



NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number NR233A750004G002	2. Amendment Number	3. Award /Project Period Date of final signature - 03/20/2028	4. Type of award instrument: Grant Agreement
5. Agency (Name and Address) USDA Partnerships for Climate-Smart Commodities c/o FPAC-BC Grants and Agreements Division 1400 Independence Ave SW, Room 3236 Washington, DC 20250 Direct all correspondence to FPAC.BC.GAD@usda.gov		6. Recipient Organization (Name and Address) IOWA SOYBEAN ASSOCIATION 1255 SW PRAIRIETRAIL PKWY ANKENY IA 50023-7068 UEI Number / DUNS Number: L7KQE4GQ1Q71 / 600824853 EIN:	
7. NRCS Program Contact Name: ERIC HANSEN (b)(6)	8. NRCS Administrative Contact Name: Jackie Pashnik (b)(6)	9. Recipient Program Contact Name: KIRK LEEDS (b)(6)	10. Recipient Administrative Contact Name: Adam VenHuizen (b)(6)
11. CFDA 10.937	12. Authority 15 USC 714 et seq	13. Type of Action New Agreement	14. Program Director Name: ADAM KIEL (b)(6)
15. Project Title/ Description: Expand markets for climate-smart corn, soybeans, sugar beets, and wheat in the Midwest and support farmer implementation and monitoring of climate-smart practices.			
16. Entity Type: N = Nonprofit without 501C3 IRS Status (Other than Institution of Higher Education)			
17. Select Funding Type			
Select funding type:	<input checked="" type="checkbox"/> Federal	<input checked="" type="checkbox"/> Non-Federal	
Original funds total	95,000,000.000	62138827.00	
Additional funds total	\$0.00	\$0.00	
Grand total	95,000,000.000	62138827.00	
18. Approved Budget			

Personnel	\$1,234,462.00	Fringe Benefits	\$678,954.00
Travel	\$32,175.00	Equipment	\$0.00
Supplies	\$41,732.00	Contractual	\$0.00
Construction	\$0.00	Other	93,012,677.000
Total Direct Cost	94,816,834.000	Total Indirect Cost	\$183,166.00
		Total Non-Federal Funds	62138827.00
		Total Federal Funds Awarded	95,000,000.000
		Total Approved Budget	157,138,827.000

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

Name and Title of Authorized Government Representative KATINA HANSON Acting Senior Advisor for Climate-Smart Commodities	Signature KATINA HANSON Digitally signed by KATINA HANSON Date: 2023.03.10 15:44:58 -05'00'	Date
Name and Title of Authorized Recipient Representative KIRK LEEDS Chief Executive Officer	Signature Kirk Leeds Digitally signed by Kirk Leeds Date: 2023.03.09 16:36:26 -05'00'	Date 3/9/2023

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 Iowa Soybean Association (Recipient), is to build markets for climate-smart commodities and invest in America's climate-smart producers to strengthen U.S. rural and agricultural communities.

Objectives

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

Budget Narrative

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

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

TOTAL BUDGET \$ 157,138,827

TOTAL FEDERAL FUNDS \$95,000,000

PERSONNEL \$1,122,238

FRINGE BENEFITS \$617,231

TRAVEL \$29,250

EQUIPMENT \$0

SUPPLIES \$37,938

CONTRACTUAL \$0

CONSTRUCTION \$0

OTHER

SUBAWARD \$40,917,612

PRODUCER INCENTIVES \$52,092,565

TOTAL DIRECT COSTS \$94,816,834

INDIRECT COSTS \$183,166

TOTAL NON-FEDERAL FUNDS \$62,138,827

PERSONNEL \$0

FRINGE BENEFITS \$0

TRAVEL \$0

EQUIPMENT \$0

SUPPLIES \$0

CONTRACTUAL \$0

CONSTRUCTION \$0

OTHER \$0

PRODUCER INCENTIVES \$62,138,827

TOTAL DIRECT COSTS \$62,138,827

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

Withheld pursuant to exemption

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of the Freedom of Information and Privacy Act

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Midwest Climate Smart Commodity Program Narrative

I. Executive Summary

The Iowa Soybean Association (ISA), in partnership with the Soil and Water Outcomes Fund (SWOF) operated by AgOutcomes Inc. (a subsidiary of the Iowa Soybean Association) and other organizations, requests \$95 million for the creation of the Midwest Climate Smart Commodity Program (the “Program”) that provides performance based direct financial incentives for farmers to produce climate-smart commodities on 3.8 million aggregate acres of corn, soy, sugar beets and wheat over five years. The requested USDA funding will be matched by \$62.1 million in secured corporate commitments to purchase carbon dioxide equivalent (CO₂e) inset credits from participating farmers. The total five-year project budget is \$157,128,827

To support farmer production of climate smart commodities, the program will provide \$114.2 million (73% of the total project budget, \$19.2 million more than the USDA request) to farmers via outcome-based contracts for the reduction and removal of CO₂e through the adoption of new climate-smart practices. The remaining project funding will support farmer enrollment assistance, CO₂e quantification, technical assistance support, measurement, reporting and verification, and underserved farmer outreach and enrollment. 20% of contracts will be reserved for underserved populations supported by dedicated conservation agronomist technical assistance. 155,000 acres of early adopters' production of climate-smart commodities will be incentivized via environmental outcome payments from the project using USDA and partner funds. Incentive payments will be tied to the environmental outcomes and associated with a valued commodity.

The Program’s expected outcomes over five years include:

- The removal and reduction of 2.3-2.9 million metric tons of CO₂e
- The prevention of 46-61 million pounds of nitrogen and 3-4.2 million pounds of phosphorus from entering waterways
- The climate-smart production of an estimated 363 million bushels of corn, 112 million bushels of soybeans, and 7.5 million bushels of wheat
- 220-440 contracts with underserved farmers (20% of all contracts)
- Total farmer payments of over \$114.2 million

The Program will develop and expand markets for climate-smart commodities and their resulting environmental benefits: 1) the market for CO₂e insets associated with the production of commodities used in key food and fuel supply chains; 2) the market for water quality improvements generated by the introduction of climate smart practices; 3) the market for verified climate-smart corn, soy, sugar beet and wheat commodities; 4) the market for biofuel inputs using commodities produced with climate-smart practices; This Program will support USDA’s goal to expand or develop these markets by:

- Streamlining and scaling systems to generate verified CO₂e insets and water quality credits that farmers can monetize to meet growing demand for corporate carbon footprint reductions and water quality improvements, climate-smart inputs for renewable fuel, and future markets for climate-smart corn, soy, and wheat.

- Producing data and information that can be used by USDA and policymakers to shape research and policies supporting financial and technical support for climate-smart practice adoption and markets.
- Developing systems, processes, tools, and partnerships to encourage participation and market access for small and underserved farmers.

