



NOTICE OF GRANT AND AGREEMENT AWARD

1. Award Identifying Number NR233A750004G032	2. Amendment Number	3. Award /Project Period Date of final signature - 04/15/2028	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) WOLFE'S NECK FARM FOUNDATION, INC., THE 184 BURNETT ROAD FREEPORT ME 04032-6322 UEI Number / DUNS Number: X47KW2GXWUV8 / 046538612 EIN:	
7. NRCS Program Contact Name: ECHO DOMINGUES	8. NRCS Administrative Contact Name: MICHELE DEVANEY	9. Recipient Program Contact Name: Hannah Tikalsky	10. Recipient Administrative Contact Name: Hannah Tikalsky
(b)(6)			
11. CFDA 10.937	12. Authority 15 USC 714 et seq	13. Type of Action New Agreement	14. Program Director Name: Dorn Cox (b)(6)
15. Project Title/ Description: Expands climate-smart Beef, Dairy, Wheat, Rice and Specialty Crop markets in CA, CO, CT, DE, ME, MD, MA, NH, NJ, NY, PA, RI, VT and supports implementation and monitoring of climate-smart practices.			
16. Entity Type: M = Nonprofit with 501C3 IRS Status (Other than Institution of Higher Education)			
17. Select Funding Type			
Select funding type:	<input checked="" type="checkbox"/> Federal	<input checked="" type="checkbox"/> Non-Federal	
Original funds total	35,000,000.000	\$3,050,509.00	
Additional funds total	\$0.00	\$0.00	
Grand total	35,000,000.000	\$3,050,509.00	
18. Approved Budget			

Personnel	\$4,900,069.00	Fringe Benefits	\$1,470,021.00
Travel	\$542,676.00	Equipment	\$0.00
Supplies	\$328,275.00	Contractual	10,085,761.000
Construction	\$0.00	Other	17,673,198.000
Total Direct Cost	33,369,838.000	Total Indirect Cost	\$1,630,162.00
		Total Non-Federal Funds	\$3,050,509.00
		Total Federal Funds Awarded	35,000,000.000
		Total Approved Budget	38,050,509.000

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: 2023.04.25 17:00:44 -05'00'	Date
Name and Title of Authorized Recipient Representative DAVID HERRING Executive Director	Signature 	Date April 25, 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 The Wolfe's Neck Farm Foundation, Inc (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 \$38,050,509

TOTAL FEDERAL FUNDS \$35,000,000

PERSONNEL \$4,454,609

FRINGE BENEFITS \$1,336,383

TRAVEL \$493,342

EQUIPMENT \$0

SUPPLIES \$298,432

CONTRACTUAL \$9,168,874

CONSTRUCTION \$0

OTHER \$17,618,198 (includes \$20,505 HU travel stipend and \$7,275,000 Producer Incentive under Subaward)

TOTAL DIRECT COSTS \$33,369,838

INDIRECT COSTS \$1,630,162

TOTAL NON-FEDERAL FUNDS \$3,050,509

PERSONNEL \$0

FRINGE BENEFITS \$0

TRAVEL \$0

EQUIPMENT \$0

SUPPLIES \$0

CONTRACTUAL \$0

CONSTRUCTION \$0

OTHER \$2,773,190

TOTAL DIRECT COSTS \$2,773,190

INDIRECT COSTS \$277,319

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

Responsibilities of the Parties:

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

RECIPIENT RESPONSIBILITIES

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

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

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

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

Performance Reports: Quarterly

SF425 Financial Reports: Quarterly

Detailed Progress Report: Quarterly

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

Expected Accomplishments and Deliverables

See attached Benchmarks Table and associated Project Narrative.

Resources Required

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

Milestones

See attached Benchmarks Table and associated Project Narrative.

GENERAL TERMS AND CONDITIONS

Please reference the below link(s) for the General Terms and Conditions pertaining to this award:

<https://www.fpacbc.usda.gov/about/grants-and-agreements/award-terms-and-conditions/index.html>

Attachments:

Budget Narrative

Project Narrative

Benchmarks Table

Climate-Smart Practices List and Limitations

Data Dictionary

Climate-Smart Specific Terms and Conditions

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ACTION for CSA

(Alliance to Catalyze Transition Incentives through Open Networks for Climate Smart Agriculture)

i. A. Contact Information

i. B. List of Project Partners

i. C. List Of Underserved/Minority-Focused Project Partners

i. D. Compelling Need For The Project:

Action Project Areas Which Will Support Transformative Change:

- 1) Technical Assistance
- 2) Increase Supply And Reduce Barriers To Participation
- 3) Expand Transition Finance Incentives
- 4) Demand and Market Development
- 5) Scalable Technology Infrastructure

i. E. Approach To Minimize Transaction Costs Associated With Project Activities

Action Is Implicitly Minimizing Transaction Costs In Four Ways:

- 1) Planning as MMRV baseline
- 2) Improved Field Monitoring Protocols
- 3) Continual Improvement Network System
- 4) Financial Feedback and Benchmarking

i. F. Approach To Reduce Producer Barriers To Implementing Csa Practices For The Purpose Of Marketing Climate-Smart Commodities

