning and Verification Portal

Functions	Carbon Farm Planning & Opportunity Assessment	Implementation Tracking, Monitoring & Verification	Data Access & Reporting		
Core Capabilities	Whole-farm & Contextual Data	Mapping & Spatially Explicit Data	Quantification	Monitoring & Verification of Implemented Practices	Database Management & Data Access
	Farm management, history, goals, resource concerns	Delineate recommended practices from desktop, mobile mapping, or shapefile upload	Query COMET-Planner, USDA, & other quantification data based on location & practice	Implementation tracking, including updated implementation details	Producer privacy
	Fundamentals of carbon cycling, roles & principles of climate beneficial practices	Add attributes, descriptions, site photos, etc. to practices	Flexibility to include other practice- and location-specific data (e.g., empirical GHG estimates)	Record multi-year monitoring records	Supply chain stakeholder access to regional queries: implementation, verification, GHG impact
	Regional climate change predictions & implications	Delineate farm/ranch mgt units and infrastructure (e.g., fields, fences)	Calculate anticipated GHG outcomes from recommended practices	Record multi-year verification data, e.g., forage productivity, soil sampling data, & photos	Producer participation & data access
		Reference existing spatial data (e.g., soils maps, ecological sites)	Quantify estimated GHG outcome for implemented practices based on monitoring & verification		Export compiled tables & reports, compatible w/ NRCS conservation plans
					Availability of verification data and practice details to quantification & model validation

Table 2. MMRV Process for Various Fiber Systems and Practices

Practice	Quantification	Monitoring Method	Verification Method
Wool -- Northern California, Northern Great Plains, Northeast Pastures			
• Rangeland seeding • Forage & biomass planting • Prescribed grazing	COMET-Planner (linked to Carbon Farm Planning and Verification Portal)	Field observation for forage species establishment & rangeland condition in year 1 & repeated annually for 5 years. Recorded in Portal.	Trend in rangeland productivity based on NDVI-estimated precipitation-corrected peak production compared to pre-implementation baseline. Results recorded in Portal.
• Compost application to rangeland • Compost application to pasture	COMET-Planner or ecosystem-relevant data where available (linked to Portal)	Field observation and discussion with producer. Recorded in Portal.	One-time verification based on receipts (where applicable) and photo documentation of application. Results recorded in Portal.
Cotton - San Joaquin Valley, Southeast Cotton Belt			
• Reduced tillage • Strip tillage • Multi-species cover crop • Compost application	COMET-Planner, USDA Methods for Entity-Scale Inventory (linked to Portal)	Planner field observation and discussion with producer. Year 1 only; repeated observations with ongoing implementation. Recorded in Portal.	Trend in SOC determined by soil sampling in year 0 and year 5. TAPs conduct soil sampling according to regionally designed cropland soil sampling protocols. Results recorded in Portal.
• Nutrient management			Nitrogen fertilizer application records compared to pre-implementation fertilizer rates. Results recorded in Portal.
Either Wool or Cotton - all regions			
• Hedgerow or windbreak establishment	COMET-Planner, i-Tree, COMET-Farm (linked to Portal)	Field observation for planting establishment & ongoing maintenance. Observation in years 1, 2, 4 and 6. Recorded in Portal.	Planner verifies ongoing success of plantings based on field observation schedule, including photo documentation. Results recorded in Portal.
• Riparian forest buffer or riparian herbaceous cover	COMET-Planner, i-Tree, COMET-Farm (linked to Portal)	Field observation for planting establishment & ongoing maintenance in years 1, 2, 4 and 6. Recorded in Portal.	Planner verifies ongoing success of plantings based on field observation schedule. Results recorded in Portal.

KEY TO TABLE 3
TAP = Technical Assistance Provider COMET-Planner = http://comet-planner.com/
i-Tree = https://www.itreetools.org/ COMET-Farm = https://comet-farm.com/
NDVI: Normalized Difference Vegetation Index = https://www.fuelcast.net/

Milestones/benchmarks:

Required Quantitative Targets by Quarter (Cumulative) – some initial quarters may be zero:

- Number of producers involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 15). Year 2 (Q1 = 20, Q2 = 20, Q3 = 50, Q4 = 50). Year 3 (Q1 = 50, Q2 = 50, Q3 = 80, Q4 = 80). Year 4 (Q1 = 80, Q2 = 80, Q3 = 100, Q4 = 100). Year 5 (Q1 = 100, Q2 = 100, Q3 = 100, Q4 = 100).

- Number of underserved producers involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 6). Year 2 (Q1 = 8, Q2 = 8, Q3 = 20, Q4 = 20). Year 3 (Q1 = 20, Q2 = 20, Q3 = 32, Q4 = 32). Year 4 (Q1 = 32, Q2 = 32, Q3 = 40, Q4 = 40). Year 5 (Q1 = 40, Q2 = 40, Q3 = 40, Q4 = 40).

- Number of acres involved: Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 300k). Year 2 (Q1 = 400k, Q2 = 400k, Q3 = 800k, Q4 = 800k). Year 3 (Q1 = 800k, Q2 = 800k, Q3 = 1.4M, Q4 = 1.4M). Year 4 (Q1 = 1.4M, Q2 = 1.4M, Q3 = 1.97M, Q4 = 1.97M). Year 5 (Q1 = 1.97M, Q2 = 1.97M, Q3 = 1.97M, Q4 = 1.97M).

- Number of head involved (if applicable): Year 1 (Q1 = 0, Q2 = 0, Q3 = 0, Q4 = 4,000). Year 2 (Q1 = 14,000, Q2 = 14,000, Q3 = 35,000, Q4 = 35,000). Year 3 (Q1 = 35,000, Q2 = 35,000, Q3 = 56,000, Q4 = 56,000). Year 4 (Q1 = 56,000, Q2 = 56,000, Q3 = 70,000, Q4 = 70,000). Year 5 (Q1 = 70,000, Q2 = 70,000, Q3 = 70,000, Q4 =70,000).

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Explain

This represents number of new brands that will be drawn in as buyers of premium quality Climate Beneficial™ Fiber (wool and cotton).

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These numbers represent additional volume of Climate Beneficial™ Fiber that will move into the Climate Beneficial Fiber market as a result of this project – 225,000 pounds wool and 1,500,000 pounds cotton.

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Climate-Smart Practices and Limitations

Climate-Smart practices under this grant shall be limited to the following practices:

NRCS Practice Code	Practice Name
386	Field Borders
345	Residue and Tillage Management, Reduced Till
340	Cover Crops
332	Contour Buffer Strips
329	Residue and Tillage Management, No Till
328	Conservation Crop Rotation
327	Conservation Cover
393	Filter Strips
412	Grassed Waterways
484	Mulching
585	Stripcropping
601	Vegetative Barrier
603	Herbaceous Wind Barrier
590	Nutrient Management
311	Alley Cropping
512	Pasture and Hay Planting
528	Prescribed Grazing
550	Range Planting
342	Critical Area Planting
379	Forest Farming
380	Windbreak and Shelterbelt Establishment
650	Windbreak and Shelterbelt Renovation
381	Silvopasture
390	Riparian Herbaceous Cover
391	Riparian Forest Buffer
420	Wildlife Habitat Planting
422	Hedgerow Planting
317	Compost Facility
336	Soil Carbon Amendment
614	Watering Facilities
657	Wetland Restoration
670	Energy Efficient Lighting System
672	Energy Efficient Building Envelope
374	Energy Efficient Agricultural Operation
372	Combustion System Improvement
666	Forest Stand Improvement
645	Upland Wildlife Habitat Management
612	Tree/Shrub Establishment
511	Forage Harvest Management
659	Wetland Enhancement

449	Irrigation Water Management
382	Fence
516	Livestock pipeline
E528P	Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water.

All practices applied under this grant will follow NRCS practice standards unless noted below:

N/A

Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

Version 1.0

USDA Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
February 2023

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Overview of Reporting Requirements

Grant recipients are required to submit reports to document their performance under the *Partnerships for Climate-Smart Commodity* funding opportunity. These submissions will be required to use the Microsoft Excel workbook templates provided by USDA. The workbooks contain a series of worksheets that collect data in a standardized format to ensure data quality and allow for aggregation and summary of this information. The entire workbook must be submitted quarterly, with updates to all applicable worksheets. This guide is divided into three sections. The *Overview of Reporting Requirements* section summarizes the layout of the reporting workbook and presents the data elements included in each worksheet. It also describes additional documents that must be submitted to supplement the performance reports. The *Data Definitions* section provides descriptions and allowable response options for each data element. The guide also indicates whether each data element is required, applicable at times, or optional; as well as how frequently each data element must be updated. Finally, the *Appendices* contain practice and commodity lists that will be used for these reports. Reporting is necessary for USDA oversight of this effort. The data elements required for inclusion in the quarterly performance reports allow USDA to conduct selected audits to review whether producers are receiving federal funds from multiple sources for the same purpose; to determine whether GHG benefits from implementation of climate-smart agriculture and forestry (CSAF) practices are being estimated accurately; and for other purposes deemed appropriate by USDA.

The reporting worksheets collect information at four levels: project, partner, producer, and field. Descriptions of each level:

> **Project level**: Information about activities and impacts at a whole project/aggregate level (i.e., reflecting all activities under the grant agreement). Some project-level reporting is further subdivided by commodity type or a combination of commodity and CSAF practice(s) (commodity x practice).
> **Partner level:** Information about activities related to a single organization (recipient, subrecipient, contractor, or other partner) within a project.
> **Producer level**: Information about individual producers who have one or more farms enrolled in a project.
> **Field level**: Information about individual fields enrolled in a project.

Certain data elements are required to be reported for each producer and field enrolled in a project. In order to minimize the burden associated with data collection and to enable USDA to match data to existing records, these producer- and field-specific records must use the producer's established FSA Farm, Tract and Field IDs, and report the State and County associated with the Farm ID. Associated data entered in conjunction with these data elements, such as Producer Name, must match the data contained in the customer's Business Partner record, and the Farm Operating Plan in Business File for that Farm ID. Disclosure of this information is protected under Section 1619 of the Food, Conservation, and Energy Act of 2008 (PL 110- 246), 7 U.S.C. 8791. Additionally, Departmental Regulation 4370-001 provides USDA's policies for collecting demographic data, including race, ethnicity and gender. Providing demographic information is voluntary and at the discretion of the customer. Demographic information is used by USDA for statistical purposes only and will not be used to determine an applicant's eligibility for programs or services for which they apply.

Note: For purposes of this guide, "farm" refers to the operation from which climate-smart commodities are produced and may represent farms, ranches, forests or other operations. Similarly, "field" refers to the individual land units at which climate-smart practices are being implemented to produce climate-smart commodities and may represent lots, farmsteads or other units, depending on the type of operation and commodity. The use of "Farm", "Tract" and "Field" align with the FSA definitions; for example, "A field is a part of a farm that is separated from the balance of the farm by a permanent boundary, such as; fences, permanent waterways, woodlands, croplines in cases where farming practices make it probable that this cropline is not subject to change, and other similar features."

USDA Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
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The following tables list the data elements included in each reporting worksheet, along with a brief description of each item.

Project Summary

These data will be collected about each project. Cumulative results are reported each quarter. Report last quarter's entry if there has been no change in this quarter.

Table 1. Project Summary elements

Data element name	Description	Frequency
Commodity type	Type of commodity(ies) incentivized by the project	Quarterly
Commodity sales	Indicates sales of the commodity(ies) related to the project occurred this quarter	Quarterly
Farms enrolled	Indicates enrollment activities occurred this quarter	Quarterly
GHG calculation methods	Methods used to calculate greenhouse gas (GHG) benefits	Quarterly
GHG cumulative calculation	Method used to calculate cumulative GHG benefits	Quarterly
Cumulative GHG benefits	Whole project estimate of total GHG (CO2e) emission reductions	Quarterly
Cumulative carbon stock	Whole project estimate of total carbon sequestration	Quarterly
Cumulative CO2 benefit	Whole project estimate of total CO2 emission reductions	Quarterly
Cumulative CH4 benefit	Whole project estimate of total CH4 emission reductions	Quarterly
Cumulative N2O benefit	Whole project estimate of total N2O emission reductions	Quarterly
Offsets produced	Amount of carbon offsets produced by project	Quarterly
Offsets sale	Name of marketplace where carbon offsets were sold	Quarterly
Offsets price	Price of carbon in offset sales	Quarterly
Insets produced	Amount of carbon insets produced by project	Quarterly
Cost of on-farm TA	Cost of on-farm technical assistance (TA) provided to producers	Quarterly
MMRV cost	Cost of measurement, monitoring, reporting, and verification (MMRV) activities	Quarterly
GHG monitoring method	Methods used by project to monitor GHG benefits (up to 5)	Quarterly
GHG reporting method	Methods used by project to report on GHG benefits (up to 5)	Quarterly
GHG verification method	Methods used to verify GHG benefits (up to 5)	Quarterly

Partner Activities

These data will be collected at the project level. Each row in this worksheet will represent one organization involved in the project, including the recipient and all contributing partners. A partner is any organization that is receiving project funds or providing matching contributions (funds or in-kind contributions) to the project. While the recipient must complete one row for their own organization, not all data elements apply to the recipient. These exceptions are noted in the detailed descriptions of the specific elements in the *Data Definitions* section of this guide. Data are reported cumulatively each quarter. Report last quarter's entry if there has been no change in this quarter.

Table 2. Partner Activities elements

Data element name	Description	Frequency
Partner ID	Unique ID for each partner	One-time
Partner name	Name of partner organization	One-time
Partner type	Type of organization	One-time
Partner POC	Partner point of contact name	As applicable
Partner POC email	Partner point of contact email	As applicable
Partnership start date	Start of partnership on project	One-time
Partnership end date	End of partnership on project	As applicable
New partnership	Indicator for partner organizations that have no prior work with the recipient	As applicable
Partner total requested	Total amount requested to date by partner from recipient	Quarterly
Total match contribution	Total amount of match contribution by partner to date	Quarterly
Total match incentives	Total amount of match contribution by partner for incentives	Quarterly
Match type	Top 3 types of match contribution by partner, other than incentives	Quarterly
Match amount	Value of match contributions by type	Quarterly
Training provided	Top 3 types of training provided to the partner through project	Quarterly
Activity by partner	Top 3 types of activities provided by this partner to producers or other partners	Quarterly
Activity cost	Approximate cost per activity type provided by partner to producers or other partners	Quarterly
Products supplied	Names of products supplied to producers as part of project activities or incentives	Quarterly
Product source	Supplier or source of products supplied to producers as part of project activities or incentives	Quarterly

Marketing Activities

These data will be collected at the project level. Each row in this worksheet will correspond to one commodity for which the project enrolls fields and one marketing channel used to sell that commodity by the project or producers enrolled in the project. Data are reported for the current quarter and are not cumulative. If no sales of the commodity were reported during a quarter, do not complete this worksheet for that quarter.

