NRCS-ADS-093

U.S. Department of Agriculture
Natural Resources Conservation Service

NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number	2. Amendment Number	3. Award /Project Period	4. Type of award instrument:
NR233A750004G059		Date of Final Signature - 06/27/2028	Grant Agreement

5. Agency (Name and Address)	6. Recipient Organization (Name and Address)
USDA Partnerships for Climate-Smart Commodities c/o FPAC-BC Grants and Agreements Division 1400 Independence Ave SW, Room 3236 Washington, DC 20250 Direct all correspondence to FPAC.BC.GAD@usda.gov	AMERICAN SUSTAINABLE BUSINESS INSTITUTE INC 709 COUNTY ROUTE 11 ANCRAM NY 12502-5255 UEI Number / DUNS Number: RW2ALKRAKUG3 / 079261800 EIN:

7. NRCS Program Contact	8. NRCS Administrative Contact	9. Recipient Program Contact	10. Recipient Administrative Contact
Name: JOHN ANDERSON	Name: ADAM CARL	Name: Anna Straus	Name: Anna Straus
(b)(6)			

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

15. Project Title/ Description: Expands markets for climate-smart Beef, Bison and Beef-Bison By-Products in 49 states (excludes Alaska), tribe(s) and supports implementation and monitoring of climate-smart practices.

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

17. Select Funding Type

Select funding type:	☒ Federal	☒ Non-Federal
Original funds total	$34,999,190.00	$760,616.00
Additional funds total	$0.00	$0.00
Grand total	$34,999,190.00	$760,616.00

18. Approved Budget

Personnel	$2,273,823.00	Fringe Benefits	$522,980.00
Travel	$345,664.00	Equipment	$0.00
Supplies	$150,700.00	Contractual	$5,102,632.00
Construction	$0.00	Other	26,603,391.00
Total Direct Cost	34,153,645.000	Total Indirect Cost	$845,545.00
		Total Non-Federal Funds	$760,616.00
		Total Federal Funds Awarded	$34,999,190.00
		Total Approved Budget	$35,759,806.00

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	Signature	Date
KATINA HANSON Acting Senior Advisor for Climate-Smart Commodities	KATINA HANSON Digitally signed by KATINA HANSON Date: 2023.06.29 06:54:00 +09'00'	06/29/2023
Name and Title of Authorized Recipient Representative	Signature	Date
DAVID LEVINE President	David Levine Digitally signed by David Levine Date: 2023.06.27 15:08:51 -04'00'	June 27,2023

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 American Sustainable Business Institute, LLC (ASBI), 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 $35,759,806

TOTAL FEDERAL FUNDS $34,999,190
PERSONNEL $2,067,112
FRINGE BENEFITS $475,436
TRAVEL $314,240
EQUIPMENT $0
SUPPLIES $137,000
CONTRACTUAL $4,638,756
CONSTRUCTION $0
OTHER $26,472,288 (includes PRODUCER INCENTIVES $17,850,000)
TOTAL DIRECT COSTS $34,104,832
INDIRECT COSTS $894,358

TOTAL NON-FEDERAL FUNDS $760,616
PERSONNEL $396,858
FRINGE BENEFITS $91,277
TRAVEL $0
EQUIPMENT $0
SUPPLIES $0
CONTRACTUAL $0
CONSTRUCTION $0
OTHER $272,481 (includes PRODUCER INCENTIVES $0)
TOTAL DIRECT COSTS $760,616
INDIRECT COSTS $0

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

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 for The Growing GRASS & Climate-Smart Value-Added U.S. Commodity Markets Project (*Growing GRASS Project*)

Proposed Project Start- End Date: Spring 2023- Spring 2028

i) Executive Summary of Pilot Project

a) Contact Information

David Levine American Sustainable Business Institute, Inc.
709 County Route 11 Ancram, NY 12502-5255

b) Project Partners

This is the full list of Growing Grass Project partners. Bolded entities are subawardees and have primary responsibility for performance and verification of the Growing GRASS project, all *italicized* entities have signed on as supporters with commitments to aid the Growing GRASS Project. Additional information on supporter roles is detailed in accompanying letters of support.

GRASS Farmer/Rancher Producer Partners & Branded/Aggregator Meat Companies
(includes over 240 U.S. regenerative producers managing over 1.5 million acres)
Lead: **Roots of Change**
Thousand Hills Lifetime Grazed, Minnesota
White Oak Pastures, Georgia
Richards Regenerative, California
Blue Nest Beef, Minnesota/Dakotas
BAR C Rancher Co-op, California
Hickory Nut Gap, North Carolina
Eel River Organics, California
Stemple Creek Ranch, California

Farmer Member Organizations
California Cattlemen's Association,
American Grassfed Association

Processing Partners
Lead: **Other Half Processing SBC (OHP)**
Vermont Packinghouse, Vermont
Lorentz Meats, Minnesota
White Oak Pastures, Georgia
Marksbury Farm Foods

Market Stakeholder & Marketing Partners
Regenerative Rising
LookINTO
Textile Exchange
Zero Footprint

Certification, Auditing/ MRV Tools Partners
Lead: **American Grassfed Association**
Audubon Conservation Ranching Initiative
Bionutrient Food Association/Utah State University
CarbonSpace

Research Partners:
Pure Strategies
UC Davis Food Systems Lab
IC-FOODS
Autocase
Health Research Institute (HRI) Labs
Dr. John Ikerd

Apparel Brand Partners
VF Corporation (includes Timberland, Vans, North Face, Smartwool, etc.)
Ralph Lauren
Tapestry (Coach and Kate Spade)

Meat Retail Partner (in addition to branded meat companies aggregators listed above)
Natural Grocers
Applegate
Feltman's of Coney Island
Homeplate Solutions

NGO Supporters
The Growing GRASS Project has several NGO and organizational partners that will help increase awareness among farmers, ranchers, policymakers and consumers about the climate-smart benefits and opportunities associated with regenerative beef and bison production. Identified partners include *Holistic Management International, the Socially Responsible Agriculture Project* and *Kiss the Ground,* among others.

We know that some of our project partners and many of our supporters and potential partners are also applying for this funding opportunity. The *Growing GRASS Project* team is open to

collaboration with as many relevant partners as possible, regardless of funding allocation, to contribute to the overall success of the climate-smart agriculture ecosystem in the US.

c) List of underserved/minority-focused project partners

- ***NDN Fund**, Arizona, Hawaii, Idaho, Montana, Nevada, New Mexico, North Dakota, South Dakota, Washington and Wyoming*
- ***Flower Hill Institute,** New Mexico*
- ***Buffalo Nations Grasslands Initiative (BNGA),** Native Nations in the US Portion of the Northern Great Plains*
- ***Sicangu Co (formerly known as Rosebud Economic Development Company - REDCO),** Mission, South Dakota*

d) Compelling need for the project

The Growing GRASS & Climate-Smart Value-Added U.S. Commodity Markets Project (*Growing GRASS Project*) will help U.S. beef and bison producers optimize total value from their regenerative grazing operations through lowered costs of verification, market access, and increased value-added markets that more fully utilize the whole animal, along with incentives for climate-smart grazing systems that reduce costs, increase resiliency, and deliver environmental and climate benefits.

Current value-added markets for beef and bison focus on 100% grassfed, organic, animal welfare, wildlife habitat, and increasingly, climate smart or regenerative claims. Regenerative is an indigenous originated agricultural approach that includes within its parameters "climate-smart" prescribed grazing practices and outcomes. Producers that regeneratively graze and raise livestock are actively improving soil health, fertility and forage production, water holding capacity, and overall animal welfare while potentially getting a higher economic return. However, the high upfront costs of on-farm/ranch inspections required to access most of these value-added markets - especially for climate smart verifications - can make them inaccessible for many farmers and ranchers.

Additionally, for producers, processors and meat companies in the regenerative beef and bison supply chain, the lack of returns associated with hides and other byproducts from meat processing represents a huge loss of actual and potential value, curtailing profitability and market growth. Historically, byproduct sales make up a significant revenue stream for meat processors (and still do for the larger-scale meat companies and packers). Byproduct collection and processing capacity has consolidated and declined so much for small and medium sized processors in parts of the US that in many cases they now pay disposal fees instead of getting paid for these materials. This added cost, in place of a former revenue stream, is understandably passed back to the grassfed, regenerative and other value-added custom meat companies through

higher processing costs and fees, resulting in lower net returns and lost value for the whole value chain, especially producers.

As detailed in the 2017 report "Back to Grass: The Market Potential for US Grassfed Beef," the negative differential in byproducts sales and value is a major reason meat processing costs are much higher for grassfed and regenerative meat companies.[i] Even with high premiums in the market for regenerative meat, the lost value of byproducts reduces overall potential returns to producers significantly, thereby minimizing total economic incentives for regenerative livestock grazing system growth and the positive climate-related impacts on the land that come with it. If, instead, these byproducts were collected and segregated in an economical way and, due to their traceable regenerative and "climate-smart" attributes, received premium pricing in the market, there would be a significant increase in total value returned to the processors, meat companies/aggregators and producers. The Generalized Regenerative Agriculture Sourcing Specification (GRASS) was created to help achieve these outcomes.

GRASS is a benchmarking/ standards verification tool developed by Other Half Processing (OHP), Timberland and Pure Strategies to provide Timberland and other buyers of hides/leather with a verification and sourcing system for regeneratively raised attributes. Through its equivalency approach to verification, GRASS provides Timberland and other market partners confidence in the regenerative product traceability for their supply chain. At the same time, it allows a greater scale of supply and diversity of verified regenerative hides to be bought and used beyond what any single regenerative certification system offers without requiring significant additional and mostly redundant costs for producers.

GRASS uses information gathered from on-farm/ranch inspections conducted by grassfed, animal welfare, organic and regenerative markets to verify the regenerative equivalency claims. As long as the inspection verifies 100% grassfed/finished, regeneratively managed grazing, animal welfare considerations, biodiversity protection and involvement in soil testing and/or other regenerative "outcome" verifications, that 3rd party inspection and the required information provided by the producers can be used to access GRASS markets. This means that producers already inspected by *American Grassfed Association*, *Audubon Conservation Ranching Initiative, the Savory Institute Environmental Outcomes Verification, Regenerative Organic Certification*, *Global Animal Partnership* and related value-added market verification systems for grassfed cattle/bison can be part of the GRASS markets without new inspections/costs of entry. It also means that new value-added certifications and verification approaches can also be part of GRASS if they meet clearly identified equivalency requirements. In its first three years of use, the sales of GRASS verified hides and pet food ingredients have returned over $1 million in additional value directly to producers, meat aggregators and processors tied to regenerative sourcing claims.

Beyond the hide/leather space, GRASS is increasingly being used as a sourcing tool for verifying and aggregating meat and the other byproducts sourced from regeneratively raised livestock for food, pet food and treats, and other sectors. As a result, OHP, Timberland, Pure Strategies and other partners decided to develop GRASS into a more formalized sourcing/benchmarking tool. With seed funding secured from VF Foundation and Applegate, work has begun to establish GRASS as a stand-alone equivalency tool and program through a process that follows recognized international criteria for standard, accreditation and certification entities. With further development planned for Years 1-3, by Year 4 GRASS is expected to have its own stakeholder-led administration, governance, accreditation staffing and funding stream to allow it to function at the highest level of credibility and be of value to producers and the market as new GRASS compliant verification systems emerge.

GRASS' core focus on regenerative or climate-smart commodity verification, traceability and market development, and producer benefit has clear alignment with the goals of the USDA Climate-Smart Commodity program announced in early 2022. As a result, the businesses and organizations leading the GRASS work decided to pursue this funding opportunity to really "Grow Grass" as a verification and market system and connect it, where possible and appropriate to US farm environmental, economic and rural policy and programmatic goals. If successful, the work of Growing GRASS will significantly expand regenerative and climate-smart market opportunities for farmers and ranchers in ways that reduce barriers, increase producer participation, and fully optimize both the value of regeneratively raised livestock for U.S. producers and the economy *and* the significant climate and environmental benefits provided by these regenerative grazing systems.

We plan to do this through a multi-year research, demonstration and evaluation project to pilot, test and evaluate how the GRASS supply chain - starting with the GHG and environmental benefits of the grazing systems - can be optimized for overall value and climate performance from farm/ranch to markets (textile, grocery, pet food etc.) Growing GRASS has an interdisciplinary approach to its research, with producers (who will be compensated partners in research) and supply chain partners (including meat/byproduct processors, aggregators, brands and retail companies) working together with academic and professional organizations. The plan is to a) validate the regenerative aspects of GRASS beef and bison grazing systems and assess the GHG reduction reality/potential and economic value of the grazing systems and markets; b) develop GRASS as a recognized and subscribed value-added climate smart market opportunity for farmers/ranchers, meat companies and byproduct value chains in the market; c) identify the best equipment, technical support and systems for climate-smart, high-value byproduct collection, processing and traceability through to the marketplace; c) identify best incentives for increasing the number of farmers/ranchers, head of beef/bison and total acres in regenerative grazing systems; and d) collect, analyze and disseminate findings.

