USDA

**U.S. Department of Agriculture
Natural Resources Conservation Service**

NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number NR243A750004G008	2. Amendment Number	3. Award /Project Period Date of final signature - 11/06/2028	4. Type of award instrument: Grant Agreement
5. Agency (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		6. Recipient Organization (Name and Address) WORKING LANDSCAPES LLC WALLACE DIALYSIS 108C SOUTH MAIN ST, STE 2 WARRENTON NC 27589 UEI Number / DUNS Number: YHXDR9AA9W33 / 011398340 EIN:	

7. NRCS Program Contact Name: Jade Nield	8. NRCS Administrative Contact Name: Jobeth Bellanca	9. Recipient Program Contact Name: CARLA NORWOOD	10. Recipient Administrative Contact Name: MELISSA FERENS
(b)(6)			

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

15. Project Title/ Description: Expands climate-smart fruits, vegetables, corn, soybeans, beef, chicken, and pork markets in NC and supports farmers to implement and monitor 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	$4,999,841.00	$0.00
Additional funds total	$0.00	$0.00
Grand total	$4,999,841.00	$0.00

18. Approved Budget

Personnel	$1,785,798.00	Fringe Benefits	$319,194.00
Travel	$71,326.00	Equipment	$94,277.00
Supplies	$44,161.00	Contractual	$101,875.00
Construction	$0.00	Other	$2,583,210.00
Total Direct Cost	$4,780,479.00	Total Indirect Cost	$219,362.00
		Total Non-Federal Funds	$0.00
		Total Federal Funds Awarded	$4,999,841.00
		Total Approved Budget	$4,999,841.00

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 KATINA HANSON Acting Senior Advisor for Climate-Smart Commodities	Signature KATINA HANSON	Digitally signed by KATINA HANSON Date: 2023.11.02 14:43:46 -05'00'	Date
Name and Title of Authorized Recipient Representative DR. CARLA NORWOOD Executive Director	Signature Carla Norwood	Digitally signed by Carla Norwood Date: 2023.11.02 10:53:14 -04'00'	Date 11/02/2023

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 Working Landscapes 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 $4,999,841.00

TOTAL FEDERAL FUNDS $4,999,841.00
PERSONNEL $1,623,453.00
FRINGE BENEFITS $290,176.00
TRAVEL $64,842.00
EQUIPMENT $94,277.00
SUPPLIES $40,146.00
CONTRACTUAL $96,875.00
CONSTRUCTION $0
OTHER $2,570,710.00 (includes PRODUCER INCENTIVES $1,285,900)
TOTAL DIRECT COSTS $4,780,479.00
INDIRECT COSTS $219,362.00

TOTAL NON-FEDERAL FUNDS $0
PERSONNEL $0
FRINGE BENEFITS $0.00
TRAVEL $0
EQUIPMENT $0
SUPPLIES $0
CONTRACTUAL $0
CONSTRUCTION $0
OTHER $0 (includes PRODUCER INCENTIVES $0)
TOTAL DIRECT COSTS $0
INDIRECT COSTS $0

Recipient has elected to use the de minimis indirect cost rate.

When equipment is purchased with Federal funds it must be used until no longer needed as described in the General Terms and Conditions and 2 CFR 200. If the residual value of the equipment is $5,000 or more at the time it is no longer needed, the recipient must request disposition instructions. The disposition instructions may direct the recipient to: 1) sell the equipment and return a proportionate share of the proceeds to the Federal agency; 2) transfer title to another eligible entity identified by the Federal agency; or 3) keep the equipment if desired and compensate the Federal agency for its proportionate share of the value.

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 Table and associated Project Narrative.

Resources Required

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

Milestones

See attached Benchmarks Table 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 Table
Climate-Smart Practices List and Limitations
Data Dictionary
Climate-Smart Specific Terms and Conditions

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Project Narrative - Working Landscapes

I. Executive Summary of Pilot Project, which includes at minimum a high-level description of the project, the issues it is seeking to address and how the project will contribute to the goals in this funding opportunity, including:

Working Landscapes is proud to submit this application on behalf of an energized network of local food hubs, farmers, and partners located across the state of North Carolina. Our project promotes climate-smart agriculture practices among small and underserved producers principally by equipping food hubs to support and advise on-farm climate-smart practice implementation and marketing. Working Landscapes and its partner hubs–the majority of whom are minority and/or woman-led–will engage our networks of small and underserved farmers in producing and marketing climate-smart commodities. With our support, 85 farms will design and implement whole-farm Climate Smart Transition Plans (hereafter "CSTP"), which will include an array of practices including cover cropping and rotational grazing (see Section II.A for a full list). Through financial and technical assistance, we will help these farms market and supply their climate-smart products to mission-aligned food buyers, including business partners on this proposal and others in our existing supply chains. An additional 125 farms will benefit from education and training provided through this project.

Our project addresses multiple overarching goals of the Partnerships for Climate-Smart Commodities program–especially these five:
- Increasing markets for climate-smart products
- Increasing adoption of climate-smart agricultural practices
- Demonstration of sustainable/low-cost measurement, monitoring, reporting, and verification systems
- Testing/evaluation of product traceability
- Equitable administration that includes small/underserved producers.

A. Contact Information

Working Landscapes is located at 108C South Main St, Warrenton, NC, 27589–we are downtown on purpose! Our director, Carla Norwood, PhD, is the primary point of contact for this proposal. She can be reached at (252) 431-5164 or carla@workinglandscapesnc.org.

B. List of Project Partners

Technical Support Partners:
Please see Section II.C for details on the qualifications and responsibilities.
- Emory University
- North Carolina A&T State University (HBCU), Cooperative Extension
- Resourceful Communities Partnership of the Conservation Fund
- Haliwa Saponi Tribe

Market Access Partners:
Please see Section IV.A for information on their roles
- Haliwa Saponi Tribe

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- Weaver Street Market
- Fruitful Innovation Group
- Bender Farms
- NC State University Center for Environmental Farming Systems (CEFS) North Carolina 10% Campaign

Farm Partners:
- Lumbee Farmers Cooperative (representing four Native American farmers)
- Davis Farms Sandy Creek (small, African-American owned produce and livestock farm)
- Hunt's Farm (small, African-American owned produce and livestock farm)
- Bender Farms (small produce and row crop farm)
- Fourtee Acres (an African-American owned produce, row crop, and timber farm).

Table 1. Food hub partners

Partner	Home county/ service area (all are located in NC)	Underserved/ minority-led or focused	# Farmers Currently Served, # Small/ Underserved Farmers Served*
Working Landscapes	Warren/ northeastern NC	yes	20 farms, 18 small/underserved
Farmer Foodshare	Durham/ central NC	yes	30+ farms, 8 small/underserved
Blue Ridge Women in Agriculture	Watauga/ northwestern NC	yes	83 farms, all small/underserved
Men & Women United	Columbus/ southeastern NC	yes	10 farms, all small/ underserved
TRACTOR	Yancey/ western NC	no (but focus is on small farms)	65 farms, 36 small/underserved

*Numbers taken from 2021 Annual Reports

C. List of underserved/minority-focused project partners

Please see Section I.B.

D. Compelling need for the project

As the USDA commits itself to supporting a diverse set of farmers, ranchers, and forest owners through climate solutions, this project sees its vision as integral to furthering this goal. Climate change has already impacted agriculture and food systems throughout North Carolina: Hurricane Florence, exacerbated by climate change (Reed et al. 2020), caused an estimated $1.1 billion of agricultural losses in North Carolina (Knox 2018). Within the food system, small and underserved farmers are disproportionately vulnerable to the effects of climate change and less able to survive these effects financially (Nadolnyak et al. 2019). However, small farmers also

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have special market incentives and organizational flexibility to diversify and adapt their operations (Lancaster and Torres 2019), making them ideal candidates for climate-smart program interventions.

The impacts of climate change on underserved farmers and the food systems of underserved communities are an environmental justice issue (consistent with the Biden administration's Justice40 Initiative). As a woman of color-led organization based in Warren County, North Carolina–known as the birthplace of the national environmental justice movement–Working Landscapes is attuned to the need for a climate justice lens in rural places, and strengthening the food system is a key way that Working Landscapes, as a rural development organization and food hub, contributes to this vision.

Our goal is to help small and underserved farmers in our state adopt regenerative, climate-smart agricultural practices. Our experience with small and underserved farmers indicates that they are very interested in implementing climate-smart practices, but are in need of training, financing, and market support to successfully integrate them into their operations. To address these needs, our project relies on North Carolina's food hubs.