Table 3. Marketing Activities elements

Data element name	Description	Frequency
Commodity type	Type of commodity incentivized by the project	Quarterly
Marketing channel type	Type of marketing channels used	Quarterly
Number of buyers	Number of buyers per marketing channel	Quarterly
Names of buyers	Names of buyers in the marketing channel	Quarterly
Marketing channel geography	Geography of marketing channel	Quarterly
Value sold	Value of commodity sold by marketing channel	Quarterly
Volume sold	Volume of commodity sold by marketing channel	Quarterly
Price premium	Price premium of commodity by marketing channel	Quarterly
Price premium to producer	Percent of price premium that goes to the producer	Quarterly
Product differentiation method	Top 3 types of product differentiation methods used	Quarterly
Marketing method	Top 3 types of marketing methods used	Quarterly
Marketing channel identification method	Top 3 ways marketing channel was identified	Quarterly
Traceability method	Top 3 types of supply chain traceability methods used	Quarterly

Producer Enrollment

These data will be collected at the producer level about each farm enrolled in the project. In this worksheet, each row will correspond to one farm that has at least one field enrolled in the project. Data are reported when a producer first enrolls one or more fields in the project. If a producer is enrolled in the project for multiple years, review the farm characteristics each time a new contract is signed and provide any necessary updates. The quarterly submission should contain information about each farm initially enrolled in the project during that quarter and for updates to farms that have re-enrolled during that quarter, as applicable. If no farms are enrolled during that quarter, do not complete this worksheet for that quarter.

Table 4. Producer Enrollment elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
State or territory	State name (must match FSA farm enrollment data)	
County of residence	County name (must match FSA farm enrollment data)	
Producer data change	Indicator that producer data was updated at re-enrollment	As applicable
Producer start date	Contract start date	Enrollment
Producer name	Name of primary operator	Enrollment
Underserved status	Indicator the primary operator is considered underserved and/or a small producer	Enrollment
Total area	Total area of enrolled operation	Annual
Total crop area	Total crop area in enrolled operation enrolled	Annual
Total livestock area	Total livestock confinement, pasture and rangeland in enrolled operation	Annual
Total forest area	Total forest area in enrolled operation	Annual
Livestock type	Top 3 types of livestock on enrolled operation	Annual
Livestock head	Total livestock currently managed (by type)	Annual
Organic farm	Indicator that part of the farm is certified or transitioning organic	Annual
Organic fields	Indicator that any of the enrolled fields are certified or transitioning organic	Annual
Producer motivation	Motivation for participation	Annual
Producer outreach	Top 3 types of outreach provided to producer	Annual
CSAF experience	Indicator of prior implementation of CSAF practices at this farm	Annual
CSAF federal funds	Indicator of prior receipt of federal funds for CSAF practices	Annual
CSAF state or local funds	Indicator of prior receipt of state funds for CSAF practices	Annual
CSAF nonprofit funds	Indicator of prior receipt of nonprofit funds for CSAF practices	Annual
CSAF market incentives	Indicator of prior receipt of market incentives for CSAF practices	Annual

Field Enrollment

These data will be collected about each field enrolled in the project. In this worksheet, each row corresponds to one field x commodity combination enrolled in the project. Generally, data are reported once for each field, at its initial enrollment. The quarterly submission should contain information about each field initially enrolled in the project during that quarter. If no fields are enrolled during that quarter, do not complete this worksheet for that quarter. If a field is enrolled for multiple years, any relevant changes, such as a new ID number or changes to the commodity or practice combinations should be entered in this worksheet during the quarter it is re-enrolled, or as applicable.

Table 5. Field Enrollment elements

Data element name	Description
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name
Physical County of field	Physical county name must match FSA farm records
Prior Field ID	Previous Field ID when reconstitution of farm results in new Field IDs
Field data change	Indicator that field data has changed from initial enrollment
Contract start date	Start date of contract
Total field area	Size of enrolled field
Commodity category	Category of commodity(ies) produced
Commodity type	Type of commodity(ies) produced
Baseline yield	Average yield of commodity in 3 years prior to enrollment
Baseline yield location	Location for which baseline yield is provided
Field land use	Most common land use in field in past 3 years
Field irrigated	Most common irrigation type in field in past 3 years
Field tillage	Most common tillage in field in past 3 years
Practice past extent - farm	Extent of operation that implemented this practice prior to project enrollment
Field any CSAF practice	Indicator for prior CSAF practices in this field in past 3 years
Practice past use - this field	Indicator of prior use of this practice in this field in the past 3 years
Practice type	CSAF practice(s) that will be implemented in enrolled field (up to 7)
Practice standard	Organization that developed CSAF practice standard implemented in field
Planned practice implementation year	Year that practice is planned to be implemented
Practice extent	Area or number of animals for which practice is implemented
Follow-on questions	Follow-on questions by practice type (see Table 11)

Farm Summary

These data will be collected about each farm enrolled in the project. In this worksheet, each row will correspond to one farm that has at least one field enrolled in the project. The quarterly submission should contain updates to any data elements that have changed for each farm enrolled in the project during that quarter. If there are no changes from the previous quarter, do not complete this worksheet for that quarter. Data are not cumulative.

Table 6. Farm Summary elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
State or territory	State name	
County of residence	County name	
Producer TA received	Type of technical assistance provided to producer	Quarterly
Producer incentive amount	Total financial incentive provided to the producer	Quarterly
Incentive reason	Top 4 reason(s) for financial incentives provided to producer	Quarterly
Incentive structure	Top 4 units on which financial incentives are structured	Quarterly
Incentive type	Top 4 type(s) of financial incentives provided to producer	Quarterly
Payment on enrollment	Extent of payment provided to producer upon enrollment	Quarterly
Payment on implementation	Extent of payment provided to producer upon implementation of CSAF practices	Quarterly
Payment on harvest	Extent of payment provided to producer upon harvest or slaughter	Quarterly
Payment on MMRV	Extent of payment provided to producer upon reporting or verification	Quarterly
Payment on sale	Extent of payment provided to producer upon sale of commodity	Quarterly

Field Summary

These data will be collected about each field enrolled in the project for a commodity x practice(s) combination. In this worksheet, each row will correspond to one field x commodity x practice(s) combination enrolled in the project. Data for each field will be reported quarterly and are not cumulative. Report data for any elements that have an update in that quarter. Greenhouse gas benefit estimates must be entered upon practice completion or annually, as appropriate. If there are no changes from the previous quarter, do not complete this worksheet for that quarter. This worksheet includes a section to report the "official" estimate of GHG benefits – amounts of greenhouse gas emissions reduced and carbon sequestered – for the field. These quantities refer to the estimates that are used to calculate the project's aggregate impact (reported in Table 1). Tables 8 and 9 are used to report alternate estimates of the field-level GHG benefits when additional methods are used to model (Table 8) or measure (Table 9) these impacts. Any field that can use COMET-Planner must submit those results, either as the official or alternate model.

Table 7. Field Summary elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State or territory of field	State name	
County of field	County name	
Commodity type	Type of commodity produced from field	Quarterly
Practice type	Type of practice(s) incentivized in field (up to seven)	Quarterly
Date practice complete	Date that practice implementation is certified complete	Quarterly
Contract end date	End date of contract	Quarterly
MMRV assistance provided	Indicator that MMRV assistance is provided to field	Quarterly
Marketing assistance provided	Indicator that marketing assistance provided for commodity from field	Quarterly
Incentive per acre or head	Indicator that a per acre/head incentives is provided for the CSAF practice(s) on this field	Quarterly
Field commodity value	Value of commodity produced from field	Quarterly
Field commodity volume	Volume of commodity produced from field	Quarterly
Cost of implementation	Total cost of practice implementation in field	Quarterly
Cost coverage	Percent of total cost of implementation of practice covered by project incentives	Quarterly
Field GHG monitoring	Methods used to monitor GHG benefits in field (up to 3)	Quarterly
Field GHG reporting	Methods used to report on GHG benefits for field (up to 3)	Quarterly
Field GHG verification	Methods used to verify GHG benefits for field (up to 3)	Quarterly
Field GHG calculations	Methods used to calculate GHG benefits for field	Quarterly
Field official GHG calculation	Method used to calculate official GHG benefits for field	Quarterly
Field official GHG ER	Official estimate of total GHG emission reductions for field	Quarterly
Field official carbon stock	Official estimate of total carbon sequestration for field	Quarterly
Field official CO2 ER	Official estimate of total CO2 emission reductions for field	Quarterly
Field official CH4 ER	Official estimate of total CH4 emission reductions for field	Quarterly
Field official N2O ER	Official estimate of total N2O emission reductions for field	Quarterly
Field offsets produced	Amount of carbon offsets produced in field	Quarterly
Field insets produced	Amount of carbon insets produced in field	Quarterly
Other field measurements	Indicator that field data was collected for reasons other than GHG benefit estimation	Quarterly

GHG Benefits - Alternate Modeled

If greenhouse gas benefits are modeled for the same field using multiple methods, the results for the alternate models are reported in this worksheet. The "alternate" models refer to those model results that were not used in the calculation of the project's aggregate impact (as reported in Table 1). Any field that can use COMET-Planner must submit those results, either as the official or alternate model. These data will be collected about the modeled GHG benefits for each field x commodity x practice(s) combination. In this worksheet, each row will correspond to one field enrolled in the project. Data are not cumulative. Each quarterly submission should include information for all fields that have new modeled data. Greenhouse gas benefit estimates must be entered upon practice completion or annually, as appropriate.

Table 8. GHG Benefits – Alternate Modeled elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State or territory of field	State name	
County of field	County name	
Commodity type	Type of commodity(ies) produced from the field (up to 6)	Annual
Practice type	Type of practice(s) incentivized in field (up to 7)	Annual
GHG model	Model used to calculate GHG benefits	Annual
Model start date	Start date of model run	Annual
Model end date	End date of model run	Annual
Total GHG benefits estimated	Estimate of total GHG benefits for field	Annual
Total carbon stock estimated	Estimate of total change in carbon stock for field	Annual
Total CO2 estimated	Estimate of total CO2 emission reductions for field	Annual
Total CH4 estimated	Estimate of total CH4 emission reductions for field	Annual
Total N2O estimated	Estimate of total N2O emission reductions for field	Annual

GHG Benefits - Measured

Projects must report the results of any carbon stock or greenhouse gas emission measurements in this worksheet. These data will be collected at the field level. Each row will represent a separate measurement method used to calculate GHG benefits for a given field. Data are reported once per year of measurement and are not cumulative. Each quarterly submission should include information for any field for which there are new soil samples or new calculations of annual GHG benefits based on actual measurements.

Table 9. GHG Benefits - Measured data elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State	State name	
County	County name	
GHG measurement method	Method of measurement	Annual
Lab name	Entity that conducted analysis	Annual
Measurement start date	Start date of measurements	Annual
Measurement end date	End date of measurements	Annual
Total CO2 reduction calculated	Calculation of total CO2 reduction	Annual
Total carbon stock change calculated	Calculation of change in carbon stock	Annual
Total CH4 reduction calculated	Calculation of total CH4 reduction	Annual
Total N2O reduction calculated	Calculation of total N2O reduction	Annual
Soil sample result	Numeric result from soil sample	Annual
Measurement type	Type of analysis conducted	Annual

Additional Environmental Benefits

Projects that track additional environmental benefits (e.g., water quality improvements) from enrolled fields report results in this worksheet. These data will be collected about each field. Each row in this worksheet will correspond to an enrolled field. Data are not cumulative. Estimates of environmental benefits must be entered upon practice completion or annually, as appropriate.

Table 10. Additional Environmental Benefits elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State	State name	
County	County name	
Environmental benefits	Indicator that project tracks other environmental benefits	Annual
Reduction in nitrogen loss	Indicator that project tracks reductions in nitrogen loss	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduction in phosphorus loss	Indicator that project tracks reductions in phosphorus loss	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Other water quality	Indicator that project tracks other water quality improvements	Annual
Type	Type of water quality metric being tracked	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Water quantity	Indicator that project tracks reduced water use	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduced erosion	Indicator that project tracks reductions in soil erosion	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Reduced energy use	Indicator that project tracks reductions in energy use	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Avoided land conversion	Indicator that project tracks reductions in land conversion	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual
Improved wildlife habitat	Indicator that project tracks improvements in wildlife habitat	Annual
Amount	Amount	Annual
Purpose	Purpose of tracking those co-benefits	Annual

Supplemental Data Submission

Project MMRV Plan

Definition of MMRV elements:

Measurement: Quantification of the greenhouse gas benefits (reduction or capture) using mathematical models and/or direct physical measurements in the field

Monitoring: Ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time

Reporting: Documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization

Verification: Independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable.

Projects must submit an MMRV plan that includes details about how each of the following are addressed:

- Quantification approach, including:
  - GHG models used
  - GHG measurement plan (if applicable)
  - Approach to quantifying additional environmental benefits, if applicable (e.g., water quality, habitat)
- Verification approach:
  - Compliance criteria
  - Verification plan/methodology
- Approach to ensuring:
  - Additionality
  - Permanence
  - Leakage
  - Impacts of weather
- Plan for non-compliance

If the project is using a specific MMRV methodology or approach developed by the recipient, a project partner, or an outside organization, the project can submit documentation associated with the methodology as long as the documentation addresses each of the above categories.

If the project is tracking other environmental benefits (as reported in the *Additional Environmental Benefits* worksheet), include a description of the methodology and tools used to track and report on these benefits.

Field modeled GHG benefit reports

Results from any models besides COMET-Planner used to estimate GHG benefits must also be submitted as a separate report. This includes projects running COMET-Farm. The full results of any model can be submitted in the native/standard format generated by the modeling tool and must include the following Unique IDs in the report or in the file name: State, County, Farm ID, Tract ID, Field ID.

Field direct measurement results

For any direct physical measurements in the field, measurement results must be submitted as a separate report and must include the following Unique IDs in the report or in the file name: State, County, Farm ID, Tract ID, Field ID. Measurement results reports must include the name of the equipment used for sampling or data collection, the name of the lab that analyzed the data, and the analytical method used.

Sample report types include soil analysis reports, summarized results of portable emissions analyzers or flux towers, water quality analyses, and plant species counts. These could be collected for the purposes of determining GHG emission reductions or carbon sequestration amounts, for calibration of tools or models, for tracking other environmental benefits, or for other reasons.

Data Descriptions

This section provides descriptions and allowable response options for each data element. The guide also indicates whether each data element is required, applicable at times, or optional; as well as how frequently each data element must be updated.