Jim Kleinschmit, Co-Founder and CEO of Other Half Processing SBC, has led the creation of GRASS and the development of the Growing GRASS project work and organizing to date, and will serve as the Project Administrator for the Growing GRASS Project. He comes from a regenerative family farm background and has a work history of working on climate-related farming systems tied to value-added markets and incentives. The lead applicant, the American Sustainable Business Institute, will facilitate and maintain stakeholder engagement and knowledge sharing throughout the Growing GRASS value chain to build an interwoven, public-private web of support for the effort. The process will follow accepted approaches for setting baseline criteria, including stakeholder inclusion, public commenting, governance, administration and funding. As part of that approach, the Growing GRASS Project is committed to equitably providing financial support to underserved producers and communities participating in the GRASS tool development and review process. The partners and supporters of this proposal are optimistic that the development of a transparent private sector-based market for regenerative meat and byproducts will create a roadmap for public space guidelines and policies to support this ongoing work and will work with public partners to keep them informed of project findings and outcomes.

The project will include beef and bison producers and supply chain partners from underserved farming communities (see subsection c. above) in project leadership, project activities, and ongoing regenerative supply chain and market development efforts. It is widely acknowledged that regenerative agriculture has indigenous origins, yet structural and historical injustices have limited the resources of these and other underserved communities, resulting in lower involvement in and benefit from these and other value-added markets. How to address this higher value market access barrier in a culturally and scale appropriate manner for Native American and other historically underserved producers will be explicitly addressed within the Growing GRASS framework, project design and ongoing work.

To help engage, support and work with Native American farmers and ranchers raising beef, but especially bison, the *Growing GRASS* project has support from a diverse group of Native American focused and run non-profit organizations, including the Buffalo Nations Grasslands Association (BNGA), NDN Collective, Sicangu, and Flower Hill Institute (see attached letters). Our initiative will support community efforts to grow bison herds utilizing Traditional Ecological Knowledge, as well as individual native farmers and ranchers raising beef and bison under GRASS compliant climate-smart systems. Similar work is projected with other underserved producer focused organizations and communities for both beef and bison. For any physical activities on tribal lands associated with the grant, including but not limited to leased ground held by the BIA or Tribe, Growing GRASS or the individuals/groups undertaking the activities will have permission to act, including securing a Tribal Resolution whenever appropriate.

The Growing GRASS Project design consists of a network of stakeholder subgroups that will work with the Growing GRASS project interdisciplinary research team, that includes field, climate, informatics, economics, lab, policy and marketing researchers from academia, businesses and NGOs, to meet the project goals. Stakeholder groups include:

- Producer/ producer aggregator (a farmer/rancher that also plays an aggregator role, often tied to a meat company)
- Underserved producer/ producer aggregator (working in partnership with the Producer/producer aggregator group, separated to ensure this group receives equitable voice and funding opportunities within the project)
- On-farm Certifiers/Auditing/Inspection/MRV services (including both the certification entities and the on-farm/ranch inspection and testing groups)
- Meat and byproduct processors/aggregators (supply chain and traceability)
- Byproduct market partners and supply chains (hides/leather, pet sector, ingredients)
- Regenerative and sustainable agriculture and market partner stakeholder organizations

If successful in its work, Growing GRASS will lead to greater involvement by farmers and ranchers in verified climate-smart/regenerative markets that provide environmental and economic benefits across the value chain and society. As part of the work, alignment and connections with US policy and programs that help drive climate-smart and economic outcomes for US producers and markets will be identified and reinforced. Together, these outcomes should ensure that Growing GRASS is not only growing profitability and overall value to regenerative beef and bison producers, rural communities and supply chain partners, but will also help expand a climate-smart economy that has value and benefits for all of the US and the world through its reductions in greenhouse gas emissions and improved environmental performance.

e) Approach to minimize transaction costs associated with project activities

Payments to producers, auditors/MRV toolmakers, technical assistance providers and processors, and market partners for the *Growing GRASS* Project will be provided via a central body hosted by the American Sustainable Business Institute (ASBI). As an organization experienced in capital deployment to diverse groups of stakeholders, ASBI has existing personnel, infrastructure and organizational principles to efficiently administer and track payments and requests for proposals. This project's budget also includes funding to set up a project-specific accounting system that will reduce administrative burden throughout the project duration. Project partners have also agreed to leverage their existing virtual platforms and technology to provide technical assistance and training to producers, reducing the need for additional transactions in this focus area. Producers will receive payments from processors for animal byproducts in a traditional format, the capture of byproducts and the increased market value of regenerative products will add value to these returns.

We will be hiring a producer payment coordinator to work with the administrative team to set up an efficient producer payment system and facilitate payments using the most cost-effective payment methods. ASBI is matching $481,605 administrative salary time and fringe to help reduce the initial set up costs of HR, finance and operations.

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

One of the most significant barriers for producers implementing Climate-Smart Agriculture and Forestry (CSAF) grazing practices is financial costs, which can be made up through higher returns from some of the associated higher-value markets such as grassfed, regenerative, etc. However, accessing these markets almost always requires an annual on-farm inspection, with an average inspection cost of at least $1200 per operation *per claim* (not including the time and labor of the producer). Companies interested in making regenerative, grassfed, organic and animal welfare claims about meat and other products understandably want outside verification, but for farmers and ranchers, accessing even one of these higher-value markets can be price-prohibitive, especially for beginning, small and underserved livestock producers.

Instead of requiring additional on-farm audits for verifying regenerative grazing systems, the GRASS marketplace recognizes that most inspections utilized for grassfed, animal welfare, organic, and other value-added market claim verification can already - or with minimal changes - capture the needed information to verify regenerative grazing practices and outcomes, including climate-smart aspects. By creating an accessible, clarified set of regenerative and climate-smart indicators and claims among existing certifications and audits, the GRASS benchmarking/equivalency approach reduces regulatory and compliance burden. And by allowing producers verified under one or more of the eligible value-added markets to also be verified/included in the GRASS marketspace, it gives the producer access to a high value regenerative market without requiring an additional redundant, costly on-farm inspection.

On-farm/ranch inspections focused on regenerative and climate smart production, systems and outcomes are important for several reasons. From an economic, legal and market perspective, they are needed by companies to back up the climate-smart claims that support higher-value associated markets, so are a required access point for producers. But they also provide producers with valuable (and generally costly data to obtain on their own) related to soil, environmental, climate and other aspects of their operations that will help them learn and hopefully improve upon their performance economically and environmentally. Recognizing their value for both economic advancement and educational/operational improvement for producers, we want to expand access to these on-farm/ranch inspections and the markets they connect with, with a special focus on work with underserved/small producer communities. Therefore, a key part of the *Growing GRASS Project* is a pilot cost-share program to reduce on-farm/ranch inspection costs for verifying regenerative livestock grazing operation (50%-100% of estimated costs to

assess best incentive level, with small/underserved producers eligible for the higher cost-share amounts).

This will reduce risk for producers that want to start using regenerative grazing systems and/or participate in verified livestock product markets. By providing access to a diverse set of markets with accompanying technical and financial assistance, producers can choose the best market/verification options for their own operations and value options. The value and efficacy of the cost-share approach to climate-smart audits will be evaluated for its ability to collect more consistent and voluminous climate and other important data on more operations. The data will be owned by the producers and held in a confidential manner. It will be used to inform modeling and planning, provide verification for high-value markets, help producers to learn more about climate-smart grazing, encourage transition and increased participation in regenerative and other value-added markets, and ultimately maximize economic and GHG reduction values from full animal utilization and valuation by the regenerative beef, bison and livestock sector. Depending on the outcomes of the pilot work and research, we see the opportunity for potential alignment with USDA programs, including the cost-share support for Organic certification.[ii] If the perceived overall value accrued through increased producer use of these on-farm/ranch inspections is born out, we believe that GRASS eligible inspections - all of which include credible climate-smart data as part of their verification – could merit public support and investment based on their importance in increasing economic and environmental value.

g) Geographical Focus

The current GRASS producer supply chain includes over 250 producers in over 35 states, managing millions of acres of pastures/grassland, and meat processors in 8 states. The Growing GRASS Project will use this existing national footprint as a starting point for its work.

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

- **Roots of Change (ROC) -** In 2021 ROC completed an analysis of the challenges to livestock and poultry farmers and ranchers in California related to processing, climate impacts including drought and fire. This work involved extensive interaction with 30 producers or processors to learn their impediments to successes.
- **American Grassfed Association (AGA) -** AGA will lead the coordination of certifying and auditing partners. AGA is a grassfed certification and education organization that has been working with producers to assist in implementing grass-fed practices for cattle since 2003 with over 600 certified producer members currently. This work includes moving producers towards climate-smart practices like managed grazing and nutrition.
- **Other Half Processing SBC (OHP) –** OHP is a for-profit, Minnesota Special Benefit Corporation co-founded by brothers Jim and Mark Kleinschmit that is an originator and

leader in the development and implementation of the GRASS system. Since 2019, OHP has worked with partners in the apparel sector to build the market and traceability systems for verified regenerative hides for leather, collecting more than 25,000 hides from across the country in 2021, and returning much of that value back to its producer and supply chain partners. Based on his history in the regenerative value-added sector and leadership work with GRASS, Jim Kleinschmit, OHP's CEO, will take on the Project Administrator role for the Growing GRASS Project. OHP will also provide the lead role in work with the Processing sub-group.

- **Pure Strategies** – Pure Strategies GHG and lifecycle consultants helped develop GRASS and have been working with Timberland/VF corporation to assess the climate-smart value of the regenerative leather supply chain with the farmer/rancher suppliers and meat companies. In addition to their developmental work with GRASS, they are also experienced with the COMET tool and on-farm GHG measurements related to the beef cattle supply chain and will serve as an essential partner in this work and as the lead on climate science and claims.
- **IC-FOODS -** As a leader in the effort to build the semantic and distributed ledger infrastructure for the Internet of Food, the IC-FOODS team brings over 20 years of experience to this project, building data, information, and knowledge systems for academia, industry, and government operations. The team also has experience working with agriculture and resource management challenges from local to global scales, including significant work with farmers, ranchers, and land managers on climate adaptation and mitigation strategies to support smart agriculture and resilient management of public lands.
- **Autocase** – Autocase conducts ecosystem service valuations, with experience working on hundreds of business cases, quantifying and valuing carbon and other social/environmental impacts to major infrastructure and real estate projects. You can see a sampling of the projects they have worked on specifically related to Climate Adaptation/Mitigation and Resilience here.
- **UC Davis Food Systems Labs -** The UCD team has almost 20 years of experience working with a variety of stakeholders, including producers and landowners, on a wide range of research topics, such as climate-related issues. They work with stakeholders to understand their issues/concerns/needs and translate these forms that can be formally analyzed for the production of new information and a better understanding.
- **Textile Exchange (TE)** - Textile Exchange has a robust and extensive network of farmers and ranchers of diverse fibers and materials. TE also has the network to engage the broader stakeholder group to provide unified strategies and practices, and the infrastructure with our international working groups and standards models to drive these solutions to scale. TE will lead apparel industry organizing, and work with Growing GRASS to connect GRASS criteria and reporting into their work with climate reporting/accounting for the industry.
- **Regenerative Rising -** Regenerative Rising will serve as a marketing and convening partner. They have been convening farmers, ranchers and industry leaders since 2017 to grow the

marketplace for regenerative/climate smart agriculture production, including bringing 300 producers and industry leaders from the food and apparel industries together each year.

- **Lookin.to -** Lookin.to™ will be a lead partner in developing and testing producer profile and traceability efforts. Lookin.to is a story sharing platform that empowers producers to directly upload video and photos about themselves tied to stories about their ranch/farm that can be linked through QR codes to the final brands/products in the marketplace.

ii) A plan to pilot climate-smart agriculture and/or forestry practices on a large scale
a) A description of CSAF practices to be deployed

The Generalized Regenerative Agriculture Sourcing Specification supports product claims for products/materials from regeneratively grazed livestock. Producers participating in GRASS markets and the Growing GRASS grant work will be deploying **NRCS Conservation Practice 528: Prescribed Grazing** in appropriate aspects as a Climate-Smart Agriculture and Forestry (CSAF) practice**.** According to USDA NRCS, Prescribed grazing is managing the harvest of vegetation with grazing or browsing animals to achieve specific ecological, economic and management goals. Producers who practice prescribed grazing may sequester carbon in perennial biomass and soils while delivering the co-benefits of enhancing or maintaining desired plant species for forage, improving water quality, increasing stocking rates and livestock vigor and building soil health.[iii] For producers focused on regenerative and climate-smart outcomes, emphasis within prescribed grazing is often focused on the intensive or Adaptive Multi-Paddock (AMP) managed grazing approaches, that are proven to rapidly sequester significant quantities of carbon in the soils.