The Midwest Climate Smart Commodity Program and its supporting partners are uniquely positioned to implement this program at the proposed scale of 3.8 million acres using the Soil and Water Outcomes Fund (SWOF) infrastructure, services, and experience. Since 2019, the SWOF has been working to create a robust agricultural ecosystem service market that aligns the environmental and economic interests of farmers, corporations, and governments at the local, state, and federal levels. The SWOF has developed a track record for working with farmers and public and private entities to support new climate-smart practices that deliver high-quality, cost-effective water quality and CO₂e outcomes. In 2021, the SWOF enrolled more than 120,000 acres of cropland in Iowa, Illinois, Ohio, Maryland, Pennsylvania, and North Carolina, generating over 111,500 metric tons of CO₂e reductions and removals, and preventing nearly 112,400 pounds of phosphorus and 1.9 million pounds of nitrogen from entering waterways. The SWOF has built the infrastructure, tools, processes, and partnerships to gather farmer data, use COMET-Farms and additional GHG quantification tools to quantify CO₂e outcomes, contract and pay farmers, monitor and verify practice changes, and provide robust reporting through an online data management platform – groundwork that will allow this program to efficiently enroll acres, deploy dollars, and measure outcomes at scale.

Contact information for lead partner: Iowa Soybean Association, 1255 SW Prairie Trail Parkway, Ankeny, Iowa 50023

Lead project subawardee: AgOutcomes Inc., (manager of the Soil and Water Outcomes Fund and subsidiary of the Iowa Soybean Association)

Contributing partners providing matching funds: PepsiCo, Cargill, Renewable Energy Group, Ingredion, Target, JBS, Coca-Cola

Groups supporting the project: Illinois Soybean, Ohio Soybean Council, Missouri Soybean Merchandising Council, Iowa Department of Agriculture, The Andersons, StoneX Financial, Simplot, Landus, Milborn Seeds, American Farmland Trust, Iowa Finance Authority, National Association of State Departments of Agriculture, The Seam

Underserved/minority-focused partners: A minority and underserved outreach contractor, FarmRaise, Rural Community Assistance Partnership

Compelling need for the project: Stimulating new climate-smart practice adoption at scale requires technical assistance and financial incentives that cover implementation costs, especially in early adoption years. Today, private markets for climate-smart corn, soy and wheat do not exist. Private markets for on-farm CO₂e inset credits typically only pay \$5-12 per acre – far below implementation costs of ~\$25-30+ per acre – and often require long-term contracts or purchase commitments for other products such as seed or fertilizer. Public conservation

programs can provide higher incentives but may include eligibility restrictions, limitations on acreage enrollment, or cost-share requirements. Public programs typically do not have access to matching corporate funding to extend impact across more acres with higher average farmer payments. The Program will pair USDA and private funding together to incentivize climate-smart adoption at scale with an average farmer payment of \$28.70 per acre. This assistance will help farmers transition to climate-smart practices that produce long-term soil health improvements, environmental benefits, and economic returns. A Soil Health Institute report showed long-term implementation of climate-smart practices increased net income by 85% for farmers growing corn and 88% growing soybeans¹. USDA funding for this program will also support the development and expansion of four distinct markets for climate-smart commodities and their environmental outcomes. Today, these markets are either emerging or conceptual. This program will address key barriers in these markets by deploying and refining the SWOF's turnkey, cost-effective farmer enrollment, contracting, quantification, and MRV platform while testing new approaches and technology for traceability and recordkeeping across supply chains.

Approach to minimize transaction costs: Four drivers will minimize transaction costs:

- The Program will utilize the SWOF's established tools, enrollment and data platform, and processes to scale farmer outreach, enrollment, payments, CO₂e quantification via COMET-Farm, and practice monitoring, reporting, and verification. These services have been used to deploy, quantify, and verify new climate-smart practices across 120,000 acres in multiple states. Because this infrastructure and processes have already been developed and tested at scale, the program will be able to minimize transaction costs and deploy over \$114.2 million directly to farmers.
- Outcomes-based contracts with farmers. This approach rewards farmers based on the metric tons of CO₂e reduced and removed as quantified by the COMET-Farm tool, thereby allocating dollars to practices that drive the greatest CO₂e outcomes.
- Participating partners' network of existing farmers will minimize farmer outreach costs.
- Secured commitments of over \$62 million from corporate partners to purchase verified CO₂e reductions from fields within their supply chain using newly adopted climate-smart practices. These commitments eliminate any transaction costs related to identifying and contracting buyers for climate-smart practice-related CO₂e outcomes.

Approach to reduce farmer barriers to implementing CSAF practices: The Program will provide direct payments to farmers to reduce barriers to enrollment and implementation of climate-smart practices. These payments will reflect the cost of practice changes and transition risks to the farmer and the value of the carbon emissions and other benefits to the supply chain. 50% of yearly payments will be provided upon contract signing to address upfront cost barriers associated with practice implementation. The Program will also provide agronomic and conservation support, including a dedicated agronomist for underserved farmers. Utilization of the SWOF's tested and proven farmer enrollment and data collection platform will reduce administrative barriers to adoption. The Program will not have minimum acre requirements or enrollment limitations. The Program will encourage participation with all farmers, including those who rent land, new farmers, smallholder farms, and farmers of color.

¹ "Economics of Soil Health On 100 Farms", Soil Health Institute, September 14, 2021

Geographic focus: The Program will target areas of Iowa, Illinois, Indiana, Ohio, Missouri, Kansas, Nebraska, South Dakota, North Dakota, Minnesota, Wisconsin, and Michigan where commodities are sourced for specific partner food and fuel supply chains and markets.

Project management capacity of partners: The Iowa Soybean Association has years of experience working with USDA grants and working directly with farmers to implement climate-smart agricultural practices. Most recently, Iowa Soybean Association and project partners have implemented an RCPP Alternative Fund Award project to create an outcomes-based climate and water quality program with farmers in Iowa, Illinois, and Ohio. This experience allowed the Program team to develop farmer onboarding procedures, technical assistance services, contracting and payment mechanisms, and quantification and verification approaches. Further, the RCPP project developed procedures to check USDA farmer eligibility and meet NEPA requirements, in addition to developing familiarity with USDA reimbursement and other systems. The group of partners for this Program have experience purchasing and processing commodities and tracking GHG intensities through internal mass-balance approaches. Other participating partners have direct connections with farmers through member, customer, or other types of farmer relationships. The Iowa Soybean Association intends to contract with AgOutcomes (manager of the Soil and Water Outcomes Fund) to manage farmer payments, quantification, MRV, and CO₂e transactions with partners.

II. Project Plan

Introduction: The Program seeks to build upon successful 2020-22 pilot projects to scale climate-smart practice implementation across a cumulative 3.8 million acres over five years.

CSAF practices deployed: Based on our experience, farmers will have the option to implement the following climate-smart practices: no-till (NRCS standard 329), reduced tillage (NRCS standard 345), cover crops (NRCS standard 340), nutrient management (NRCS standard 590), diverse crop rotations (NRCS standard 328), and pasture and hayland planting (512). These practices are all approved NRCS practices, and farmer contracts will specify that practices must follow NRCS practice standards.

Plan to recruit: Multiple recruitment pathways will secure farmer engagement:

1. Partner direct promotion: Commodity purchasers Cargill, The Andersons, and Ingredion will work with the SWOF to reach farmers in key geographies and supply chains. The Soil and Water Outcomes Fund will conduct outreach in Iowa, Illinois, Ohio, Missouri, and Indiana through its existing network of farmers supported by its agronomy team.
2. Affiliated recruiters: The SWOF's network of affiliated recruiters will identify and enroll farmers. Recruiters include national and regional ag retailers and cooperatives, commodity associations, certified crop advisors, individual farmers, and others.
3. Targeted marketing: A marketing campaign will reach farmers in eligible geographies and include an emphasis on targeting historically underserved farmers.
4. Commodity associations: Partner commodity associations have committed to promoting the enrollment opportunity to farmer members.