Food hubs are mission-driven organizations that connect regional farmers to consumers through food aggregation, distribution, and marketing; some hubs (including Working Landscapes) also undertake value-added processing. Food hubs are well positioned to help small/underserved farmers adopt climate-smart agriculture practices because they already:
- Work with networks of small and underserved farmers;
- Provide technical and marketing support to farmers (e.g. Working Landscapes has supported farmers in achieving Good Agricultural Practices certifications);
- Offer farm-to-fork product traceability;
- Aggregate products from multiple small farms, thereby enabling those farms to supply larger customers that they could not serve individually;
- Own and manage food system infrastructure designed specifically to facilitate market access for small farmers;
- Differentiate products in the marketplace, e.g. *local*, *BIPOC-grown*, *naturally grown*, *organic, pasture-raised*, *grass-fed*, *Animal Welfare Approved*, etc.

Their existing relationships, programming expertise, and experience as value chain intermediaries enable food hubs to simultaneously facilitate both farmer adoption of climate-smart practices and the development of markets for climate-smart agricultural products. Our partners on this project understand the imperative to transition to climate smart agriculture, and are eager to support farmers in a new way through this project.

As we build value chains for climate-smart commodities from underserved farms and communities, it is important that members of underserved groups are in decision-making positions whenever possible. This is why, in addition to focusing on underserved farmers, we are working with food hubs that are women-and/or people of color-led. In particular, as a Native American woman-led food hub that sources from Native American farmers (Lumbee Farmer Cooperative) and supplies a Native tribe (Haliwa-Saponi), Working Landscapes will be able to establish entirely Native-led value chains for climate-smart products.

E. Approach to minimize transaction costs associated with project activities

Our key approach to minimizing transaction costs across the project will be through the utilization of the food hubs' statewide networks of relationships with small and underserved

producers. Food hubs are already trusted customers and partners of the farmers they work with, and they are already familiar with those farmers' operations.

To reduce transaction costs involved in recruiting additional farmers and delivering technical assistance, we will rely on Working Landscapes' staff expertise in participatory qualitative research and stakeholder engagement design (Cumming and Norwood 2012; Cumming et al. 2021), as well as years of on-the-ground experience among food hub partners. Through early engagement of farmers in identifying access, service, and skill needs, gaps, and opportunities, we will co-develop a culturally-appropriate, adaptive, and legible framework for this work that minimizes transaction costs. This foundational commitment to place-based, responsive design and the ongoing refinement of project delivery will be reflected in all aspects of our work (see also Sections I.F. and II.B.). We also anticipate that the data and methods yielded by this approach will make valuable contributions to the climate-smart commodities community of practice.

F. Approach to reduce producer barriers to implementing CSAF practices for the purpose of marketing climate-smart commodities

The mixed-method, participatory engagement and evaluation aimed at identifying and reducing transaction costs (described above) will also generate insights into producer's perspectives regarding barriers to implementing CSAF practices and marketing CSAF commodities.

In this project, we will focus on fruits and vegetables (beans, tomatoes, greens, melons, hard squash, lettuce, cucumbers and sweet potatoes, apples, strawberries, peaches and blueberries), as well as pasture-raised beef, chicken and pork. Corn and soybeans will also be represented among our commodities, primarily when participating small farmers also have larger acreage of non-vegetable, commodity crops.

We will hear from farmers what they need from the project team in order to feel prepared and energized about implementing CSAF practices. Our project design anticipates what some of the key producer barriers may be; our approaches to addressing them are listed below.

Distrust from underserved farmers due to historic discrimination	→ Working through existing relationships of trust with food hubs and other partners; peer-to-peer networking; placing resources in rural communities. This requires building and deepening relationships and spending time with farmers.
Lack of farmer understanding and expertise with climate-smart practices	→ Educational programming and resources; one-on-one and ongoing technical support in developing and implementing Climate Smart Transition Plans (described in Section II.C.); multi-year opportunity to gain experience and confidence
Financial cost and/or risk of unfamiliar practices	→ Financial assistance that covers farmers' input, time, management costs; food hubs absorb some of the risk by providing access to and training on using shared equipment such as a biochar kiln or no-till drill
Market skepticism	→ Food hub market connections and value-chain development services; market research, marketing strategy and targeted marketing; support from motivated wholesale customers; multi-year opportunity to build new market relationships

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G. Geographic focus

The food hubs in our network and farmers they serve are located across the state of North Carolina (see Table 1).

H. Project management capacity of partners, including a description of existing relationship with and/or prior experience working with producers or land owners, promoting climate-smart activities and marketing climate-smart commodities.

Working Landscapes and the other hubs partnering on this project have extensive experience managing not only grant-funded projects, but also farm-to-fork value chains. One of our team's key strengths is our existing network of relationships with small and underserved farmers across our state. Working Landscapes has established itself as a leader among food hubs in advancing climate-smart activities; our existing Soil Health Program has connected a diverse cohort of small farmers to each other and to regenerative agriculture resources. Program participants have thus far benefited from collection of baseline farm data, one-on-one regenerative management consultations, and educational/networking events, which have led to the implementation of climate-smart practices on a select number of pilot farms. One of our partner food hubs, Blue Ridge Women in Agriculture, has also created a Collaborative Regional Alliance for Farmer Training, which educates farmers on climate-smart strategies.

Given their values-driven approach, food hubs and their customers serve consumers who have a demonstrated interest in climate-friendly sourcing (see Weaver Street Market's letter of support). These customers have already responded to other kinds of differentiated branding (e.g. *local*, *organic*); with their support, we will model and promote climate-smart product marketing that builds on these established differentiation strategies.

II. A plan to pilot climate-smart agriculture and/or forestry practices on a large scale, including:

A. A description of CSAF practices to be deployed

Because food hubs and our market access partners work with a variety of commodities and types of farms, this project will provide technical and financial support for farmers to implement a variety of climate-smart practices during this project. CSA Specialists will help farmers identify which practice(s) would suit their resources, goals, and needs. These practices will be operationalized through financial incentives and technical assistance provided by CSA Specialists and the technical service provider partners named in this proposal.

- Pasture: *intensive rotational grazing*, which could sequester around 1.05 Mg of carbon per hectare per year (Franzluebbers et al. 2011); *increasing plant diversity* to increase forage yields and protect against weeds; and *converting annuals into perennial stands* which could increase the land's carbon sequestration potential by an average of 39% (Park et al. 2017). We anticipate working with farms who already have pastures established. In order to implement an intensive rotational grazing program, producers will likely need to use non-permanent fencing system, such as ones that utilize step-in

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poly posts. We do not anticipate installing any fencing below the plow line as part of this project.
- Cropland: *multispecies cover crops*; *crop rotation*; and *reduced tillage/no-till*.
- Soil Amendments: *compost*, which can both improve soil structure but also sequester carbon; and *biochar*, which can increase water holding capacity and provide habitat for microbes, in addition to sequestering carbon.   Compost-biochar mixes have been shown to be effective in improving soil health and productivity, and in sequestering carbon. Biochar is the residue of biomass that has undergone pyrolysis. Its application to agricultural land is one proven way of aligning the goals of permanently sequestering carbon and improving soil health. Weisberg (2010) suggests that one metric ton of biochar can sequester up to 2.93 metric tons of CO2e emissions, though they say 2 metric tons is a more conservative estimate, and we use that figure in our calculations in section IV.C. Particularly in the matrix of forest and farmland that characterize land use in North Carolina, biochar also represents a profound reintegration of farm and forest resources in the agroecological landscape.

While our practices will focus on the three domains described above, the following table lists the specific NRCS conservation practices that our project may utilize in consultation with producers:

Code	Conservation Practice Standard Name
327	Conservation Cover
328	Conservation Crop Rotation
329	Residue and Tillage Management, No Till
336	Soil Carbon Amendment
338	Prescribed Burning
340	Cover Crop
345	Residue and Tillage Management, Reduced Till
386	Field Border
484	Mulching
590	Nutrient Management
512	Pasture and Hay Planting
528	Prescribed Grazing*
380	Windbreaks/Shelterbelt Establishment and Renovation
381	Silvopasture
390	Riparian Herbaceous Cover
391	Riparian Forest Buffer*
612	Tree/Shrub Establishment
666	Forest Stand Improvement

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B.