GRASS is focused on verification of regenerative grazing systems and outcomes. Prescribed Grazing practices are central to regenerative grazing approaches, and GRASS eligible on-farm/ranch inspections validate that farmers and ranchers are following these systems in their livestock production. To ensure that ongoing alignment with recognized CSAF practices, as part of their conditions for participating in the Growing GRASS project, all producers will agree to fulfill the 528 Conservation Practice criteria, with compliance verified by the appropriate, identified on-farm inspection/technical assistance partners.

Growing GRASS funding and project activities will support producer research involvement and verification of the grazing systems through on-farm/ranch inspections tied to value-added markets, including soil testing, as well as market subsidies and technical assistance/education. The Growing GRASS is not providing any funding for investments in infrastructure (fencing, wells, etc.) and will therefore not include any activities that disturb the below the plow line.

b) Plan to recruit producers and landowners, including estimated scale of the project (e.g., number of landowners, acres targeted, head of livestock, etc.)

Beef is the largest agricultural sector in the U.S. by acreage and total number of producers, with pasture and range land making up 41% of U.S. land (of which over 80% is estimated as not being suitable for crop production). It also is the largest category of U.S. producers, with estimates that ⅓ of U.S. farms/ranches have cattle. Bison production is significantly smaller, with US private farm and ranch herd size estimated at just over 180,000 in 2017, and around 63,000 slaughtered annually as of 2021.

Producers already involved in the GRASS marketplace associated with regenerative and climate-smart leather currently produce over 50,000 head of cattle a year and a much smaller number of bison a year. According to "Back to Grass," there were an estimated 232,000 verified grassfed cattle raised by approximately 3900 producers nationwide, a head number which can serve as our project goal. If funded, we will open up the *Growing GRASS Project* work and opportunities to all U.S. cattle and bison producers that can meet program requirements. Our listed project partners, including California Cattlemen's Association, Holistic Management International, and the American Grassfed Association alone represent an initial network of over 7500 producers and over 4 million acres of grazing land across the U.S., and will be part of the producer outreach effort. Working with a strong network of partnering Native American led agricultural NGOs, including Council of Large Tribes, Buffalo Nations Grasslands Alliance, NDN Collective, Flower Hill Institute and Sicangu Growing GRASS will also be able to connect with a large and diverse group of Native American farmers, ranchers and community efforts focused on climate smart beef and bison production.

Up to 1000 beef and bison producers will be recruited to be part of the initial participatory research, with at least 25% (250) to be recruited from Native American and other historically disadvantaged producer communities. All participating farmers/ranchers in the research phase will receive a payment for their time and effort and will also retain ownership and control over the information collected from their operations. As part of the research into most effective incentive approaches, an estimated 10,000 total on-farm inspections that allow access to the GRASS market will be cost-shared throughout the project (estimated 6000 total producers participating, with 25% from underserved/small communities). Finally, climate-smart commodity payments for an estimated 300,000 head of beef/bison will be made available as climate smart commodity payments to eligible producers during the later pilot phase of the *Growing GRASS Project* (again with a carve out for underserved/small producers).

To be eligible to be part of this research effort or any of the other paid Growing GRASS project components, producers will agree to specific terms, including that they: are eligible to receive payments according to listed USDA criteria; are not currently receiving and have not historically received payments for the same work/outcomes from USDA; are not operating a CAFO (as defined by EPA); are not utilizing or converting nonagricultural land for grazing; and agree to graze GRASS eligible livestock according to GRASS and meet Conservation Practice 528

criteria, including providing appropriate documentation. An example of the producer participation eligibility terms is included in Attachment A. And for any physical activities on tribal lands associated with the grant, including but not limited to leased ground held by the BIA or Tribe, Growing GRASS or the individuals/groups undertaking the activities will have permission to act, including securing a Tribal Resolution whenever appropriate.

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

Technical assistance, outreach and training for producers to help them meet regenerative criteria and monitoring and verification services will be administered primarily through Growing GRASS's partnering certifier, auditor, and producer aggregator networks, and through a technical assistance funding program tied to the Growing GRASS market/system. This program will provide funding to additional technical service providers that have been identified by producers as trusted and accessible, and vetted by the Growing GRASS team to meet capacity and outcome standards. Leveraging producer's existing relationships with existing and preferred technical assistance providers reduces transaction costs and potential barriers. Stakeholder groups will work together to ensure that trainings retain necessary consistency while providing relevant information for diverse, including historically underserved, producers. Technical assistance will be provided to producers by traditional agricultural educators (extension service, etc.), but there will also be funding for technical service provision to underserved producers by community and culturally appropriate providers. To fulfill this goal, we will identify through our research work which providers are most trusted/accessible to the targeted producer communities, and contract with the relevant organizations/entities so that they can provide the needed educational and technical service support for these producer communities.

Field researchers will assess technical assistance administration methods, and auditing services surveying producers in compliance with the Paperwork Reduction Act, to develop recommendations for best practices for technical assistance within and across certifier, auditor, and producer aggregator networks. The field research team will be led by project partner, the UC Davis Food Systems Lab Team which has almost 20 years of experience working with stakeholders, including producers and landowners, on research topics such as climate to understand the issues/concerns/needs and translating these into forms that can be analyzed. Roots of Change, together with a lead organizer and partners focused on work with underserved producer communities, will work with the UC Davis team to ensure that any technical questions producers may have about initial research and project participation are registered and answered. Year 1 of the project will focus on several themes. Working with the Informatics R&D Team, the field research team will develop a certification ontology (common language for certifications) and a catalog of auditors and auditing systems. Field research will also reach out to existing GRASS producers to identify regenerative practices that may not be included in the existing catalog. Following this, field research will work with existing and new GRASS producers in

conjunction with the Informatics R&D Team to record this information and, where appropriate, feed this information into the COMET-Farm Voluntary Carbon Reporting Tool, while capturing/sharing additional information not found in the COMET framework.

The field research team will prioritize producer privacy through a combination of practices, including collecting a minimum amount of identifying information, building a consent process into the workflow, ensuring robust security measures in place for data protection, and anonymizing data whenever statistical summaries are made available for export. Producers will retain all ownership and rights over the data about their operations, although will be required to share the information in agreed upon format to be part of the project. Technical assistance will connect to the Informatics Research & Development (IR&D) team, led by the International Center for Food Ontology Operability Data and Semantics (IC-FOODS). This team is experienced working with farming and resource management challenges, including work with farmers/ranchers and land managers on climate adaptation and mitigation strategies to support climate smart agriculture and resilient management of public lands.

The IR&D team's approach to providing technical assets and assistance is rooted in informatics: creating a common language across production methods, MRV methods, and certification requirements to ensure information is understandable and accessible to all supply chain participants. Engagement with stakeholders at each step of the supply chain (including producers, processors, auditors) provides the foundation with which to understand varied use cases, technical needs, and objectives, thereby providing underpinnings for common language. A major informatics focus of the year 1 will be a detailed assessment and characterization of stakeholder stories, needs, and goals; their current human/computer interactions, tools, workflows, and technical capacities; as well as potential alignment of issues/opportunities between existing systems, stakeholders, and objectives.

In years 2-3, the I&RD team will develop a virtual platform and sociotechnical system for tracking commodities and their related dollar values and carbon capture throughout the supply chain. This platform will be available for all project members, with contextually appropriate modules (including, but not limited to producer, auditors, processors, retail buyers, and researchers). In years 4 & 5 the team will deliver a functional platform more broadly available to diverse food system actors. It will be capable of characterizing products valorized by their current and/or novel regenerative/climate-smart practices. This will be done within the context of varied auditing and certification systems that have been cohered with common, standardized language, and which is able to report relevant information into USDA's COMET. Wherever possible, this work will be connected to aligned work in other CSC and related projects, including especially the work of Open TEAM. We believe that this system will serve as a model for transparency for climate smart value chains in the U.S.

Processor technical assistance will be coordinated by Other Half Processing SBC (OHP). OHP is a Minnesota Specific Benefit Company working with producers, aggregators and processors to verify, trace, buy hides and other byproducts at a premium price from regenerative producers and meat aggregators to sell to leather companies/tanneries, pet food companies and other users of these ingredients. During the project's first phase, OHP will coordinate with small-midsized processing company partners to research the best appropriate scale equipment, systems and education/training needed for byproduct processing, traceability and storage/transport. Processing research will involve both fact finding and piloting of different processing, traceability and training techniques. Following the determination of best practices, equipment/systems and workforce support options, OHP will purchase byproduct processing and handling equipment, and will work with partnering processors to test and assess different combinations of equipment, systems, workforce investments and training. This activity should result in retention of climate smart byproduct traceability and highest value, while producing the greatest number of high-quality byproducts possible and being affordable/accessible. Information gathered will be disseminated to project partners, the broader meat and byproduct processing sectors, and where appropriate, state and federal programs and agencies.

Technical assistance for project partners and stakeholder groups related to the administration of grant funding and completion of project goals is led by the American Sustainable Business Institute. ASBI has the ability to connect varieties of stakeholders across disciplines, and systems in place to maintain these connections, as well as a large, active network of businesses that can provide technical assistance to this project's diverse stakeholder groups as challenges arise. ASBI also has experience working with producers and producer aggregators and will provide oversight and support for technical assistance providers working directly with aggregators and producers during both research and implementation phases. A full-time producer payment coordinator will be hired by ASBI. This coordinator will be primarily responsible for working with producers who may experience technical issues applying for or receiving any of our producer payments.

A more comprehensive plan containing potential project milestones and expenses can be found at the bottom of this narrative within Attachment B.

d) Plan to provide financial assistance for producers/landowners to implement CSAF practices

The Growing GRASS Project takes a three-pronged approach to ensuring producers have needed financial support motivating them to implement and sustain climate-smart agricultural practices.

Phase One of financial assistance primarily is direct research payments to beef and bison producers. This phase will take place primarily in years 1-3 of the project. The field research team will include producers as research partners to share basic demographic and farm/ranch

operational data, as well as details about the "pain points" they experience transitioning to, implementing or expanding prescribed grazing and other related CSAF practices tied to regenerative beef/bison markets. This includes, but is not limited to connection to, costs and utilization of auditing/MRV services, certifications, processing and market buyers, along with assessed value of these programs economically, operationally and interactively. Producers who already are working with GRASS will be invited to participate, but final selection of producers for the research component will be determined based on identified demographic and operational research parameters, including ensuring significant participation by underserved/small producers. Partners in the value chain will be involved in helping to recruit/identify producers from their networks to join the Growing GRASS Project work.

Phase Two of producer support is an auditing/MRV cost-share program, modeled after the USDA's organic cost share program. This phase will take place largely within years 2-5 of the project. Growing GRASS project work will be focused on efforts with producers, certifiers and auditors to identify what approach to cost-share will work best. It will compare traditional producer "reimbursement" approaches (whereby the producer pays the full cost and then is reimbursed the eligible amount) with an option whereby certifiers/auditors instead submit invoices for cost-share eligible audits directly to certifiers (in this case ASBI) for eligible producers, which would reduce transaction costs associated with traditional reimbursement and minimize upfront transaction costs/obstacles for producers who want to access these markets. In Years 2-3 of the initial research work, all 1000 producers will receive 100% cost-share (capped at $1200). In Years 4-5, this program will expand to include 10,000 audit cost-shares, with small and underserved producers provided 100% (capped at $1200). Other producers will receive between 25%-75% to help determine what level of cost-share is both most impactful on producer decisions and most cost-effective programmatically. At least 25% of auditing cost-share rates will be allocated to underserved producers. The producer payment coordinator will be responsible for setting up the system and the overall administrative work of distributing payments to producers.

Phase Three of producer financial assistance will build on market access and de-risking of regenerative raising livestock by introducing a climate smart commodity payment systems pilot. This phase will take place in years 3-5 of the project. The Growing GRASS Project research teams will develop a reliable system to assess expected and assessed 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. In addition, the economics research team will assess the economic value of other environmental services and systems associated with regenerative livestock production and prescribed grazing, and work to determine an overall economic value for regeneratively raised livestock and compare that with the value of the meat and co-products. To test this research and value estimation and see if providing a subsidy payment to participating beef and bison producers for their verified, regeneratively

raised livestock tied to this identified amount (currently set at $30/head based on initial research and funding limits of the grant) can help incentivize more production and involvement in the GRASS marketplace.