Unique IDs

Project ID: Unique ID at the project level – "Award Identifying Number" shown on award documentation
Partner ID: Unique ID at the partner level – use EIN; if no EIN, a unique ID will be assigned for use in these reports
State or territory of operation: State or territory name
County of operation: Physical county name
Farm ID: Unique ID at the operation level assigned by Farm Service Agency (FSA)
Tract ID: Unique ID at the tract level assigned by FSA
Field ID: Unique ID at the field level assigned by FSA

Project Summary

Commodity type	
Data element name: Commodity type	**Reporting question:** What climate-smart commodity types are produced by this project?
Description: Type of commodity incentivized by the project. These commodities include those for whom farmers are directly receiving incentives or other types of marketing support. See full list of commodity options in Appendix B. List one commodity per row.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Commodity sales	
Data element name: Commodity sales	**Reporting question:** Did project activities result in sales this quarter of the commodity(ies) produced by this project?
Description: Indicator of sales of commodity(ies) related to project activities. If sales are reported, complete the *Marketing Activities* worksheet (Table 3) as part of the quarterly performance report.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Farms enrolled	
Data element name: Farms enrolled	**Reporting question:** Did the project enroll any producers or fields this quarter?
Description: Indicator that the project enrolled producers or fields. If enrollment activities occurred this quarter, complete the *Producer Enrollment* and *Field Enrollment* worksheets (Tables 4 and 5) as part of the quarterly performance report.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

GHG calculation methods	
Data element name: GHG calculation methods	**Reporting question:** What methods is the project using to calculate GHG benefits?
Description: List the way(s) that GHG benefits are being measured and calculated by the project this quarter.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Models • Direct field measurements • Both
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

GHG cumulative calculation

Data element name: GHG cumulative calculation

Reporting question: What method(s) was used to calculate the total cumulative GHG benefits reported here?

Description: List the method(s) that was used to calculate the total cumulative GHG benefits reported by the project this quarter.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative GHG benefits

Data element name: Cumulative GHG benefits

Reporting question: What are the project's estimated total GHG emission reductions (CO2eq) to date?

Description: Total cumulative estimated greenhouse gas emission reductions from practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative carbon stock

Data element name: Cumulative carbon stock

Reporting question: How much carbon has the project sequestered to date?

Description: Estimated total cumulative change in carbon stock based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CO2 benefit

Data element name: Cumulative CO2 benefit

Reporting question: What are the project's estimated total cumulative CO2 emission reductions to date?

Description: Estimated total cumulative carbon dioxide emission reductions based on practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CH4 benefit

Data element name: Cumulative CH4 benefit

Reporting question: What are the project's estimated total CH4 emission reductions to date?

Description: Estimated total cumulative methane reduction based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative N20 benefit

Data element name: Cumulative N2O benefit

Reporting question: What are the project's estimated total N2O emission reductions to date?

Description: Estimated total cumulative nitrous oxide reduction based on practice implementation. This is updated quarterly. If there are no updated numbers enter the same number as the previous quarter. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets produced

Data element name: Offsets produced

Reporting question: How many carbon offsets have been produced in the project?

Description: Total carbon offsets produced by enrolled project fields during the quarter. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets sale

Data element name: Offsets sale

Reporting question: To what marketplace(s) were carbon offsets sold?

Description: Marketplaces to which carbon offsets produced by enrolled project fields were sold. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. List each marketplace name. Separate names with commas.

Data type: Text

Select multiple values: NA

Measurement unit: Name

Allowed values: Text

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets price

Data element name: Offsets price

Reporting question: What was the average price of carbon received for offsets?

Description: Average price per metric ton paid for carbon offsets produced by enrolled project fields. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars per metric ton

Allowed values: 0-500

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Insets produced

Data element name: Insets produced

Reporting question: How many carbon insets have been produced in the project?

Description: Total carbon insets produced by enrolled fields during the quarter. Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cost of on-farm TA

Data element name: Cost of on-farm TA

Reporting question: What is the total amount that has been spent to provide on-farm TA?

Description: Total cost of any field- or practice-specific technical assistance provided by the project (by recipient or partners) to any producers. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0-$50,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

MMRV cost

Data element name: MMRV cost

Reporting question: What is the total amount that has been spent on MMRV activities?

Description: Total cost of all MMRV activities paid for by the project (recipient or partners). MMRV components are defined as measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practices have been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable). This is updated quarterly. If there are no changes, enter the same number as the previous quarter.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0-$50,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG monitoring method

Data element name: GHG monitoring 1-5

Reporting question: How did the project monitor GHG benefits?

Description: Up to the five most common forms of monitoring GHG benefits used this quarter as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Drones
- Ground-level photos and videos
- On-farm visit
- Plot-based sampling
- Producer records or attestation
- Satellite monitoring or remote sensing
- Soil metagenomics
- Soil sensors
- Water sensors
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG reporting method

Data element name: GHG reporting 1-5

Reporting question: How did the project track and report implementation of practices to reduce GHG emissions?

Description: Up to the five most common forms of tracking and reporting on practice implementation used this year as part of MMRV requirements. Reporting is defined as documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG reporting methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG reporting methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Automated devices
- Email
- Mobile app
- Paper
- Third-party actors
- Website
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG verification method

Data element name: GHG verification method 1-5

Reporting question: How did the project verify implementation of practices to reduce GHG emissions?

Description: Up to the five most common forms of verifying practice implementation used this year as part of MMRV requirements. Verification is defined as independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG verification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG verification methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Artificial intelligence
- Audit by recipient
- Computer modeling
- Photos
- Record audit
- Satellite imagery
- Site or field visit
- Third-party audit
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Partner Activities

Unique IDs	
Partner ID	Unique Project ID for each partner

Partner name	
Data element name: Name of partner organization	**Reporting question:** What is the official name of the recipient or partner organization?
Description: Legal name of recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation

Partner type	
Data element name: Type of partner organization	**Reporting question:** What type of organization is this?
Description: Legal/financial structure of recipient or partner organization	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity groups (501c5) • For-profit • Individual • Nonprofit • State or local agency • Tribal agency • University
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation

Partner POC	
Data element name: Partner POC	**Reporting question:** Who is the point of contact for this project at the recipient or partner organization?
Description: Name of a point of contact for the recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation; update as necessary

Partner POC email	
Data element name: Partner POC email	**Reporting question:** What is the point of contact's email address?
Description: Email of the point of contact for the recipient or partner organization	
Data type: Text	**Select multiple values**: NA
Measurement unit: NA	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Partnership initiation; update as necessary

Partnership start date

Data element name: Partnership start date | **Reporting question:** When did the partnership start?

Description: Date that the partner organization and the recipient began formally partnering on the project

Data type: Date | **Select multiple values**: NA

Measurement unit: MM/DD/YYYY | **Allowed values:** 01/01/2023 – 12/31/2030

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership initiation

Partnership end date

Data element name: Partnership end date | **Reporting question:** When did the partnership end?

Description: Date that the partner organization and the recipient stopped formally partnering on the project

Data type: Date | **Select multiple values**: NA

Measurement unit: MM/DD/YYYY | **Allowed values:** 01/01/2023 – 12/31/2030

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership end quarter

New partnership

Data element name: New partnership | **Reporting question:** Is this a new partnership?

Description: A new partnership means that the recipient and the partner organization have not had a formal working relationship (under contract or on a grant) prior to the start of the project.

Data type: List | **Select multiple values**: No

Measurement unit: Category | **Allowed values:**

- Yes
- No
- I don't know

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Partnership initiation

Partner total requested

Data element name: Partner total requested | **Reporting question:** What is the total amount of funding the partner has requested to date from this project?

Description: Cumulative (total) amount of funds that the partner has requested reimbursement for from the recipient from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus the amount of funds requested in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal | **Select multiple values**: NA

Measurement unit: Dollars | **Allowed values:** $0-$100,000,000

Logic: No response for recipient | **Required:** Yes

Data collection level: Partner | **Data collection frequency:** Quarterly

Total match contribution

Data element name: Total match contribution

Reporting question: What is the total match value the organization has contributed to the project to date?

Description: Cumulative (total) value of funds and in-kind contributions (e.g., staff time, inputs, equipment rental, marketing support) that the partner has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus match contributions in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Total match incentives

Data element name: Total match incentives

Reporting question: What is the total value of match provided by this organization for producer incentives?

Description: Cumulative (total) value of funds for incentive payments directly to producers that the partner has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus match incentives in the reporting quarter. If there are no changes, report the value from the previous quarter.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match type

Data element name: Match type 1-3

Reporting question: What types of match contributions has the organization provided to the project?

Description: Types of match contributions *other than incentives* provided directly to producers by the organization from the start of the partnership to the end of the reporting quarter. Enter up to the top three (in dollar value) types of match contributions provided. In-kind staff time could be used for technical assistance, marketing assistance, or other support to producers. Production inputs include seed, fertilizer, pesticides, equipment and other inputs for use in the field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 match types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other match types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Equipment rental or use
- In-kind staff time
- Production inputs (reduced cost or free)
- Program income
- Software
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match amount

Data element name: Match amount 1-3

Reporting question: What is the value of the match contributions the organization provided to the project?

Description: Cumulative (total) value of funds for each match type that the organization has provided as a project match contribution from the start of the partnership to the end of the reporting quarter. Enter amounts for up to the top three (in dollar value) match types. The worksheet provides three columns for this data element. Enter one value for each column. If fewer than 3 match types are used, leave unnecessary columns blank.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Training type provided

Data element name: Training type 1-3 provided

Reporting question: What types of training has the organization provided to project partners?

Description: Types of training provided to the project partner as a result of participating in the project during the past quarter. Training can come from the recipient, a project partner organization (including other divisions of their own organization, or an outside organization. Enter up to the top three (in dollar value) types of partner training provided. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 training types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other training types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Data collection
- Grant reporting
- Marketing opportunities
- Providing financial assistance
- Providing technical assistance
- Writing producer contracts
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity by partner

Data element name: Activity 1-3 by partner

Reporting question: What types of activities has the organization provided to the project?

Description: Types of activities that the recipient or partner organization has provided during the reporting quarter. Enter up to the top three (in dollar value) types of activities undertaken. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 activity types are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other activity types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Marketing support
- MMRV support
- Producer outreach for enrollment
- Technical assistance to producers
- Training to other partner organizations
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity cost

Data element name: Activity cost 1-3	**Reporting question:** What is the value of the activities this organization has provided to the project?
Description: Cumulative (total) cost of each activity type that the organization has undertaken or offered from the start of the partnership to the end of the reporting quarter. Enter amounts for up to the top three (in dollar value) activity types. The worksheet provides three columns for this data element. Enter one value for each column. If fewer than 3 activity types are provided, leave unnecessary columns blank.	
Data type: Decimal	**Select multiple values**: NA
Measurement unit: Dollars	**Allowed values:** $0-$100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Products supplied

Data element name: Products supplied	**Reporting question:** What products or supplies were provided to enrolled fields?
Description: Name(s) of products supplied to enrolled producers as incentives or matching contributions. Enter the name of each product, including its brand. Separate each product name with a comma. If no products or supplies were provided by the organization, leave the column blank.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Product source

Data element name: Product source	**Reporting question:** Which companies provided the supplies?
Description: Name of firm or company from which supplies were obtained.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: Respond if text entered for 'Products supplied'	**Required:** Yes
Data collection level: Partner	**Data collection frequency:** Quarterly

Marketing Activities

Commodity type	
Data element name: Commodity type	**Reporting question:** What type of commodity is produced by the farmers enrolled in this project?
Description: List a single commodity produced or marketed through incentives from this project. If multiple commodities are produced by the project, use additional rows of the worksheet to report each commodity. Use the FSA commodity list in Appendix B and choose the commodity from the list.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Marketing channel type	
Data element name: Marketing channel type	**Reporting question:** What type of marketing channel is used to sell this commodity?
Description: List a single type of marketing channel used to sell the commodity produced by farmers enrolled in the project. If a single commodity is marketed through multiple channels, use additional rows of the worksheet to report each combination of commodity and marketing channel. If "other" is chosen, use the additional column to enter the other marketing channel type(s) as free text.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Agricultural marketing board • Biorefinery • Commodity broker • Direct to consumer • Direct to institution • Direct to restaurant • Distributor (including grain elevators) • Food hub or cooperative • Food processor • Non-food byproducts processor • Retailer • USDA • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Number of buyers	
Data element name: Number of buyers	**Reporting question:** How many buyers are there in this marketing channel?
Description: List the number of individual firms or buyers in this marketing channel.	
Data type: Integer	**Select multiple values**: No
Measurement unit: Count	**Allowed values:** 1-500
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Names of buyers

Data element name: Names of buyers

Reporting question: What are the names of all of the buyers in this marketing channel?

Description: Provide the names of all buyers in this marketing channel. Separate each name with a comma.

Data type: Text

Select multiple values: NA

Measurement unit: Name

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing channel geography

Data element name: Marketing channel geography

Reporting question: What is the primary geography of the marketing channel?

Description: The primary geography of the type of marketing channel. Primary geography means the scale at which most of the activity of buying and selling happens. Local means within a single state or directly neighboring states. Regional means within a five-to-ten state area. National means across the United States. International means specific locations outside of the United States. Global means across the world or not to a specific international location.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Local
- Regional
- National
- Global

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Value sold

Data element name: Value sold

Reporting question: What is the value of the commodity sold in this marketing channel?

Description: The dollar value of the commodity sold in this marketing channel this quarter (non-cumulative).

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $1-$100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Volume sold

Data element name: Volume sold

Reporting question: What is the volume of the commodity sold in this marketing channel?

Description: The volume of the commodity sold in this marketing channel this quarter (non-cumulative).

Data type: Decimal

Select multiple values: No

Measurement unit: Number

Allowed values: 1-100,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Volume sold unit

Data element name: Volume sold unit

Reporting question: What is the unit of volume?

Description: The unit associated with the volume of the commodity sold in the marketing channel. If "other" is chosen, use the additional column to enter the appropriate unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Bales (500 pounds)
- Bushels
- Carcass pounds
- Gallons
- Kilograms
- Linear board feet
- Liveweight pounds
- Metric tons
- Pounds
- Short tons
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium

Data element name: Price premium

Reporting question: What price premium is received for the commodity sold in this marketing channel?

Description: The price premium received for the commodity sold in this marketing channel this quarter. Price premium is the amount received above a 'business as usual' price.

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0.01-$10,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium unit

Data element name: Price premium unit

Reporting question: What is the unit for the price premium?

Description: The unit associated with the price premium for the commodity sold in the marketing channel. If "other" is chosen, use the additional column to enter the appropriate unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Per bale (500 pounds)
- Per bushel
- Per carcass pound
- Per gallon
- Per kilogram
- Per linear board foot
- Per live pound
- Per metric ton
- Per ounce
- Per short ton
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium to producer

Data element name: Price premium to producer

Reporting question: What percent of the price premium is provided to the producer for the commodity sold in this marketing channel?

Description: The percent of the price premium provided to the producer for the commodity sold in this marketing channel this quarter. Price premium is the amount received above a 'business as usual' price.

Data type: Decimal

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Product differentiation method

Data element name: Product differentiation method 1-3

Reporting question: What methods are used to differentiate climate-smart commodities in this marketing channel?