The TSP training and common onboarding create rapid progress for CSA adoption on five fronts:

i. G. Geographic Focus

i. H. Project Management Capacity Of Partners, Including A Description Of Existing Relationships With And/Or Prior Experience Working With Producers Or Land Owners, Promoting Climate Smart Activities And Marketing Climate Smart Commodities

Collaborative Co-Design Process

ii. A Plan To Pilot Csa Practices On A Large Scale

ii. A. Description of CSA Practices to be deployed

ii. B. Plan To Recruit Producers And Landowners, Including Estimated Scale Of The Project (E.G., Number Of Landowners, Acres Targeted, Head Of Livestock, Etc.)

ii. C. Plan To Provide Tsp, Outreach, And Training, Including Who Will Be Conducting These Activities, Qualifications And Projected Timeline

Outreach To Producers

Training and Access to Decision (Support) Tools

ii. D. Plan To Provide Financial Assistance For Producers To Implement Csa Practices

ii. E. Plan To Enroll Underserved And Small Producers, Including Estimated Number Of Underserved And Small Producers Participating And Associated Dollar Amounts Anticipated To Go Directly To Producers, In The Form Of Technical And Financial Assistance

iii. A Measurement/Quantification, Monitoring, Reporting, And Verification Plan

iii. A. Approach To Greenhouse Gas Benefit Quantification, Including Methodology Approach Consistent With The Section Titled "Quantification Requirements"

iii. B. Approach To Monitoring Practice Implementation, Including The Anticipated Number Of Farms And Acres Reached Through Project Activities

iii. C. Approach To Reporting And Tracking Of Greenhouse Gas Benefits Including The Anticipated Ghg Benefits Per Farm, Per Project, Per Commodity Produced, Per Dollar Expended, And The Anticipated Longevity Of Ghg Benefits

iii. D. Approach To Verification Of Greenhouse Gas Benefits

ACTION's GHG benefit tracking plan has six primary components:

iii. E. Agreement To Participate In The Partnerships Network

iv. A Plan To Develop And Expand Markets For Climate-Smart Commodities Generated:

The Market Expansion strategy is to leverage the immense breadth of the network across ACTION through:

Expanded and Transparent Purchaser Commitments

Ongoing, Transition and Innovative Financing Models

Environmental Claims Clearinghouse

Community Engagement and Consumer Marketing and Awareness

iv. B. A Plan To Track Climate-Smart Commodities Through The Supply Chain, If Appropriate

iv. C. Estimated Economic Benefits For Participating Producers Including Market Returns:

In addition to practice incentive payments, producers will have access to multiple market and agronomic economic benefits through participation:

iv. D. Post Project Potential, Including Anticipated Ability To Scale Project Activities, Likelihood Of Long Term Viability Beyond Project Period, And Ability To Inform Future Usda Actions To Encourage Climate Smart Commodities.

Supply Of CSA: Collective Funding To Finance Ongoing Practice Implementation, TSP And Decision Support For Adaptive Management.

[Informing future USDA actions to encourage climate-smart commodities.](#)

[Success Criteria - SMART Goals](#)

[Success Criteria: Foundational Infrastructure Agreements/contracts; Baseline Agreements Created](#)

[Success Criteria: TSPs/Certifiers](#)

[Success Criteria: Scientific Advancement](#)

[Success Criteria: Co-Design Process](#)

[Success Criteria: Field testing](#)

[Success Criteria: Versioned releases/Iteration](#)

[Success Criteria: Scaled Release](#)

[Success Criteria: Sustained and growing community](#)

[Success Criteria: Sustained support](#)

[V. A. Glossary of Terms and Definitions](#)

[Adaptive Management Planning](#)

[Ag Data Wallet](#)

[Cadaster](#)

[CARE Data Principles](#)

[Collabathon](#)

[Common Onboarding](#)

[Community-Driven Protocols](#)

[CSA Connector](#)

[Data Portability](#)

[Data Sovereignty](#)

[Decision Support System](#)

[Digital Certification](#)

[Digital Certification Standards](#)

[Ecosystem Service Markets](#)

[Electronic Authorization \(E-Auth\)](#)

[Environmental Asset Claims](#)

[Environmental Claims Clearinghouse](#)

[Environmental Product Declarations \(EPD\)](#)

[Ex-Ante Power Analysis](#)

[FAIR Data Principles](#)

[Fidelity](#)

[Generation of Collective Funding \(GCF\)](#)

[High Fidelity Digital Provenance](#)

[Historically Underserved \(HU\) Producers](#)

[Interoperability](#)

[Interoperable Claims Standards](#)

[Measuring, Monitoring, Reporting, and Verification \(MMRV\)](#)

[National Calibration Dataset](#)

[Open Source](#)

[Post-Farmgate Data](#)

[Pre-Competitive Approach](#)

[Provenance](#)

[Public Land Library](#)

[Resolution](#)