Throughout all phases of the project, GRASS market partners will be buying verified materials from these producers, adding additional financial value and benefits that will also be tracked. To help spur uptake and purchasing of these climate-smart byproducts, especially by markets that have not fully embraced or have high awareness of climate smart value propositions and premiums, financial support for underdeveloped byproduct market partners will be provided to assess if and how well market incentives can help to increase sales by producers.

Finally, throughout the grant but primarily in phase three, a list of additional financial resources and market opportunities for producers implementing CSAF will be made available. Resources will include state and federal programs, a list of Community Development Financial Institutions (an initial version has already been developed by ASBI), access to ASBI's impact investor arm to mobilize private investors to support CSAF activities, and inclusion in a GRASS market partners directory.

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.
The project welcomes beef and bison producers from all backgrounds and regions and is focused on ensuring that Native American and other underserved and small producers are recruited and directly involved, capturing real benefits and support from the Growing GRASS system/market and grant funded producer payment programs. Small and underserved producers already represent a significant percentage of existing regenerative farmers/ranchers, even if they are not large market players, so this focus is in line with the market and demographic realities and potential.

Currently, partners involved in the *Growing GRASS Project* already represent over 1,000 underserved and small producers, and we aim to reach at least an additional 2000 producers as a part of this grant. We will conduct this recruitment in partnership with organizations that are led by or have underserved members, especially with Native American led agricultural NGO partners that work with Native American beef and bison producers and communities, including Flower Hill Institute, BNGA, Sicangu Co and NDN Collective, who provided letters of support and are excited to be involved in Growing GRASS. This approach recognizes the role that certain organizations have within their communities and their superior ability to reach farmers and ranchers within their own underserved communities.

Approximately $900,000 total of funding is dedicated specifically to technical service assistance for underserved and small producers. $200,000 is allocated to support work led by and focused on underserved community partners to create culturally appropriate and accessible certification/ MMRV GRASS pathway tied to community or local value attributes, with at least one specifically focused on Native American community values and bison production. An additional $700,000 of funding will be provided to technical service providers that will be identified during years 1-2 that have proven ability to connect and engage with underserved producers and communities. Specific focus of the technical service programming will be determined based upon research and feedback with producer groups and community partner organizations, but will include information on regenerative grazing, financial support opportunities, market access, and building capacity to meet market access and auditing requirements.

Producer payment programs will provide equitable incentives to encourage additional enrollment of small and underserved producers. 25% of the Growing GRASS producer research partner slots (250) will be reserved for underserved/small producers to ensure significant representation from these farmer/rancher communities. At 25% of the total, research payments for these 250 underserved/small producers will together total approximately $462,500. All small/underserved producers participating in the research phase of the on-farm auditing/MRV work will receive 100% cost share (up to $1200/operation), which equals roughly $300,000. In years 4-5, when we expand the on-farm auditing/MRV cost-share program, small/underserved producers will continue to be eligible for 100% cost share. Assuming that at least 25% of the projected total 5,000-7,500 producers that will receive cost-share are small/ underserved, an additional $2.5 million in support will go directly to small/underserved producers. Small/underserved producers who are a part of GRASS will also be eligible for Climate Smart Commodity Producer Payments during the pilot phase of the project in years 4-5. The economics research team will use research data to determine equitable distribution of payments. At least 25% of the Climate Smart Commodity Producer Payments are planned to be allocated to small and underserved beef and bison producers, equal to approximately $1.65 million. Therefore, the amount of anticipated total payments and financial support for small/underserved producers involved in Growing GRASS will total just under $5 million.

iii) A measurement/quantification, monitoring, reporting, and verification plan
a) Approach to greenhouse gas benefit quantification, including methodology approach consistent with the section titled "Quantification Requirements" below
Currently, producers use an array of auditing and MMRV services to quantify their grazing operations' GHG sequestration. Some also capture additional value-added livestock claims like humane animal treatment and biodiversity preservation. The *Growing GRASS Project* will organize a research team, headed by Pure Strategies but including UC Davis, IC-FOODS, and many others, to analyze the existing state of climate metrics and the MRV services that provide

them. This research will incorporate both data science and social science: which tools capture what data, how accurately they capture it, and how easy, accessible and culturally relevant tools are for producers. Following this research and evaluation, which will include input from producers, processors and certifiers, a recommended list of approved auditing/MRV services that producers may use to report their GHG benefits, along with additional climate-smart metrics, will be released. Before the release of this recommended list, producers will be able to access the GRASS marketplace through the tool's existing evaluation criteria. The development of a larger list of approved auditing/MRV services providers will help inform further project partnerships with approved auditing/ MRV services. The Growing GRASS project will, with a commitment to empower communities, especially small/underserved, will use recommendations from this research, as well as field research to fund the building of culturally appropriate auditing/ MRV/certification services that include GRASS benchmarks.

The Growing GRASS Project IR&D team will collect auditing data provided by beef and bison producers using approved auditing/ MRV services. This data will be analyzed by an ontology working group housed within the IR&D team who will collect it and identify the best ways to translate it to multiple potential end users. This includes analysis and retention for GRASS purposes, but also translation where appropriate and possible, into the COMET tool, as an endpoint to create a "common language" to be shared with the USDA. Any data that the COMET tool is unable to process will be translated into a complementary "common language" that will be shared as appropriate with the USDA to help inform expansion/improvement of the COMET tool. Emphasis will be on ensuring that the data collection and interface is aligned and communicable as much as possible with other existing and planned farm data collection/database systems, to ensure highest levels of usability and value for producers. Other Half Processing will lead physical traceability work to ensure byproducts are efficiently and accurately tracked between the field and market-end manufacturing. OHP will work with the IR&D team to ensure that the traceability process for byproducts is visible to all areas of the supply chain and again is aligned with what is identified through stakeholder and supply chain research as the best and most accepted traceability systems to try and ensure highest ongoing value and use.

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

The *Growing GRASS Project* will work with existing certifiers and auditors, technical service providers and partnering organizations to ensure producer practice implementation is being monitored on the ground and produces reliable data. The informatics research and development team will work together with the field research team, collecting data from certifiers and auditors in a way that is socially reasonable and scientifically sound. The IR&D team will be the single source for synthesizing data, which will ensure no double counting. The *Growing GRASS* Project pilot project has already developed an initial set of benchmark criteria, but the funding of this proposal will allow for the incorporation of additional certifiers, auditing tools, indicators and

data points. Monitoring of practice implementation in years 1-2 will initially include 1000 beef and bison producers, with 250 of these intended to be from underserved/small producer backgrounds. This number will grow through the cost-share research and pilot program and climate smart commodity payment pilot programs to encompass an expected 6000 total producers. In addition, the technical service provision is intended to reach at least twice as many producers as will be directly involved in project work (10,000-15,000 total).

The total number of acres reached is more difficult to estimate, as beef and bison producing farm/ranch sizes vary significantly in the areas of the country project partnerships will encompass. Using information from 2022 USDA ERS research that estimates average farm/ranch size of producers using basic rotational grazing systems at 1515 acre and 650 acres for intensive rotational grazing, we can in turn estimate that the total number of acres reached will be somewhere between 5-10 million, with the smaller end of the range recognizing that many of the underserved producers will have lower than average acreages in grazing. [iv]

Monitoring of climate-smart practices will also be coupled with restrictions and compliance with limitations that do not meet GRASS criteria and are not aligned with the grant participation criteria and goals (summarized in Attachment A). Participating beef and bison producers in Growing GRASS funded work must agree to be in compliance with both USDA requirements for program eligibility and the highly erodible land conservation and wetland conservation provisions as detailed in 7 CFR Part 12. For the purposes of the Growing GRASS grant and CSC program, they will also agree to fulfill CSAF Conservation Practice 528 Prescribed Grazing, affirm that all land used for grazing will have already been in agricultural use/eligible, and that their livestock operation does not qualify as a CAFO according to EPA criteria. The Growing GRASS team will monitor producer operations for adherence to these agreements in partnership with auditing/ MRV partners. Because funding is specifically for auditing MRV cost share, research participation, and subsidy payments, producer payments will not go towards any on-farm/ranch physical infrastructure, so will not include disturbance of soil below the plow line.

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

Reporting and tracking of GHG benefits will be done on a direct basis where possible, with overall and averaged per head beef and bison estimates created that will be apportioned appropriately to the meat and other byproducts. Our calculations and initial GHG estimated benefits from regenerative grazing of beef cattle are based on the findings of Stanley et. al. in their 2018 study on the impacts of soil carbon sequestration on lifecycle GHG emissions from beef finishing systems.[v] According to this research, regeneratively raised Adaptive Multi Paddock (AMP) grazed cattle can have a net negative emission of -6.65kg CO2-e kg carcass weight equivalent emissions when the carbon sequestration of the grazing system is included.

With AMP (intensive rotationally grazed) animals with a mean carcass weight of 280kg, each animal produced in this manner results in an estimated total of 1862 kg CO2 equivalent emissions *saved*. According to the same research, beef cattle raised in a feedlot finishing system with a mean carcass weight of 405.8kg have a net total of 6.12kg CO2-e per kg carcass weight for a total of 2,483 kg per beef cattle produced, when feed production, erosion and other inputs and emissions are considered. Using these calculations, regeneratively grazed cattle have an estimated 4,346.8kg CO2 equivalent emissions better GHG performance per animal when compared to typical feedlot finished beef on an average carcass weight basis.

Of course, the estimates used for sequestration potential outcomes/estimates are tied to AMP grazing in the upper Midwest, so results will not be expected to be the same across the country and in all climates/weather situations, but it demonstrates the potential opportunity of climate smart grazing for beef cattle. Bison has similar and most likely even better sequestration abilities when grazed in a regenerative manner, but has not been as deeply researched, based in part on the much smaller scale of herd size and production, so we are using the same GHG estimates for beef cattle as a starting point for our research.

The current estimated supply of GRASS eligible, verified regenerative cattle is around 65,000 annually. According to research, there were 232,000 grassfed beef cattle slaughtered in 2017, of which approximately 81% or 187,920 were aggregated by branded meat companies (the rest were mostly sold direct to consumers by producers).[vi] With rapid sector growth since 2017, we estimate up to 250,000 grassfed cattle are now being aggregated annually, of which at least 50% (125,000) could be part of the GRASS markets/system. As a result of our Growing GRASS Project work, by 2028 we estimate more producers will be incentivized to participate, and as a result, the GRASS verified regenerative cattle supply will increase to at least 300,000 annually. Verified regeneratively raised bison numbers are very low but growing rapidly, thanks largely to Native American farmer, rancher and community efforts, and will be assisted by the incentives available through Growing GRASS.

Using these calculations, this many beef cattle raised under AMP grazing systems can result in over 559 million kg CO2 equivalent emissions reductions alone, and 1.3 billion (300,000 x 4,345kg = 1.303 billion kg CO2) equivalent emissions reductions when compared to producing the same number of cattle finished in a feedlot. If the regenerative market sector expands at the rapid rate as organic and grassfed have in recent years (especially with the added incentives included in our GRASS markets), we project the regenerative verified share of total U.S. annual beef and bison combined production could increase to at least 3% by 2030, which would result in a savings of over 4.3 billion (990,000 x 4,345kg = 4,301,550,000) kg CO2 equivalent emissions annually compared to feedlot finished. At its maximum projected level of "realistic" expansion (according to some grazing/agricultural researchers) if 60% of the US beef herd/slaughter was transitioned to regenerative grazing, it could save over 78 billion kg (39,105,000 metric tonnes)

CO2 equivalent emissions annually compared to feedlot finished.[vii] This shows that at all levels, climate-smart beef and bison production from regenerative grazing can provide real contributions to agriculture's efforts to reduce emissions and slow and counter climate change.[viii]

Reporting and tracking GHG benefits for the *Growing GRASS Project* will be led by the IR&D team in partnership with the Standard, Claims and Verifications team, led by Pure Strategies and the producer/aggregator partners. They will work together to identify gaps in current data collection, particularly more accurate ways of assessing the carbon sequestration potential and longevity of storage associated with different regenerative grazing systems. The team will lead the development of a data schema to track the relationships between each of the entities (producer/region, per project/ processor, per commodity produced). GHG information from this data collection and tracking scheme will feed directly into the COMET tool wherever possible. For variables and data not accepted by COMET, the team will develop a proposed language, compatible with and including suggested improvements in COMET. This will ensure that all GHG mitigation variables, along with additional ecosystem services are being accounted for and that existing tracking tools like COMET connected to regenerative systems are being improved.

d) Approach to verification of greenhouse gas benefits

Growing GRASS' established auditing and certifier partners in conjunction with the research team will be primarily responsible for the verification of greenhouse gas benefits. They will work with the IR&D team and the field research team to ensure that the data collection protocols are sound and simplify the subsequent analyses and analysis workflow. Verification data will be synthesized by the IR&D team in a way that best addresses questions of prime interest to the field research team and market-end research team. Throughout the duration of the project, the claims and research teams will stay abreast of the state of climate science and research coming from institutional and other CSC research entities and efforts.