Description: Provide the methods used to differentiate the climate-smart commodity in this market channel. Product differentiation methods are ways to distinguish or differentiate the climate-smart commodity in the marketplace. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 product differentiation methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other product differentiation methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Certification/verification for internal insetting
- Farm certification
- Label or badge used on packaging or marketing
- Third party certification/verification
- Trademark
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing method

Data element name: Marketing method 1-3

Reporting question: What methods are used to market climate-smart commodities in this marketing channel?

Description: Provide the method(s) used to market this commodity in this market channel. Marketing method is the way that potential buyers of the climate-smart commodity are engaged by the project partners as the sellers or facilitators of sale. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 marketing methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other marketing methods as free text

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Label or badge used on packaging or marketing materials
- Marketing partnership (e.g., promotion by buyer)
- Print marketing campaign
- Social media and digital marketing campaign
- Verbal marketing campaign (e.g., radio, word of mouth)
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing channel identification method

Data element name: Marketing channel identification method 1-3

Reporting question: What methods are used to generate interest in climate-smart commodities in this marketing channel?

Description: Provide the marketing channel identification method(s) used for this commodity in this market channel. Market channel identification methods are the ways that producers and project partners generate interest in purchasing the climate-smart commodity. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 marketing channel identification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other marketing channel identification methods as free text

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Educational tours for buyers
- In-person lead generation
- Negotiated contracts with buyers
- Partnership network or project partner
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Traceability method

Data element name: Traceability method 1-3

Reporting question: What traceability methods are used for climate-smart commodities in this channel?

Description: Provide the traceability method(s) used for the climate-smart commodity in this market channel. Traceability methods are ways to trace the climate-smart commodity or the climate-smart claims through the supply chain. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 traceability methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other traceability methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Barcode or unique ID
- Blockchain
- Book and claim
- Chain of custody
- Mass balance
- Recordkeeping
- Registry with certification
- Segregation
- Supply shed
- Volume proxy
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Producer Enrollment

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
State or territory	State name (must match FSA farm enrollment data)
County of residence	County name (must match FSA farm enrollment data)

Producer data change

Data element name: Producer data change

Reporting question: Is there new/updated information for a producer who is re-enrolling in the project?

Description: Indicates that there is new or updated information for a producer who had previously enrolled in the project and is re-enrolling.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Re-enrollment

Producer start date

Data element name: Producer start date

Reporting question: When did the producer enroll in the project?

Description: Date that the producer enrolled in the project by signing their first contract.

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer name

Data element name: Producer name

Reporting question: What is the name of producer enrolled in the project?

Description: Name of the producer enrolled in the project; the name must match the name contained in the customer's Business Partner record and the Farm Operating Plan in FSA Business File for that Farm ID.

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Underserved status

Data element name: Underserved status

Reporting question: Is this producer considered an underserved and/or a small producer?

Description: Underserved status of the primary operator of the enrolled operation. Underserved producers generally include beginning farmers, socially disadvantaged farmers, veteran farmers, and limited resource farmers; women farmers and producers growing specialty crops are generally also included in these categories. Small farms are generally those with less than $350,000 in annual gross cash farm income. Indicate whether this producer is considered underserved, a small producer, or both underserved and a small producer. Use "I don't know" if the producer declines to answer. Departmental Regulation 4370-001 provides USDA's policies for collecting demographic data, including race, ethnicity and gender. Providing demographic information is voluntary and at the discretion of the customer. Demographic information is used by USDA for statistical purposes only and will not be used to determine an applicant's eligibility for programs or services for which they apply.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes, underserved
- Yes, small producer
- Yes, underserved and small producer
- No
- I don't know

Logic: None – all respond

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment

Total area

Data element name: Total area

Reporting question: What is the total area of the farm?

Description: Total area of the farm associated with the Farm ID. Report total area of the farm, even if only a portion of the farm is enrolled in the project. If a producer is enrolled in the project for multiple years, review the total area each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Less than 1 acre
- 1 to 9 acres
- 10 to 49 acres
- 50 to 69 acres
- 70 to 99 acres
- 100 to 139 acres
- 140 to 179 acres
- 180 to 219 acres
- 220 to 259 acres
- 260 to 499 acres
- 500 to 999 acres
- 1,000 to 1,999 acres
- 2,000 to 4,999 acres
- 5,000 or more acres

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Total crop area

Data element name: Total crop area	**Reporting question:** What percent of the current operation is cropland?
Description: Area of the total farm that is currently used as cropland. If a producer is enrolled in the project for multiple years, review the total crop area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Total livestock area

Data element name: Total livestock area	**Reporting question:** What amount of the current operation is used for livestock (by area)?
Description: Area of the total farm that is currently used for pasture, grazing, rangeland; or animal housing, feeding or milking. If a producer is enrolled in the project for multiple years, review the total livestock area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Total forest area

Data element name: Total forest area	**Reporting question:** What amount of the current operation is forested (by area)?
Description: Area of the total farm that is currently considered forest land use. Forest land use means that at least 10% of the land area is covered in trees that will be at least 13 feet tall when mature. If a producer is enrolled in the project for multiple years, review the total forest area each time a new contract is signed and provide any necessary updates.	
Data type: Integer	**Select multiple values:** No
Measurement unit: Acres	**Allowed values:** 0-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Livestock type

Data element name: Livestock type 1-3

Reporting question: What types of livestock are raised on the farm?

Description: Up to top three types of livestock (by head count) on the farm. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 livestock types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other livestock types as free text. If a producer is enrolled in the project for multiple years, review the livestock type each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Alpacas
- Beef cows
- Beefalo
- Buffalo or bison
- Chickens (broilers)
- Chickens (layers)
- Dairy cows
- Deer
- Ducks
- Elk
- Emus
- Equine
- Geese
- Goats
- Honeybees
- Llamas
- Reindeer
- Sheep
- Swine
- Turkeys
- Other (specify)

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Livestock head

Data element name: Livestock head 1-3

Reporting question: How many livestock (by type) are on this operation?

Description: Average annual head count for each type of livestock. Enter amounts for up to the top three livestock types by number. The worksheet provides three columns for this data element. Enter one value for each column. If there are fewer than 3 livestock types, leave unnecessary columns blank. If a producer is enrolled in the project for multiple years, review the average annual head count each time a new contract is signed and provide any necessary updates.

Data type: Integer

Select multiple values: NA

Measurement unit: Head count

Allowed values: 1-10,000,000

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Organic farm

Data element name: Organic farm

Reporting question: Is any part of the farm currently USDA-certified organic or transitioning to USDA-certified organic?

Description: USDA-certified organic means that the farm has been certified by an accredited organic certifying agent or is transitioning to USDA-certified organic by not using any of the prohibited substances. Yes means that some or all of the farm is certified organic or transitioning to certified organic. No means that no part of the farm is certified organic or transitioning to certified organic. If a producer is enrolled in the project for multiple years, review the organic certification status of the farm each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Organic fields

Data element name: Organic fields

Reporting question: Are any of the fields enrolled in the project currently USDA-certified organic or transitioning to USDA-certified organic?

Description: USDA-certified organic means that the operation has been certified by an accredited organic certifying agent or is transitioning to USDA-certified organic by not using any of the prohibited substances. Yes means that some or all of the fields enrolled in the project are certified organic or transitioning to certified organic. No means that no part of the fields enrolled in the project are certified organic or transitioning to certified organic. If a producer is enrolled in the project for multiple years, review the organic certification status of the enrolled fields each time a new contract is signed and provide any necessary updates.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Organic operation'

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment and subsequent enrollment(s), if applicable

Producer motivation

Data element name: Producer motivation

Reporting question: Which of the following was the primary reason the producer enrolled in this project?

Description: Primary operator's motivation for enrolling in the project.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Financial benefit
- Environmental benefit
- New market opportunity
- Partnerships or networks
- Other

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer outreach

Data element name: Producer outreach 1-3

Reporting question: What types of outreach were provided to producers?

Description: Up to three most common types of outreach provided to producer prior to enrollment. Outreach activities are those focused on identifying and enrolling producers in the project. Outreach can come from the recipient or project partners. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 outreach types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other outreach types as free text.

Data type: List

Select multiple values: Yes

Measurement unit: Category

Allowed values:

- Commodity organizations
- Conferences
- Cooperative extension
- Digital communications and resources
- Education workshops, field days, and town halls
- Existing partner networks
- Farm visits and one-on-one meetings
- General advertising
- Peer referrals and producer groups
- Phone calls
- Print communications and resources
- Retailers
- State agencies
- Targeted messaging using proprietary data
- Technical service providers
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF experience

Data element name: CSAF experience

Reporting question: Has the primary operator implemented CSAF practices in the last ten years anywhere on the farm?

Description: Has this farm implemented climate-smart agriculture or forestry (CSAF) practices anywhere on the farm in the past 10 years or since the current primary operator took control (whichever time period is shorter)? CSAF practices are included in a list in Appendix A.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF federal funds

Data element name: CSAF federal funds

Reporting question: Were prior CSAF practices supported by federal funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by federal funds? Federal funds are defined as being from programs including, but not limited to, those from the Natural Resources Conservation Service ((NRCS), including through Environmental Quality Incentives Program (EQIP), Conservation Stewardship Program (CSP), Regional Conservation Partnership Program (RCPP), or related programs), the Farm Service Agency Conservation Reserve Program (CRP), as well as funds from other USDA programs or other federal agencies.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF state or local funds

Data element name: CSAF state or local funds

Reporting question: Were prior CSAF practices supported by state or local funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by state funds? State or local funds are those from state departments of agriculture or other state agencies, local water quality districts and other local agencies.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF nonprofit funds

Data element name: CSAF nonprofit funds

Reporting question: Were CSAF practices supported by nonprofit funds?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by nonprofit funds? Nonprofit funds are those offered directly from a nonprofit organization to a producer.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF market incentives

Data element name: CSAF market incentives	**Reporting question:** Were CSAF practices supported by market incentives?
Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by market incentives? Market incentives include premiums paid by a commodity buyer or by a consumer based on branding or labeling as a climate-smart commodity.	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'CSAF experience'	**Required:** Yes
Data collection level: Producer	**Data collection frequency:** Initial enrollment

Field Enrollment

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)
Prior Field ID, if applicable	Prior Field ID assigned by FSA if there has been reconstitution of the farm resulting in a new Field ID during the field's enrollment in the project

Field data change

Data element name: Field data change

Reporting question: Has the information previously reported for this field changed?

Description: Indicator that this entry is being used to report any relevant changes, such as a new Field ID number or changes to the commodity or practice combinations, for a field that has previously been enrolled in the project.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Re-enrollment

Contract start date

Data element name: Contract start date

Reporting question: What is the start date of the contract with the producer that includes this field?

Description: Start date listed on the contract that enrolls the field in the project.

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Total field area

Data element name: Total field area

Reporting question: What is the total size of the enrolled field?

Description: Total size of the field enrolled with the project.

Data type: Decimal

Select multiple values: No

Measurement unit: Acres

Allowed values: .01-500

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Commodity category

Data element name: Commodity category	**Reporting question:** What category of commodity(ies) is (are) produced from this field?
Description: Category of commodity(ies) produced in field enrolled in the project	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Crops • Livestock • Trees • Crops and livestock • Crops and trees • Livestock and trees • Crops, livestock and trees
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Commodity type

Data element name: Commodity type	**Reporting question:** What type of commodity is produced from this field?
Description: Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides a drop-down list of the allowed values. Choose the appropriate value. Enter additional commodities in subsequent rows.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Baseline yield

Data element name: Baseline yield	**Reporting question:** What is the baseline yield of this field?
Description: Average annual yield of commodity in 3 years prior to enrollment. Provide yield for the enrolled field if possible. If not at field level, provide average annual yield for the specific commodity for the operation.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Production per acre or animal	**Allowed values:** .01-100,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Baseline yield unit

Data element name: Baseline yield unit

Reporting question: Baseline yield unit

Description: Unit of average annual yield of commodity in enrolled field in 3 years prior to enrollment. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Animal units per acre
- Bushels per acre
- Carcass pounds per animal
- Head per acre
- Hundred-weights (or pounds) per head
- Linear feet per acre
- Liveweight pounds per animal
- Pounds per acre
- Tons per acre
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Baseline yield location

Data element name: Baseline yield location

Reporting question: For what portion of the operation is the baseline yield being reported?

Description: Location of the reported average annual yield of commodity in 3 years prior to enrollment. If "other" is chosen, use the additional column to enter the appropriate location as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Enrolled field
- Whole operation
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field land use

Data element name: Field land use

Reporting question: What is this field's land use history?

Description: Prior to enrollment, what was the most common land use for this field in the past 3 years?

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Crop land
- Forest land
- Non-agriculture
- Other agricultural land
- Pasture
- Range

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field irrigated

Data element name: Field irrigated	**Reporting question:** What is this field's irrigation history?
Description: Prior to enrollment, what was the most common irrigation practice on this field the past 3 years?	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • No irrigation • Center pivot • Drip-subsurface • Drip-surface • Flood/border • Furrow/ditch • Lateral/linear sprinklers • Micro-sprinklers • Seepage • Side roll • Solid set sprinklers • Supplemental • Surface • Traveling gun/towline • Wheel Line • Other
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Field tillage

Data element name: Field tillage	**Reporting question:** What is this field's tillage history?
Description: Prior to enrollment, what was the most common tillage approach during the past 3 years?	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • None • Conventional, inversion • Conventional, vertical • No-till, direct seed • Reduced till, inversion • Reduced till, vertical • Strip till • Other
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

Practice past extent - farm

Data element name: Practice past extent - farm

Reporting question: What percent of the farm has implemented this CSAF practice (combination) previously?

Description: Prior to enrollment, on what portion of the whole farm had this (these) CSAF practice(s) ever been used by the primary operator? If multiple practices are planned to be implemented in this field, enter the value that best corresponds to the farm's prior experience with the planned set of practices.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Never used
- Used on less than 25% of operation
- Used on 25-50% of operation
- Used on 51-75% of operation
- Used on more than 75% of operation

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field any CSAF practice

Data element name: Field any CSAF practice

Reporting question: What is this field's prior experience with CSAF practices?

Description: Prior to enrollment, have any CSAF practice or practices been used in this field in the past 3 years? CSAF practices are included in a list in Appendix A.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice past use - this field

Data element name: Practice past use - this field

Reporting question: Have this CSAF practice (combination) been implemented previously in this field?

Description: Prior to enrollment, had this (these) CSAF practice(s) been used in this field in the in the past 3 years? Enter yes if all of the practices had been used previously in this field; enter some if multiple practices are being implemented and one or more, but not all of the practices had been used previously in this field; and enter no if none of the practices had been used previously in this field.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- Some
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice type

Data element name: Practice type 1-7

Reporting question: What CSAF practice is being implemented in this field through the project?

Description: Which CSAF practice or practices will be implemented on this field as part of enrollment in the project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice standard

Data element name: Practice standard 1-7

Reporting question: What standard does the CSAF practice follow?