5. Historically underserved farmer outreach: Program partners, specifically those with connections to historically underserved farmers, have committed to promote enrollment and outreach to underserved farmers in their networks. See additional information in the “Plan for Enrolling Underserved Farmers” section.

Table 1: Forecasted Acres, CO₂e Metric Tons, and Farmers

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Early adopter acres	155,000	155,000	155,000	155,000	155,000	775,000
Additional acres with new climate-smart practices per year	155,000	240,182	240,182	240,182	96,073	3,425,000
Total acres under contract	310,000	550,182	790,364	1,030,547	1,126,620	3,807,713
Estimated metric tons of CO₂e reduced of removed	186,000-232,500	330,109-412,637	474,219-592,773	618,328-772,910	675,982-844,965	2,284,628-2,855,785
Total farmer contracts (est)	310-620	550-1,110	790-1,581	1,031-2,061	1,127-2,253	1,127-2,253
Historically underserved farmer contracts (est)	62-124	112-224	220-440	220-440	220-440	220-440

Plan for technical assistance: The Program will utilize a network of on-staff conservation agronomists to provide technical assistance to farmers before, during, and after enrollment. The conservation agronomists have backgrounds in either conservation, agronomy, or a related field and interface with farmers on the farm to help implement the climate-smart practices and address questions or issues that arise with the management of the practices. The conservation agronomists also interface with USDA-NRCS to develop environmental assessments to meet NEPA requirements and check farmer highly erodible land and wetland compliance status to ensure eligibility. The Program will also have a conservation agronomist on staff dedicated to working with historically underserved farmers. The network of conservation agronomists will expand to 16 to provide sound technical assistance to farmers.

Plan to provide financial assistance: The Program will build upon an existing, proven model (via the Soil and Water Outcomes Fund) to deploy financial assistance to farmers and secure reimbursement from public and private partners. The Program will provide farmers a forecasted \$114.2 million or \$40.00 per metric ton of CO₂e on average, with ~47% of payments supported by USDA’s climate-smart funding and ~53% of payments supported by partners.

The process for providing farmer financial assistance is as follows:

1. Farmer enrolls via the SWOF website (theoutcomesfund.com) or by working directly with a conservation agronomist or recruiting partner. The farmer provides field boundaries and operational data, including climate-smart conservation practice information.
2. Farmer data is sent to an environmental outcome quantification contractor. This contractor will run the COMET-Farm and Nutrient Tracking Tool models to determine the environmental outcomes resulting from new climate-smart practices.
3. The SWOF provides the farmer with an outcomes-based payment estimate determined by the volume of CO₂e reductions and removals estimated by COMET-Farm. The farmer’s payment per metric ton of CO₂e will be \$40.

4. Farmers who accept the payment estimate will enter into a contract that sets the terms for participation, including fields under contract and specific climate-smart practices implementation details. The contract also details NRCS practice specifications, prohibits enrollment in other conservation or carbon programs, and specifies the transfer of ownership of environmental outcomes.
5. The SWOF provides half of the yearly outcome-based contract payment within two weeks of contract signing to support the implementation of climate-smart practices. Farmers can choose to receive payment via overnight check or direct deposit. This upfront payment addresses a major barrier to entry for underserved farmers who may lack the financial resources to fund upfront costs for climate-smart practice implementation.
6. The SWOF conducts sampling and verification (described in the “Measurement, Recording, and Verification” section); once complete, the farmers receive the second half of their payment. If farmers are non-compliant, fields are rejected, or the contracts are amended to account for changes found during the verification process.
7. The Program will seek reimbursement from USDA once all yearly outcomes are verified. Partners, specifically those who agreed to purchase CO₂e insets, will provide payment for the CO₂e outcomes within their market supply chain geography.

Table 2: Financial Assistance and Average Payment Rates

	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Early adopter farmer payments	\$4,650,000	4,650,000	\$4,650,000	\$4,650,000	\$4,650,000	\$23,250,000
Farmer payments for new climate smart practices	\$4,650,000	\$11,855,467	\$19,060,934	\$26,266,402	\$29,148,589	\$90,981,392
Total forecasted farmer payments	\$9,300,000	\$16,505,467	\$23,710,934	\$30,916,402	\$33,789,589	\$114,231,392
Average farmer payment per acre	\$30	\$30	\$30	\$30	\$30	\$30
Average farmer payment per MT of CO₂e	\$40	\$40	\$40	\$40	\$40	\$40
Average USDA payment per CO₂e metric ton	\$20.27	\$20.27	\$20.27	\$20.27	\$20.27	\$20.27

Plan to support early adopters: Early adopter determination will be made at the field level. Fields in the early adopter pool will not be allowed to concurrently enroll in a USDA contract for conservation practices. Also, fields enrolled in the early adopter pool must be beyond the practice lifespan of prior USDA contracted practices. The greenhouse gas reductions and removals will be calculated by comparing field operations *with* climate-smart practices to field operations *without* climate-smart practices. The resulting climate-smart commodities are valued and used by the project matching partners. If the project cannot incentivize the production of climate-smart commodities on these 155,000 early adopter acres, there is a high likelihood of increasing emissions. These acres will also provide significant ongoing data collection and MRV value for the project, USDA and partners.

Plan to enroll and provide financial assistance to underserved and small producers: The SWOF approach, which will be utilized in the Program, was intentionally designed in close collaboration with farmers to address common barriers and transition risks related to the adoption of climate-smart practices and to work for farms of all scales and economic background, regardless of land ownership. This flexible and non-prescriptive approach that includes free and ongoing agronomic support from professional SWOF conservation agronomists, free MRV/soil/water sampling, and guaranteed timely payments based on verified practices. These factors have been instrumental for engagement with younger and smaller farmers; of the acres currently enrolled in the SWOF, 20% are on farms smaller than 400 acres, and 33% are operated by farmers younger than 45.

Building on this solid foundation, the program will partner with its commodity association partners, a minority and underserved outreach contractor, Rural Community Assistance Partnership (RCAP), and others to engage beginning farmers, historically underserved farmers, veteran farmers, low-income farmers, and women farmers. Specifically, the minority and underserved outreach contractor will develop a custom outreach plan and bilingual materials for Hispanic farmers. FarmRaise will use its network, technology, and experience to enroll underserved farmers, including new and beginning farmers. Commodity association and retailer partners will develop outreach and communication plans for their farmer networks, which include veterans, women, and other underserved farmers. RCAP will provide data and research on vulnerable rural, low-income, tribal communities, and communities of color who can benefit most from climate-smart practices. RCAP will also support outreach to low-income and farmers of color who have not traditionally accessed benefits from USDA or federal programs.