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

Jim Kleinschmit as the Project Administrator along with other relevant grant project leadership and staff from the *Growing GRASS* Project agree and are excited to participate in "USDA Partnerships for Climate-Smart Commodities Learning Network." We hope to share with other projects our work, and to find ways to collaborate that lead to more value for all partners and projects.

iv) A plan to develop and expand markets for climate-smart commodities generated as a result of project activities

a) Any partnerships designed to market resulting climate-smart commodities

GRASS began and continues to serve primarily as a market-based tool to retain and amplify the climate-smart, regenerative value of meat, leather, and other products that come from regeneratively raised livestock. Supply partnerships and interest in regenerative beef and bison leather from apparel companies have expanded since the original work with Timberland to include other major brands such as Vans, the North Face, Coach and Ralph Lauren, smaller brands such as Range Revolution, and industry sustainability and standards organizations, including the Textile Exchange, the recognized environmental standard organization for apparel. Most major branded regenerative meat companies are already involved in the GRASS supply chain as suppliers for byproducts, with interest piquing among other brands. Meat and grocery retail company partners include Eel River, White Oak Pasture, Thousand Hills Cattle Company, Applegate, Natural Grocers and Feltman's Coney Island Hot Dogs. Other market sub-groups, organized around market opportunities, include pet food/treats, and food, cosmetics, pharmaceuticals and fertilizer sectors.

Growing GRASS will expand these partnerships through its separate stakeholder/supply chain partner coordination and engagement efforts. The goal is to increase communication and understanding throughout the supply chain to enable better market coordination and growth based on the added value opportunities associated with climate-smart verification. Part of those efforts will be focused on clarifying each market sector's needs and opportunities and working with the market segments and their supply to test and share ways to address those market shortfalls, pain points, and risks.

Core to this market development is the need for marketing, data sharing and storytelling that bolsters producer connections and creates higher-value market demand among consumers, brands and retailers for climate-friendly products. To address identified gaps and needs in these areas, the Growing GRASS project has funding to support different levels of communications and marketing efforts focused on climate-smart beef and bison. While the specifics of how that funding will be spent will be determined based on research gathered in Years 1-2 from market supply chain partners, marketing funding will generally be focused on development and testing of best communications and marketing schemes for promoting the climate-smart value and stories to the beef and bison byproduct sectors, retailers, consumers and decision makers. Through various marketing/communications mediums ranging from the producer story sharing/product traceability technology via the LookINTO platform to education efforts focused on c suite leaders at product companies to marketing support for explaining climate smart values to consumers, the marketing group will identify the best messaging and mechanisms for sharing these compelling stories and societal benefits in a way intended to increase market demand and value.

Recognizing and trying to reduce the risk for companies buying higher priced climate smart beef and bison byproducts while the market is still in development, we also have a Supply Chain

Market Incentive Pilot Program as part of Growing GRASS. This innovative program will provide payments to market partners to offset the higher costs they paid for GRASS-certified ingredients used in value-added products sold in the market. While program specifics will be developed in Years 1-2 with intended deployment of the pilot program in for Years 3-5, we initially plan to create eligibility requirements, place a per company limit on this funding, focus its efforts on less developed byproduct markets and require participating companies to share information with the Growing GRASS project to help with its research and project goals.

b) A plan to track climate-smart commodities through the supply chain, if appropriate

A central premise of the GRASS supply chain traceability work, in line with its verification approach, is to avoid redundancy and extra costs by providing an opportunity for all real and credible systems and approaches to be supported. The *Growing GRASS* Project will support this by assessing and utilizing the different existing and emerging traceability/tracking and handling systems to provide a credible and workable array of options for technology and equipment that can meet the different scale, community, and cost needs for producers, processors, and market partners. The goal is to find the least costly and most accurate ways to ensure that regenerative and climate-smart claims remain connected directly to the meat, hides and other byproduct commodity products.

Tracking climate-smart commodities through the supply chain will begin with a research/pilot phase. Using the existing GRASS system as a starting point, the processing team, led by Other Half Processing will continue to identify the various tracking methods - both high and low tech - that are best for ensuring the accurate physical and climate-attribute tracking of meat, hides and other byproducts, and collect necessary data so it can be analyzed and published by the informatics research & development team. The IR&D team will use those findings and work with a programming team to develop an open-access, cyber-secure platform to provide a clear picture of how these diverse products move through the supply chain to eventually become consumer-facing products while retaining their climate smart values. As part of the project reporting, we plan to detail how effective that tracking is, and how and where it is directly connected to higher economic value for producers and other supply chain partners.

c) Estimated economic benefits for participating beef and bison producers including market returns

- At least 1000 producers will receive research participation payments for providing program evaluation data to research teams. These payments have been budgeted at $25 per hour x 20 hours for a total of $500 per producer per year, except Year 5, when it is $25/hour x 10 hours totaling $250 per producer. Our target is for 25% of the total number of beef and bison producers participating in research to be small/ underserved producers, ensuring that approximately $462,500 of the research payments will go to producers from those communities.

- Producer cost-share payments (of up to $1200/per inspection) will be available for the producer research partners in years 2 & 3 to cover costs associated with on-farm audits/inspections that meet GRASS benchmarks and gain access to Growing GRASS' certified regenerative market. In return, producers will share details and feedback on the impact of this and other considerations.
- Reducing costs for on-farm/ranch verifications for regenerative markets. GRASS' approach minimizing costly added verification requirements to access regenerative value-added markets saves producers money and time, while allowing access to multiple, higher value markets.
- The availability of 25%-100% Producer Cost Share Payments for GRASS eligible audits for up to 10,000 audits (estimated at 6000 total producers), with 100% cost share going to identified underserved/small producers. Result will be a total savings of estimated $312-$1200/per producer for these inspections.
- Capturing more value for climate-smart claims associated with the entire animal, not just the meat. Research shows a regenerative/climate-smart beef producer selling through a branded grassfed meat program gets an estimated 25% premium over USDA pricing.[ix] The regenerative leather market reinforces a similar premium percentage. If that premium level is extended across all byproducts that come from these verified regenerative livestock systems, the return to the producer increases significantly. We estimate GRASS certified regenerative bison should be able to provide similar returns.
- During the pilot phase of the project (projected to begin in 2024) while the markets and infrastructure for valuing the byproducts are immature, a climate smart commodity payments program will be created and implemented to test the value of this de-risking approach for producers. The payments will initially be $30/head of qualifying beef or bison – close to an estimated "missing premium" for regenerative beef and bison byproducts. If accessed by producers as expected, an estimated $6.6 million will be paid directly to climate smart beef and bison producers during the project under this approach. The economic research team will calculate the actual environmental and market value that is created and retained by these grazing systems and supply chains. This information can then be used to develop an appropriately incentivizing and rewarding longer-term level climate-smart market premiums and/or commodity payments.

d) Post-project potential, including anticipated ability to scale project activities, likelihood of long-term viability beyond project period, and ability to inform future USDA actions to encourage climate-smart commodities.

The GRASS sourcing system and market was designed from its inception to be market-supported and scalable. Research conducted throughout the project will be used to inform best practices by auditing/MRV services, certifiers, and processors. Findings will be publicly released. The Growing GRASS Project intends to model cost-share and commodity payment programs that have a history of successfully incubating value-added markets and supply chains, with the goal

that the market will eventually carry most costs, and that public policy will pay a share for documented returns to the environment, climate and economic public good. Financial and trading benefits that companies gain from participating in the Growing GRASS network and markets will help incentivize adoption of higher-value regeneratively produced inputs into more supply chains.

ASBI policy advocates will assist in developing research findings into public and private (corporate) policy recommendations. This shift in policies will enable a longer lasting framework for the needed systemic change. ASBI will both distribute information about Growing GRASS to investors and seek to organize Investor Showcases that provide an important platform for these enterprises within the Growing GRASS network to secure the needed funding to continue to grow their regenerative enterprises.

References:

[i] Cheung, Renee, and Paul McMahon. *Back to grass: The market potential for US grassfed beef.* Stone Barns Center for Food and Agriculture, 2017.

[ii] USDA. USDA Organic Certification Cost Share Program Organic certification cost share program (OCCSP). https://www.fsa.usda.gov/programs-and-services/occsp/index . Accessed May 3, 2022.

[iii] https://www.nrcs.usda.gov/wps/portal/nrcs/detail/national/climatechange/?cid=nrcseprd1881023

[iv] Whit, Christine and Wallander, Steven, USDA ERS (2022) Rotational Grazing Adoption by Cow-Calf Operations https://www.ers.usda.gov/webdocs/publications/105077/eib-243.pdf?v=2549.7

[v]Stanley, P. L., Rowntree, J. E., Beede, D. K., DeLonge, M. S., & Hamm, M. W. (2018). Impacts of soil carbon sequestration on life cycle greenhouse gas emissions in Midwestern USA beef finishing systems. *Agricultural Systems*, *162*, 249-258.

[vi] Cheung et. Al.

[vii] Hayek, M. N., & Garrett, R. D. (2018). Nationwide shift to grass-fed beef requires larger cattle population. *Environmental Research Letters*, *13*(8), 084005.

[viii] Matthew N Hayek and Rachael D Garrett 2018 Environ. Res. Lett. 13 084005

[ix] Cheung et. Al.

Attachment A: Growing GRASS Project Producer Participant Agreement
DRAFT VERSION – NOT FINAL

In order for beef and bison producers be eligible to participate in the GRASS marketplace and receive any funding through any aspects of the Growing GRASS Project work (paid research partner, cost-share funding for on-farm inspections and climate smart commodity payments), producers will affirm the following:

1. I am not currently, and will not, within the duration of the Growing GRASS project, receive payments for the same production practice or system implementation on the same land for which myself (the producer) or landowner has already received, or is contracted to receive, funding through another USDA program.
2. I have control of the land involved for the term of the proposed award period.
3. I personally satisfy the following USDA eligibility criteria, as applicable:
    a. If a person: any person who is not a citizen of the United States or an alien lawfully admitted into the United States for permanent residence under the Immigration and Nationality Act (8 U.S.C. 1101-1778) will be ineligible to receive any disbursement under this NFO on a farm that is owned or operated by the person, unless the person is an individual who Partnerships for Climate-Smart Commodities Funding Opportunity Page 12 of 35 is providing land, capital, and a substantial amount of personal labor in the production of crops on the farm; or
    b. If a corporation or legal entity: A corporation or other legal entity will be ineligible to receive disbursement under this NFO if more than 10 percent of the ownership of the legal entity is held by persons who are not citizens of the United States or lawful aliens unless each foreign person who is a stockholder or other type of member provides a substantial amount of active personal labor in the production of crops on a farm owned or operated by the legal entity. However, upon the written request of the legal entity, the grant recipient may make payments in an amount representative of the percentage interest of the legal entity that is owned by citizens of the United States and lawful aliens or foreign stockholders or other type of member who provide a significant contribution of active personal labor in the production of crops on a farm owned or operated by the legal entity. USDA will provide additional direction on how these percentages may be determined and approved.
4. I am in Conservation Compliance. I will be in compliance with the highly erodible land conservation and wetland conservation provisions as detailed in 7 CFR Part 12
    a. Certified on Form AD-1026
5. All land used for grazing related to the Growing GRASS project will be land already in agricultural use.
6. My beef and/or bison operation does not qualify as a CAFO according to EPA criteria
7. I agree to follow/implement NRCS Prescribed Grazing Conservation Practice 528
8. I agree to share data and other requested information (within agreed upon parameters of confidentiality, control and access) with the Growing GRASS project team.