Description: Is the CSAF practice being implemented on the field as part of enrollment in the project following a defined practice standard? The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- NRCS
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Planned practice implementation year

Data element name: Practice 1-7 implementation year

Reporting question: What year is the CSAF practice planned to be implemented?

Description: Year that the CSAF practice is planned to be implemented on the field. Use 2022 for early adopters, defined as fields that have the practice actively implemented in 2022 (prior to contract being signed for this project). The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: Integer

Select multiple values: No

Measurement unit: Year

Allowed values: 2022-2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice extent

Data element name: Practice 1-7 extent

Reporting question: To what extent is the practice implemented?

Description: Total area, length, or head where the practice is being implemented in the field specified by the contract.

Data type: Decimal

Select multiple values: No

Measurement unit: Extent

Allowed values: .01-100,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice extent unit	
Data element name: Practice 1-7 extent unit	**Reporting question:** Unit for extent of practice implementation
Description: Unit for extent of practice implementation on the field specified by the contract. If "other" is chosen, use the additional column to enter the appropriate unit.	
Data type: List	**Select multiple values:** No
Measurement unit: Category	**Allowed values:** • Acres • Head of livestock • Linear feet • Square feet • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Initial enrollment

CSAF Practice Sub-questions

For certain practices, additional questions are asked that provide information necessary to estimate greenhouse gas benefits from implementation of the practice. See Table 11 in the *CSAF Practice Sub-questions* section for descriptions of individual questions to be answered depending on the CSAF practices selected.

Farm Summary

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
State or territory	State name (must match FSA farm enrollment data)
County of residence	County name (must match FSA farm enrollment data)

Producer TA received

Data element name: Producer TA received 1-3

Reporting question: What types of technical assistance were provided to this producer?

Description: Did the recipient or any partner provide technical assistance (TA) to the producer this year? Technical assistance is any training, education, capacity building or other support provided by any project partner(s) directly to producers enrolled in the project. List up to the top three most common types of TA provided to this producer. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 3 TA types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other TA types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Demonstration plots
- Equipment demonstrations
- Group field days or in-person field workshops
- Hotline
- One-on-one enrollment assistance
- One-on-one field visits
- One-on-one producer mentorship
- Producer networks and peer-to-peer groups
- Retailer consultation
- Social media/digital tools
- Train-the-trainer opportunities
- Virtual meetings or field days
- Webinars and videos
- Written materials
- None
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Producer incentive amount

Data element name: Producer incentive amount

Reporting question: What is the total value of financial incentives provided to this producer?

Description: Total incentive payment received by the producer from USDA project funds for the year (non-cumulative). Do not include incentive payments made with partner match funds.

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

Allowed values: $0-$5,000,000

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive reason

Data element name: Incentive reason 1-4

Reporting question: Why were incentives provided to this producer?

Description: List up to four reasons for producer incentive payments. List the top 4 based on total value of the incentive for each reason. The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 reasons, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other reasons as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Avoided conversion
- Conference or training attendance
- Demographics/equity payment
- Enrollment
- Foregone revenue
- Historic data collection
- Identity preservation (supply chain tracing)
- Implementation of practices
- MMRV (e.g., data collection, reporting)
- Passing audit
- Price premium on output
- Yield change
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive structure

Data element name: Incentive structure 1-4

Reporting question: What are the units for the financial incentives provided to this producer?

Description: List the structures (units) corresponding to the top 4 (by dollar value) incentive payments to producers. Production unit is weight or volume (bushel, kilogram, ton). The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 structure types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other structure types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Flat rate
- Per animal head
- Per area
- Per length
- Per production unit
- Per ton GHG
- Per tree
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive type

Data element name: Incentive type 1-4

Reporting question: What type of incentives were provided to each producer?

Description: List the top 4 types of incentive payments to producers (based on dollar value). The worksheet provides four columns with a drop-down list of the allowed values. Choose one value for each column. If there are fewer than 4 incentive types, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other incentive types as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Cash payment
- Equipment loan
- Guaranteed commodity premium payment
- Inputs and supplies
- Land rental
- Loan
- Paid labor
- Post-harvest transportation
- Tuition or fees for training
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on enrollment

Data element name: Payment on enrollment

Reporting question: What portion of the financial incentive is provided to the producer upon enrollment in the project?

Description: Any incentive payment provided to the producer upon enrollment/signing a contract, and not related to any implementation, MMRV or sales activities. Full payment means the full incentive amount for any contract held by the producer is paid upon enrollment. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon enrollment. No payment means that none of the full incentive amount for any contract held by the producer is paid upon enrollment.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on implementation

Data element name: Payment on implementation

Reporting question: What portion of the financial incentive is provided to the producer upon implementation of the practices?

Description: Any incentive payment provided to the producer upon implementing the practices included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon implementation. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon implementation. No payment means that none of the full incentive amount for any contract held by the producer is paid upon implementation.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on harvest

Data element name: Payment on harvest

Reporting question: What portion of the financial incentive is provided to the producer upon harvest of the commodity?

Description: Any incentive payment provided to the producer upon harvesting or slaughtering the commodity included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon harvest. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon harvest. No payment means that none of the full incentive amount for any contract held by the producer is paid upon harvest.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on MMRV

Data element name: Payment on MMRV

Reporting question: What portion of the financial incentive is provided to the producer upon completing MMRV requirements?

Description: Any incentive payment provided to the producer upon completing the annual MMRV requirements included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon MMRV being complete. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon MMRV being complete. No payment means that none of the full incentive amount for any contract held by the producer is paid upon MMRV being complete.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on sale

Data element name: Payment on sale

Reporting question: What portion of the financial incentive is provided to producer upon sale of the commodity?

Description: Any incentive payment provided to the producer upon sale of the commodity included in the contract. Full payment means the full incentive amount for any contract held by the producer is paid upon sale. Partial payment means that only part of the full incentive amount for any contract held by the producer is paid upon sale. No payment means that none of the full incentive amount for any contract held by the producer is paid upon sale.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Field Summary

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Commodity type

Data element name: Commodity type

Reporting question: What type of commodity is produced from this field?

Description: Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides multiple columns with a drop-down list of the allowed values. Choose one value for each column. Leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Practice type

Data element name: Field practice type 1-7

Reporting question: What CSAF practice is being implemented in this field through the project?

Description: Which climate-smart agriculture or forestry (CSAF) practice or practices are being implemented in this project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Date practice complete

Data element name: Date practice complete

Reporting question: When did the project certify CSAF practice implementation as complete?

Description: Date that the project certifies that implementation of the CSAF practice is complete on the field. Use January of the year prior to contract year for early adopters, defined as fields that have the practice actively implemented in the year prior to a contract associated with this project is signed). The worksheet provides seven columns for this data element. Enter one value for each column, corresponding to the practice types entered in the previous columns. If there are fewer than 7 practices being implemented on this field through enrollment in the project, leave unnecessary columns blank.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Contract end date

Data element name: Contract end date

Reporting question: Contract end date

Description: End date listed on the contract that enrolls the field in the project. If contract end date changes, submit updated end date during the next quarter's reporting.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

MMRV assistance provided

Data element name: MMRV assistance provided

Reporting question: Was MMRV assistance provided?

Description: Was any MMRV assistance provided to the primary operator for this field? MMRV assistance includes in-field support for the use of technologies, consultation on data collection and input, and other support related to MMRV. MMRV is defined a measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable).

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Marketing assistance provided

Data element name: Marketing assistance provided

Reporting question: Was marketing assistance provided?

Description: Was any marketing assistance provided to the primary operator for the commodity(ies) produced from this field? Marketing assistance includes guaranteeing the sale of the commodity(ies), providing a platform for the sale of the commodity(ies), providing a label, branding, or other support related to marketing.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Incentive per acre or head

Data element name: Incentive per acre or head

Reporting question: Is this field receiving a per-acre or per-head incentive?

Description: Is this field receiving an incentive payment to implement a specific CSAF practice or set of practices on a per-acre or per-head (livestock) basis?

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field commodity value

Data element name: Field commodity value	**Reporting question:** What is the value of the commodity produced on the enrolled field?
Description: The dollar value of the commodity produced on the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field commodity volume

Data element name: Field commodity volume	**Reporting question:** What is the volume of commodity produced on the enrolled field?
Description: The volume of the commodity produced on the enrolled field	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Number	**Allowed values:** 1-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field commodity volume unit

Data element name: Field commodity volume unit	**Reporting question:** What is the unit of volume?
Description: The unit associated with the volume of the commodity produced on the enrolled field. If "other" is chosen, enter the appropriate value in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Bushels • Carcass weight pounds • Gallons • Head • Linear feet • Liveweight pounds • Pounds • Tons • Other (specify)
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Cost of implementation

Data element name: Cost of implementation	**Reporting question:** What is the cost of practice implementation in the field?
Description: Total annual estimated cost per unit of implementing the practice(s) in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Cost unit

Data element name: Cost unit

Reporting question: What is the unit for cost?

Description: The unit associated with the cost of implementing CSAF practices in the field. If "other" is chosen, enter the appropriate value in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Per acre
- Per bushel
- Per head
- Per linear foot
- Per pound
- Per ton
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Cost coverage

Data element name: Cost coverage

Reporting question: What percent of the practice cost is covered by the incentive?

Description: Estimated proportion of total annual cost of implementing the practice(s) that is covered by project incentives.

Data type: Integer

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG monitoring

Data element name: Field GHG monitoring 1-3

Reporting question: How were GHG impacts monitored in this field?

Description: Up to the top three forms of monitoring GHG benefits as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Drones
- Ground-level photos and videos
- On-farm inspection
- Plot-based sampling (e.g., soil, water)
- Producer records or attestation
- Satellite monitoring or remote sensing
- Soil metagenomics
- Soil sensors
- Water sensors
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG reporting

Data element name: Field GHG reporting 1-3

Reporting question: How were GHG benefits reported for this field?

Description: Up to the top three forms of reporting on GHG benefits as part of MMRV requirements. Reporting is defined as documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG reporting methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG reporting methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Automated devices
- Email
- Mobile app
- Paper
- Third-party actors
- Website
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG verification

Data element name: Field GHG verification 1-3

Reporting question: How was implementation of practices to reduce GHG emissions verified for this field?

Description: Up to the top three of verification of GHG benefits as part of MMRV requirements. Verification is defined as independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG verification methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG verification methods as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Artificial intelligence
- Computer modeling
- Recipient audit
- Photos
- Record audit
- Satellite imagery
- Site or field visit
- Third-party audit
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG calculations

Data element name: Field GHG calculations

Reporting question: What methods are used to calculate GHG benefits in this field?

Description: List the method(s) used to calculate GHG benefits in this field. If yes to direct physical measurements, submit result reports (see *Supplemental Data Submission – Field direct GHG measurement results*).

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official GHG calculation

Data element name: Field official GHG calculation

Reporting question: What method was used to calculate the official GHG benefits in this field?

Description: List the method used to calculate the official GHG benefits in this field that are reported as part of the project's aggregate impact.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:
- Models
- Direct field measurements

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official GHG ER

Data element name: Field official GHG emission reductions

Reporting question: What are the estimated total GHG emission reductions (CO2eq) in this field?

Description: Estimated greenhouse gas emission reductions from practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official carbon stock

Data element name: Field official carbon stock

Reporting question: How much carbon has been sequestered in this field?

Description: Estimated total change in carbon stock based on practice implementation in this field. This data element can be reported in any quarter and is cumulative for the year. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official CO2 ER

Data element name: Field official CO2 emission reductions	**Reporting question:** What are the estimated total CO2 emission reductions in this field?
Description: Estimated total carbon dioxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official CH4 ER

Data element name: Field official CH4 emission reductions	**Reporting question:** What are the estimated total CH4 emission reductions in this field?
Description: Estimated total methane emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official N20 ER

Data element name: Field official N2O emission reductions	**Reporting question:** What are the estimated total N2O emission reductions in this field?
Description: Estimated total nitrous oxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field offsets produced

Data element name: Field offsets produced	**Reporting question:** How many carbon offsets have been produced in this field?
Description: Total carbon offsets produced in the field during the quarter (not cumulative). Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field insets produced

Data element name: Field insets produced	**Reporting question:** How many carbon insets have been produced in this field?
Description: Total carbon insets produced in the field during the quarter (not cumulative). Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Other field measurement

Data element name: Other field measurement	**Reporting question:** Were data collected from the field for reasons other than GHG benefit estimation?
Description: Direct physical measurements or data collection taken in the field for any reason other than GHG benefits estimation. These reasons could include calibration of GHG estimation tools or models, tracking other environmental benefits (see Field environmental benefits report), and other reasons. If yes, submit corresponding reports (see *Supplemental data submission - Field direct measurement results*).	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

GHG Benefits - Alternate Modeled

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Commodity type

Data element name: Commodity type 1-6 **Reporting question:** What type of commodity(ies) is produced from this field?

Description: Type of commodity(ies) produced in field enrolled in the project. See full list of commodity options in Appendix B. The worksheet provides multiple columns with drop-down lists of the allowed values. Choose one value for each column. Leave unnecessary columns blank

Data type: List **Select multiple values**: No

Measurement unit: Category **Allowed values:** FSA commodity list

Logic: None – all respond **Required:** If project calculates GHG benefits using multiple methods

Data collection level: Field **Data collection frequency:** Annual

Practice type

Data element name: Practice type 1-7 **Reporting question:** What CSAF practice is being implemented by this project?

Description: Which CSAF practice or practices are being implemented in this project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented by the project, leave unnecessary columns blank.

Data type: List **Select multiple values:** No

Measurement unit: Category **Allowed values:** See list in Appendix A

Logic: None – all respond **Required:** If project calculates GHG benefits using multiple methods

Data collection level: Field **Data collection frequency:** Annual

GHG model

Data element name: GHG model

Reporting question: What model was used for alternate calculation of GHG benefits?