Plan to recruit producers and landowners, including estimated scale of the project (e.g., number of landowners, acres targeted, head of livestock, etc.)
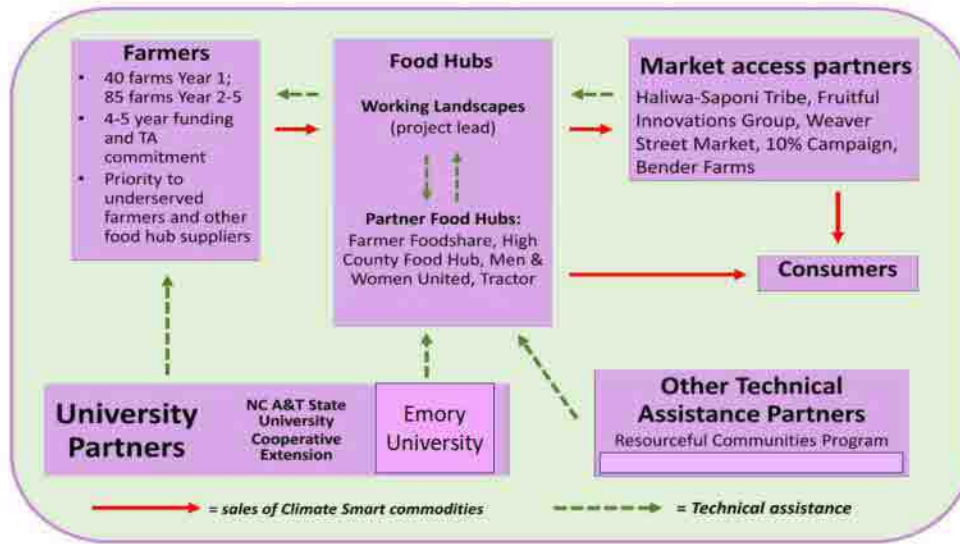
We will primarily recruit producers and landowners through existing food hub networks, beginning with suppliers of partner food hubs who have already expressed interest in climate-smart agricultural techniques. Additional farmers, if needed, will be recruited through the expansion of our food hub networks and through educational workshops. In the first year, we anticipate recruiting 40 farms. In the second year, we anticipate the participating farmer network to grow to approximately 85 farms. We estimate that the average size of participating farms will be 35 acres, encompassing a mixture of pasture, crop and timberland. We will only engage eligible farmers into the project, as determined by project guidelines. G*

We will draw on our success in engaging historically marginalized communities in natural resource management (Cumming and Norwood 2021) in order to integrate farmer feedback, perspectives and values into recruitment, support, and technical assistance efforts throughout the project. Participatory research and engagement with farmers has been found to result in greater engagement and a greater shared understanding of soil management objectives (Stoate et al. 2019). Such engagement can initiate new connections and knowledge flows, underscoring the importance of skillfully engaging farmers in project design and implementation (Homsy and Warner 2013). We expect to engage up to 30 farmers in providing feedback on the design and implementation of the project, including the Climate Smart Transition Plan creation process described in Section II.C.

C. Plan to provide technical assistance, outreach, and training, including who will be conducting these activities, qualifications and projected timeline

Our approach to providing technical assistance utilizes food hubs as grassroots social institutions and sites of education, training, and innovation. Project personnel providing technical assistance to farmers will include new positions: the Project Director, Climate Smart Agricultural Specialists, and Climate Smart Recruitment and Marketing Specialists, as well as partner food hub personnel (supported by subawards, described below). Our technical assistance and university partners will provide training to project staff and food hubs, and direct technical assistance to farmers. As we support farmers in planning and implementing climate-smart practices, we will ensure that no practices are double-funded. Further, technical assistance will be provided by our project staff, not existing entities such as the NRCS. (I have reworded this to address questions about CSTPs, or the climate smart transition plans that are a part of our technical assistance to farmers) Project staff will then utilize a collaborative approach to efficiently provide support to the farmers enrolled in this project. The project's organizational structure (see Figure 1), which is built on food hubs' existing supply chain relationships, is designed to simultaneously facilitate the provision of technical assistance and the movement of climate-smart commodities to market (as discussed in Section IV). Our project centers technical support directly in rural, low income and historically marginalized communities, rather than basing the most senior personnel on the project in universities or urban areas, thereby correcting a long-standing bias toward solutions that flow outward from elite, urban-based institutions.

Figure 1. Diagram of project roles and relationships

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Partner	Responsibilities
Technical assistance partners	
North Carolina A&T State University Cooperative Extension	• Review and refine service delivery processes and tools • Consult on engagement strategies for socially disadvantaged producers; help to organize trainings; Support farmer workshops and host tours of NCA&T university farm; educate project staff on best practices
Emory University	• Advise on soil sampling approach • conduct soil tests on samples taken by project staff, analyze soil data, train project staff in sampling techniques
Resourceful Communities Partnership of the Conservation Fund	• Convene food hub network for capacity building and business development and collaborative opportunities
Market Access Partners	
Bender Farms	• Purchase climate-smart commodities for milled animal feed and human food products
Fruitful Innovation Group	• Purchase climate-smart produce for use in shelf-stable fruit and vegetable jerky
Haliwa-Saponi Tribe	• Promote climate-smart farm management practices among

	tribal members • Purchase climate-smart produce and meat for food access programs
NC 10% Campaign	• Assist in the implementation of climate-smart marketing strategies, targeting customers already involved in the 10% Local campaign • Survey supply chain entities for price and market discovery
Weaver Street Market	• Purchase and promote climate-smart food products for prepared meals and grocery retail

Working Landscapes (WL) has a dual role: 1) as lead organization, providing services project-wide; and 2) as a food hub. Each participating food hub will build its capacity to be a climate-smart service provider (adding up to 54%, supported by the subawards to food hubs). Additionally, WL will hire a Climate-Smart Agriculture Director (hereafter "CSA Director"), who will be hired in Year 1, along with multiple Climate-Smart Agriculture Specialists (hereafter "CSA Specialists") (four in Year 1). These project staff will work with the farmers that supply each participating food hub, and also work to integrate climate-smart commodity products into food hub market channels, thereby increasing the benefits of this program over the long term. The CSA Director will be based at Working Landscapes, serving as a manager for the CSA Specialists and a coordinator for many project-wide activities. The CSA Director and Specialists will be individuals with a background in agriculture or environmental science, familiarity with the techniques of climate-smart agriculture, and experience working with rural communities.

Most services will be provided directly to farms through food hubs via the CSA Specialist assigned to that food hub. Responsibilities of each food hub's CSA Specialist will include onboarding farmer participants and ensuring compliance with eligibility criteria; guiding farmers through the development of Climate Smart Transition Plans (described below); delivering participant support funds in an expeditious manner; providing assistance with CSTP practice implementation; coordinating workshops and field trips; and collecting samples for the MMRV (Measurement/Quantify, Monitor, Report, Verify) process (see Section III). CSA Specialists are responsible for determining the project reporting requirements for each farm, and fulfilling them in collaboration with the farmer, CSA Director, and a contractual reporting assistant. Fostering long-term, trusting relationships built on mutual interdependence will be a crucial element of the work of the CSA Specialists, as these relationships are pivotal for farmers to adopt and implement new practices.

Whenever possible, CSA Specialists will educate and train farmers on the farmer's own property, using the farmer's own equipment. We refer to this assistance as "facilitated implementation," indicating the CSA Specialists' direct role in supporting farmers' success. Additionally, this "training-in-place" approach demonstrates the benefits of climate-smart practices within farmers' individual context and prepares farmers for the long-term development of climate-smart agriculture on their land.

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Key Technical Assistance Partners

Working Landscapes will partner with statewide leaders in food systems and agricultural education to carry out this project. The Cooperative Extension of North Carolina Agricultural and Technological State University, an HBCU located in Greensboro, NC, will be a key project partner. Since 2011, Working Landscapes have worked closely with North Carolina Cooperative Extensions specialists to support small farmers and advance consumer education. NC A&T will assist with farmer recruitment and retention, provide guidance on the development of CSTPs and research instruments, and offer technical assistance to participating farmers.

Emory University will advise on our project's design, implementation and analysis of soil samples. Personnel at Emory are also a part of the Rodale Institute's Climate Smart Commodities project, and we are pleased to be able to utilize their expertise to support our project and benefit the small and underserved producers that will be reached through our project. The lab we are partnering with has received multiple awards for soil ecology and GHG studies, including the 2022 Sergei A. Wilde Early Career Achievement Award from Soil Science Society of America (Forest, Range and Wildland Soils Division) and the 2018 Gene E. Likens Award from Ecological Society of America (Biogeosciences section).

D* The Resourceful Communities Program (RCP) of The Conservation Fund is another partner on this proposal. As the coordinator of NC's Food Hub Collaborative, they will convene the food hub network for capacity building opportunities and facilitate meetings that will help the food hubs design and implement statewide marketing strategies. These activities are key to building self-sustaining skills and initiatives that can extend beyond the grant period. RCP has also been a trusted advisor to Working Landscapes and will continue to serve in an advisory role in this project, helping to make connections across the food and environmental sector. More information about the NC Food Hub Collaborative can be found on the website www.ncfoodhubs.org. The work of RCP is sustained by other sources of funding.

Climate-Smart Transition Plans (CSTPs)

Climate-smart practice implementation will follow a plan written collaboratively by producers, the CSA Director, CSA Specialists, food hub personnel, and other relevant stakeholders at the beginning of the farm's participation in the project. The Climate-Smart Transition Plan (CSTP) will be a living farm document that:
(1) reflects a holistic inventory farm's natural resources, infrastructure, and capital;
(2) describes the producer's climate-smart operational and marketing goals;
(3) identifies climate-smart practices from the NRCS standard practice list to be implemented;
(4) identifies resources and management practices necessary for achieving the producer's goals, including technical assistance needs;
(5) Outlines marketing and strategy and sales goals; and
(6) describes an approved MMRV plan.
The CSTP provides a road map for farm-wide adoption of climate-smart practices and serves as the basic structure of the application for grant funds, thereby reducing the transaction costs for farmers. The plan will outline a 10 year plan for comprehensive adoption of climate-smart practices and an ongoing marketing strategy for their climate-smart commodities.