Growing GRASS Project Milestones and Benchmarks (3-17-23)

YEARLY & QUARTER	Growing GRASS Project Milestones & Benchmarks	PROJECT EXPENSES [1]	PAYMENTS TO PRODUCERS[2]
YEAR 1	**• Successful establishment of Growing GRASS project team & Project planning/deployment.** **• Planning, recruitment and research efforts are underway for GRASS climate-smart on-farm/ranch verification system and ways to optimize that value in the marketplace.** **• First Annual Growing GRASS meeting is held with partners and producer participants.**	**$2,805,054**	**$250,000**

Quarter 1	• Project organizational plan and calendar developed.
	• Research team and planning is underway.
	• Hiring process for new staff and contractors developed and initiated.
	• Recruitment process for producers and value chain stakeholders developed.
	  ○ Producer eligibility will require agreeing to several conditions, including sharing of following information to allow required quarterly reporting to USDA:
	  ▪ Location and underserved producer status
	  ▪ Total acres grazed
	  ▪ Total head of livestock grazed
	  ▪ Sharing of available data to calculate GHG emissions
	  ▪ Which and how many MMRV tool(s) used to assess grazing system
	  ▪ Info on existing or new marketing channels for products (where applicable)
	• Building of accounting and administrative systems for Growing GRASS at ASBI underway.
	• Building of subawardee evaluation structure underway.
	• Data from quarterly subawardee reports compiled for project reporting.
	• USDA QUARTERLY REPORTING INFORMATION
	  ▪ Number of producers involved in Growing GRASS project. **(0)**
	  ▪ Number of underserved producers involved in Growing GRASS project. **(0)**
	  ▪ Number of acres involved in Growing GRASS project. **(0)**
	  ▪ Total head of livestock involved in Growing GRASS project. **(0)**
	  ▪ Total amount of payments to producers **(0)**
	  ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(0)**
	  ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(0)**
	  ▪ Number of new marketing channels established. **(0)**
	  ▪ Number of marketing channels expanded. **(0)**
	  ▪ Number and type of market partner involvement. **(0)**		

[1] Project Expenses includes all requested project costs for research, staffing, travel, supplies, reporting, indirect, etc., EXCEPT for those listed under Producer Payments & Benefits

[2] Producer Payments & Project Support/Benefits includes research (participant) payments, cost-share for inspections, subsidy payments, producer travel/education, and technical assistance support for regen grazing and GRASS. No indirect costs are included.

YEARLY & QUARTER	Growing GRASS Project Milestones & Benchmarks	PROJECT EXPENSES [1]	PAYMENTS TO PRODUCERS [2]
Quarter 2	• Project and research design and organization finalized, and initial staffing hired. • Research and related work initiated. • Producer and stakeholder partner recruitment ongoing, including underserved producers. • Quarterly reports to track progress of subawardees designed and distributed. • External project auditor hiring process initiated. • Growing GRASS annual gathering date determined/travel planning underway. • Data from quarterly subawardee reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(0)** ▪ Number of underserved producers involved in Growing GRASS project. **(0)** ▪ Number of acres involved in Growing GRASS project. **(0)** ▪ Total head of livestock involved in Growing GRASS project. **(0)** ▪ Total amount of payments to producers **(0)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(0)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(0)** ▪ Number of new marketing channels established. **(0)** ▪ Number of marketing channels expanded. **(0)** ▪ Number and type of market partner involvement. **(0)**		
Quarter 3	• Project research and work continues towards identified goals, with staffing hires in place. • Producer and stakeholder partner recruitment ongoing, including underserved producers. • GRASS website development work initiated. • External project auditor hired and begins work for Year 1 • Data from quarterly subawardee reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(250)** ▪ Number of underserved producers involved in Growing GRASS project. **(65)** ▪ Number of acres involved in Growing GRASS project. **(162,500)** ▪ Total head of livestock involved in Growing GRASS project. ▪ Total amount of payments to producers **($125,000)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(9,310)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(7)** ▪ Number of new marketing channels established. **(0)** ▪ Number of marketing channels expanded. **(0)** ▪ Number and type of market partner involvement.		
Quarter 4	• Project and research work continuing according to project plan. • Producers and stakeholder partners recruited and agree to participate - estimated total of 500 producers participating by end of year 1, with 25% from underserved communities.		

YEARLY & QUARTER	Growing GRASS Project Milestones & Benchmarks	PROJECT EXPENSES [1]	PAYMENTS TO PRODUCERS[2]
	• First annual Growing GRASS gathering held bringing together participants, producers and partners. • Data from quarterly subawardee reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(250)** ▪ Number of underserved producers involved in Growing GRASS project. **(125)** ▪ Number of acres involved in Growing GRASS project. **(325,000)** ▪ Total head of livestock involved in Growing GRASS project. **(10,000)** ▪ Total amount of payments to producers **($125,000)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(27,930)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(7)** ▪ Number of new marketing channels established. **(2)** ▪ Number of marketing channels expanded. **(2)** ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
YEAR 2	• **Initial research findings gathered and synthesized to build and test different incentive options and verification/marketing systems to identify which are best at encouraging producers to increase production of GRASS verified climate-smart/regeneratively raised beef and bison, and the supply chains and market to value the products from these livestock.** • **GRASS information collection/sharing systems (informatics) is developed and in testing/use** • **GRASS as an equivalency system and market tool are assessed/validated in research on equivalency and outcomes from GRASS verified systems and the data collected from producer research partners and other sources.** • **An additional 500 producers are engaged in research for a total of 1000, including in cost-share research.** • **GRASS website developed and published for use.** • **First public version of GRASS equivalency tool (Version 1) released and revised with public comments.**	**$3,169,211**	**$ 2,002,498**
Quarter 1	• Annual report detailing accomplishments and challenges of first Project year completed and shared with USDA. • Work initiated with first identified producer group/community to create culturally/community appropriate and value-specific GRASS verification system. • GRASS website and information exchange system development underway. • GRASS stakeholder governance and leadership identification/recruitment work begins. • Version 1.0 of GRASS equivalency criteria released for first public comment. • Data from quarterly subawardee reports compiled for project reporting.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	• USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(600)** ▪ Number of underserved producers involved in Growing GRASS project.**(150)** ▪ Number of acres involved in Growing GRASS project. **(390,000)** ▪ Total head of livestock involved in Growing GRASS project. **(12,000)** ▪ Total amount of payments to producers **($500,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(50,274)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(8)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 2	• Cost-share for on-farm inspections pilot program begins to recruit producers. • Producer education support program starts (providing travel funding for producers to attend educational events/conferences/etc. focused on regenerative and climate-smart grazing systems). • Comments on Public Draft of GRASS equivalency criteria collected and analyzed. • Growing GRASS annual gathering date determined/travel planning underway. • Data from quarterly subawardee reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(750)** ▪ Number of underserved producers involved in Growing GRASS project. **(188)** ▪ Number of acres involved in Growing GRASS project. **(487,500)** ▪ Total head of livestock involved in Growing GRASS project. **(15,000)** ▪ Total amount of payments to producers **($500,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(78,204)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(9)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 3	• Technical assistance project work initiated and underway with underserved communities. • Supply chain/processor partner education support program starts (providing travel and related funding to allow processor and other supply chain partners to attend educational events). • GRASS website and information exchange finalized and in use. • GRASS stakeholder governance and leadership council established for inaugural year. • GRASS 1.1 version published for public use (including feedback on public comments). • Data from quarterly subawardee reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(850)**		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	▪ Number of underserved producers involved in Growing GRASS project. **(215)** ▪ Number of acres involved in Growing GRASS project. **(552,500)** ▪ Total head of livestock involved in Growing GRASS project. **(17,000)** ▪ Total amount of payments to producers **($500,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(109,858)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(10)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 4	• Paid producer involvement in research expanded to a total of 1000, including cost-share partners. • First culturally/community appropriate GRASS verification module completed and ready for use. • Producer incentive pilot program readied to recruit broader producer pool. • 2nd Annual Growing GRASS gathering held. • Annual reporting materials to track progress of subawardees distributed. • Data from quarterly subawardee reports complied for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(1000)** ▪ Number of underserved producers involved in Growing GRASS project. **(250)** ▪ Number of acres involved in Growing GRASS project. **(650,000)** ▪ Total head of livestock involved in Growing GRASS project. **(20,000)** ▪ Total amount of payments to producers **($500,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(147,098)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(10)** ▪ Number of new marketing channels established. **(4)** ▪ Number of marketing channels expanded. **(4)** ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
YEAR 3	• **The producer and market incentive programs and verification/marketing systems are developed and piloted to see which are best at encouraging farmers/ranchers to increase production of GRASS verified climate-smart/regeneratively raised beef and bison, and optimizing value for those products in the supply chains and markets.** • **Marketing work and incentive options developed and piloted with feedback from supply chain partners.** • **Up to 1500 producers engaged in helping further develop cost-share incentive program parameters and subsidy program parameters.** • **Based on research, new GRASS information collection/sharing systems (informatics) and GRASS as an equivalency system and markets are expanded, with the GRASS system starting development and implementation of governance, etc.**	**$3,356,781**	**$3,602,498**
Quarter 1	• Annual report detailing accomplishments and challenges of second project year completed and shared with USDA (including findings from project external auditor who will evaluate report and reporting processes). • Work begins with the second producer community on creating an appropriate GRASS verification system. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(1000)** ▪ Number of underserved producers involved in Growing GRASS project **(250)**. ▪ Number of acres involved in Growing GRASS project. **(650,000)** ▪ Total head of livestock involved in Growing GRASS project. **(20,000)** ▪ Total amount of payments to producers **($900,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(184,338)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(11)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
Quarter 2	• 3rd Annual Growing GRASS gathering date has been determined / travel planning is underway. • Cost-share pilot program research work continued with up to 1000 producers. • Climate Smart Subsidy Pilot Program launched with up to 1500 producers. • Market incentive program trials began with climate-smart byproduct materials sectors. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(1000)** ▪ Number of underserved producers involved in Growing GRASS project.**(250)** ▪ Number of acres involved in Growing GRASS project. **(650,000)** ▪ Total head of livestock involved in Growing GRASS project. **(20,000)** ▪ Total amount of payments to producers **($900,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(221,578)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(11)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 3	• GRASS hires staffing to help with member services and other needs for the verification and market support organization. • 2nd Public Comment Round for GRASS initiated. • 1st Investor showcase held. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(1750)** ▪ Number of underserved producers involved in Growing GRASS project.**(435)** ▪ Number of acres involved in Growing GRASS project. **(1,137,500)** ▪ Total head of livestock involved in Growing GRASS project. **(35,000)** ▪ Total amount of payments to producers **($900,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(286,748)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(12)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 4	• Project and research work continues according to the project plan.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	• Analysis of initial results of the incentive programs and framework completed. • Second culturally/community appropriate GRASS verification module completed • 3rd Annual Growing GRASS gathering held. • Annual reporting materials to track progress of subawardees distributed. • Producers and stakeholder partners recruited and under agreement to participate - estimated 500 producers total participating, with 25% from underserved communities. • Growing GRASS gathering held bringing together project participants, producers and partners. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(2500)** ▪ Number of underserved producers involved in Growing GRASS project. **(625)** ▪ Number of acres involved in Growing GRASS project. **(1,625,000)** ▪ Total head of livestock involved in Growing GRASS project. **(50,000)** ▪ Total amount of payments to producers **($900,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(379,848)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(12)** ▪ Number of new marketing channels established. **(3)** ▪ Number of marketing channels expanded. **(3)** ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
YEAR 4	**• Different producer incentive options and verification/marketing systems are piloted with larger representative producer pools to see which are best at encouraging increased production of GRASS verified climate-smart/regeneratively raised beef and bison and overall optimized value from the supply chains and market segments.** **• Up to 4000 producers involved in expanded cost-share incentive, subsidy pilot program and technical services work.** **• GRASS established as an ISEAL Code Compliant verification initiative and has its own governance and staffing in place and active.** **• Market incentive programs deployed based on findings of Year 3 research/pilot work.**	**$ 3,557,815**	**$ 5,802,498**
Quarter 1	• Annual report detailing accomplishments and challenges of the third project year completed and shared with USDA (including findings from project external auditor who will evaluate report and reporting processes). • Comments on the 2nd Round of Review for GRASS 1.1 collected and analyzed. • Cost-share on-farm/ranch inspection pilot program expanded to include up to 4000 producers. • Market incentive programs with climate-smart byproducts companies expanded based on pilot.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	• Climate Smart Subsidy Pilot Program expanded to include up to 4000 producers. • Work begins with the third producer community on creating an appropriate GRASS verification system. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(3000)** ▪ Number of underserved producers involved in Growing GRASS project.**(750)** ▪ Number of acres involved in Growing GRASS project. **(1,950,000)** ▪ Total head of livestock involved in Growing GRASS project. **(60,000)** ▪ Total amount of payments to producers **($1,450,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(491,568)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(13)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 2	• After the 2nd public comment period, GRASS 1.2 is released for public use. • GRASS is established as an ISEAL Code Compliant verification and initiative. • Growing GRASS 4th Annual gathering date determined/travel planning underway. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(3500)** ▪ Number of underserved producers involved in Growing GRASS project. **(875)** ▪ Number of acres involved in Growing GRASS project. **(2,275,000)** ▪ Total head of livestock involved in Growing GRASS project. **(70,000)** ▪ Total amount of payments to producers **($1,450,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(621,908)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(13)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 3	• Third culturally/community appropriate GRASS verification module completed and in use. • 2nd Investor showcase held. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	▪ Number of producers involved in Growing GRASS project. **(4000)** ▪ Number of underserved producers involved in Growing GRASS project.**(1000)** ▪ Number of acres involved in Growing GRASS project. **(2,600,000)** ▪ Total head of livestock involved in Growing GRASS project. **(80,000)** ▪ Total amount of payments to producers **($1,450,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(770,868)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(14)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 4	• GRASS has established stakeholder-led administration and governance, including an accreditation process and income streams identified. • Information from pilot incentive programs shared with government and policy community • 4th Annual Growing GRASS gathering held. • Annual reporting materials to track progress of subawardees will be distributed. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(5000)** ▪ Number of underserved producers involved in Growing GRASS project. **(1250)** ▪ Number of acres involved in Growing GRASS project. **(3,250,000)** ▪ Total head of livestock involved in Growing GRASS project. **(100,000)** ▪ Total amount of payments to producers **($1,450,624.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(957,068)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(14)** ▪ Number of new marketing channels established. **(4)** ▪ Number of marketing channels expanded. **(4)** ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
YEAR 5	**• Producer and market incentive and verification/marketing pilot programs are expanded to include larger producer pools to help gather final information on if/how derisking production and purchases helped encourage increased GRASS verified climate-smart/regeneratively raised beef and bison production, and increased value/sales from the supply chains and market segments.** **• Up to an estimated 6000 producers participated in cost-share incentive and the subsidy pilot program in the final year.** **• Research findings collected and analyzed to assess impact of producer incentives and market support for growing production and demand for/value of climate-smart products in the market.** **• Where appropriate and deemed effective/valuable, findings disseminated and publicized that include which programs and policies proved to be most effective at supporting climate-smart production and market development.** **• In total, project engaged up to 7500 producers in funded project work, and at least 3 times that through partner organizations, communications efforts, technical assistance, outreach, etc.** **• Final Growing GRASS project report developed and shared strategically that summarizes overall project goals, work and findings.**	**$ 3,498,987**	**$ 6,952,498**
Quarter 1	• Annual report detailing accomplishments and challenges of fourth project year completed and shared with USDA (including findings from project external auditor who will evaluate report and reporting processes). • Cost-share on-farm/ranch inspection pilot program expanded to include up to 6000 producers. • Climate Smart Subsidy Pilot Program expanded to include up to 6000 producers. • GRASS in operation and growing as an equivalency tool in the marketplace. • Work begins with the 4th producer community to create an appropriate GRASS verification system. • Market incentive programs with companies buying climate-smart byproducts are continued. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(5500)** ▪ Number of underserved producers involved in Growing GRASS project. **(1375)** ▪ Number of acres involved in Growing GRASS project. **(3,575,000)** ▪ Total head of livestock involved in Growing GRASS project. **(110,000)** ▪ Total amount of payments to producers **($1,738,124.50)** ▪ Total estimated GHG benefits (Metric Tons of CO_2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(1,161,888)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(15)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
Quarter 2	• Final Growing GRASS annual gathering date determined/travel planning underway. • Final Project Reporting work underway to summarize total project results. • Biannual reports to track progress of subawardees will be distributed to subawardees. • 3rd and final Investor showcase held. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(6000)** ▪ Number of underserved producers involved in Growing GRASS project. **(1500)** ▪ Number of acres involved in Growing GRASS project. **(3,900,000)** ▪ Total head of livestock involved in Growing GRASS project. **(120,000)** ▪ Total amount of payments to producers **($1,738,124.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(1,385,328)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(15)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 3	• Communications and outreach plan for sharing Growing GRASS findings established. • Fourth culturally/community appropriate GRASS verification module completed. • Final Annual Growing GRASS gathering held. • Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. (**6500)** ▪ Number of underserved producers involved in Growing GRASS project. **(1625)** ▪ Number of acres involved in Growing GRASS project. **(4,225,000)** ▪ Total head of livestock involved in Growing GRASS project. **(130,000)** ▪ Total amount of payments to producers **($1,738,124.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(1,627,388)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(15)** ▪ Number of new marketing channels established. ▪ Number of marketing channels expanded. ▪ Number and type of market partner involvement.		
Quarter 4	• Project work concluded (wrapped up or where appropriate, passed on to identified partners). • Annual reporting materials to track progress of subawardees distributed. • Final Project report released on activities and outcomes.		