Description: Select the model used for the alternate calculation of the field's GHG benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- ACC Calculator
- Agriculture, Forestry and Other Land Use (AFOLU) Carbon Calculator
- AIRES
- APEX
- Bowen Ratio Energy Balance
- Carat-Calculator
- CArPE
- CDFA web-based calculator
- COMET-Farm
- COMET-Planner
- CoolFarm
- Cover Crop Explore
- CropTrak
- CultivateAI's FMIS
- DayCent-CR
- DNDC
- DSSAT
- Earth Optics
- EcoPractices
- EPIC
- Extrapolation based on literature
- FieldPrint
- Granular
- GREET
- gTIR
- IFSM
- IPCC default emissions factors & models
- itree
- Nitrogen Balance
- Nutrient Tracking Tool (NTT)
- RCD Project Tracker
- Revised Universal Soil Loss equation 2 (RUSLE2)
- RuFaS
- SAFE-Link
- SALUS (CIBO)
- SNAPGRAZE
- SquareRoots
- SWAT-C
- SYMFONI
- Truterra Sustainability Tool
- Verra
- WEPP
- YardStick
- Other (specify)

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Model start date

Data element name: Model start date	**Reporting question:** For what time period are the GHG benefits modeled (model start date)?
Description: Date that the model parameters begin.	
Data type: Date	**Select multiple values**: NA
Measurement unit: MM/DD/YYYY	**Allowed values:** 01/01/1950 – 12/31/2030
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Model end date

Data element name: Model end date	**Reporting question:** For what time period are the GHG benefits modeled (model end date)?
Description: Date that the model parameters end.	
Data type: Date	**Select multiple values**: NA
Measurement unit: MM/DD/YYYY	**Allowed values:** 01/01/2023– 12/31/2030
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total GHG benefits estimated

Data element name: Total GHG benefits estimated	**Reporting question:** What is the alternate estimate of the field's total GHG emission reductions?
Description: Total greenhouse gas emission reductions from practice implementation in the field estimated using an alternate model.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total carbon stock estimated

Data element name: Total carbon stock estimated	**Reporting question:** What is the alternate estimate of how much carbon has the field has sequestered?
Description: Total change in carbon stock based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total CO2 estimated

Data element name: Total CO2 estimated	**Reporting question:** What is the alternate estimate of the field's total CO2 emission reductions?
Description: Total carbon dioxide emission reductions based on practice implementation in the field estimated using an alternate model.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total CH4 estimated

Data element name: Total CH4 estimated	**Reporting question:** What is the alternate estimate of the field's total CH4 emission reductions?
Description: Total methane emission reductions based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

Total field N20 estimated

Data element name: Total N2O estimated	**Reporting question:** What is the alternate estimate of the field's total N2O emission reductions?
Description: Total nitrous oxide emission reductions based on practice implementation in the field estimated using an alternate method. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If project calculates GHG benefits using multiple methods
Data collection level: Field	**Data collection frequency:** Annual

GHG Benefits - Measured

Unique IDs

Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

GHG measurement method

Data element name: GHG measurement method

Reporting question: What measurement method is used to calculate GHG benefits?

Description: Field-based measurement method used to calculate GHG benefits. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Emissions measurement unit
- Flux towers
- Litterbags
- Plant measurements
- Portable emissions analyzers
- Soil flux chambers
- Soil samples
- Soil sensors
- Vehicle-mounted sensors
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Lab name

Data element name: Lab name

Reporting question: What is the name of the lab that processed the measurement samples?

Description: Name of entity that received data and conducted analysis of samples.

Data type: Text

Select multiple values: No

Measurement unit: NA

Allowed values: Free text

Logic: None – all respond

Required: If applicable

Data collection level: Field

Data collection frequency: Annual

Measurement start date

Data element name: Measurement start date

Reporting question: On what date did the measurement start?

Description: Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements first began.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023 – 12/31/2030

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Measurement end date

Data element name: Measurement end date

Reporting question: On what date did the measurement end?

Description: Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements were completed.

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

Allowed values: 01/01/2023– 12/31/2030

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total CO2 reduction calculated

Data element name: Total CO2 reduction calculated

Reporting question: What are the total measured CO2 emission reductions?

Description: Total annual CO2 emission reductions based on practice implementation in the field calculated from in-field measurements.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If a project takes carbon stock or greenhouse gas emission measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total field carbon stock measured

Data element name: Total field carbon stock measured

Reporting question: What is the total amount of carbon sequestered based on repeat measurements in this field?

Description: Change in carbon stock based on practice implementation in the field calculated from repeat soil sampling in this field. (Results for initial field soil samples should be reported in the 'Soil sample result' and 'Measurement type" columns.) Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If a project conducts soil samples or takes carbon stock measurements in this field

Data collection level: Field

Data collection frequency: Annual

Total CH4 reduction calculated

Data element name: Total CH4 reduction calculated	**Reporting question:** What are the total measured CH4 emission reductions?
Description: Total annual methane emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual

Total N20 reduction calculated

Data element name: Total N2O reduction calculated	**Reporting question:** What are the total measured N2O emission reductions?
Description: Total annual nitrous oxide emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual

Soil sample result

Data element name: Soil sample result	**Reporting question:** What is the numeric result from this soil sample?
Description: Results of measurement(s) taken to determine the carbon stock of a soil (the tons of carbon found in a specified volume of soil).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** .00001-100,000
Logic: None – all respond	**Required:** If a project conducts soil samples in this field
Data collection level: Field	**Data collection frequency:** Annual

Soil sample result unit

Data element name: Soil sample result unit

Reporting question: What is unit for the soil sample result?

Description: Unit for the corresponding soil sample result. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Percent
- Ppm
- Grams
- Grams per cubic centimeter
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Measurement type

Data element name: Measurement type

Reporting question: What type of analysis was conducted for this soil sample?

Description: Type of soil analysis conducted. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Organic matter
- Total organic carbon
- Bulk density
- Other (specify)

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Additional Environmental Benefits

Unique IDs	
Farm ID	Unique Farm ID assigned by FSA
Tract ID	Unique Tract ID assigned by FSA
Field ID	Unique Field ID assigned by FSA
State or territory of field	State name (must match FSA farm enrollment data)
County of field	County name (must match FSA farm enrollment data)

Environmental benefits

Data element name: Environmental benefits

Reporting question: Are environmental benefits other than GHGs being tracked in the field?

Description: Tracking of environmental benefits other than greenhouse gas emission reductions and carbon sequestration in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss

Data element name: Reduction in nitrogen loss

Reporting question: Are reductions in nitrogen losses being tracked in the field?

Description: Tracking reductions in nitrogen losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount

Data element name: Reduction in nitrogen loss amount

Reporting question: How much reduction in nitrogen losses have been measured in the field?

Description: Total amount of reduction in nitrogen losses that is measured and reported in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Reduction in nitrogen loss'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount unit

Data element name: Reduction in nitrogen loss amount unit	**Reporting question:** What is the unit for how much reduction in nitrogen losses have been measured in the field?
Description: Unit for the total amount of reduction in nitrogen losses that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilograms • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Reduction in nitrogen loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in nitrogen loss purpose

Data element name: Reduction in nitrogen loss purpose	**Reporting question:** What is the purpose of tracking reduction in nitrogen losses?
Description: Purpose of tracking reduction in nitrogen losses in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduction in nitrogen loss'	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Annual

Reduction in phosphorus loss

Data element name: Reduction in phosphorus loss	**Reporting question:** Are reductions in phosphorus losses being tracked in the field?
Description: Tracking of reductions in phosphorus losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss amount

Data element name: Reduction in phosphorus loss amount	**Reporting question:** How much reduction in phosphorus losses have been measured in the field?
Description: Total amount of reduction in phosphorus losses that is measured in the field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss amount unit

Data element name: Reduction in phosphorus loss amount unit	**Reporting question:** What is the unit for the reduction in phosphorus losses measured in the field?
Description: Unit for the total amount of reduction in phosphorus losses that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilograms • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduction in phosphorus loss purpose

Data element name: Reduction in phosphorus loss purpose	**Reporting question:** What is the purpose of tracking reductions in phosphorus losses?
Description: Purpose of tracking reduction in phosphorus losses in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduction in phosphorus loss'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality

Data element name: Other water quality	**Reporting question:** Are other water quality metrics being tracked in the field?
Description: Project tracking of other water quality metrics in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality type

Data element name: Other water quality type	**Reporting question:** What type of other water quality metric have been measured in the field?
Description: Type of other water quality metric (besides nitrogen loss and phosphorus loss reductions) that is measured in the field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Sediment load reduction • Temperature • Other (specify)
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality amount

Data element name: Other water quality amount	**Reporting question:** How much reduction in other water quality metrics have been measured in the field?
Description: Total amount of reduction in other water quality metrics that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality amount unit

Data element name: Other water quality amount unit	**Reporting question:** What is the unit for the reduction in other water quality metrics measured in the field?
Description: Unit for the total amount of reduction in other water quality metrics that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Degrees F • Kilograms • Kilograms per liter • Metric tons • Pounds • Other (specify)
Logic: Respond if yes to 'Other water quality'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Other water quality purpose

Data element name: Other water quality purpose

Reporting question: What is the purpose of tracking other water quality benefits?

Description: Purpose of tracking other water quality benefits in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity marketing
- Producing insets
- Producing offsets
- I don't know
- Other (specify)

Logic: Respond if yes to 'Other water quality'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Water quantity

Data element name: Water quantity

Reporting question: Is water conservation being tracked in the field?

Description: Tracking of water conservation or reduction in use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Water quantity amount

Data element name: Water quantity amount

Reporting question: How much water conservation has been measured in the field?

Description: Total amount of water conservation or reduction that is measured in the field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Water quantity'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Water quantity amount unit

Data element name: Water quantity amount unit

Reporting question: What is the unit for the amount of water conservation measured in the field?

Description: Unit for the total amount of water conservation or reduced use that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acre-feet
- Cubic feet
- Other (specify)

Logic: Respond if yes to 'Water quantity'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Water quantity purpose

Data element name: Water quantity purpose	**Reporting question:** What is the purpose of tracking water conservation?
Description: Purpose of tracking water conservation or reductions in water use in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Water quantity'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion

Data element name: Reduced erosion	**Reporting question:** Is reduced soil erosion being tracked in the field?
Description: Tracking of reduced soil erosion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion amount

Data element name: Reduced erosion amount	**Reporting question:** How much erosion reduction has been measured in the field?
Description: Total amount of erosion reduction that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion amount unit

Data element name: Reduced erosion unit	**Reporting question:** What is the unit for the amount of erosion reduction measured?
Description: Unit for the total amount of erosion reduction from enrolled fields that is measured and reported by the project. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Tons • Other (specify)
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced erosion purpose

Data element name: Reduced erosion purpose	**Reporting question:** What is the purpose of tracking reduced erosion in the field?
Description: Purpose of tracking reduced erosion the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Reduced erosion'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use

Data element name: Reduced energy use	**Reporting question:** Is reduced energy use being tracked in the field?
Description: Tracking of reduced energy use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No • I don't know
Logic: Respond if yes to 'Environmental benefits'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use amount

Data element name: Reduced energy use amount	**Reporting question:** How much energy use reduction has been measured in the field?
Description: Total amount of energy use reduction that is measured in the enrolled field.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** 0-1,000,000
Logic: Respond if yes to 'Reduced energy use'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use amount unit

Data element name: Reduced energy use unit	**Reporting question:** What is the unit for the energy use reduction measured in the field?
Description: Unit for the total amount of energy use reduction that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Kilowatt hours • Other (specify)
Logic: Respond if yes to 'Reduced energy use'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Reduced energy use purpose

Data element name: Reduced energy use purpose

Reporting question: What is the purpose of tracking reduced energy use in the field?

Description: Purpose of tracking reduced energy use in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity marketing
- Producing insets
- Producing offsets
- I don't know
- Other (specify)

Logic: Respond if yes to 'Reduced energy use'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion

Data element name: Avoided land conversion

Reporting question: Is avoided land conversion being tracked in the field?

Description: Tracking of avoided land conversion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. Land conservation means land use changing from agricultural uses to non-agricultural uses.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount

Data element name: Avoided land conversion amount

Reporting question: How much avoided land conversion has been measured in the field?

Description: Total amount of avoided land conversion that is measured in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount unit

Data element name: Avoided land conversion unit

Reporting question: What is the unit for the amount of avoided land conversion measured in the field?

Description: Unit for the total amount of avoided land conversion that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acres
- Other (specify)

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion purpose

Data element name: Avoided land conversion purpose

Reporting question: What is the purpose of tracking avoided land conversion in the field?

Description: Purpose of tracking avoided land conversion in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity marketing
- Producing insets
- Producing offsets
- I don't know
- Other (specify)

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat

Data element name: Improved wildlife habitat

Reporting question: Are improvements to wildlife habitat being tracked in the field?

Description: Tracking of improvements to wildlife in and around the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat amount

Data element name: Improved wildlife habitat amount

Reporting question: How much improved wildlife habitat has been measured in the field?

Description: Total amount of improved wildlife habitat that is measured in and around the enrolled fields.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Improved wildlife habitat'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat amount unit

Data element name: Improved wildlife habitat unit

Reporting question: What is the unit for the amount of improved wildlife habitat measured in the field?

Description: Unit for the total amount of improved wildlife habitat that is measured in and around enrolled fields. If "other" is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acres
- Linear feet
- Other (specify)

Logic: Respond if yes to 'Improved wildlife habitat'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Improved wildlife habitat purpose	
Data element name: Improved wildlife habitat purpose	**Reporting question:** What is the purpose of tracking improved wildlife habitat in the field?
Description: Purpose of tracking improved wildlife habitat in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Commodity marketing • Producing insets • Producing offsets • I don't know • Other (specify)
Logic: Respond if yes to 'Improved wildlife habitat'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

CSAF Practice Sub-questions

For some CSAF practices, there is an additional set of questions that are unique to each practice. Responses to these questions are needed to verify estimated GHG benefits of these practices. If a field is implementing a CSAF practice with an NRCS CPS code in Table 11, answer the follow-up questions listed next to the relevant practice name in the table. Use the *Supplemental Reporting Workbook – CSAF Practice Sub-questions* to report the required information.