[Technical Service Provider](#)

[Third Party Digital Verification](#)

[Traceable Transaction Handling](#)

[V. B. List of Tables and Diagrams](#)

[Diagrams](#)

[Tables](#)

[V. C. Appendix - High Resolution Graphics and Support Materials](#)

i. A. Contact Information

Wolfe's Neck Center for Agriculture & the Environment/OpenTEAM

184 Burnett Rd Freeport, ME 04032

The Wolfe's Neck Farm Foundation Inc. (WNFF) is the contracting entity, often referenced within this document as Wolfe's Neck Center for Agriculture and the Environment or shortened as Wolfe's Neck Center (WNC), a registered D/B/A of WNFF, or by the projects/programs within WNC such as OpenTEAM and ACTION for CSA (ACTION). The Wolfe's Neck Farm Foundation Inc. was incorporated in 1997 as a 501(c)3 organization.

i. B. 1. List of Phase I Project Partners

Transition Finance: Zero Food Print

MRV & Technical Training: California Certified Organic Farmers; Oregon Tilth, Point Blue, Quivira Coalition; The Soil Carbon Inventory Project

Technical Development: AgStack; Conservation Technology Information Center; Digital Green; Element84; FarmOS; Heartland Science and Technology Group; LookINTO; OurSci; Purdue OATS Center; Regen Network; Tech Matters; Terran Collective; The Nature Conservancy;
Marketplace Development/Benchmarking and Scoring Functions: IFT/GFTC; Open Rivers; Sustainable Agriculture Education(SAGE)

i. B. 2. List of Project Supporters

AgStack, American Farmland Trust, Black Farmer Fund, Boulder County Department of Agriculture, Bronzville Black & Brown Growers Collective, California Association of Resource Conservation Districts, California Certified Organic Farmers, Carbon A List, Center for Good Food Purchasing, Conservation Technology Information Center, Cool Farm Alliance, Digital Green, Element84, FarmOS, Field to Market, Food Solutions New England, FrontLine Farming, Funders for Regenerative Agriculture, General Mills, Global Growers, Green America, Heartland Science and Technology Group, IFT-GFTC, James Beard Foundation, John Wick Nicasio Native Grass Ranch, Kitchen Table Advisors, Lactalis Stonyfield, LiteFarm, LookINTO, Lundberg Family Farms, Maine Farmland Trust, Mile High Farmers, Million Acre Challenge, Northeast Farmers of Color Land Trust, Oregon Tilth, Organic Valley, Pasa Sustainable Agriculture, Point Blue, Project Open Hands, Quivira Coalition, Regen1A, Regenerative Rising, Sodexo, SustainCERT, Tech Matters, Terran Collective, The Alliance Center, The Soil Information Project, Transformational Investing in Food Systems, Vermont Organic Farmers, Walmart Foundation, Whole Foods, Yardstick, Zero Food Print

i. B. 3. List of OpenTEAM Community Members

Agricultural Research Service, Black Farmer Fund, CIBO Technologies, California Association of Resource Conservation Districts, Caney Fork Farms, Carbon A-List, COMET-Farm, Cool Farm Alliance, Digital Green, FarmOS, Field to Market, Foundation for Food and Agriculture Research, General Mills, Heartland Science and Technology Group, LandPKS, LiteFarm, LookINTO, Mad Agriculture, Michigan State University, NE Farmers of Color Land Trust, NORI, Open Agriculture Technology and Systems (OATS), Open Rivers, Organic Valley, Our Sci, Paicines Ranch, PastureMap, Planetary CARE, Point Blue Conservation Science, Propagate, Purdue University, Quivira Coalition, Regen Farmers Mutual, Regen Network, Rhode Island School of Design, Stonyfield Organic, Sustainability Innovation Lab at Colorado, Tech Matters, Terra Ethics, Terra Genesis, Terran Collective, The Bionutrient Institute, The Lexicon, UBC Farm, We Are For The Land Foundation, White Buffalo Land Trust, Wolfe's Neck Center for Agriculture & the Environment, Zero Foodprint

i. C. 1. List Of Underserved/Minority-Focused Project Partners

Organizations who have committed to providing outreach and support for ACTION for CSA, and who we intend to work closely with:

American Farmland Trust, Black Farmers Fund, Food Solutions New England, Frontline Farming (with Mile High Farmers and Bronzeville - Black and Brown Growers Collective), Global Growers, Kitchen Table Advisers Northeast Farmers of Color Land Trust, Potlikker Capital

i. D. Compelling Need For The Project:

Transformative change is required in science and technology (e.g. research measurement networks, soil monitoring networks, remote sensing spatial databases, model integration), practices (e.g. reduced tillage, cover crops, organic amendments) and implementation (e.g. agricultural supply chain management, decision-support systems, increased land-user engagement) to build the foundation for a new climate smart economy. The Alliance to Catalyze Transition Incentives through Open Networks for Climate Smart Agriculture (ACTION for CSA) offers the systemic tools and approaches necessary to catalyze change by operating in three areas simultaneously: equipping and training Technical Service Providers (TSPs) for CSA implementation, creating transition finance incentives for producers, and developing a robust and self-sustaining marketplace for climate smart commodities. A key aspect of a self-sustaining marketplace is the ability to support the needs of private capital to producers and TSPs using the same technical infrastructure and data standards as federally funded projects. Open Technology Ecosystem for Agricultural Management (OpenTEAM) has created the technological infrastructure needed to further support this process which ACTION will put into practice at scale.