YEARLY & QUARTER	Growing GRASS Project Milestones	PROJECT EXPENSES	PAYMENTS TO PRODUCERS
	• Data from quarterly subawardee and partner reports compiled for project reporting. • USDA QUARTERLY REPORTING INFORMATION ▪ Number of producers involved in Growing GRASS project. **(7500)** ▪ Number of underserved producers involved in Growing GRASS project. **(1875)** ▪ Number of acres involved in Growing GRASS project. **(4,875,000)** ▪ Total head of livestock involved in Growing GRASS project. **(150,000)** ▪ Total amount of payments to producers **($1,738,124.50)** ▪ Total estimated GHG benefits (Metric Tons of CO2e Reduced or Sequestered) from Growing GRASS project activities/livestock. **(1,906,688)** ▪ Number and type of MMRV tool(s) used by Growing GRASS producers. **(15)** ▪ Number of new marketing channels established. **(6)** ▪ Number of marketing channels expanded. (**6)** ▪ Number and type of market partner involvement.		
TOTAL 5 YEAR PROJECT		**$16,387,848**	**$18,609,990**

Climate-Smart Practices and Limitations

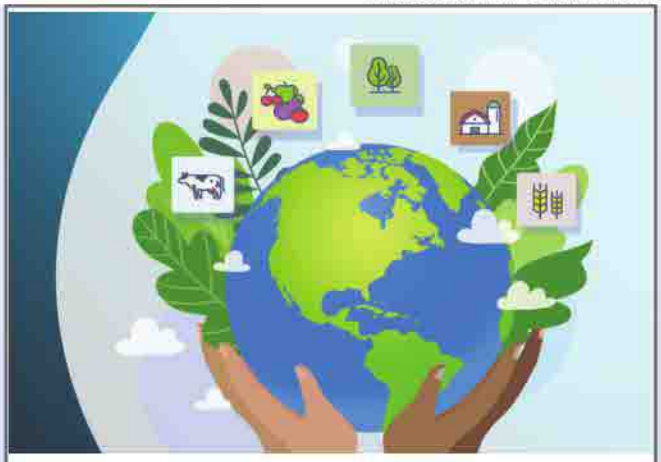
American Sustainable Business Institute, Inc.

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

NRCS Practice Code	Practice Name
528	Prescribed Grazing
E528F	Stockpiling cool season forage to improve structure and composition or plant productivity and health
E528H	Prescribed grazing to improve/maintain riparian and watershed function-elevated water temperature
E528I	Grazing management that protects sensitive areas-surface or ground water from nutrients
E528J	Prescribed grazing on pastureland that improves riparian and watershed function
E528L	Prescribed grazing that improves or maintains riparian and watershed function-erosion
E528M	Grazing management that protects sensitive areas from gully erosion
E528O	Clipping mature forages to set back vegetative growth for improved forage quality
E528P	Implementing Bale or Swath Grazing to increase organic matter and reduce nutrients in surface water
E528R	Management Intensive Rotational Grazing
E528S	Soil Health Improvements on Pasture
E528T	Grazing to Reduce Wildfire Risks on Forests

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

N/A



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

Version 1.0

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

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Overview of Reporting Requirements

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

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

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

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

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

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

The following tables list the data elements included in each reporting worksheet, along with a brief description of each item.

Project Summary

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

Table 1. Project Summary elements

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

Partner Activities

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

Table 2. Partner Activities elements

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

Marketing Activities

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

Table 3. Marketing Activities elements

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

Producer Enrollment

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

Table 4. Producer Enrollment elements

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

Field Enrollment

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

Table 5. Field Enrollment elements

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

Farm Summary

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

Table 6. Farm Summary elements

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

Field Summary

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

Table 7. Field Summary elements

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

GHG Benefits - Alternate Modeled

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

Table 8. GHG Benefits – Alternate Modeled elements

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

GHG Benefits - Measured

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

Table 9. GHG Benefits - Measured data elements

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

Additional Environmental Benefits

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

Table 10. Additional Environmental Benefits elements

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

Supplemental Data Submission

Project MMRV Plan

Definition of MMRV elements:

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

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

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

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

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

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

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

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

Field modeled GHG benefit reports

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

Field direct measurement results

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

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

Data Descriptions

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

Unique IDs

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

Project Summary

Commodity type	
Data element name: Commodity type	**Reporting question:** What climate-smart commodity types are produced by this project?
Description: Type of commodity incentivized by the project. These commodities include those for whom farmers are directly receiving incentives or other types of marketing support. See full list of commodity options in Appendix B. List one commodity per row.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** FSA commodity list
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly
Commodity sales	
Data element name: Commodity sales	**Reporting question:** Did project activities result in sales this quarter of the commodity(ies) produced by this project?
Description: Indicator of sales of commodity(ies) related to project activities. If sales are reported, complete the *Marketing Activities* worksheet (Table 3) as part of the quarterly performance report.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly
Farms enrolled	
Data element name: Farms enrolled	**Reporting question:** Did the project enroll any producers or fields this quarter?
Description: Indicator that the project enrolled producers or fields. If enrollment activities occurred this quarter, complete the *Producer Enrollment* and *Field Enrollment* worksheets (Tables 4 and 5) as part of the quarterly performance report.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Yes • No
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly
GHG calculation methods	
Data element name: GHG calculation methods	**Reporting question:** What methods is the project using to calculate GHG benefits?
Description: List the way(s) that GHG benefits are being measured and calculated by the project this quarter.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Models • Direct field measurements • Both
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

GHG cumulative calculation

Data element name: GHG cumulative calculation

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative GHG benefits

Data element name: Cumulative GHG benefits

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative carbon stock

Data element name: Cumulative carbon stock

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CO2 benefit

Data element name: Cumulative CO2 benefit

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative CH4 benefit

Data element name: Cumulative CH4 benefit

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cumulative N20 benefit

Data element name: Cumulative N2O benefit

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets produced

Data element name: Offsets produced

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets sale

Data element name: Offsets sale

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

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

Data type: Text

Select multiple values: NA

Measurement unit: Name

Allowed values: Text

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Offsets price

Data element name: Offsets price

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars per metric ton

Allowed values: 0-500

Logic: Respond if >0 to 'Offsets produced'

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Insets produced

Data element name: Insets produced

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Cost of on-farm TA

Data element name: Cost of on-farm TA

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

MMRV cost

Data element name: MMRV cost

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG monitoring method

Data element name: GHG monitoring 1-5

Reporting question: How did the project monitor GHG benefits?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG reporting method

Data element name: GHG reporting 1-5

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG verification method

Data element name: GHG verification method 1-5

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Partner Activities

Unique IDs	
Partner ID	Unique Project ID for each partner

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

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

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

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

Partnership start date

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

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

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

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

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

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

Partnership end date

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

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

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

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

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

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

New partnership

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

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

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

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

- Yes
- No
- I don't know

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

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

Partner total requested

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

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

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

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

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

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

Total match contribution

Data element name: Total match contribution

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Total match incentives

Data element name: Total match incentives

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match type

Data element name: Match type 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match amount

Data element name: Match amount 1-3

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Training type provided

Data element name: Training type 1-3 provided

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity by partner

Data element name: Activity 1-3 by partner

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Activity cost

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

Products supplied

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

Product source

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

Marketing Activities

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

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

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

Names of buyers

Data element name: Names of buyers	**Reporting question:** What are the names of all of the buyers in this marketing channel?
Description: Provide the names of all buyers in this marketing channel. Separate each name with a comma.	
Data type: Text	**Select multiple values**: NA
Measurement unit: Name	**Allowed values:** Text
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Marketing channel geography

Data element name: Marketing channel geography	**Reporting question:** What is the primary geography of the marketing channel?
Description: The primary geography of the type of marketing channel. Primary geography means the scale at which most of the activity of buying and selling happens. Local means within a single state or directly neighboring states. Regional means within a five-to-ten state area. National means across the United States. International means specific locations outside of the United States. Global means across the world or not to a specific international location.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Local • Regional • National • Global
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Value sold