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The CSTP signals the farm's climate-smart orientation, differentiating their products in the marketplace. Detailed notes in the CSTP will describe the farm's participation in project activities; these will document each farm's climate smart agricultural journey, and can be drawn upon for storytelling about the impacts of the project.

We will offer two approaches to providing ongoing support to farmers as they implement their CSTPs (although the exact design may be adjusted based on feedback from project stakeholders during Year 1). We call these approaches "the Highway" and "the Byway."

The Highway approach is well suited to farmers who can identify discrete climate-smart practices–such as cover crop planting or materials for cross-fencing–and are prepared to implement them with little support needed following the development of the CSTP. These farmers can attend workshops, field trips, and request technical support from the project team at any time, and will be scheduled for twice-yearly visits by CSA Specialists to confirm practice implementation and update the CSTP. MMRV activities will proceed according to the CSTP, with support and technical assistance as needed provided by the project team.

The Byway approach, by contrast, offers more active support to producers. Rather than identifying a specific practice or two, interested farmers commit a certain area of their farm to holistic climate-smart management according to their CSTP. In committing to this implementation strategy, producers enter into a more hands-on relationship with their supporting food hub that involves collaborative land management decisions, participation in climate-smart education and training opportunities, and the facilitated implementation of a variety of climate-smart practices through one-on-one teaching and technical guidance.

Byway farms will agree to a 4-5 year plan to implement trials that compare CSAF-managed plots and control plots, which will be used when compiling final reports on the overall success of the implementation of climate-smart practices. The products of both the climate-smart and the control plot will be segregated during harvest, yielding empirical data regarding

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productivity, economic viability, soil biology, and GHG benefits. These trials align with the perspective of many in the climate-smart agriculture movement who advocate for the prioritization of profit per acre over yield. At the same time, this strategy introduces an element of friendly competition to assess the economic viability of two farming methods simultaneously. Economic analyses of climate-smart practices suggest that economic benefits do not accrue until the second or third year of management, so we are eager to collect and disseminate better multi-year data.

At least one farm in each project region (for a total of 5-6 farms) will serve as a demonstration farm. These farms, which will be eligible for additional funding and support commensurate with their role in the project, will agree to additional documentation of their farm activities and the hosting of educational programming geared toward other farmers.

Project timeline

Year 1, Quarter 1
- Execute contracts, subawards, and convene initial project meeting
- Hire CSA Director & CSA Specialists
- Begin engaging project participants and market access partners to inform project implementation
- Begin recruiting farmers and visiting farms

Year 1, Quarter 2
- Food hubs integrate this project into their operational and strategic plans
- Recruit 40 farms
- Finalize GHG monitoring and soil sampling scheme; conduct baseline soil sampling
- Form team of farmers and technical assistants to design CSTP framework

Year 1, Quarter 3
- Complete baseline data collection
- Continue to recruit farms
- Recruit additional farms for participation in Year 2 (continue as needed)
- Purchase equipment to support project activities (soil sampling equipment, biochar kilns, no-till drills, etc)
- Begin hosting educational events
- Begin drafting CSTPs

Year 1, Quarter 4
- Develop food hub-specific implementation plans
- Continue to develop CSTPs with design team
- Conduct MMRV activities
- Begin disbursing grant funds

Year 2
- Enroll new farms (up to 45 additional)
- Disburse grant funds

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- Provide farmer services: CSTP drafting, MMRV training, grant assistance, facilitated implementation
- CSA Specialists and Director design field trips and educational workshops, coordinating with technical support partners
- Food hubs begin buying and selling Climate Smart commodities produced through this project
- Begin developing Climate Smart commodity marketing materials aimed at wholesale buyers and end consumers

Year 3-5
- Review and adapt funding model according to participatory engagement and feedback
- Provide farmer services: CSTP review, MMRV activities, facilitated implementation
- CSA Specialists and Director design field trips and educational workshops, coordinating with technical support partners
- Launch Climate marketing campaign; increase sales of Climate Smart commodities through wholesale and direct-to-consumer channels
- Offer educational workshops, field trips and trainings to engage the broader community in the project

Final Year
- Conclude grant disbursement and documentation of practices and outcomes
- Review CSTP for continuation beyond the grant period
- Collect narratives from project participants for storytelling materials
- Consolidate and analyze GHG and market benefits and report findings
- Develop writing, presentations and other materials to share project findings

D. Plan to provide financial assistance for producers/landowners to implement CSAF practices

Each farm will receive a $750 annual stipend for participating in the project, which will include drafting and updating the CSTP, compliance with the MMRV plan and other tracking and reporting responsibilities, as well as regular communications with project personnel and participation in workshops. Each farmer will then be eligible to receive grant funds for one or more approved climate-smart practices described in their CSTP. The ceiling of the financial incentive over the project period will be $20,000 for each farm, based on the cost of the practice and total acreage impacted. This will ensure equitable incentives as incentive rates will be standardized. Upon drafting the CSTP, farmers and CSA Specialists will jointly determine a schedule to receive funds. Certain practices such as reseeding pasture with diverse grasses, forbs, or planting woody shrubs for pollinators may require greater upfront funding. Cover crop planting, on the other hand, would likely use equal amounts of funding in each year of participation. To incentivize farmer investment, 5% of project funds must be supplied in cash or in-kind by the farmer. The costs of each practice, including supplies, equipment, fuel, and labor costs will be itemized in each CSTP. Funds will be granted to farmers according to the cost-share rules prior to expense to ease operating capital costs. Farmers' in-kind contribution of their own labor, equipment, and supplies will count toward their cost-share match. All receipts and invoices will be recorded and documented, and practice implementation will be documented by farmers and verified by CSA Specialists.

E. Plan to enroll underserved and small producers, including estimated number of underserved and small producers participating and associated dollar amounts anticipated to go directly to producers, in the form of technical and financial assistance.

Food hubs focus on working with small and underserved producers, so their suppliers are a robust and engaged cohort of candidates for this project. Enrollment will begin with these contact lists, then expand through other small and underserved farmer networks in North Carolina as necessary to meet this project's service goals of serving 45 farms in year one and 85 farms years two through five on a continuous basis through the duration of the project. We estimate that 100% of farmer participants will qualify as small or underserved. Project staff will ensure that all program participants meet eligibility requirements by consulting USDA data to ensure compliance with 7 CFR part 12; verifying land control with proof of title or a valid lease; documenting and verifying farm business structure and requesting proof of citizenship. Over the course of the project, we expect to serve 85 small and underserved producers through financial support and direct technical assistance, and an additional 125 operators will receive technical assistance through educational opportunities.

The estimates for total technical assistance include portions of salaries of personnel, equipment, field trips, soil testing, and other supplies (see budget narrative).

Total grant funds going directly to producers: $1,283,552
Total value of direct technical assistance: $3,277,253

Across the 85 farms directly served through this project, the average annual financial award will be $3,550 per year. However, the amount of funding provided to individual farms will vary based upon the CSTP and the specific CSAF practices to be implemented. Our larger budget for technical support is based on our experience working with small farmers; we have seen that hands-on assistance is highly valuable and that most programs, in an effort to reach larger numbers of farms, do not provide enough support to guarantee long-term success.

III. A measurement/quantification, monitoring, reporting, and verification plan, including:

This proposal presents a MMRV plan based on the understanding that climate-smart agricultural practices are those that build soil organic matter and promote the conditions for the biological cycling of nutrients. Our MMRV plan emphasizes soil carbon and soil health testing as a fundamental benchmark of climate-smart agriculture, while also recording analyses of water, cover crop tissue, and cash crop tissue to assess the impacts and efficiencies of climate-smart management. Crucially, our proposal leverages the emplacement of the food hubs to build capacity locally for ongoing soil health documentation through skill building and the deployment of necessary in-field soil testing equipment.

IV.   A. Approach to greenhouse gas benefit quantification, including methodology approach consistent with the section titled "Quantification Requirements" below,

The quantification plan will be rooted in the practices and goals outlined in each farm's Climate-Smart Transition Plan (CSTP). When drafting the CSTP, the CSA Specialists will use the COMET-Planner tool to determine the expected GHG benefits of practices selected, and also discuss desired changes in soil health metrics compared to baseline soil test results. Then, the CSA Specialist will set a schedule for soil and biomass testing to determine the actual changes in

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carbon stocks. For practices which involve emission reduction, the CSTP will outline procedures for reporting quantifiable changes in management such as reduced energy use or fertilizer application. When applicable, soil will be sampled at multiple depths in order to calculate root-zone enrichment of carbon over time. Root-zone enrichment is a new approach to calculate the stock of soil organic carbon and differentiate the influence of historical pedogenic processes from contemporary management (Franzluebbers 2021). Samples will be analyzed by Emory University (Sihi Biogeochemistry Lab), for total organic carbon and nitrogen amounts, soil biological activity, mineralizable soil nitrogen, and aggregate stability, as well as routine soil nutrients routed to NCDA Soil Testing Lab in Raleigh.