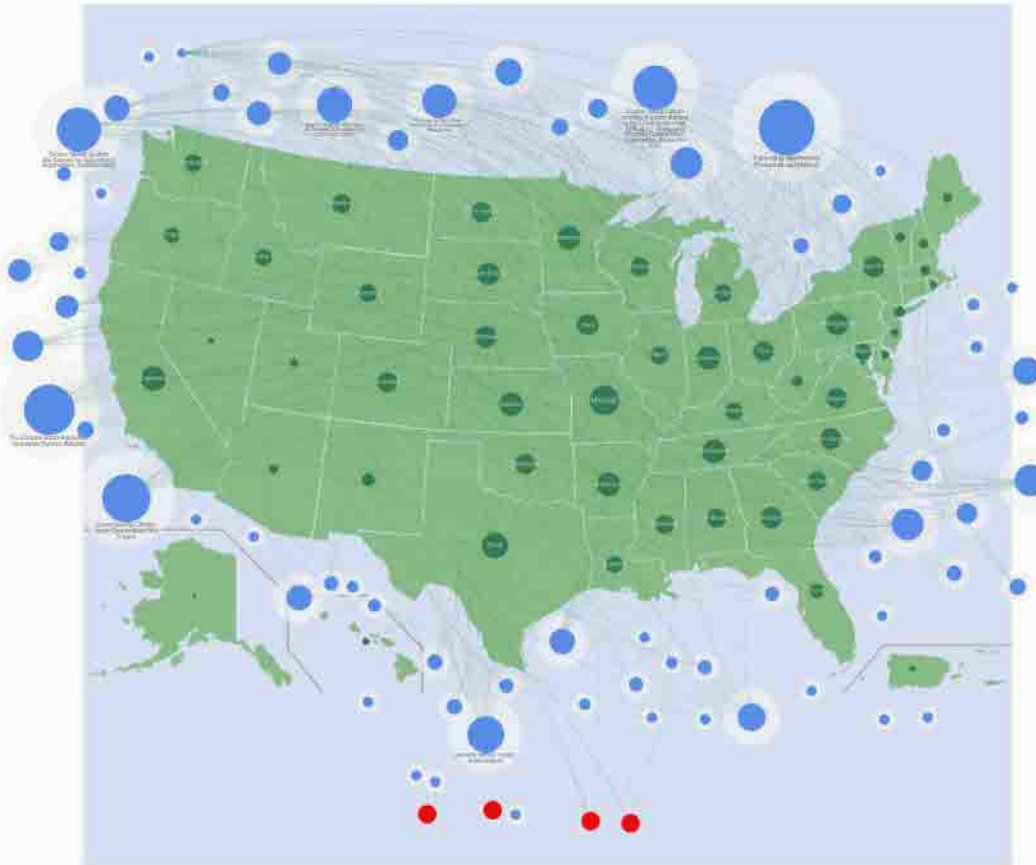
Current competitive efforts are fragmented and disconnected from producers and lack the economic mechanisms to scale. ACTION's pre-competitive approach provides a national, coordinated effort that activates all levers of influence including technical assistance capacity, scientific integrity, producer trust, financial incentives and marketplace transparency. This

approach ensures knowledge is shared across the private and public sectors for the benefit of all, building the foundations of interoperability which allows technologies, systems, and networks to work together. Thus, OpenTEAM's national leadership partners have created an alliance to catalyze transition incentives through open, collaborative networks supported by an open technology ecosystem that can bridge public and private incentives and markets. This alliance brings together nationally recognized organizations to address each aspect of need.

ACTION will support the planning, production, financing and marketing of climate-smart commodities through national pilot projects that will provide the solid foundation for increasing supply, finance and demand.

This work complements the work being done with the full portfolio of all Partnership for Climate Smart Commodities grantees. Our activities will help other projects leverage open source tools, technology, market and legal standards for every other project in the USDA PCSC program. The impact of this common infrastructure and interoperability will support climate-smart markets and provide a pathway for all grantees to learn from each other in a structured way.