To ensure the program addresses the needs of historically underserved farmers, the Program will:

1. Target and dedicate 20% of all yearly contracts to underserved farmers (a higher percentage than recent EQIP participation rates by underserved farmers). See Table 1 for the forecasted number of underserved farmer contracts.
2. Dedicate a full-time conservation agronomist to assist historically underserved farmers.
3. Work with partners to reduce barriers to enrollment by:
 - a. Developing custom outreach and engagement strategies;
 - b. Raising awareness among farmers about ecosystem service market opportunities;
 - c. Providing alternative enrollment pathways for underserved farmers, including paper enrollment forms and meetings with the conservation agronomist;
 - d. Administering upfront payments to ensure these farmers have the funds necessary to implement climate-smart practices.
4. Work with and support other USDA funded climate-smart projects that focus on historically underserved farmers.
5. Include representation of historically underserved farmers in the Program Advisory Council, which will be developed to guide and support strategy and implementation.

III. Monitoring, Reporting, and Verification

Introduction: The Midwest Climate Smart Commodity Program will engage and expand the SWOF's comprehensive monitoring, reporting, and verification (MRV) program, developed and perfected using real-world data from 120,000 acres across several states over the past two years. Using this existing infrastructure and operating model will help to speed project implementation, minimize transaction costs, and maximize farmer payments.

Approach to GHG quantification: The Program will use a quantification methodology that will be deployed by a environmental outcome quantification contractor.). The Program will use the following steps for GHG quantification:

1. **Field data collection.** Demographic, farm, field, and operational data will be collected from farmers wishing to enroll. The SWOF data management system interfaces with farm data management systems via Leaf (withleaf.io) to connect to commonly used farm data management systems – however, data can also be entered directly into the enrollment system. Necessary data includes field boundaries, fertilizer applications, tillage applications, field drainage structures, manure applications, harvest dates, and other operational data. The data is validated using a series of internal checks to ensure it falls within expected ranges. Farm Service Agency farm and tract numbers are also collected to meet USDA reporting requirements.
2. **Outcome quantification:** A data application programming interface will allow for the seamless transfer of data to the environmental outcome quantification contractor. The baseline and future farm operational data are combined with multiple years of historical “spin-up” data to establish a baseline for predicting changes associated with new conservation practices. USDA-NASS Cropland Data Layers (CDL) and USDA Crop Management Zone (CMZ) operations templates are used for parameterizing the COMET-Farm model for years prior to the farmer-provided data. Average annual CO₂e estimates are calculated based on a 10-year projection from the year the conservation practice was implemented. The CO₂e estimates are calculated by comparing baseline fluxes to those corresponding with simulation years following the conservation practice intervention and account for nitrous oxide reductions and soil carbon sequestration. This process can also quantify the water quality benefits, specifically nitrogen, phosphorus, and sediment reductions. The quantification process typically takes less than 48 hours.

Approach to monitoring: See Project Plan section, Table 1, for the anticipated number of farmer contracts and acres. Monitoring for this project will include the following components:

1. **Remote sensing:** The SWOF currently uses remotely sensed products from the USDA to backfill field-level cropping system data beyond what is provided by farmers during the enrollment process. An imagery service provider will be selected to complement USDA data to provide field boundary detection technology, further streamline the farmer enrollment process and conduct field-by-field climate-smart practice verification. The remote sensing partner will blend radar, satellite observations with models, and deep learning with on-the-ground training data to verify crop rotations, cover crops, and tillage practices. Verification results from remote sensing will prioritize fields for ground-based

field inspections. Remote sensing verification will be used on 50% of contracted acres starting in year 2.

2. **Field inspections:** Staff from the SWOF will visit 100% of fields to document crop type, tillage, residue levels, presence of cover crops, and other information. Field visits will occur in the fall or spring of each year when conservation practices such as cover crops and no-till are visible. Photos and field notes are taken during the inspections, and all data is stored in the SWOF data management system and tied to each field's record.
3. **Farmer operational records:** The farmer contract requires the retention of paper or electronic records of planned and actual farming practices, which the SWOF can request to ensure contract compliance.
4. **Field audits:** If contract-required conservation practices are not observed during field inspections, the SWOF will request proof of practice, including receipts, invoices, as-applied data, or other information.
5. **Soil sampling:** Soil sampling will be conducted on 10% of enrolled fields every year, and the sampling is repeated every five years. The fields selected for sampling are chosen at random using a GIS tool. Results of soil sampling are used to supplement and ground truth modeled soil carbon accumulation data and reduce uncertainty in modeled results in the long term. The soil sampling results will NOT be used to adjust the outcome transactions with SWOF partners and customers. Details of the soil sampling program are:
 - a. **Site selection:** Three soil sampling areas, one area in each of the three predominant soil types, will be selected in each field designated for soil organic carbon (SOC) verification. If there are less than three soil types in a field, the number of sampling locations will match the number of soil types. A GIS script is used to position soil sampling areas at the centroid of each soil type. A GPS-enabled data collector application will be used to navigate to 20 by 20-foot sampling areas.
 - b. **SOC sample collection:** A composite sample of 12 individual soil cores, positioned within the 20-foot square soil sampling area, are collected from a depth of zero to 12 inches, a depth controlled by a soil probe. Sample collection will avoid fields that have been recently fertilized or applied with manure, surface residues, and compacted, eroded, and other non-typical areas. The composite soil samples will be shipped to certified labs for analysis.
 - c. **Bulk density sample collection:** Soil bulk density samples will be collected using a 2-inch diameter by a 6-inch-long metal cylinder near where soil organic carbon samples are taken. The samples extracted from the cylinder will be taken, weighted, and dried in a laboratory oven and re-weighted again to estimate volumetric soil moisture content. All estimates of soil bulk density will be based on the dry soil and the specific volume of the cylinder used.
 - d. **Frequency of soil sampling:** Collection of soil samples for soil organic carbon and soil bulk density will be conducted every five years from the same sampling areas and during the same time of year to ensure consistency. Ten percent (10%) of the enrolled fields will be selected for soil organic carbon and soil bulk density on a rolling basis.

Approach to reporting and tracking GHG benefits: The Program will use an approach developed by the SWOF that accounts for and tracks both emission reductions and soil carbon sequestration separately at the field level. This data can be reported separately or in aggregate as a total CO₂e. Once the GHG outcomes have been quantified and verified, they are reported and tracked using the following methodology:

1. **Internal ledger assignment:** All CO₂e and water quality outcomes are associated with specific farmer contracts and unique field identifiers within the SWOF data system, allowing for internal and external data audits down to the field level. Once yearly quantification, monitoring and verification, and outcomes assignment are completed, the data is locked, and no further changes can be made, preventing any double counting and double selling of environmental outcomes. The ledger assignment also ensures the GHG outcomes and associated CO₂e insets are assigned to corporate partners.
2. **Buffer pools:** The SWOF system will assign annual buffer pools to the CO₂e and water quality outcomes to account for reversals from fields under contract. The CO₂e buffer pool will be 10% of all outcomes, and the water quality buffer is variable based on upper limits for water quality improvements. These outcomes are not sold or reported to partners.
3. **Reporting:** The SWOF will provide a field-by-field report of CO₂e and water quality improvements to USDA and other Program partners once a year. The reports will be the official transfer of ownership of the CO₂e and water quality outcomes from the farmer. It should be noted that USDA will not be acquiring ownership of the environmental outcomes but instead supporting the development of the outcomes for the Scope 3 inset market associated with commodity transaction and use.