All resource analysis data will be compiled by the CSA Director and correlated with expected outcomes from the COMET-Planner tool, in collaboration with university partners.

B. Approach to monitoring of practice implementation, including the anticipated number of farms and acres reached through project activities,

Utilizing the established networks of participating food hubs, we anticipate providing participation stipends, practice payments, technical assistance and marketing assistance to 40 farms in the first year, and 85 by year two. Educational programming will be open to the public, which will help the project reach additional farms. We estimate that participating farms will range from <1 to over 200 acres. Depending on the farm's CSTP, the anticipated acreage used for climate-smart practices would range from <1 to 70 acres, with an average of 20 acres. Once included in the project, farms will maintain their involvement through the duration of the grant in order to enhance their skills as climate-smart farmers and increase the cumulative impact of climate-smart practices. In total, we expect implementation funds to impact at least 1,700 acres per year once fully operational in year two. However, the successful demonstration of climate-smart practices and the building of local regenerative management capacity could allow project activities to quickly spread across all farmland impacted by food hub partners and beyond.

Project staff will monitor practice implementation during each of at least two annual farm visits. These meetings will also be used to collect resource samples, demonstrate climate-smart management techniques, and discuss updates to the CSTP. In an iterative and collaborative record-keeping process, CSA Specialists will ensure that farmers have the tools and procedures necessary to document their practices on their own, then submit them to project staff for approval.
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The Emory team will oversee the monitoring plan and train CSA Specialists, who in turn will train farmers, to conduct empirically-rigorous sampling and monitoring independently. Beginning in the first year of the grant, technical advisors will work with the CSA Director and Specialists in procuring instruments and equipment for in-field soil analysis, such as compaction and infiltration testing. These tests, which cannot be performed in a lab, will provide essential soil health data and demonstrate the impact of climate-smart management in a tangible, comprehensible way.

C. Approach to reporting and tracking of greenhouse gas benefits, including the anticipated GHG benefits per farm, per project, per commodity produced, per dollar expended, and the anticipated longevity of GHG benefits,

All GHG benefit data from resource testing and the COMET Planner tool will be compiled in a centralized dataset and reported on an annual basis both internally and to external partners. The data from the on-farm resource testing will be compared with outcomes predicted by the COMET tools. CSA Specialists will collect data on the amount of funding invested, climate-smart practices used, and the commodities produced at each farm and for the food hub they serve. Together, this

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data can be correlated to determine the greenhouse gas benefits per farm, per project, per commodity produced, and per dollar expended.

We anticipate having 40 farms participating in Year 1 of the program, and 85 farms participating in Years 2-5. Given our expectation of 15% of participating farms growing corn, 15% growing soy, 40% growing vegetables, and 30% in pasture; the average farm size of 80 acres; and the average number of "impacted acres" (or, acres in production) as 20 acres; the following calculations were made:

Land Use	# of Farms Participating Year 1	Total # of Impacted Acres Year 1	# of Farms Participating Years 2-5	Total # of Impacted Acres Years 2-5
Cropland (Vegetables, Corn, Soy)	28 farms (16 vegetable, 6 corn, 6 soy)	560 acres (320 vegetable, 120 corn, 120 soy)	59 farms (35 vegetable, 12 corn, 12 soy)	1190 acres (680 vegetable, 255 corn, 255 soy)
Pasture	12 farms	240 acres	26 farms	510 acres
TOTAL	**40 farms**	**800 acres**	**85 farms**	**1700 acres**

In this project, we will focus on fruits and vegetables (beans, tomatoes, greens, melons, hard squash, lettuce, cucumbers and sweet potatoes, apples, strawberries, peaches and blueberries), as well as pasture-raised beef, chicken and pork. Corn and soybeans will also be represented among our commodities, primarily when participating small farmers also have larger acreage of non-vegetable, commodity crops.

The COMET-Planner tool was then utilized to estimate the GHG Emission reductions associated with the NRCS Conservation Practices that will be adopted on the farms. The Conservation Practices were paired with the appropriate commodity farms, and the number of acres estimated to be impacted per commodity were determined according to their relative prevalence. The figures below are from COMET and represent estimations for Years 2-5 of the program (i.e. the full set of 85 farms and 1700 impacted acres). For the GHG Emission calculations below, the Year 1 data was gathered by adjusting the Year 2-5 data to the smaller set of farms.

The tool estimated that the total GHG Emission reduction across our full set of 85 farms would be 2155 tonnes CO_2 equivalent per year, with a reduction of 691 tonnes CO_2 equivalent per year on cropland (corn, soy, and vegetables) and 1464 tonnes CO_2 equivalent per year on pastureland. With these estimates adjusted for the smaller set of farms for Year 1, the total GHG Emission Reduction over the five years combined is therefore estimated at 9633 tonnes CO_2 equivalent, with 3089 tonnes CO_2 equivalent on cropland and 6544 on pastureland.

Total GHG Reductions by year and land type (in tonnes CO_2 equivalent)	
Year 1 GHG Benefits - cropland	325
Year 1 GHG Benefits - pasture	688

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Year 2 GHG Benefits - cropland	691
Year 2 GHG Benefits - pasture	1464
Year 3 GHG Benefits - cropland	691
Year 3 GHG Benefits - pasture	1464
Year 4 GHG Benefits - cropland	691
Year 4 GHG Benefits - pasture	1464
Year 5 GHG Benefits - cropland	691
Year 5 GHG Benefits - pasture	1464
Total	**9633**

The CSTP will outline a five-year continuation of climate-smart management beyond the grant period, increasing the likelihood that GHG benefits will continue. We will use participatory engagement methods throughout the grant period to gauge farmers' assessment of the viability of climate-smart management beyond the grant period and adapt program design to enhance its viability. In particular, commitment to reduced tillage and cover cropping will ensure that GHG benefits related to soil carbon will be retained, and evidence suggests biochar applications and its sequestration benefits are stable for hundreds if not thousands of years.

D. Approach to verification of greenhouse gas benefits

A third party consultant will review our reported GHG impacts and practice implementation data to ensure that GHG benefits recorded through this project are indeed additional and without leakage. Verification will take place in years three, four, and five of the project.

E. Agreement to participate in the Partnerships Network (see entry below in "Considerations for Successful Projects").

Working Landscapes will designate at least one staff member as a member of the USDA Partnerships for Climate-Smart Commodities Learning Network. This member will attend all required meetings and complete and contribute to synthesis reports as assembled by the USDA. Jon White is expected to serve as Climate Smart Agriculture Director, and we anticipate he will join these meetings.

V. Partnerships for Climate-Smart Commodities, a plan to develop and expand markets for climate-smart commodities generated as a result of project activities, including: E*

A. Any partnerships designed to market resulting climate-smart commodities,

Like our approach to providing technical support, our marketing strategy leverages existing relationships of the food hubs in our network. Food hubs are buyers of food themselves that can exercise a preference for purchasing climate-smart commodities, and they also sell food to other buyers with interests and incentives to purchase climate-smart products. Working Landscapes and the food hub network, in collaboration with project partners, will market the climate-smart commodities produced through this project. Food hubs are accustomed to differentiating their products in the marketplace by emphasizing their socially and environmentally beneficial attributes. In all cases, this project will focus on capturing a premium for climate smart commodities, and in cases where climate-smart attributes are coupled with others (such as local),

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there will not be additional costs to the project.

Our marketing plan includes two primary focuses, detailed below, that will be used reach and inspire mission-aligned customers, including wholesale buyers, institutional buyers and individuals. We will utilize qualitative and quantitative storytelling about climate-smart commodities (including their GHG reductions, social and economic impacts to small and underserved producers and other farmworkers, and the environmental resilience of climate-smart agriculture) in a variety of formats (including online multimedia, print materials, signage, point of sale displays, climate-smart farm tours, and more) to market the climate-smart commodities produced through this project.

1) We will market climate-smart commodities through existing food hub market channels. The food hubs involved in this project currently market products to institutions (schools, tribes, universities, healthcare systems, childcare centers, senior services agencies), commercial food distributors (serving both foodservice and retail buyers), and individual households (through CSA-style food boxes and other direct-to-consumer channels). Some of the market partners listed above are already part of existing food hub supply chains. Together with our market partners, we will engage with the food hubs' wholesale, institutional and individual buyers to understand their perspectives on, support for, and hesitations about climate smart agriculture. These findings will be used to guide implementation of our marketing/educational initiative directed towards wholesale customers and end consumers.

2) We will collaborate with our Market Access Partners, which include organizations that have committed to helping the food hubs reach consumers (see attached letters of support) with climate smart commodities. In some cases, we currently work with these partners, but not on the marketing of climate smart commodities.