Diagram 1 – [Map of PCSC Connections By Region](#)



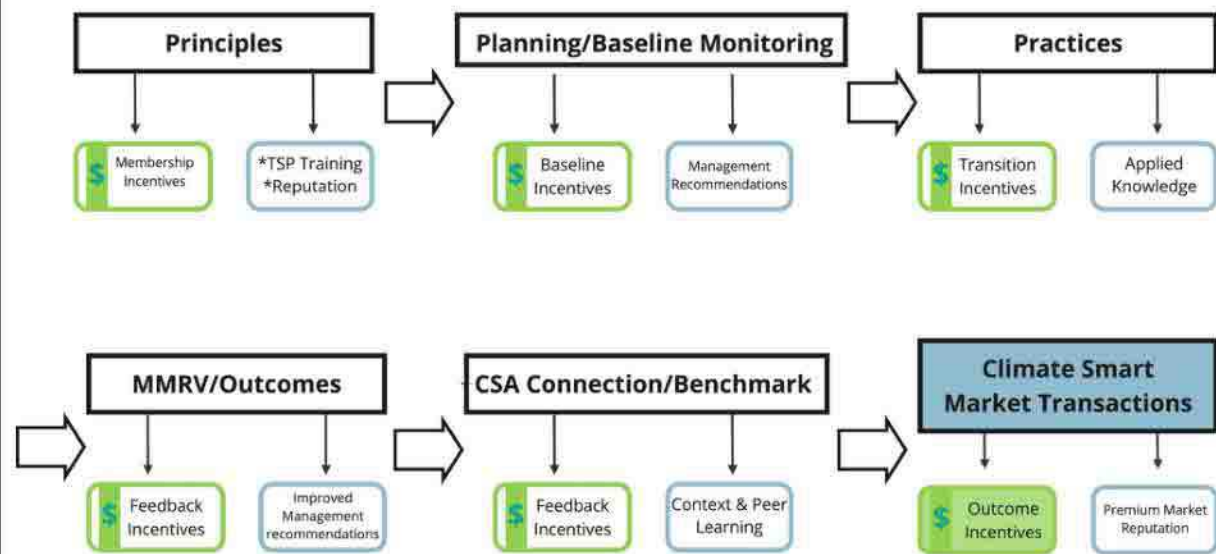
*This interactive map shows the states the various funded PCSC projects are working in.
Projects are scaled by the number of states they are working in.*

ACTION builds on OpenTEAM's systems-based approach which aims to utilize not just improved greenhouse gas quantification technology, but also incentives for practices and effective strategies to provide timely results. In addition OpenTEAM has developed FAIR in practice methodology (see section i.H for description) which balances social, technical and legal approaches for effective outcomes.

ACTION has a consistent structure that builds upon foundational principles, and consistent incentives. This systems-based framework enables local adaptability and long-term stability while creating interoperability between projects and opportunity for diverse stakeholders through adherence to FAIR principles. Community-agreed upon principles form foundational trust in planning processes and transition incentives for baseline documentation. Monitoring of planned practices enables meaningful measurement of outcomes. Incentives for climate-smart practices are then tied both to planning incentives and rewards for positive outcomes in the

marketplace. The final phase of work enables all participants in the system including producers, TSPs, Funders, Researchers and buyers to benchmark their performance with peers and to connect with each other. The access to connections and information exchange provides a final incentive which will sustain the marketplace over time.

Diagram 2 – Climate Smart Transformation Processes (See Appendix for full resolution diagram)



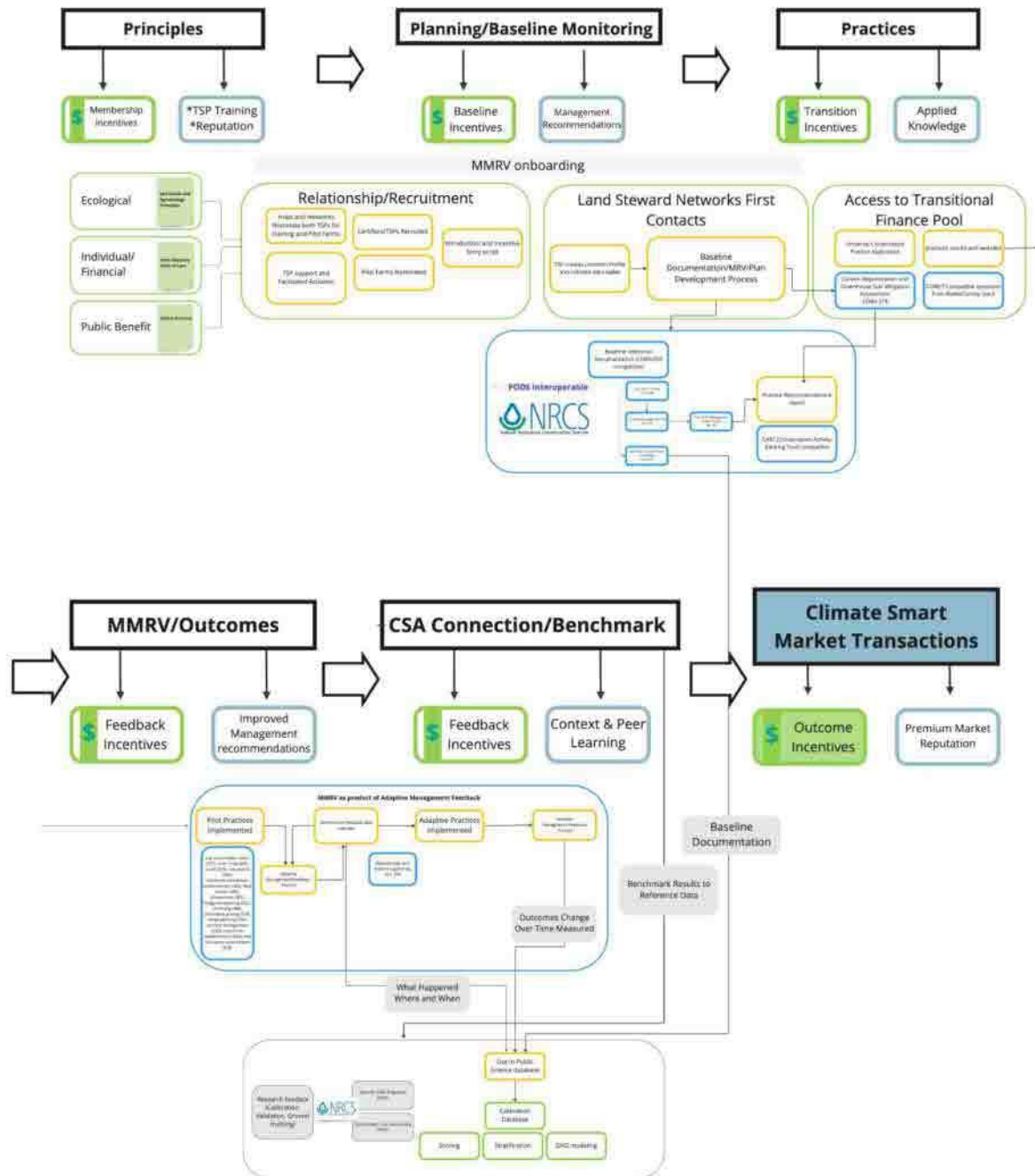
This diagram shows the transformation process for producers to convert to climate-smart practices and realize a number of transition and outcomes incentives.