Table 3: Estimated GHG Benefits

GHG Benefits per Acre	~0.60-0.75 metric tons of CO ₂ e
GHG Benefits per 500-acre Farm	~300-375 metric tons of CO ₂ e
GHG Benefits for Program	~2,570,206-2,855,785 metric tons of CO ₂ e
GHG Benefits per Commodity – Corn	~1,380,197 metric tons of CO ₂ e
GHG Benefits per Commodity – Soybeans	~1,403,519 metric tons of CO ₂ e
GHG Benefits per Commodity – Wheat	~72,068 metric tons of CO ₂ e
Longevity of GHG Benefits	TBD beyond project scope based on partner commitments and farmer continuation.

Approach to GHG verification: The Program will use the robust monitoring and reporting system developed by the SWOF and its public and private partners, provided at no cost to enrolled farmers. The Program will produce a quality GHG inset credit by ensuring the following:

1. **Additionality:** The GHG reduction would not have occurred if the cropland system had operated under “business-as-usual” land management and not implemented the specific intervention for which the credit is being issued. Additionality will be determined at the field level when the farmer first enrolls. Conservation agronomists will work with farmers to ensure practices meet additionality requirements.

- 2. Verification of intervention:** Implementation of agricultural land management interventions for which inset credits are produced will be verified using a standardized process involving field visits, photos, receipts and documentation, and remote sensing.

Agreement to participate in partnerships network: The Iowa Soybean Association, AgOutcomes and the assembled partnership agree to assign a participant to the Climate-Smart Partnerships Network. Additionally, this proposal will support the establishment of a Program Advisory Council. The Advisory Council will guide new MRV processes, review existing data collection and analysis protocols, and include membership that reflects relevant experience, inclusivity, and diversity.

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

The Midwest Climate Smart Commodity Program is estimated to generate an estimated 363 million bushels of corn, 111 million bushels of soybeans, and 7.5 million bushels of wheat produced with climate-smart practices – commodities valued at over \$3.8 billion.² These commodities will develop and fuel the expansion of three markets tied to climate-smart commodity production and their resulting environmental benefits.

Market 1: Scope 3 Emission Reduction Insets

The Program will develop and expand systems for a large-scale corporate inset market, including farmer enrollment, CO₂e quantification, inset verification, reporting and inset tracking. The program has secured commitments from PepsiCo, Cargill, Target, Ingredion, REG, Coca-Cola, and JBS to purchase verified CO₂e reductions and removals of \$62.1 million over the five-year program. Additional supply chain partners have expressed interest in participating as CO₂e inset buyers.

Market scalability: Corporate demand for on-farm carbon reductions generated by climate-smart practices is a fast-growing market driven by carbon reduction commitments and increasing recognition of climate change impacts on farm resiliency and long-term soil health. The market size for companies seeking to reduce their CO₂e footprint is estimated at \$5.2 billion³, of which Scope 3 insets represent a material share.

Likelihood of long-term viability: Long-term market viability is high due to increasing demand from Scope 3 commitments and investments in supply chain resiliency. Viability requires tools, systems, and data that align corporate demand with farmer interest, document verified CO₂e reductions at the field level, reduce administrative barriers, and minimize transaction costs. The Program will build and scale the infrastructure developed by the SWOF to support this market growth and increase farmer access to a new revenue stream.

Ability to inform future USDA actions: The Program will provide valuable insights to policymakers related to technical assistance, refinement of quantification models for CO₂e and other co-benefits, creation of climate-smart standards or certification guidelines, and enhancements to existing conservation programs to facilitate greater adoption of climate-smart

² Estimates based on USDA National Agricultural Statistics Services state production and market data from 2021.

³ “Economic Assessment for Ecosystem Service Market Credits from Agricultural Working Lands” Oct 2018

practices. USDA will receive quantitative data related to CO₂e reductions and removals at the field level for practice adoption, indirect economic benefits such as fuel savings and lower input costs, payment amounts, practice compliance rates, and soil and water sampling results.

Ability to help farmers realize greater market returns: Facilitating farmer access to the Scope 3 emission markets can increase market returns by \$10-15 per acre, given current CO₂e pricing for Scope 3 insets. This pricing will likely increase due to growing corporate commitments and competition for farmer CO₂e outcomes given overlapping supply sheds. The Program will pair USDA funding with CO₂e inset purchases to support an average payment of \$30 per acre, which will help cover practice implementation costs. This Program will support sustainable market access and returns by scaling the infrastructure that provides farmers with an easy, cost-free tool to monetize climate-smart commodities and their environmental benefits.

Market 2: Water Quality Outcomes and Credits Generated by Climate-Smart Practices

Climate-smart practices produce water quality co-benefits for upstream and downstream communities by reducing nitrogen and phosphorus runoff—co-benefits that have significant value to governments and corporations. The SWOF is a leader in working with farmers, corporations, municipalities, state agencies, and the USDA to support verified nitrogen and phosphorus runoff reductions produced by new climate-smart practices. Since 2020, the SWOF has secured >\$15 million in contracts from Iowa municipalities using verified outcomes to meet NPDES permits; state agencies using verified outcomes to address voluntary nutrient management strategies; the USDA through the RCPP-AFA program; and corporations seeking holistic environmental resiliency improvements in priority watersheds. The Program will quantify and verify nitrogen and phosphorus runoff reductions using the USDA-supported Nutrient Tracking Tool and pursue additional water quality commitments to increase the total USDA match and extend the number of acres available for enrollment.

Market scalability: The combined value of nitrogen and phosphorous water quality credits is estimated at \$8.7 billion⁴ driven by regulatory and voluntary programs to address nonpoint source runoff pollution. Recent federal legislation and state programs have increased funding available for water quality improvements. For example, programs and new funding related to this proposal's target geography include 2021's Infrastructure Investment and Jobs Act, which allocated \$1 billion to the Great Lakes Restoration Initiative, \$53 million to the Gulf of Mexico, and \$60 million to the Gulf Hypoxia Action Plan, and \$100 million from Iowa's allocation of American Rescue Plan Act fund.

Likelihood of long-term viability beyond project period: The long-term viability for water quality credits from new climate-smart practices is growing due to the increased interest and application of "pay-for-outcomes" projects and improved data, measurement, and infrastructure required to execute such programs. The Program's proposed system is more cost-effective than existing grant, cost-share, and pay-for-practice water programs, is easier to implement for partners, allows dollars to be directed to key watersheds, and generates field-level data on practice adoption and nitrogen and phosphorus reductions. The Program will seek ways to

⁴ "Economic Assessment for Ecosystem Service Market Credits from Agricultural Working Lands" Oct 2018

improve this existing system, secure new funding allocations for verified nitrogen and phosphorus reductions, and provide farmers with a platform to access water quality dollars.

Ability to inform future USDA actions: The Program will develop data and other information that will help inform USDA as it looks to facilitate water quality improvements in key watersheds and resolve water quality-related issues affecting and caused by agriculture. The Program will provide USDA with verified pounds of nitrogen and phosphorus reductions at the field level with corresponding baseline and new climate-smart practice adoption. The information and insights from this project could inform how USDA allocates funding for conservation practices and climate-smart practice adoption (e.g., expansion of a pay-for-outcomes RCPP-AFA program), pricing required to incentivize farmer enrollment at scale while containing costs, research needs, and future collaboration with EPA in supporting farmer adoption of climate-smart practices for water quality benefits.