Table 11. Follow-on questions for select CSAF practices

Practice name and code	Follow-up question	Options (select one)
Alley Cropping (CPS 311)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Anaerobic Digester (CPS 366)	Waste storage system prior to installing anaerobic digester	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/range/paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
	Digester type	Covered lagoon with energy generation Covered lagoon with flaring Covered lagoon (no energy generation or flaring) Complex mix with energy generation Plug flow with energy generation Other (specify)
	Additional feedstock source (select most common if using more than one)	Food waste Straw or bedding Wastewater Other (specify)

Combustion System Improvement (CPS 372)	Fuel type before installation	Coal Diesel Electricity Gasoline Kerosene Liquified petroleum gas (LPG) Natural gas Propane Wood Other (specify)
	Fuel amount before installation	0-1,000,000
	Fuel amount unit before installation	Cubic feet (natural gas) Gallons (diesel, gasoline, propane, LPG, kerosene) Kilowatt-hours (electricity) Pounds (wood, coal) Other (specify)
	Fuel type after installation	Coal Diesel Electricity Gasoline Kerosene Liquified petroleum gas (LPG) Natural gas Propane Wood Other (specify)
	Fuel amount after installation	0-1,000,000
	Fuel amount unit after installation	Cubic feet (natural gas) Gallons (diesel, gasoline, propane, LPG, kerosene) Kilowatt-hours (electricity) Pounds (wood, coal) Other (specify)
Conservation Cover (CPS 327)	Species category (select most common/extensive type if using more than one)	Brassicas Grasses Legumes Non-legume broadleaves Shrubs

Conservation Crop Rotation (CPS 328)	Conservation crop type	Brassica Broadleaf Cool season Grass Legume Warm season
	Change implemented	Added perennial crop Reduced fallow period Both
	Conservation crop rotation tillage type	Conventional (plow, chisel, disk) No-till, direct seed Reduced till Strip till None Other (specify)
	Total conservation crop rotation length in days	1-120
Contour Buffer Strips (CPS 332)	Strip width (feet)	1-100
	Species category	Grasses Forbs Mix
Cover Crop (CPS 340)	Species category (select most common/extensive type if using more than one)	Brassicas Forbs Grasses Legume Non-legume broadleaves
	Cover crop planned management	Grazing Haying Termination
	Cover crop termination method	Burning Herbicide application Incorporation Mowing Rolling/crimping Winter kill/frost
Critical Area Planting (CPS 342)	Species category (select most common/extensive type if using more than one)	Grass Grass legume/forb mix Herbaceous woody mix Perennial or reseeding Shrubs Trees
Feed Management (CPS 592)	Crude protein (percent)	0-100
	Fat (percent)	0-100
	Feed additives/supplements	Chemical Edible oils/fats Seaweed/kelp Other (specify)
Field Border (CPS 386)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs

Filter Strip (CPS 393)	Strip width (feet)	20-1,000
	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs
Forest Farming (CPS 379)	Land use in previous year	Forest Multi-story cropping Pasture/grazing land Row crops Other agroforestry
Forest Stand Improvement (CPS 666)	Purpose for implementation	Maintain or improve forest carbon stocks Maintain or improve forest health and productivity Maintain or improve forest structure and composition Maintain or improve wildlife, fish, and pollinator habitat Manage natural precipitation more efficiently Reduce forest pest pressure Reduce forest wildfire hazard
Grassed Waterway (CPS 412)	Species category (select most common/extensive type if using more than one)	Flowering Plants Forbs Grasses
Hedgerow Planting (CPS 422)	Species category (select most common/extensive type if using more than one)	Grasses Shrubs Trees
	Species density (number of trees planted per acre)	1-10,000
Herbaceous Wind Barriers (CPS 603)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Mix Shrubs
	Barrier width (feet)	1-1,000
	Number of rows	1-100
Mulching (CPS 484)	Mulch type	Gravel Natural Synthetic Wood
	Mulch cover (percent of field)	0-100

Nutrient management (CPS 590)	Nutrient type with CPS 590	Biosolids Commercial fertilizers Compost EEF (nitrification inhibitor) EEF (slow or controlled release) EEF (urease inhibitor) Green manure Liquid animal manure Organic by-products Organic residues or materials Solid/semi-solid animal manure Wastewater
	Nutrient application method with CPS 590	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application method in the previous year	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application timing with CPS 590	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application timing in the previous year	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application rate with CPS 590	0-20,000
	Nutrient application rate unit with CPS 590	Gallons per acre Pounds per acre
	Nutrient application rate change	Decrease compared to previous year Increase compared to previous year No change
Pasture and Hay Planting (CPS 512)	Species category (select most common/extensive type if using more than one)	Cool-season broadleaf Cool-season grass Warm-season broadleaf Warm-season grass
	Termination process	Grazing Haying (i.e., cutting and baling) Other (specify)
Prescribed Grazing (CPS 528)	Grazing type	Cell grazing Deferred rotational Management intensive Rest-rotation

Range Planting (CPS 550)	Species category (select most common/extensive type if using more than one)	Forbs Grasses Legumes Shrubs Trees
Residue and Tillage Management – No-till (CPS 329)	Surface disturbance	None Seed row only
Residue and Tillage Management – Reduced Till (CPS 345)	Surface disturbance	None Seed row/ridge tillage for planting Shallow across most of the soil surface Vertical/mulch
Riparian Forest Buffer (CPS 391)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Riparian Herbaceous Cover (CPS 390)	Species category (select most common/extensive type if using more than one)	Ferns Forbs Grasses Legumes Rushes Sedges
Roofs and Covers (CPS 367)	Roof/cover type	Concrete Flexible geomembrane Metal Timber Other (specify)
Silvopasture (CPS 381)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Forage Shrubs
	Species density (number of trees planted per acre)	1-10,000
Stripcropping (CPS 585)	Strip width (feet)	1-1,000
	Crop category (select most common/extensive type if using more than one)	Erosion resistant crops Fallow Sediment trapping crops
	Number of strips	2-100
Tree/Shrub Establishment (CPS 612)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Vegetative Barrier (CPS 601)	Species category (select most common/extensive type if using more than one)	Grasses Grass forb mix Grass legume mix
	Barrier width (feet)	3-1,000

Waste Separation Facility (CPS 632)	Separation type	Chemical (e.g., salts, polymers) Mechanical (e.g., screens, presses) Settling basin
	Most common use of solids	Bedding Field applied Other (specify)
Waste Storage Facility (CPS 313)	Waste storage system prior to installing your waste storage facility	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/range/paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
Waste Treatment (CPS 629)	Treatment type	Biological Chemical Mechanical
Waste Treatment Lagoon (CPS 359)	Waste storage system prior to installing waste treatment lagoon	Aerobic lagoon Anaerobic digester (complex mix) with energy generation Anaerobic digester (plug flow) with energy generation Anaerobic lagoon Composting Covered lagoon (no energy generation or flaring) Covered lagoon with energy generation Covered lagoon with flaring Daily spread Deep bedding pack Deep pit Dry lot Dry stacking/solid storage Pasture/Range/Paddock Poultry with bedding Poultry without bedding (e.g., high rise) Slurry tank/basin
	Is there a lagoon cover/crust?	Yes No
	Is there lagoon aeration?	Yes No

Windbreak/Shelterbelt Establishment and Renovation (CPS 380)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000

Appendix A: Climate-smart Agriculture and Forestry Practices

All NRCS Practice Standards (not limited to climate-smart practices)

309, Agrichemical Handling Facility
311, Alley Cropping
313, Waste Storage Facility
314, Brush Management
315, Herbaceous Weed Treatment
316, Animal Mortality Facility
317, Composting Facility
318, Short Term Storage of Animal Waste and By-Products
319, On-Farm Secondary Containment Facility
320, Irrigation Canal or Lateral
324, Deep Tillage
325, High Tunnel System
326, Clearing and Snagging
327, Conservation Cover
328, Conservation Crop Rotation
329, Residue and Tillage Management, No Till
330, Contour Farming
331, Contour Orchard and Other Perennial Crops
332, Contour Buffer Strips
333, Amending Soil Properties with Gypsum Products
334, Controlled Traffic Farming
336, Soil Carbon Amendment
338, Prescribed Burning
340, Cover Crop
342, Critical Area Planting
345, Residue and Tillage Management, Reduced Till
348, Dam, Diversion
350, Sediment Basin
351, Well Decommissioning
353, Monitoring Well
355, Groundwater Testing
356, Dike and Levee
359, Waste Treatment Lagoon
360, Waste Facility Closure
362, Diversion
366, Anaerobic Digester
367, Roofs and Covers
368, Emergency Animal Mortality Management
371, Air Filtration and Scrubbing
372, Combustion System Improvement
373, Dust Control on Unpaved Roads and Surfaces
374, Energy Efficient Agricultural Operation
375, Dust Management for Pen Surfaces
376, Field Operations Emissions Reduction
378, Pond
379, Forest Farming
380, Windbreak/Shelterbelt Establishment and Renovation
381, Silvopasture
382, Fence
383, Fuel Break
384, Woody Residue Treatment
386, Field Border
388, Irrigation Field Ditch
390, Riparian Herbaceous Cover
391, Riparian Forest Buffer
393, Filter Strip
394, Firebreak
395, Stream Habitat Improvement and Management
396, Aquatic Organism Passage
397, Aquaculture Pond
398, Fish Raceway or Tank
399, Fishpond Management
400, Bivalve Aquaculture Gear and Biofouling Control
402, Dam
410, Grade Stabilization Structure
412, Grassed Waterway
420, Wildlife Habitat Planting
422, Hedgerow Planting
423, Hillside Ditch
428, Irrigation Ditch Lining
428A, Irrigation Water Conveyance, Ditch and Canal Lining, Plain Concrete
428B, Irrigation Water Conveyance, Ditch and Canal Lining, Flexible Membrane
428C, Irrigation Water Conveyance, Ditch and Canal Lining, Galvanized Steel
430, Irrigation Pipeline
432, Dry Hydrant
436, Irrigation Reservoir
441, Irrigation System, Microirrigation
442, Sprinkler System
443, Irrigation System, Surface and Subsurface
447, Irrigation and Drainage Tailwater Recovery
449, Irrigation Water Management
450, Anionic Polyacrylamide (PAM) Application
453, Land Reclamation, Landslide Treatment
455, Land Reclamation, Toxic Discharge Control
457, Mine Shaft and Adit Closing
460, Land Clearing
462, Precision Land Forming and Smoothing
464, Irrigation Land Leveling
466, Land Smoothing
468, Lined Waterway or Outlet
472, Access Control
484, Mulching
490, Tree/Shrub Site Preparation
500, Obstruction Removal
511, Forage Harvest Management
512, Pasture and Hay Planting
516, Livestock Pipeline
520, Pond Sealing or Lining, Compacted Soil Treatment
521, Pond Sealing or Lining, Geomembrane or Geosynthetic Clay Liner
521A, Pond Sealing or Lining, Flexible Membrane
521B, Pond Sealing or Lining, Soil Dispersant
521C, Pond Sealing or Lining, Bentonite Sealant

521D, Pond Sealing or Lining, Compacted Clay Treatment
522, Pond Sealing or Lining - Concrete
527, Sinkhole Treatment
528, Prescribed Grazing
533, Pumping Plant
543, Land Reclamation, Abandoned Mined Land
544, Land Reclamation, Currently Mined Land
548, Grazing Land Mechanical Treatment
550, Range Planting
554, Drainage Water Management
555, Rock Wall Terrace
557, Row Arrangement
558, Roof Runoff Structure
560, Access Road
561, Heavy Use Area Protection
562, Recreation Area Improvement
566, Recreation Land Improvement and Protection
570, Stormwater Runoff Control
572, Spoil Disposal
574, Spring Development
575, Trails and Walkways
576, Livestock Shelter Structure
578, Stream Crossing
580, Streambank and Shoreline Protection
582, Open Channel
584, Channel Bed Stabilization
585, Stripcropping
587, Structure for Water Control
588, Crosswind Ridges
589, Cross Wind Trap Strips
590, Nutrient Management
591, Amendments for Treatment of Agricultural Waste
592, Feed Management
595, Pest Management Conservation System
600, Terrace
601, Vegetative Barrier
602, Equitable Relief
603, Herbaceous Wind Barriers
604, Saturated Buffer
605, Denitrifying Bioreactor
606, Subsurface Drain
607, Surface Drain, Field Ditch
608, Surface Drain, Main or Lateral
609, Surface Roughening
610, Salinity and Sodic Soil Management
612, Tree/Shrub Establishment
614, Watering Facility
620, Underground Outlet
629, Waste Treatment
630, Vertical Drain
632, Waste Separation Facility
633, Waste Recycling
634, Waste Transfer
635, Vegetated Treatment Area
636, Water Harvesting Catchment
638, Water and Sediment Control Basin
640, Waterspreading
642, Water Well
643, Restoration of Rare or Declining Natural Communities
644, Wetland Wildlife Habitat Management
645, Upland Wildlife Habitat Management
646, Shallow Water Development and Management
647, Early Successional Habitat Development-Mgt
649, Structures for Wildlife
650, Windbreak/Shelterbelt Renovation
654, Road/Trail/Landing Closure and Treatment
655, Forest Trails and Landings
656, Constructed Wetland
657, Wetland Restoration
658, Wetland Creation
659, Wetland Enhancement
660, Tree-Shrub Pruning
666, Forest Stand Improvement
670, Energy Efficient Lighting System
672, Energy Efficient Building Envelope
736, Crop By-Product Transfer, interim
724, Water Treatment Facility, interim
735, Waste Gasification Facility, interim
737, Reduced Water and Energy Coffee Conveyance System, interim
740, Pond Sealing and Lining, Soil Cement, interim
751, Individual Terrace, interim
753, Infiltration Ditch, interim
755, Well Plugging, interim
770, Livestock Confinement Facility, interim
775, Drainage Ditch Covering, interim
782, Phosphorus Removal System, interim
800, Controlling Existing Flowing Wells, interim
803, Water Well Disinfection, interim
805, Amending Soil Properties with Lime, interim
808, Soil Carbon Amendment, interim
809, Conservation Harvest Management, interim
810, Annual Forages for Grazing Systems, interim
812, Raised Beds, interim
815, Groundwater Recharge Basin or Trench, interim
817, On-Farm Recharge, interim
818, Water Conservation System, interim
821, Low Tunnel Systems, interim
823, Organic Management, interim

Other CSAF Practices
Traditional or cultural practices
Microbial products
Solar power generation
Grain bin construction
Pre-season drainage

Appendix B: Commodity List

CROPS
ALFALFA
ALMONDS
AMARANTH GRAIN
APPLES
APRICOTS
ARONIA (CHOKEBERRY)
ARTICHOKES
ASPARAGUS
ATEMOYA
AVOCADOS
BAMBOO SHOOTS
BANANAS
BARLEY
BEANS
BEETS
BIRDSFOOT/TREFOIL
BLUEBERRIES
BREADFRUIT
BROCCOFLOWER
BROCCOLI
BROCCOLINI
BRUSSEL SPROUTS
BUCKWHEAT
CABBAGE
CACAO
CACTUS
CAIMITO
CALABAZA MELON
CALALOO
CAMELINA
CANARY MELON
CANARY SEED
CANEBERRIES
CANISTEL
CANOLA
CANTALOUPES
CARAMBOLA (STAR FRUIT)
CARROTS
CASHEW
CASSAVA
CAULIFLOWER
CELERIAC
CELERY
CHERIMOYA
CHERRIES
CHESTNUTS
CHICORY/RADICCHIO
CHINESE BITTER MELON
CHRISTMAS TREES
CHUFAS
CINNAMON
CLOVER
COCONUTS
COFFEE
CORN
COTTON ELS
COTTON UPLAND
CRANBERRIES
CRENSHAW MELON
CRUSTACEAN
CUCUMBERS
CURRANTS
DASHEEN
DATES
DURIAN
EGGPLANT
EINKORN
ELDERBERRIES
EMMER
FIGS
FINFISH
FLAX
FLOWERS
FORAGE SOYBEAN/SORGHUM
GAILON
GARLIC
GENIP
GINGER
GINSENG
GOOSEBERRIES
GOURDS
GRAPEFRUIT
GRAPES
GRASS
GREENS
GROUND CHERRY
GUAMABANA/SOURSOP
GUAR
GUAVA
GUAVABERRY
GUAYULE
HAZEL NUTS
HEMP
HERBS
HESPERALOE
HONEY
HONEYBERRIES
HONEYDEW
HOPS
HORSERADISH
HUCKLEBERRIES
HYBRID POPLAR TREES
IDLE
INDIGO
ISRAEL MELONS
JACK FRUIT
JERUSALEM ARTICHOKES
JICAMA
JOJOBA
JUJUBE
JUNEBERRIES
KENAF
KHORASAN
KIWIBERRY
KIWIFRUIT
KOCHIA (PROSTRATA)
KOHLRABI
KOREAN GOLDEN MELON
KUMQUATS
LAMBS EAR
LEEKS
LEMONS
LENTILS
LESPEDEZA
LETTUCE
LIMES
LONGAN
LOQUATS
LYCHEE
MANGOS
MANGOSTEEN
MAPLE SAP
MAYHAW BERRIES
MEADOWFOAM
MILKWEED
MILLET
MIXED FORAGE
MOHAIR
MOLLUSK
MORINGA
MULBERRIES
MUSHROOMS
MUSTARD
NECTARINES
NIGER SEED
NONI
OATS
OKRA
OLIVES
ONIONS
ORANGES
PAPAYA