Action Project Areas Which Will Support Transformative Change:

1) Technical Assistance

Leverage, upgrade and equip existing TSPs and networks with training and tools to create Measurement, Monitoring, Reporting and Verification (MMRV) baseline documentation as part of all conservation practices. Utilize this increased capacity and data to create Conservation Planning Activities (CPAs) plans, generate Digital Certification for organic producers, and create a marketplace profile stored in an innovative Producer Ag Data Wallet.

Diagram 3 – Description of MMRV As Byproduct Of Planning And TSP Data Entry Into Ag Data Wallet (See Appendix for full resolution diagram)



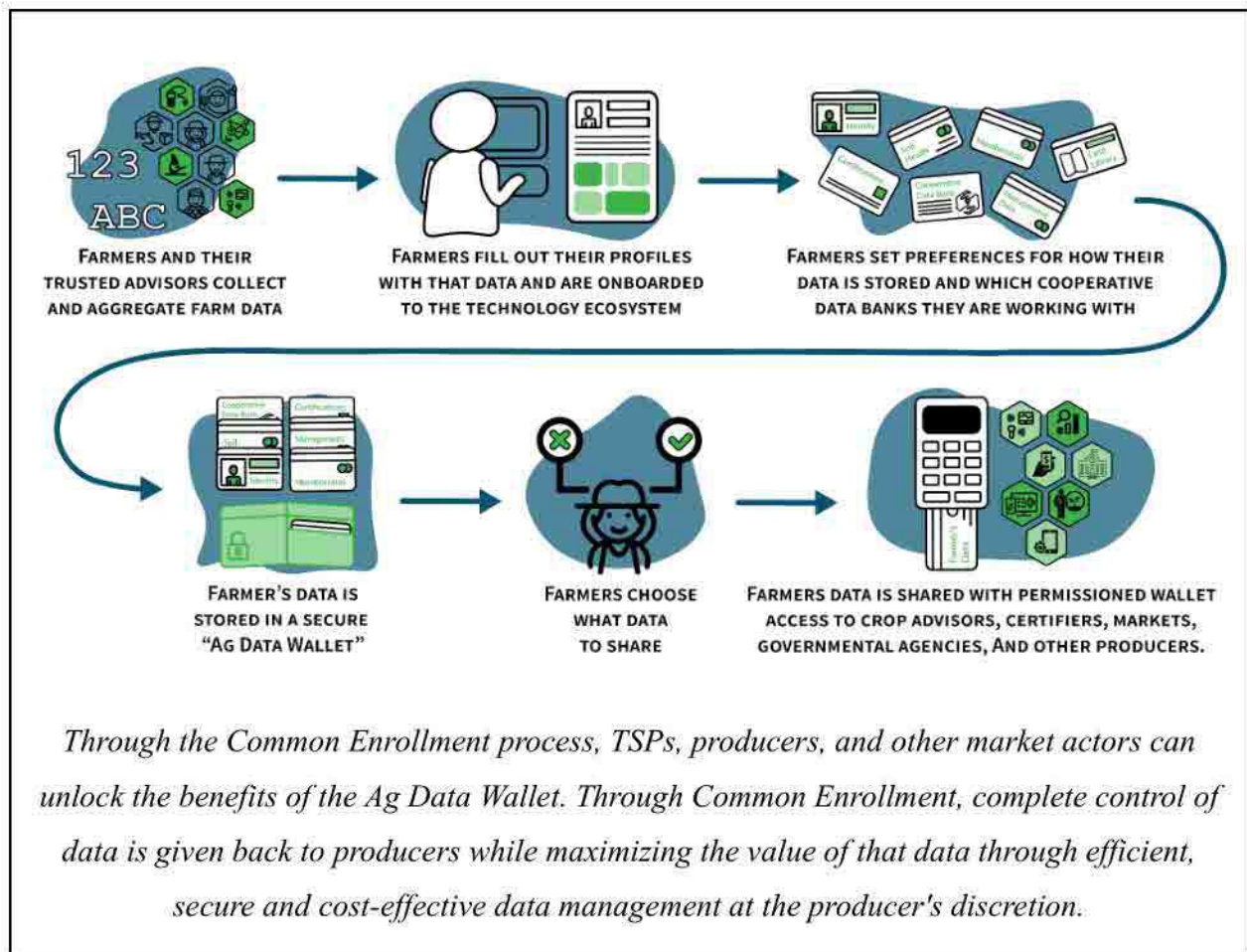
This diagram shows a more detailed transformation process for producers to convert to climate-smart practices and realize a number of transition and outcomes incentives. Through TSP data entry and planning, producers can access MMRV support as a byproduct.