Ability to help farmers realize greater market returns: The Program will help farmers access water quality markets by quantifying and verifying nitrogen and phosphorus reductions and matching water quality buyers (public and private) with farmers in priority watersheds. Pairing water quality dollars with CO₂e inset revenue can increase farmer returns from \$5-12 per acre for CO₂e only to >\$30 per acre for CO₂e and water quality. In 2021, the average farmer enrolled in the SWOF program earned over \$31 per acre. This payment level helps farmers cover implementation costs and funds the transition to better soil health and long-term net income gains of \$40-50 per acre driven by lower input costs and higher yields⁵.

Market 3: Climate-Smart Commodities for Biofuel Production

The Program will work with partner Renewable Energy Group (REG), the largest producer of biomass-based diesel in the United States, to test the production of CO₂e insets from feedstock draw areas for three production facilities. This partnership will allow for the exploration of connecting climate-smart commodities to renewable fuel markets.

Biofuels have the potential to be a key market for climate-smart commodities. For hard-to-decarbonize, liquid-fuel dependent sectors such as long-haul trucking, marine, aviation, and farm and construction equipment, biofuels can significantly reduce emissions immediately and well into the future. Many of the models used for biofuels contain substantial emissions at the farm level—as plants have become more efficient and innovative, reductions at the farm level are now the place to achieve substantial emissions reductions. The European Union’s Renewable Energy Directive (RED) rewards biofuels made from climate-smart commodities. Crops produced on acres enrolled in the Program would be eligible for the RED incentives, creating additional value for farmers. The California Low Carbon Fuel Standard (LCFS) includes incentives for emissions reductions within some portions of the biofuels supply chain, but it does not currently recognize or distinguish feedstocks based on production practices.

⁵ “Economics of Soil Health On 100 Farms”, Soil Health Institute, Sept 14, 2021

Market scalability: The global biofuels market in 2021 was valued at ~\$110 billion and is projected to grow to ~\$201 billion by 2030⁶. Growth is driven by regulatory and voluntary markets for renewable fuel and environmentally friendly energy sources. Today, the demand for biofuels is significantly greater than the supply. Even with breakthroughs in feedstock technologies, biofuel demand will likely continue to outstrip supply. Facilitating access to the biofuel market for climate-smart commodities represents a new and scalable market that can generate significant and sustainable demand.

Likelihood of long-term viability beyond project period: Global demand for biofuels is set to grow by 28% by 2026, according to the International Energy Agency. Governments and consumers are invested in ensuring the supply has lower emissions than the fuels it will replace. The Program's data, systems, and market framework will lay the groundwork for the long-term engagement between climate-smart commodities farmers and biofuels producers to best serve consumers and regulatory markets.

Ability to inform future USDA actions: Biofuels are a long-term, value-added market for U.S. crops. Developing systems and markets within biofuels for climate-smart commodities will be key for U.S. farmers, who will look to USDA for guidance. The data and information developed by the Program will be critical to informing farmers and USDA as the demand for climate-smart biofuels feedstocks grows. A continued focus on the market signals and relative cost of decarbonization can guide current and future regulatory processes to make it easier and more cost-effective to produce climate-smart commodities.

Ability to help farmers realize greater market returns: Incorporating climate-smart commodity feedstocks within the biofuels supply chain is a requirement for market access that generates market returns for climate-smart commodities. This Program will lay the groundwork for using climate-smart feedstocks for biofuels in two ways. First, through the use of COMET-Farm and GREET, the Program will document CO₂e reductions and removals associated with the production of climate-friendly commodities. This will allow biofuel producers to document greater Scope 3 emission reductions. This will create value for farmers through the CO₂e inset market of biofuel producers that is separate from and stacked on top of the added value from biofuel demand. Secondly, the Program will develop data and information for biofuel producers to engage in current and future RED markets and assist with a potential framework for the California LCFS marketplace and other emerging regulatory markets (e.g., Midwest Clean Fuel Policy) to account for farm based CO₂e reductions and removals. This approach will further incent the production of climate-smart commodities for biofuels and position farmers for long-term engagement with biofuel producers.

⁶ "Biofuels Market Size, Share & Growth Analysis Report, By Fuel Type (Biodiesel and Ethanol), By Feedstock (Coarse Grain, Sugar Crop, Vegetable Oil, Jatropha, Molasses) - Global Industry Analysis, Trends, Revenue, Segment Forecasts, Regional Outlook 2021 – 2030", Precedence Research

Milestone	Category	Measured By	Y1Q1	Y1Q2	Y1Q3	Y1Q4	Y2Q1	Y2Q2	Y2Q3	Y2Q4	Y3Q1	Y3Q2	Y3Q3	Y3Q4	Y4Q1	Y4Q2	Y4Q3	Y4Q4	Y5Q1	Y5Q2	Y5Q3	Y5Q4
Number of commodity marketing channels utilized during quarter	Commodity Marketing	Number of climate smart commodity marketing channels used during quarter	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3	3
Number of producer outreach and marketing channels utilized during quarter	Marketing	Number of outreach marketing channels used during quarter	4	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
Yearly cumulative number of producer impressions via project leads and project partners	Marketing	Yearly cumulative number of producer impressions via marketing channels	1,453	2,906	4,359	5,813	2,579	5,158	7,737	10,316	3,705	7,410	11,114	14,819	4,831	9,661	14,492	19,323	5,276	10,553	15,829	21,105
Producer survey conducted	Marketing	Once a year survey conducted with contracted producers.	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1	0	0	0	1
Number of conservation agronomists working on project and engaging producers	Project Admin	Conservation agronomist FTEs working to enroll producers	5	5	5	10	10	10	10	13	13	13	13	14	14	14	14	14	14	14	14	14
April 1st completion date for producer contract template	Enrollment	Completion of a customized farmer contract for Climate Smart program	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA
April 1st completion date for producer enrollment platform	Enrollment	Completion of the customized enrollment platform and USDA dashboards	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA

April 1st target date to open producer enrollment yearly	Enrollment	Date when enrollment open annually	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA	1	NA	NA	NA
Yearly cumulative number of producer accounts within the enrollment platform	Enrollment	Number of producer accounts	194	484	484	484	344	860	860	860	494	1,235	1,235	1,235	644	1,610	1,610	1,610	704	1,759	1,759	1,759
Yearly cumulative number of underserved producer accounts within the SWOF digital platform	Enrollment	Number of underserved producers user accounts meeting underserved producer definition.	39	97	97	97	69	172	172	172	99	247	247	247	129	322	322	322	141	352	352	352
Percent of acres enrolled via recruiters	Enrollment	Acres recruited	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%	40%
Percent of producers providing compliance documents	Enrollment	Percent of producers will eligibility determinations	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%	25%	50%	75%	100%
Yearly cumulative acres under contract	Contracts	Number of acres under contract	77,500	155,000	232,500	310,000	137,546	275,091	412,637	550,182	197,591	395,182	592,773	790,364	257,637	515,274	772,910	1,030,547	281,405	562,810	844,215	1,125,620
Yearly cumulative early adopter acres under contract	Contracts	Number of early adopter acres under contract	38,750	77,500	116,250	155,000	38,750	77,500	116,250	155,000	38,750	77,500	116,250	155,000	38,750	77,500	116,250	155,000	38,750	77,500	116,250	155,000
Yearly cumulative total producer contracts	Contracts	Number of contracts	97	194	291	388	172	344	516	688	247	494	741	988	322	644	966	1,288	352	704	1,055	1,407
Yearly cumulative total underserved producer contracts	Contracts	Number of contracts with underserved producers	23	47	70	93	42	84	224	168	83	165	248	330	83	165	248	330	83	165	248	330
Percent of contracts with underserved producers	Contracts	Percent of contracts with underserved producers	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%	20%