Some of these partners currently sell products to consumers, including Weaver Street Market, a small cooperative grocery chain; Bender Farms, which in addition to being a farm partner is also a feed producer; and Fruitful Innovation Group, a fruit and vegetable-based jerky manufacturer. These partners are already striving to meet unmet demand for ethically-sourced food products, but their efforts are hampered by nascent and miniscule value chains for these products. Furthermore, these companies understand that branding and storytelling are essential to communicating the environmental and social responsibility of their product, but lack the personal connections and on-farm environmental accounting to do this well. To overcome these challenges we will

1) Use CSTPs to coordinate a reliable supply of climate-smart produce for value-chain entities
2) Extract metrics from MMRV activities to quantify GHG benefits and identify key soil health practices for each product
3) Leverage food hubs' farmer relationships to co-develop storytelling elements and trial them through partners' advertising channels

An additional market access partner helping us to reach consumers will be the NC 10% campaign, a statewide initiative that promotes local food and will also advocate for climate-smart products from North Carolina farmers and food hubs. The Haliwa-Saponi Tribe, North Carolina's third largest Native American tribe, will contribute to the marketing efforts by sharing marketing information regarding climate smart products with its members, and potentially to direct tribal food budgets to purchase climate smart commodities as part of its food assistance programs. The area where most of the tribal population lives is a food desert, so the tribe is prioritizing improved food access for its members. The tribe has collaborated with Working Landscapes on food access

initiatives since 2020; this project will provide an opportunity to add climate-smart foods to the array of products that they offer.

As we build demand for climate-smart commodities, we will also be building collaborative capacity among farmers and food hubs. In practice, the CSTP will allow food hubs and farmers to coordinate farm production in lockstep with increasing demand from new and expanded market channels. Therefore, farmers will not be at risk of falling prices for climate-smart commodities due to a flooded market. The food hubs serve as an essential intermediary to ensure controlled growth in the market for climate-smart products.

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B. A plan to track climate-smart commodities through the supply chain, if appropriate

Product traceability is already an essential component and primary strength of food hubs' business operations. Given that food hubs and our market access partners operate in relatively short supply chains involving only one or two intermediaries, tracing products from farm to consumer is neither a highly expensive nor overbearing task. Traceability is essential for food safety assurance, and Working Landscapes has experience tracing products from individual farm tracts to end consumers under HAACP protocols. It's also central to food hubs' current marketing strategy, which typically emphasizes local origin and sustainable qualities of individual products to generate a market premium. This proposal leverages food hubs' existing experience with product traceability and enhances these capabilities through the documentation of the CSTP and MMRV reporting. These documents not only aid the farmer in transitioning to climate-smart management, but also provide a detailed paper trail for value-chain entities to associate individual products with their agricultural management practices and GHG benefits.

In the first year of the project, Working Landscapes will devise common protocols across food hubs for integrating information from CSTP and MMRV reporting into back-end documentation and consumer-facing product specifications. Such information will provide greater leverage for sales especially to institutional customers, as more and more universities, hospitals, and school districts set procurement goals for the purchase of climate-smart and sustainable food. The CSA Project Director will lead initiatives to connect institutional emissions reduction goals directly to food procurement and in-cafeteria consumer engagement for institutional customers. As a result, institutions will know the premium they pay for climate-smart commodities will go directly to meeting internal targets, educating their end consumers, and creating a structurally secure and resilient food system for the era of climate change. Similar strategies have already been piloted at Emory University, locally at UNC-Pembroke, and nationally through the 20% Real Food Campaign, but this project will demonstrate the capabilities of food hubs as the key value chain entity to provide a scalable model for ethical institutional procurement.

C. Estimated economic benefits for participating producers including market returns

The economic benefits of climate-smart agriculture include on-farm benefits to production expenses and revenue sources, as well as market premiums for differentiated climate-smart commodities. Integrating livestock on land planted with cover crops can double profit per acre (LaCanne and Lundgren 2018) and the use of cover crops in row crop operations can break even within 2-3 years due to reductions in herbicide and fertilizer use (Myers et al. 2019).

We estimate a 10% increase in revenue for acres impacted by climate-smart practices due to the additional revenue streams of diversified management and a market premium for climate-smart products of 15%. The economic benefits of this 25% revenue increase will be further enhanced by the reduction in input costs over time, increasing profitability. According to average revenues per acre for various crops, we would expect the base revenue for project acres to be $13.46 million, but the 25% premium for climate-smart management will increase this total to $17.03 million.

D. Post-project potential, including anticipated ability to scale project activities,

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likelihood of long-term viability beyond project period, and ability to inform future USDA actions to encourage climate-smart commodities.

We have designed our farmer service approach and marketing plan to generate permanent changes in the food sector, beginning with ten-year plans for on-farm regenerative management strategies (the Climate Smart Transition Plans), then following the value chain to activate mission-aligned buyers with long-term goals. Our marketing plan eases the transition for buyers from conventional to climate-smart procurement, but it also centers the structural and cultural changes that are imperative for a food system that is resilient to the ecological and societal challenges of a dysregulated climate. How can we prepare farms and farmers for a climate-smart future? How can we scale climate-smart production to impact regional food security? This proposal and marketing plan presents food hubs as the answer to these two overlapping questions. Regenerative management strategies increase profitability over time, and efficiency and resilience increases with the deepening of grassroots, relational economic ties. Investing in and achieving these system changes now will guarantee continued GHG benefits and producer security as these new models mature.

Key to the marketing plan is controlled growth among both farmers and food hubs. Increasing demand from new customers and new sales to existing processing and retail entities like Fruitful Innovation Group and Weaver Street Market will require higher production of climate-smart commodities among farmers and higher throughput at food hubs. As the implementers of the grant, food hubs are well positioned to ensure that on-farm participant support is linked to well-timed and achievable market expansion. Our impact, however, will extend well beyond the 85 farms directly supported by the grant. We expect the results of MMRV and economic impact analyses to be convincing to many more farmers and food buyers across the region. In addition, CSA Specialists will coordinate a number of educational opportunities in-person and online to demonstrate the techniques and principles of climate-smart management. These events will be open to the public, and extend the reach of project activities beyond direct participant support. And because the food hub model is being replicated nationwide, we envision the processes and tools developed through this grant in North Carolina will generate important lessons for other geographic contexts and market scales.

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Milestone	type of Measure	Category	Measurement by	Year 1 Q1	Q2	Q3	Q4	Year 2 Q1	Q2
Producers assessed for project qualification/enrollment	Quantitative	Enrollment	Cumulative Count	10	25	30	45	70	90
Total producers enrolled/Number of Producers Involved	Quantitative	Enrollment	Cumulative Count	5	20	30	40	60	85
Underserved producers enrolled/Number of Underserved producers	Quantitative	Enrollment	Cumulative Count	0	20	30	40	60	85
Fruit and vegetable producers enrolled	Quantitative	Enrollment	Cumulative Count	0	16	25	35	35	35
Grain producers enrolled	Quantitative	Enrollment	Cumulative Count	0	12	18	24	24	24
Meat producers enrolled	Quantitative	Enrollment	Cumulative Count	0	12	19	26	26	26
Acres enrolled	Quantitative	Enrollment	Cumulative Count	0	400	600	800	1200	1700
Number of Head Involved (Cow, sheep, equivalent)	Quantitative	Enrollment	Quarterly Count	0	40	80	120	160	200
Percentage of farms for which soil analysis is performed	Quantitative	MMRV	Quarterly Percentage	0	25	25	50	0	50
Percentage of enrolled farms analyzing crop/cover crop biomass production	Quantitative	MMRV	Quarterly Percentage	0	0	0	20	0	25
Number of measurement tools utilized	Quantitative	MMRV	Quarterly Count	0	0	5	5	0	5
Number of 1-1 technical assistance visits	Quantitative	Programming	Quarterly Count	10	30	20	20	45	40
Hours of virtual educational content provided per farmer	Quantitative	Programming	Quarterly Count		10	10	10	10	10
Number of events hosted (in-person educational and networking events)	Quantitative	Programming	Cumulative Count	3	6	9	11	14	
Number of attendees at hosted events	Quantitative	Programming	Quarterly Count		90	180	270	330	420
Number of climate-smart transition plans in operation	Quantitative	Implementation	Cumulative Count		10	15	25	40	60
Total dollars disbursed for producer stipends/Dollars provided to producers	Quantitative	Disbursement	Quarterly Count				30000		
Total dollars disbursed for practice implementation	Quantitative	Disbursement	Quarterly Count	$24,963.81	$24,963.81	$24,963.81	$24,963.81	$49,927.62	$49,927.62
GHG Benefits (CO2e)	Quantitative	Outcomes	Quarterly Count				1013		
Project update calls for major partners (Demonstrated engagement of major	Quantitative	Partner	Quarterly Count	1	1	1	1	1	1
Number of farms engaged by project partners	Quantitative	Partner	Quarterly Count			10	40	20	20
Number of new marketing channels established	Quantitative	Marketing	Cumulative Count				1	1	2
Number of consumer customers engaged by marketing process/materials	Quantitative	Marketing	Cumulative Count				0	500	1,500
Number of wholesale/institutional customers engaged with marketing materials	Quantitative	Marketing	Cumulative Count				4	9	14
Number of marketing channels expanded	Quantitative	Marketing	Cumulative Count					1	1
Farm revenue from impacted acres	Quantitative	Marketing	Quarterly Count			473008.8	473008.8	1005143.7	1005143.7
Financial Reimbursement Requests submitted	Quantitative	Administrative	Quarterly Count	1	1	1	1	1	1
Implement supply chain traceability system at all participating food hubs (other MMRV & supply chain tracability attributes)	Qualitative		Program records						one system developed and used by
Partners,under guidance from marketing firm, develop and implement project storytelling materials for use in branding and messaging	Qualitative	Marketing							
Market access partners develop joint sourcing strategies for climate smart commodities in partnership with food hubs (Other measurements of work related to marketing to commodities, Demonstrated Engagement of Major Partners)	Qualitative	Marketing							
Evaluation and engagement efforts reveal percent of participating farmers 'highly satisfied with program"	Quantitative						80		
Social network analysis for climate smart commodity supply chain partnerships-- increases in network density vs. baseline (Demonstrated engagement of major partners)	Quantitative		Program participant survey; social network analysis	measure baseline social network density		author report on baseline social network density	participant survey analysis indicates 10% network		
Percentage of target wholesale customers indicating awareness of climate-smart commodities marketed through this project	Quantitative	Marketing							
Quarterly Expenditures, by quarter	Quantitative	Administrative	Quarterly Count	$ 280,485.00	$ 240,381.00	$ 245,699.00	$ 241,107.00	$ 270,395.00	$ 267,895.00