TSPs provide planning services based on NRCS-compatible plans to establish baseline documentation and onboard producers. These services also provide data that can be shared with NRCS and community-driven science databases to benchmark projects over time. Early Incentives are provided to facilitate producer participation that yields public and private benefit during the transition period before the deployment of CSA based premium markets.

2) Increase Supply And Reduce Barriers To Participation

The Ag Data Wallet and technical service enables producers to access Innovative Transition Financing pools to implement CSA practices and increase supply of qualified products. An Ag Data Wallet provides secure storage and transactions of important data under the control of farmers, ranchers, and other land stewards. While the word “wallet” evokes both a place where important documents are kept and something that is under an individual’s control, an Ag Data Wallet can go beyond that by providing mechanisms for individuals to safely exchange data and give them access to a wide range of opportunities, including payment for ecosystem services, access to Digital Certification, and more. The technology creates farm-level data portability, and interoperability across systems to enable the measurement, verification and reporting of on-farm outcomes, support management and decision-making, and increase participation in conservation incentives, carbon and ecosystem service markets, and Environmental Product Declarations (EPDs). This digital wallet is focused on security, trust and data sovereignty. With producer control and consent management, this data can contribute to research, support farmer-focused supply chain initiatives, connect producers with new markets, and connect with peers to share successes, challenges and new findings. An Ag data wallet may be populated by producers or trusted advisors, and once entered, it may be used many times - and for many services.

Diagram 4 – Common Enrollment Process (See Appendix for full resolution diagram)



3) Expand Transition Finance Incentives

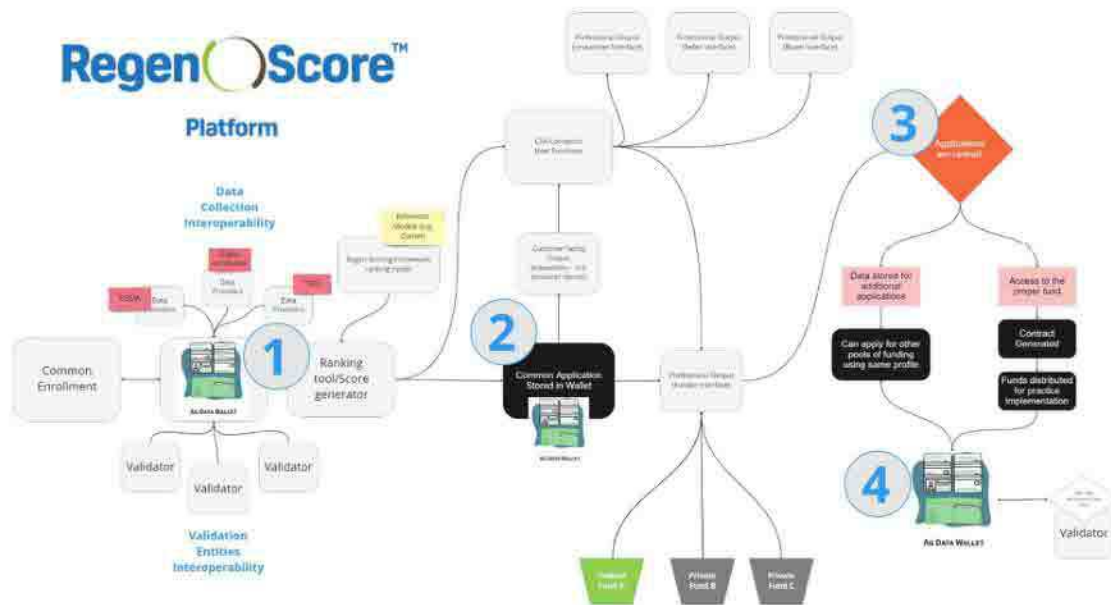
The Alliance will facilitate transition finance pools that can use the same structure to accept funds from multiple sources. This will enable the Generation of Collective Funding (GCF) from public, corporate, foundation and consumer purchasing to flow to producers using the same mechanisms and enable an improved producer experience and higher quality feedback and reporting to all funders as well. By combining and pooling public and private transition finance, a 2-3X multiplier effect can be generated and will grow over time.