PARSNIP
PASSION FRUITS
PAWPAW
PEACHES
PEANUTS
PEARS
PEAS
PECANS
PENNYCRESS
PEPPERS
PERENNIAL PEANUTS
PERIQUE TOBACCO
PERSIMMONS
PINE NUTS
PINEAPPLE
PISTACHIOS
PITAYA/DRAGONFRUIT
PLANTAIN
PLUMCOTS
PLUMS
POMEGRANATES
POTATOES
POTATOES SWEET
PRUNES
PSYLLIUM
PUMMELO
PUMPKINS
QUINCES
QUINOA
RADISHES
RAISINS
RAMBUTAN
RAPESEED
RHUBARB
RICE
RICE SWEET
RICE WILD
RUTABAGA
RYE
SAFFLOWER
SAPODILLA
SAPOTE
SCALLIONS
SESAME
SHALLOTS
SORGHUM
SORGHUM DUAL PURPOSE
SORGHUM FORAGE
SOYBEANS
SPELT
SQUASH
STAR GOOSEBERRY
STRAWBERRIES
SUGAR BEETS
SUGARCANE
SUNFLOWERS
SUNN HEMP
TANGELOS
TANGERINES
TANGORS
TANGOS
TANNIER
TARO
TEA
TEFF
TI
TOBACCO CIGAR WRAPPER
TOBACCO BURLEY
TOBACCO BURLEY 31V
TOBACCO CIGAR BINDER
TOBACCO CIGAR FILLER
TOBACCO CIGAR FILLER BINDER
TOBACCO DARK AIR CURED
TOBACCO FIRE CURED
TOBACCO FLUE CURED
TOBACCO MARYLAND
TOBACCO VIRGINIA FIRE CURED
TOMATILLOS
TOMATOES
TREES TIMBER
TRITICALE
TRUFFLES
TURNIPS
VETCH
WALNUTS
WAMPEE
WASABI
WATERMELON
WAX JAMBOO FRUIT
WHEAT
WILLOW SHRUB
WINTER MELON
WOLFBERRY/GOJI
YAM

LIVESTOCK
ALPACAS
BEEF COWS
BEEFALO
BUFFALO OR BISON
CHICKENS (BROILERS)
CHICKENS (LAYERS)
DAIRY COWS
DEER
DUCKS
ELK
EMUS
EQUINE
GEESE
GOATS
HONEYBEES
LLAMAS
REINDEER
SHEEP
SWINE
TURKEYS

Partnerships for Climate-Smart Commodities Additional Specific Terms and Conditions February 2023

I. Overarching Statement

The following award terms and conditions are applicable to Partnerships for Climate-Smart Commodities agreements and are in addition to the USDA FPAC General Terms and Conditions. The award recipient must abide by all terms of this grant including, but not limited to, the General Terms and Conditions, the terms in the Funding Opportunity and associated Frequently Asked Questions, and this addendum. The recipient must also deliver on the planned objectives in the project narrative and budget narrative associated with this grant.

II. Eligibility and Highly Erodible Lands and Wetlands Compliance

In order to be eligible for an incentive payment as a part of the Partnerships for Climate-Smart Commodities, a producer must:

- Establish Farm Records with the Farm Service Agency (FSA) (have farm, tract, and field numbers in place);
- Complete an AD-2047 (Customer Data Worksheet to facilitate the collection of customer data for Business Partner Record);
- Certify highly erodible land conservation (HEL) and wetland conservation (WC) compliance via Form AD-1026, Highly Erodible Land Conservation (HELC) and Wetland Conservation (WC) Certification; and
- Certify that they are not a foreign person or entity.

Farm, tract, and field numbers are required for the producer, and ultimately the Partnerships for Climate-Smart Commodities recipient, to report climate-smart practice implementation to USDA, as well as to certify and maintain HELC/WC compliance. This will require that some producers who do not already have these numbers, like perennial crop growers or feedlots, establish these records with USDA's FSA. Farm, tract, field numbers, producer name, and Core Customer I.D. (CCID) will be provided by the recipient to the National Program Officer as a part of routine grant reporting. Recipients must ensure that producers receiving financial assistance or incentives through this project use the same name as is included in the relevant FSA Business File for that Farm ID in any contracts or similar documentation kept by the recipient.

Producers are not bound by the payment limitations and the adjusted gross income (AGI) limitations that are in place for other USDA programs.

In order to demonstrate HELC/WC compliance for Partnerships for Climate-Smart Commodities incentive payments, producers will need to request a copy of their subsidiary print from their

USDA FSA field office. The Subsidiary Print includes print year specific eligibility related information about a selected producer. The producer will then provide this documentation to the Partnerships for Climate-Smart Commodities recipients as proof of compliance. A current year subsidiary print will be required for each crop year that the producer receives a payment, and HELC/WC eligibility information is provided under the AD-1026 and Conservation Compliance sections of subsidiary (determined by year, which can change at any time during the year or in a subsequent year). As is the case already, field offices will not be expected to provide documentation to anyone besides the producer themselves (and must always comply with Section 1619 limitations if they ever do provide documentation to third parties). Producers must have control of the land for the term of their beneficiary contract.

Recipients are responsible for determining producer eligibility within the funding opportunity requirements. Recipients must inform producers of eligibility requirements and direct them to local USDA offices for requested information as necessary, including but not limited to, farm and tract establishment and Highly Erodible Land and Wetland Compliance determinations. Privacy of producers is a priority throughout this process, and recipients are responsible for maintaining producer privacy in the process.

At minimum, the recipient will collect and review subsidiary reports from participating producers. They will ensure that the producer is listed as "compliant" in all sections of the conservation compliance portion of subsidiary and "certified" for AD-1026 before an incentive payment is made. If payments to a producer span more than one Federal fiscal year, the recipient will review an updated subsidiary print each fiscal year to ensure that the status is still compliant.

III. Other Environmental and Cultural Resources Reviews

A Finding of No Significant Impact (FONSI) was signed by USDA NRCS on August 26, 2022. A copy of the Programmatic Environmental Assessment for Partnerships for Climate-Smart Commodities is available at www.usda.gov/climate-smart-commodities . USDA may determine that additional environmental and cultural resources review is needed for any particular action under Partnerships for Climate-Smart Commodities. The recipient must not execute any beneficiary contracts under this grant agreement prior to receipt of a letter from USDA that specifically details:

1) further procedures deemed appropriate by the Agency to ensure a completed National Environmental Policy Act (NEPA) review and all appropriate consultation requirements are met, and
2) additional instructions for any unanticipated discoveries or conditions.

A resolution of support is required for projects on Tribal lands from the governing body of the Tribe with jurisdiction over that land, if the applicant is not the Tribe nor an entity owned or

operated by that Tribe. USDA may approve alternative documentation for resolutions when USDA deems necessary and legally sufficient.

IV. Producer Benefits

USDA encourages the recipient to disclose to participating producers the manner and amount for which any market premiums derived from the development of the relevant climate-smart commodity will be shared between participating parties, including producers. USDA will be monitoring producer benefits, in particular those to small and underserved producers, throughout the grant period. Recipients agree that their project(s) will implement a plan for engaging small and underserved producers as laid out in this agreement.

V. Producer Data Protection and Disclosure

Recipients must ensure each producer has convenient access to any data collected from that producer or the producer's land and any associated modeling as part of the project. The recipient must provide each producer applying for benefits under this grant a description in writing of how their information, including but not limited to data about their farm and commodities, will be utilized, protected and shared as applicable.

VI. Other Data and Reporting Requirements

In addition to the reporting information provided in the statement of work and General Terms and Conditions, USDA will provide a template for the Detailed Progress Report, also known as the Partnerships for Climate-Smart Commodities (PSCS) Project Reporting Workbook. Within 30 calendar days of execution of this grant, a copy of this workbook will be posted at www.usda.gov/climate-smart-commodities or an alternative location provided to the recipient by the National Program Officer. USDA may provide updates to the PCSC Project Reporting Workbook or submission methods to streamline the data collection process and/or reduce the burden on the recipient throughout the grant period. Generally, these updates will be provided at least 3 months in advance of any required changes. The recipient must not transfer any data to foreign governments or foreign entities without prior approval from USDA.

USDA will provide a Technical Contact for this grant. The Technical Contact will have the responsibility of technical oversight for USDA for the project. The recipient is responsible for providing the technical assistance required to successfully implement and complete the project. The recipient must comply with any requests for information from the Technical Contact. The Technical Contact for this award is the National Program Officer assigned to this grant.

Prior to execution of this grant, the recipient must provide a shapefile depicting the project boundary for enrollment under this grant. Producer enrollment may not occur outside this boundary without modification of this grant.

Within 30 calendar days of execution of this grant, the recipient must provide to the National Program Officer a website address where enrollment information will be posted for producers for the project associated with this grant. Recipients will be responsible for the following reports:

- Submit quarterly performance reports that include a written progress report, as well as additional reporting on specific data elements contained in the most up-to-date version of the Partnerships for Climate-Smart Commodities Project Reporting Workbook. Additional information about each reported element is described in the Data Dictionary.
- Submit supplemental reports required to validate greenhouse gas (GHG) benefit data, including: (1) an initial project MMRV plan, (2) field-modeled GHG benefit reports, and (3) field-direct GHG measurement results, as applicable. Additional information about these reports is in included in the Data Dictionary.
- Submit copies of project outputs and deliverables (e.g., fact sheets, reports) as attachments in ezFedGrants along with quarterly performance reports.
- Report the version of COMET-Planner used to estimate GHG benefits of the project within each quarterly performance report. As COMET-Planner is updated, recipients must adopt the latest version of the tool as directed by USDA for use in performance reports.

Recipients must designate an individual as a member of the USDA Partnerships for Climate-Smart Commodities Learning Network (Partnerships Network); this representative should be identified in the Project Narrative for this grant. Each project includes a plan for up to two Partnerships Network virtual meetings and two in-person meetings a year during the project duration. Dates and other details on events will be posted at www.usda.gov/climate-smart-commodities or an alternative location provided to the recipient by the National Program Officer.

The Partnerships Network will be co-chaired by representative from the USDA Office of the Chief Economist and the Farm Production and Conservation Mission Area. The Partnerships Network will inform synthesis reports to be assembled by USDA on a range of topics related to the implementation of Partnerships for Climate-Smart Commodities projects, including:

- Lessons-learned as projects are implemented;
- Options for providing technical assistance;
- Procedures for measurement/quantification, monitoring, reporting, and verifying GHG benefits;
- Options for tracing climate-smart commodities through the supply chain;
- Mechanisms for reducing costs of implementation;
- A forum for discussion and learning regarding approaches to climate-smart agriculture and forestry implementation (including but not limited to deployment and

measurement/quantification, monitoring, reporting, tracking, and verification of associated greenhouse gas benefits and marketing of climate-smart commodities).
- Synthesis of outcomes; and
- Opportunities for USDA and others to inform future approaches to generating new and expanded markets for climate-smart commodities.

The Partnerships Network topics to be discussed will cover at minimum the areas described in previous FAQs and will evolve with USDA's ongoing project data analysis efforts and with input from the project recipients on the kinds of sessions that will be most helpful to them in building the diverse climate-smart markets associated with their projects. Participation may include at least one interview a year and include questions related to the following areas:

- Technical assistance approaches, methods, and successes and/or challenges
- Producer outreach approaches, methods, and successes and/or challenges
- Monitoring, measurement, reporting, and verification (MMRV) approaches, methods, and successes and/or challenges
- Marketing approaches, methods, and successes and/or challenges
- Partnership approaches, methods, and successes and/or challenges
- Data collection and storage approaches, methods, and successes and/or challenges
- Supply chain approaches, methods and successes and/or challenges, including approaches to traceability
- Supply chain benefits and demand for climate-smart commodities
- Perspectives on program design, climate-smart commodity definitions, and future approaches or opportunities
- Project successes and stories

USDA may also request producer exit reports at a later date. Additional marketing and branding-related requirements may be provided by USDA, including signage related to Partnerships for Climate-Smart Commodities.

VII. Competition and Anti-Competitive Practices

In connection with this grant, recipients may not prohibit or otherwise limit a producer from changing the provider of other services or materials not included as part of this grant. Recipients may not condition, limit, steer, or discriminate in their provision or sale of non-project business functions or products to producers based on their participation or non-participation in or use of any services provided as part of this grant. Additionally, funds in this agreement shall not be used for purposes or activities related to mergers or acquisitions.

VIII. Suspension and Disbarment

The provisions governing Suspension and Disbarment in subsection 1.a.8 shall also apply to fraud, embezzlement, theft, forgery, bribery, falsification, or destruction of records, making false statements, or violations of the Federal civil antitrust or unfair trade practice laws.

IX. Special provisions for awards to for-profit entities as recipients

This section contains provisions that apply to awards to for-profit entities. These provisions are in addition to other applicable provisions of these terms and conditions, or they make exceptions from other provisions of the terms and conditions for awards to for-profit entities. For-profit entities that receive awards have two options regarding audits:

1) A financial related audit of a particular award in accordance with Generally Accepted Government Auditing Standards issued by the Comptroller General of the United States, in those cases where the for-profit entity receives awards under only one USDA program; or, if awards are received under multiple USDA programs, a financial related audit of all awards in accordance with Generally Accepted Government Auditing Standards issued by the Comptroller General of the United States; or

2) An audit that meets the requirements contained in 2 CFR 200 subpart F.

For-profit entities that receive annual awards totaling less than the audit requirement threshold in 2 CFR 200 subpart F are exempt from USDA audit requirements for that year, but records must be available for review by appropriate officials of Federal agencies or the Government Accountability Office.

X. Non-Disparagement

Recipients may not engage in any advertising deemed by USDA as disparaging to another agricultural commodity or competing product, or in violation of the prohibition against false and misleading advertising. Disparagement is defined as anything that depicts other commodities in a negative or unpleasant light via overt or subjective video, photography, or statements. Comparative advertising is allowable, provided the presentation of facts is truthful, objective, not misleading, and supported by a reasonable basis.