Milestone	type of Measure	Category	Measurement by	Q3	Q4	Year 3 Q1	Q2	Q3	Q4
Producers assessed for project qualification/enrollment	Quantitative	Enrollment	Cumulative Count	90	90	90	90	90	90
Total producers enrolled/Number of Producers Involved	Quantitative	Enrollment	Cumulative Count	85	85	85	85	85	85
Underserved producers enrolled/Number of Underserved producers	Quantitative	Enrollment	Cumulative Count	85	85	85	85	85	85
Fruit and vegetable producers enrolled	Quantitative	Enrollment	Cumulative Count	35	35	35	35	35	35
Grain producers enrolled	Quantitative	Enrollment	Cumulative Count	24	24	24	24	24	24
Meat producers enrolled	Quantitative	Enrollment	Cumulative Count	26	26	26	26	26	26
Acres enrolled	Quantitative	Enrollment	Cumulative Count	1700	1700	1700	1700	1700	1700
Number of Head Involved (Cow, sheep, equivalent)	Quantitative	Enrollment	Quarterly Count	240	255	255	255	255	255
Percentage of farms for which soil analysis is performed	Quantitative	MMRV	Quarterly Percentage	0	50	0	50	0	50
Percentage of enrolled farms analyzing crop/cover crop biomass production	Quantitative	MMRV	Quarterly Percentage	0	0	0	25	0	0
Number of measurement tools utilized	Quantitative	MMRV	Quarterly Count	0	5	0	5	0	5
Number of 1-1 technical assistance visits	Quantitative	Programming	Quarterly Count	45	40	45	40	45	40
Hours of virtual educational content provided per farmer	Quantitative	Programming	Quarterly Count	10	10	10	10	10	10
Number of events hosted (in-person educational and networking events)	Quantitative	Programming	Cumulative Count	16	18	20	22	24	26
Number of attendees at hosted events	Quantitative	Programming	Quarterly Count	480	540	600	660	720	780
Number of climate-smart transition plans in operation	Quantitative	Implementation	Cumulative Count	85	85	85	85	85	85
Total dollars disbursed for producer stipends/Dollars provided to producers	Quantitative	Disbursement	Quarterly Count		63750				63750
Total dollars disbursed for practice implementation	Quantitative	Disbursement	Quarterly Count	$49,927.62	$49,927.62	$49,927.62	$49,927.62	$49,927.62	$49,927.62
GHG Benefits (CO2e)	Quantitative	Outcomes	Quarterly Count		2155				2155
Project update calls for major partners (Demonstrated engagement of major	Quantitative	Partner	Quarterly Count	1	1	1	1	1	1
Number of farms engaged by project partners	Quantitative	Partner	Quarterly Count	20	85	20	20	20	85
Number of new marketing channels established	Quantitative	Marketing	Cumulative Count	2	2	4	4	6	8
Number of consumer customers engaged by marketing process/materials	Quantitative	Marketing	Cumulative Count	6,500	11,500	16,500	21,500	26,500	31,500
Number of wholesale/institutional customers engaged with marketing materials	Quantitative	Marketing	Cumulative Count	19	24	29	34	39	44
Number of marketing channels expanded	Quantitative	Marketing	Cumulative Count	2	2	3	3	5	6
Farm revenue from impacted acres	Quantitative	Marketing	Quarterly Count	1005143.7	1005143.7	1005143.7	1005143.7	1005143.7	1005143.7
Financial Reimbursement Requests submitted	Quantitative	Administrative	Quarterly Count	1	1	1	1	1	1
Implement supply chain traceability system at all participating food hubs (other MMRV & supply chain tracability attributes)	Qualitative		Program records						
Partners, under guidance from marketing firm, develop and implement project storytelling materials for use in branding and messaging	Qualitative	Marketing			roll out of climate smart branding/mes saging				
Market access partners develop joint sourcing strategies for climate smart commodities in partnership with food hubs (Other measurements of work related to marketing to commodities, Demonstrated Engagement of Major Partners)	Qualitative	Marketing			two market partners collaborate to plan sourcing				
Evaluation and engagement efforts reveal percent of participating farmers 'highly satisfied with program"	Quantitative				90				90
Social network analysis for climate smart commodity supply chain partnerships-- increases in network density vs. baseline (Demonstrated engagement of major partners)	Quantitative		Program participant survey; social network analysis		participant survey analysis indicates 20% network				participant survey analysis indicates 25% network
Percentage of target wholesale customers indicating awareness of climate-smart commodities marketed through this project	Quantitative	Marketing			customer survey: 10% awareness				customer survey: 25% awareness
Quarterly Expenditures, by quarter	Quantitative	Administrative	Quarterly Count	$ 267,395.00	$ 267,696.00	$ 247,305.00	$ 247,305.00	$ 247,305.00	$ 247,305.00

Milestone	type of Measure	Category	Measurement by	Year 4 Q1	Q2	Q3	Q4	Year 5 Q1	Q2
Producers assessed for project qualification/enrollment	Quantitative	Enrollment	Cumulative Count	90	90	90	90	90	90
Total producers enrolled/Number of Producers Involved	Quantitative	Enrollment	Cumulative Count	85	85	85	85	85	85
Underserved producers enrolled/Number of Underserved producers	Quantitative	Enrollment	Cumulative Count	85	85	85	85	85	85
Fruit and vegetable producers enrolled	Quantitative	Enrollment	Cumulative Count	35	35	35	35	35	35
Grain producers enrolled	Quantitative	Enrollment	Cumulative Count	24	24	24	24	24	24
Meat producers enrolled	Quantitative	Enrollment	Cumulative Count	26	26	26	26	26	26
Acres enrolled	Quantitative	Enrollment	Cumulative Count	1700	1700	1700	1700	1700	1700
Number of Head Involved (Cow, sheep, equivalent)	Quantitative	Enrollment	Quarterly Count	255	255	255	255	255	255
Percentage of farms for which soil analysis is performed	Quantitative	MMRV	Quarterly Percentage	0	50	0	50	0	50
Percentage of enrolled farms analyzing crop/cover crop biomass production	Quantitative	MMRV	Quarterly Percentage	0	25	0	0	0	25
Number of measurement tools utilized	Quantitative	MMRV	Quarterly Count	0	5	0	5	0	5
Number of 1-1 technical assistance visits	Quantitative	Programming	Quarterly Count	45	40	45	40	45	40
Hours of virtual educational content provided per farmer	Quantitative	Programming	Quarterly Count	10	10	10	10	10	10
Number of events hosted (in-person educational and networking events)	Quantitative	Programming	Cumulative Count	28	30	30	30	32	34
Number of attendees at hosted events	Quantitative	Programming	Quarterly Count	840	900	900	900	960	1020
Number of climate-smart transition plans in operation	Quantitative	Implementation	Cumulative Count	85	85	85	85	85	85
Total dollars disbursed for producer stipends/Dollars provided to producers	Quantitative	Disbursement	Quarterly Count				63750		
Total dollars disbursed for practice implementation	Quantitative	Disbursement	Quarterly Count	$49,927.62	$49,927.62	$49,927.62	$49,927.62	$49,927.62	$49,927.62
GHG Benefits (CO2e)	Quantitative	Outcomes	Quarterly Count				2155		
Project update calls for major partners (Demonstrated engagement of major	Quantitative	Partner	Quarterly Count	1	1	1	1	1	1
Number of farms engaged by project partners	Quantitative	Partner	Quarterly Count	20	20	20	85	20	20
Number of new marketing channels established	Quantitative	Marketing	Cumulative Count	10	10	10	14	16	16
Number of consumer customers engaged by marketing process/materials	Quantitative	Marketing	Cumulative Count	70,000	75,000	80,000	85,000	110,000	115,000
Number of wholesale/institutional customers engaged with marketing materials	Quantitative	Marketing	Cumulative Count	55	60	65	70	80	85
Number of marketing channels expanded	Quantitative	Marketing	Cumulative Count	10	10	10	12	14	14
Farm revenue from impacted acres	Quantitative	Marketing	Quarterly Count	1005143.7	1005143.7	1005143.7	1005143.7	1005143.7	1005143.7
Financial Reimbursement Requests submitted	Quantitative	Administrative	Quarterly Count	1	1	1	1	1	1
Implement supply chain traceability system at all participating food hubs (other MMRV & supply chain tracability attributes)	Qualitative		Program records						
Partners,under guidance from marketing firm, develop and implement project storytelling materials for use in branding and messaging	Qualitative	Marketing							
Market access partners develop joint sourcing strategies for climate smart commodities in partnership with food hubs (Other measurements of work related to marketing to commodities, Demonstrated Engagement of Major Partners)	Qualitative	Marketing					four market partners collaborate to plan sourcing		
Evaluation and engagement efforts reveal percent of participating farmers 'highly satisfied with program"	Quantitative						95		
Social network analysis for climate smart commodity supply chain partnerships-- increases in network density vs. baseline (Demonstrated engagement of major partners)	Quantitative		Program participant survey; social network analysis				participant survey analysis indicates 10% network		
Percentage of target wholesale customers indicating awareness of climate-smart commodities marketed through this project	Quantitative	Marketing					customer survey: 65% awareness		
Quarterly Expenditures, by quarter	Quantitative	Administrative	Quarterly Count	$ 238,411.00	$ 238,411.00	$ 238,411.00	$ 238,411.00	$ 244,006.00	$ 244,006.00