Yearly cumulative fields under contract	Contracts	Number of fields	969	1,938	2,906	3,875	1,719	3,439	5,158	6,877	2,470	4,940	7,410	9,880	3,220	6,441	9,661	12,882	3,518	7,035	10,553	14,070
Annual CO2e reductions and removals	Outcomes	Metric tons of CO2e outcomes produced (reductions and removals)	NA	NA	NA	209,250	NA	NA	NA	371,373	NA	NA	NA	533,496	NA	NA	NA	695,619	NA	NA	NA	759,794
Water quality outcomes (nitrogen)	Outcomes	Pounds of water quality outcomes (nitrogen)	NA	NA	NA	4,340,000	NA	NA	NA	7,702,548	NA	NA	NA	11,065,096	NA	NA	NA	14,427,658	NA	NA	NA	15,758,680
Water quality outcomes (phosphorus)	Outcomes	Pounds of water quality outcomes (phosphorus)	NA	NA	NA	310,000	NA	NA	NA	550,182	NA	NA	NA	790,364	NA	NA	NA	1,030,547	NA	NA	NA	1,125,620
Measurement tools utilized	MRV	Number of measurement tools utilized during the quarter	3	4	5	6	3	4	5	7	3	4	5	7	3	4	5	7	3	4	5	7
Percent of fields with remote sensing verification	MRV	Percent of contracted fields analyzed	0%	0%	0%	0%	0%	0%	0%	50%	0%	0%	0%	50%	0%	0%	0%	50%	0%	0%	0%	50%
Percent of fields with soil samples collected and analyzed	MRV	Number of field with soil samples collected and analyzed	0%	0%	0%	10%	0%	0%	0%	10%	0%	0%	0%	10%	0%	0%	0%	10%	0%	0%	0%	10%
Percent of fields visited to verify practice compliance	MRV	Percent of fields visited	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%	0%	0%	0%	100%
USDA sourced producer payments made during prior year	Producer payment	Payment amount to producers	NA	NA	NA	\$ 4,241,048	NA	NA	NA	\$ 7,526,934	NA	NA	NA	\$ 10,812,819	NA	NA	NA	\$ 14,098,705	NA	NA	NA	\$ 15,413,059
Partner sourced producer payments made during prior year	Producer payment	Payment amount to producers	NA	NA	NA	\$ 5,058,952	NA	NA	NA	\$ 8,978,533	NA	NA	NA	\$ 12,898,115	NA	NA	NA	\$ 16,817,697	NA	NA	NA	\$ 18,385,530

Climate-Smart Practices and Limitations

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

NRCS Practice Code (if applicable)	Practice Name
329	Residue and Tillage Management, No-Till
345	Residue and Tillage Management, Reduced Till
340	Cover Crop
590	Nutrient Management
328	Conservation Crop Rotation
512	Pasture and Hay Planting



Partnerships for
Climate-Smart
Commodities
Data Dictionary
for Recipients
February 2023
Version 1.0

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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."

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 (CO ₂ e) emission reductions	Quarterly
Cumulative carbon stock	Whole project estimate of total carbon sequestration	Quarterly
Cumulative CO ₂ benefit	Whole project estimate of total CO ₂ emission reductions	Quarterly
Cumulative CH ₄ benefit	Whole project estimate of total CH ₄ emission reductions	Quarterly
Cumulative N ₂ O benefit	Whole project estimate of total N ₂ O 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


Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
 February 2023
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 <i>Marketing Activities</i> worksheet (Table 3) as part of the quarterly performance report.	
Data type: List	Select multiple values: No
Measurement unit: Category	Allowed values: <ul style="list-style-type: none"> • 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 <i>Producer Enrollment</i> and <i>Field Enrollment</i> worksheets (Tables 4 and 5) as part of the quarterly performance report.	
Data type: List	Select multiple values: No
Measurement unit: Category	Allowed values: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 (CO ₂ eq) 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 ₂ eq	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 ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons CO ₂ eq	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 CO ₂ benefit	Reporting question: What are the project's estimated total cumulative CO ₂ 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 CH ₄ benefit	Reporting question: What are the project's estimated total CH ₄ 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 ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons CH ₄ reduced in CO ₂ eq	Allowed values: 0-10,000,000
Logic: None – all respond	Required: Yes
Data collection level: Project	Data collection frequency: Quarterly

Cumulative N2O 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 ₂ O = 298 tons of CO ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons N2O reduced in CO ₂ eq	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 ₂ eq	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 ₂ eq	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: <ul style="list-style-type: none"> • 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


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

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

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:
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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

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

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: <ul style="list-style-type: none"> • 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 (RCP), or related programs), the Farm Service Agency Conservation Reserve Program (CRP), as well as funds from other USDA programs or other federal agencies.

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment

CSAF state or local funds

Data element name: CSAF state or local funds**Reporting question:** Were prior CSAF practices supported by state or local funds?

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment

CSAF nonprofit funds

Data element name: CSAF nonprofit funds**Reporting question:** Were CSAF practices supported by nonprofit funds?

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment



CSAF market incentives

Data element name: CSAF market incentives **Reporting question:** Were CSAF practices supported by market incentives?

Description: If this farm (under the primary operator) has implemented CSAF practices in the last ten years, was implementation supported by market incentives? Market incentives include premiums paid by a commodity buyer or by a consumer based on branding or labeling as a climate-smart commodity.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

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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

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

Measurement unit: Category

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

Select multiple values: No

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

Required: Yes

Logic: None – all respond

Data collection level: Field

Data collection frequency: Initial enrollment

Field any CSAF practice

Data element name: Field any CSAF practice

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

Measurement unit: Category

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

Select multiple values: No

Allowed values:

- Yes
- No
- I don't know

Required: Yes

Logic: None – all respond

Data collection level: Field

Data collection frequency: Initial enrollment

Practice past use - this field

Data element name: Practice past use - 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

Measurement unit: Category

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

Select multiple values: No

Allowed values:

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

Required: Yes

Logic: None – all respond

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.