Data element name: Value sold	**Reporting question:** What is the value of the commodity sold in this marketing channel?
Description: The dollar value of the commodity sold in this marketing channel this quarter (non-cumulative).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Dollars	**Allowed values:** $1-$100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Volume sold

Data element name: Volume sold	**Reporting question:** What is the volume of the commodity sold in this marketing channel?
Description: The volume of the commodity sold in this marketing channel this quarter (non-cumulative).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Number	**Allowed values:** 1-100,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Project	**Data collection frequency:** Quarterly

Volume sold unit

Data element name: Volume sold unit

Reporting question: What is the unit of volume?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium

Data element name: Price premium

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Dollars

Allowed values: $0.01-$10,000

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium unit

Data element name: Price premium unit

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Price premium to producer

Data element name: Price premium to producer

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Product differentiation method

Data element name: Product differentiation method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing method

Data element name: Marketing method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing channel identification method

Data element name: Marketing channel identification method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Traceability method

Data element name: Traceability method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Producer Enrollment

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

Producer data change

Data element name: Producer data change

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Re-enrollment

Producer start date

Data element name: Producer start date

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

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

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer name

Data element name: Producer name

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

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

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Underserved status

Data element name: Underserved status

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: No

Data collection level: Producer

Data collection frequency: Initial enrollment

Total area

Data element name: Total area

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

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

Total crop area

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

Total livestock area

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

Total forest area

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

Livestock type

Data element name: Livestock type 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

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

Livestock head

Data element name: Livestock head 1-3

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

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

Data type: Integer

Select multiple values: NA

Measurement unit: Head count

Allowed values: 1-10,000,000

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

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

Organic farm

Data element name: Organic farm

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: No

Data collection level: Producer

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

Organic fields

Data element name: Organic fields

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Organic operation'

Required: No

Data collection level: Producer

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

Producer motivation

Data element name: Producer motivation

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

Producer outreach

Data element name: Producer outreach 1-3

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

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

Data type: List

Select multiple values: Yes

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF experience

Data element name: CSAF experience

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF federal funds

Data element name: CSAF federal funds

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF state or local funds

Data element name: CSAF state or local funds

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF nonprofit funds

Data element name: CSAF nonprofit funds

Reporting question: Were CSAF practices supported by nonprofit funds?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF market incentives

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

Field Enrollment

Unique IDs

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

Field data change

Data element name: Field data change

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Re-enrollment

Contract start date

Data element name: Contract start date

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

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

Data type: Date

Select multiple values: NA

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Total field area

Data element name: Total field area

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Acres

Allowed values: .01-500

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Commodity category

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

Commodity type

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

Baseline yield

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

Baseline yield unit

Data element name: Baseline yield unit

Reporting question: Baseline yield unit

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Baseline yield location

Data element name: Baseline yield location

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Enrolled field
- Whole operation
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field land use

Data element name: Field land use

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field irrigated

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

Field tillage

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

Practice past extent - farm

Data element name: Practice past extent - farm

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Field any CSAF practice

Data element name: Field any CSAF practice

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice past use - this field

Data element name: Practice past use - this field

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice type

Data element name: Practice type 1-7

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice standard

Data element name: Practice standard 1-7

Reporting question: What standard does the CSAF practice follow?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- NRCS
- Other (specify)

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Planned practice implementation year

Data element name: Practice 1-7 implementation year

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

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

Data type: Integer

Select multiple values: No

Measurement unit: Year

Allowed values: 2022-2030

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Practice extent

Data element name: Practice 1-7 extent

Reporting question: To what extent is the practice implemented?

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

Data type: Decimal

Select multiple values: No

Measurement unit: Extent

Allowed values: .01-100,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

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

CSAF Practice Sub-questions

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

Farm Summary

Unique IDs

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

Producer TA received

Data element name: Producer TA received 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Producer incentive amount

Data element name: Producer incentive amount

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive reason

Data element name: Incentive reason 1-4

Reporting question: Why were incentives provided to this producer?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive structure

Data element name: Incentive structure 1-4

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive type

Data element name: Incentive type 1-4

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on enrollment

Data element name: Payment on enrollment

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on implementation

Data element name: Payment on implementation

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on harvest

Data element name: Payment on harvest

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on MMRV

Data element name: Payment on MMRV

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Payment on sale

Data element name: Payment on sale

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Full payment
- Partial payment
- No payment

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Field Summary

Unique IDs

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

Commodity type

Data element name: Commodity type

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Practice type

Data element name: Field practice type 1-7

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Date practice complete

Data element name: Date practice complete

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

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

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Contract end date

Data element name: Contract end date

Reporting question: Contract end date

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

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

MMRV assistance provided

Data element name: MMRV assistance provided

Reporting question: Was MMRV assistance provided?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Marketing assistance provided

Data element name: Marketing assistance provided

Reporting question: Was marketing assistance provided?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Incentive per acre or head

Data element name: Incentive per acre or head

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

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

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

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

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

Cost unit

Data element name: Cost unit

Reporting question: What is the unit for cost?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Cost coverage

Data element name: Cost coverage

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

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

Data type: Integer

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG monitoring

Data element name: Field GHG monitoring 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG reporting

Data element name: Field GHG reporting 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG verification

Data element name: Field GHG verification 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG calculations

Data element name: Field GHG calculations	**Reporting question:** What methods are used to calculate GHG benefits in this field?
Description: List the method(s) used to calculate GHG benefits in this field. If yes to direct physical measurements, submit result reports (see *Supplemental Data Submission – Field direct GHG measurement results*).	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Models • Direct field measurements • Both
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official GHG calculation

Data element name: Field official GHG calculation	**Reporting question:** What method was used to calculate the official GHG benefits in this field?
Description: List the method used to calculate the official GHG benefits in this field that are reported as part of the project's aggregate impact.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Models • Direct field measurements
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official GHG ER

Data element name: Field official GHG emission reductions	**Reporting question:** What are the estimated total GHG emission reductions (CO2eq) in this field?
Description: Estimated greenhouse gas emission reductions from practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official carbon stock

Data element name: Field official carbon stock	**Reporting question:** How much carbon has been sequestered in this field?
Description: Estimated total change in carbon stock based on practice implementation in this field. This data element can be reported in any quarter and is cumulative for the year. Conversion rate is one ton of carbon = 3.67 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Quarterly

Field official CO2 ER

Data element name: Field official CO2 emission reductions

Reporting question: What are the estimated total CO2 emission reductions in this field?

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official CH4 ER

Data element name: Field official CH4 emission reductions

Reporting question: What are the estimated total CH4 emission reductions in this field?

Description: Estimated total methane emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field official N20 ER

Data element name: Field official N2O emission reductions

Reporting question: What are the estimated total N2O emission reductions in this field?

Description: Estimated total nitrous oxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field offsets produced

Data element name: Field offsets produced

Reporting question: How many carbon offsets have been produced in this field?

Description: Total carbon offsets produced in the field during the quarter (not cumulative). Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field insets produced

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

Other field measurement

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

GHG Benefits - Alternate Modeled

Unique IDs

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

Commodity type

Data element name: Commodity type 1-6

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Practice type

Data element name: Practice type 1-7

Reporting question: What CSAF practice is being implemented by this project?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: See list in Appendix A

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

GHG model

Data element name: GHG model

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Model start date

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

Model end date

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

Total GHG benefits estimated

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

Total carbon stock estimated

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

Total CO2 estimated

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

Total CH4 estimated

Data element name: Total CH4 estimated

Reporting question: What is the alternate estimate of the field's total CH4 emission reductions?

Description: Total methane emission reductions based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Total field N20 estimated

Data element name: Total N2O estimated

Reporting question: What is the alternate estimate of the field's total N2O emission reductions?

Description: Total nitrous oxide emission reductions based on practice implementation in the field estimated using an alternate method. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

GHG Benefits - Measured

Unique IDs

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

GHG measurement method

Data element name: GHG measurement method

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

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

Data collection level: Field

Data collection frequency: Annual

Lab name

Data element name: Lab name

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

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

Data type: Text

Select multiple values: No

Measurement unit: NA

Allowed values: Free text

Logic: None – all respond

Required: If applicable

Data collection level: Field

Data collection frequency: Annual

Measurement start date

Data element name: Measurement start date

Reporting question: On what date did the measurement start?

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

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

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

Data collection level: Field

Data collection frequency: Annual

Measurement end date

Data element name: Measurement end date

Reporting question: On what date did the measurement end?

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

Data type: Date

Select multiple values: No

Measurement unit: MM/DD/YYYY

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

Logic: None – all respond

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

Data collection level: Field

Data collection frequency: Annual

Total CO2 reduction calculated

Data element name: Total CO2 reduction calculated

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2

Allowed values: 0-10,000,000

Logic: None – all respond

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

Data collection level: Field

Data collection frequency: Annual

Total field carbon stock measured

Data element name: Total field carbon stock measured

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO_2eq

Allowed values: 0-10,000,000

Logic: None – all respond

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

Data collection level: Field

Data collection frequency: Annual

Total CH4 reduction calculated	
Data element name: Total CH4 reduction calculated	**Reporting question:** What are the total measured CH4 emission reductions?
Description: Total annual methane emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of CH_4 = 25 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons CH4 reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual
Total N20 reduction calculated	
Data element name: Total N2O reduction calculated	**Reporting question:** What are the total measured N2O emission reductions?
Description: Total annual nitrous oxide emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of N_2O = 298 tons of CO_2eq.	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Metric tons N2O reduced in CO_2eq	**Allowed values:** 0-10,000,000
Logic: None – all respond	**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field
Data collection level: Field	**Data collection frequency:** Annual
Soil sample result	
Data element name: Soil sample result	**Reporting question:** What is the numeric result from this soil sample?
Description: Results of measurement(s) taken to determine the carbon stock of a soil (the tons of carbon found in a specified volume of soil).	
Data type: Decimal	**Select multiple values**: No
Measurement unit: Amount	**Allowed values:** .00001-100,000
Logic: None – all respond	**Required:** If a project conducts soil samples in this field
Data collection level: Field	**Data collection frequency:** Annual

Soil sample result unit

Data element name: Soil sample result unit

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Measurement type

Data element name: Measurement type

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Additional Environmental Benefits

Unique IDs

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

Environmental benefits

Data element name: Environmental benefits

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss

Data element name: Reduction in nitrogen loss

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount

Data element name: Reduction in nitrogen loss amount

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

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

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount unit

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

Reduction in nitrogen loss purpose

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

Reduction in phosphorus loss

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

Reduction in phosphorus loss amount

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

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

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

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

Other water quality type

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

Other water quality amount

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

Other water quality amount unit

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

Other water quality purpose

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

Water quantity

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

Water quantity amount

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

Water quantity amount unit

Data element name: Water quantity amount unit	**Reporting question:** What is the unit for the amount of water conservation measured in the field?
Description: Unit for the total amount of water conservation or reduced use that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.	
Data type: List	**Select multiple values**: No
Measurement unit: Category	**Allowed values:** • Acre-feet • Cubic feet • Other (specify)
Logic: Respond if yes to 'Water quantity'	**Required:** Yes
Data collection level: Field	**Data collection frequency:** Annual

Water quantity purpose

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

Reduced erosion

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

Reduced erosion amount

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

Reduced erosion amount unit

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

Reduced erosion purpose

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

Reduced energy use

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

Reduced energy use amount

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

Reduced energy use amount unit

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

Reduced energy use purpose

Data element name: Reduced energy use purpose

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: Respond if yes to 'Reduced energy use'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion

Data element name: Avoided land conversion

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount

Data element name: Avoided land conversion amount

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion amount unit

Data element name: Avoided land conversion unit

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Acres
- Other (specify)

Logic: Respond if yes to 'Avoided land conversion'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Avoided land conversion purpose

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

Improved wildlife habitat

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

Improved wildlife habitat amount

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

Improved wildlife habitat amount unit

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

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

CSAF Practice Sub-questions

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

Table 11. Follow-on questions for select CSAF practices

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

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

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

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

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

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

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

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

Appendix A: Climate-smart Agriculture and Forestry Practices

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

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

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

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

Appendix B: Commodity List

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

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

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

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

I. Overarching Statement

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

II. Eligibility and Highly Erodible Lands and Wetlands Compliance

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

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

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

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

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

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

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

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

III. Other Environmental and Cultural Resources Reviews

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

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

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

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

IV. Producer Benefits

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

V. Producer Data Protection and Disclosure

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

VI. Other Data and Reporting Requirements

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

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

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

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

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

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

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

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

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

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

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

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

VII. Competition and Anti-Competitive Practices

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

VIII. Suspension and Disbarment

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

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

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

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

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

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

X. Non-Disparagement

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