Milestone	type of Measure	Category	Measurement by	Q3	Q4
Producers assessed for project qualification/enrollment	Quantitative	Enrollment	Cumulative Count	90	90
Total producers enrolled/Number of Producers Involved	Quantitative	Enrollment	Cumulative Count	85	85
Underserved producers enrolled/Number of Underserved producers	Quantitative	Enrollment	Cumulative Count	85	85
Fruit and vegetable producers enrolled	Quantitative	Enrollment	Cumulative Count	35	35
Grain producers enrolled	Quantitative	Enrollment	Cumulative Count	24	24
Meat producers enrolled	Quantitative	Enrollment	Cumulative Count	26	26
Acres enrolled	Quantitative	Enrollment	Cumulative Count	1700	1700
Number of Head Involved (Cow, sheep, equivalent)	Quantitative	Enrollment	Quarterly Count	255	255
Percentage of farms for which soil analysis is performed	Quantitative	MMRV	Quarterly Percentage	0	50
Percentage of enrolled farms analyzing crop/cover crop biomass production	Quantitative	MMRV	Quarterly Percentage	0	0
Number of measurement tools utilized	Quantitative	MMRV	Quarterly Count	0	5
Number of 1-1 technical assistance visits	Quantitative	Programming	Quarterly Count	45	40
Hours of virtual educational content provided per farmer	Quantitative	Programming	Quarterly Count	10	10
Number of events hosted (in-person educational and networking events)	Quantitative	Programming	Cumulative Count	36	40
Number of attendees at hosted events	Quantitative	Programming	Quarterly Count	1080	1200
Number of climate-smart transition plans in operation	Quantitative	Implementation	Cumulative Count	85	85
Total dollars disbursed for producer stipends/Dollars provided to producers	Quantitative	Disbursement	Quarterly Count		63750
Total dollars disbursed for practice implementation	Quantitative	Disbursement	Quarterly Count	$49,927.62	$49,927.62
GHG Benefits (CO2e)	Quantitative	Outcomes	Quarterly Count		2155
Project update calls for major partners (Demonstrated engagement of major	Quantitative	Partner	Quarterly Count	1	1
Number of farms engaged by project partners	Quantitative	Partner	Quarterly Count	20	85
Number of new marketing channels established	Quantitative	Marketing	Cumulative Count	16	20
Number of consumer customers engaged by marketing process/materials	Quantitative	Marketing	Cumulative Count	120,000	125,000
Number of wholesale/institutional customers engaged with marketing materials	Quantitative	Marketing	Cumulative Count	90	95
Number of marketing channels expanded	Quantitative	Marketing	Cumulative Count	14	16
Farm revenue from impacted acres	Quantitative	Marketing	Quarterly Count	1005143.7	1005143.7
Financial Reimbursement Requests submitted	Quantitative	Administrative	Quarterly Count	1	1
Implement supply chain traceability system at all participating food hubs (other MMRV & supply chain tracability attributes)	Qualitative		Program records		
Partners,under guidance from marketing firm, develop and implement project storytelling materials for use in branding and messaging	Qualitative	Marketing			
Market access partners develop joint sourcing strategies for climate smart commodities in partnership with food hubs (Other measurements of work related to marketing to commodities, Demonstrated Engagement of Major Partners)	Qualitative	Marketing			
Evaluation and engagement efforts reveal percent of participating farmers 'highly satisfied with program"	Quantitative				95
Social network analysis for climate smart commodity supply chain partnerships-- increases in network density vs. baseline (Demonstrated engagement of major partners)	Quantitative		Program participant survey; social network analysis		participant survey analysis indicates 10% network
Percentage of target wholesale customers indicating awareness of climate-smart commodities marketed through this project	Quantitative	Marketing			customer survey: 80% awareness
Quarterly Expenditures, by quarter	Quantitative	Administrative	Quarterly Count	$ 244,006.00	$ 244,006.00

Categories								
Enrollment	Producers assessed for enrollment	Total producers enrolled	Underserved producers enrolled	Fruit and vegetable producers enrolled	Grain producers enrolled	Meat producers enrolled	Acres enrolled	Head enrolled
Marketing	Number of new marketing channels utilized	Total sales volume	Number of customers engaged by marketing	Number of marketing channels expanded	Dollar value of sales	Dollars spent on marketing materials	launch marketing campaign/deploy materials	Implement traceability framework for partner food hubs
MMRV	Percentage of farms analyzing soil samples	Percentage of farms analyzing crop/cover crop biomass production	Percentage of farms utilizing aerial monitoring	Number of measurement tools utilized				
Programming	Number of 1-1 technical assistance visits	Hours of virtual educational content provided per farmer	Number of events hosted (in-person educational and networking events)	Number of attendees at hosted events	Yearly cumulative acres enrolled	yearly cumulative producers enroleld	yearly cumulative underserved producers enrolled	percent of enrolled producers who are underserved
Implementation	Number of climate-smart transition plans completed	Number of acres planted with cover crops	dev't of climate smart transition framework					
Disbursement	Total dollars of funds disbursed to producers	Dollars of funds disbursed to underserved						
Outcomes	GHG Benefits (CO2e)	other soil health measures?						
Partner Engagement	participation in meetings or project events: quarterly	contributing to reports	sharing info on project with their constituencies; storytelling; pursuing new market channels	how to measure how climate smart messaging/programs get better integrated over time	number of farms engaged by project partners			

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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
327	Conservation Cover
328	Conservation Crop Rotation
329	Residue and Tillage Management, No Till
336	Soil Carbon Amendment
338	Prescribed Burning
340	Cover Crop
345	Residue and Tillage Management, Reduced Till
380	Windbreak/Shelterbelt Establishment and Renovation
381	Silvopasture
386	Field Border
390	Riparian Herbaceous Cover
391	Riparian Forest Buffer
484	Mulching
512	Pasture and Hay Planting
528	Prescribed Grazing
590	Nutrient Management
612	Tree/Shrub Establishment
666	Forest Stand Improvement

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

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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."

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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

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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

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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

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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

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<u>Field Enrollment</u>

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)

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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

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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

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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 CO_2 emission reductions for field	Annual
Total CH4 estimated	Estimate of total CH_4 emission reductions for field	Annual
Total N2O estimated	Estimate of total N_2O emission reductions for field	Annual

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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<u>Field Enrollment</u>

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

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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

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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

Measurement unit: Category

Select multiple values: No

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

Measurement unit: Category

Select multiple values: No

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

Measurement unit: Category

Select multiple values: No

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

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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

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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.

<u>Farm Summary</u>

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

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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

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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

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<u>Field Summary</u>

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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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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

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	Strip width (feet)	20-1,000
Filter Strip (CPS 393)	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

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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

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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

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

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Appendix B: Commodity List

CROPS

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