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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:
	<ul style="list-style-type: none"> • 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:
	<ul style="list-style-type: none"> • 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:
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 <i>Supplemental Data Submission – Field direct GHG measurement results</i>).	
Data type: List	Select multiple values: No
Measurement unit: Category	Allowed values: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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 (CO ₂ eq) 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 ₂ eq	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 ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons CO ₂ eq	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 ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons CH4 reduced in CO ₂ eq	Allowed values: 0-10,000,000
Logic: None – all respond	Required: Yes
Data collection level: Field	Data collection frequency: Quarterly

Field official N2O 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 ₂ O = 298 tons of CO ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons N2O reduced in CO ₂ eq	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 ₂ eq	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 CO₂eq

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 ₂ eq	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 ₂ eq.	
Data type: Decimal	Select multiple values: No
Measurement unit: Metric tons CO ₂ eq	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 CO ₂ estimated	Reporting question: What is the alternate estimate of the field's total CO ₂ 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 CH₄ = 25 tons of CO₂eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO₂eq

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 N2O 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 N₂O = 298 tons of CO₂eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO₂eq

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**Measurement unit:** Category**Select multiple values:** No**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)

Required: If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Logic:** None – all respond**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 CO₂**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 CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons CO₂eq**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 CH₄ = 25 tons of CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons CH4 reduced in CO₂eq**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 N2O 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 N₂O = 298 tons of CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons N2O reduced in CO₂eq**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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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:
	<ul style="list-style-type: none"> • 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:
	<ul style="list-style-type: none"> • 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:
	<ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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: <ul style="list-style-type: none"> • 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

<p>Data element name: Other water quality purpose</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Other water quality’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the purpose of tracking other water quality benefits?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Water quantity

<p>Data element name: Water quantity</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Environmental benefits’</p> <p>Data collection level: Field</p>	<p>Reporting question: Is water conservation being tracked in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don’t know <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Water quantity amount

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

<p>Data element name: Water quantity amount unit</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Water quantity’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the unit for the amount of water conservation measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Acre-feet • Cubic feet • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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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

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

Measurement unit: Category

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

Select multiple values: No

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

Measurement unit: Category

Select multiple values: No

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

Measurement unit: Amount

Select multiple values: No

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

Measurement unit: Category

Select multiple values: No

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

<p>Data element name: Reduced energy use purpose</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Reduced energy use’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the purpose of tracking reduced energy use in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Avoided land conversion

<p>Data element name: Avoided land conversion</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Environmental benefits’</p> <p>Data collection level: Field</p>	<p>Reporting question: Is avoided land conversion being tracked in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don’t know <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Avoided land conversion amount

<p>Data element name: Avoided land conversion amount</p> <p>Description: Total amount of avoided land conversion that is measured in the enrolled field.</p> <p>Data type: Decimal</p> <p>Measurement unit: Amount</p> <p>Logic: Respond if yes to ‘Avoided land conversion’</p> <p>Data collection level: Field</p>	<p>Reporting question: How much avoided land conversion has been measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values: 0-1,000,000</p> <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Avoided land conversion amount unit

<p>Data element name: Avoided land conversion unit</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Avoided land conversion’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the unit for the amount of avoided land conversion measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Acres • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Avoided land conversion purpose

<p>Data element name: Avoided land conversion purpose</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Avoided land conversion’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the purpose of tracking avoided land conversion in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Improved wildlife habitat

<p>Data element name: Improved wildlife habitat</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Environmental benefits’</p> <p>Data collection level: Field</p>	<p>Reporting question: Are improvements to wildlife habitat being tracked in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don’t know <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Improved wildlife habitat amount

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

<p>Data element name: Improved wildlife habitat unit</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Improved wildlife habitat’</p> <p>Data collection level: Field</p>	<p>Reporting question: What is the unit for the amount of improved wildlife habitat measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Acres • Linear feet • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p>
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Improved wildlife habitat purpose

Data element name: Improved wildlife habitat purpose

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

Measurement unit: Category

Reporting question: What is the purpose of tracking improved wildlife habitat in the field?

Select multiple values: No

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

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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
Digester type	Digester type	Deep pit
		Dry lot
		Dry stacking/solid storage
		Pasture/range/paddock
		Poultry with bedding
		Poultry without bedding (e.g., high rise)
		Slurry tank/basin
		Covered lagoon with energy generation
		Covered lagoon with flaring
		Covered lagoon (no energy generation or flaring)
Additional feedstock source (select most common if using more than one)	Additional feedstock source (select most common if using more than one)	Complex mix with energy generation
		Plug flow with energy generation
		Other (specify)
		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


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


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

	Nutrient 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 management (CPS 590)	Nutrient application method in the previous year	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application timing with CPS 590	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application timing in the previous year	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application rate with CPS 590	0-20,000
	Nutrient application rate unit with CPS 590	Gallons per acre Pounds per acre
	Nutrient application rate change	Decrease compared to previous year Increase compared to previous year No change
Pasture and Hay Planting (CPS 512)	Species category (select most common/extensive type if using more than one)	Cool-season broadleaf Cool-season grass Warm-season broadleaf Warm-season grass
	Termination process	Grazing Haying (i.e., cutting and baling) Other (specify)
Prescribed Grazing (CPS 528)	Grazing type	Cell grazing Deferred rotational Management intensive Rest-rotation

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


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

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


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

Other CSAF Practices

Traditional or cultural practices

Microbial products

Solar power generation

Grain bin construction

Pre-season drainage

Appendix B: Commodity List

CROPS

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


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PARSNIP	STRAWBERRIES	
PASSION FRUITS	SUGAR BEETS	
PAWPAW	SUGARCANE	<u>LIVESTOCK</u>
PEACHES	SUNFLOWERS	ALPACAS
PEANUTS	SUNN HEMP	BEEF COWS
PEARS	TANGELOS	BEEFALO
PEAS	TANGERINES	BUFFALO OR BISON
PECANS	TANGORS	CHICKENS (BROILERS)
PENNYCRESS	TANGOS	CHICKENS (LAYERS)
PEPPERS	TANNIER	DAIRY COWS
PERENNIAL PEANUTS	TARO	DEER
PERIQUE TOBACCO	TEA	DUCKS
PERSIMMONS	TEFF	ELK
PINE NUTS	TI	EMUS
PINEAPPLE	TOBACCO CIGAR WRAPPER	EQUINE
PISTACHIOS	TOBACCO BURLEY	GEESE
PITAYA/DAGONFRUIT	TOBACCO BURLEY 31V	GOATS
PLANTAIN	TOBACCO CIGAR BINDER	HONEYBEES
PLUMCOTS	TOBACCO CIGAR FILLER	LLAMAS
PLUMS	TOBACCO CIGAR FILLER BINDER	REINDEER
POMEGRANATES	TOBACCO DARK AIR CURED	SHEEP
POTATOES	TOBACCO FIRE CURED	SWINE
POTATOES SWEET	TOBACCO FLUE CURED	TURKEYS
PRUNES	TOBACCO MARYLAND	
PSYLLIUM	TOBACCO VIRGINIA FIRE CURED	
PUMMELO	TOMATILLOS	
PUMPKINS	TOMATOES	
QUINCES	TREES TIMBER	
QUINOA	TRITICALE	
RADISHES	TRUFFLES	
RAISINS	TURNIPS	
RAMBUTAN	VETCH	
RAPESEED	WALNUTS	
RHUBARB	WAMPEE	
RICE	WASABI	
RICE SWEET	WATERMELON	
RICE WILD	WAX JAMBOO FRUIT	
RUTABAGA	WHEAT	
RYE	WILLOW SHRUB	
SAFFLOWER	WINTER MELON	
SAPODILLA	WOLFBERRY/GOJI	
SAPOTE	YAM	
SCALLIONS		
SESAME		
SHALLOTS		
SORGHUM		
SORGHUM DUAL PURPOSE		
SORGHUM FORAGE		
SOYBEANS		
SPELT		
SQUASH		
STAR GOOSEBERRY		

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 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.