4) Demand and Market Development

Producer Market Profiles and financed products generate MMRV that can then be searched in a CSA Connector that can be consistently sorted in a compatible way with traditional procurement patterns. This facilitates matching buyers with producers and enables marketplace exchange with rating and ranking system tools and Digital Certification standards. The

RegenScore has been developed over the last 18 months by some of the largest buyers in the industry organized by Regen1 Alliance (R1A) along with leading scientists, and producer organizations.

Diagram 5 – CSA Connector Process to enable producers to access transition finance
(See Appendix for full resolution diagram)



CSA Connector and compatible common profiles (1) enable access to a registry of relevant transition funding opportunities; (2) and connect to a common application that enable regionally led scoring; (3) ultimately awarding and providing performance metrics of transition finance projects.

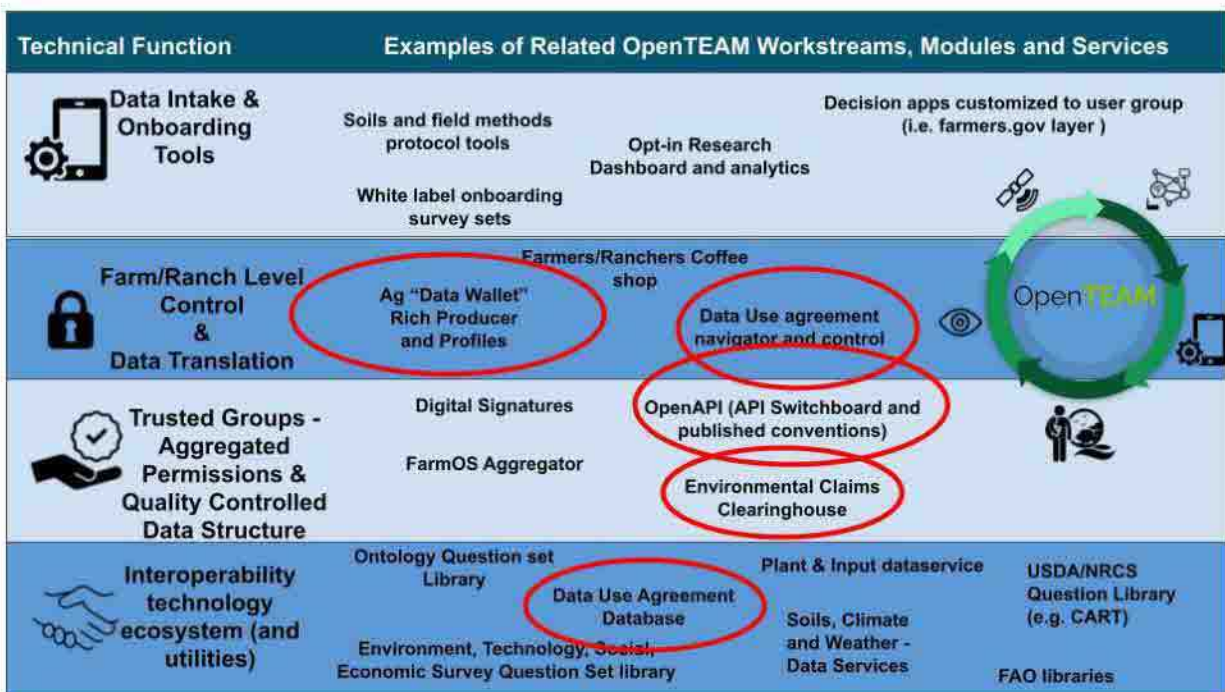
5) Scalable Technology Infrastructure

Improve and support pre-competitive market infrastructure and a comprehensive national CSA Connector service that includes:

- a) MMRV training registries
- b) Registries of Interoperable Marketplace Programs and Certifications (by Leading Ecosystem Services Markets)

- c) Registry of interoperable decision support, benchmarking and planning tools compatible with the Ag Data Wallet
- d) Keystone technical infrastructure (by leading Open Technology providers) including but not limited to an Environmental Claims Clearinghouse and producer Ag Data Wallet.
- e) National Calibration Dataset and Public Land Library to facilitate and support National Soil monitoring networks and continual improvement of remote sensing, spatial databases and model integration.

Diagram 6 – Key Technical Components of ACTION (See Appendix for full resolution diagram)



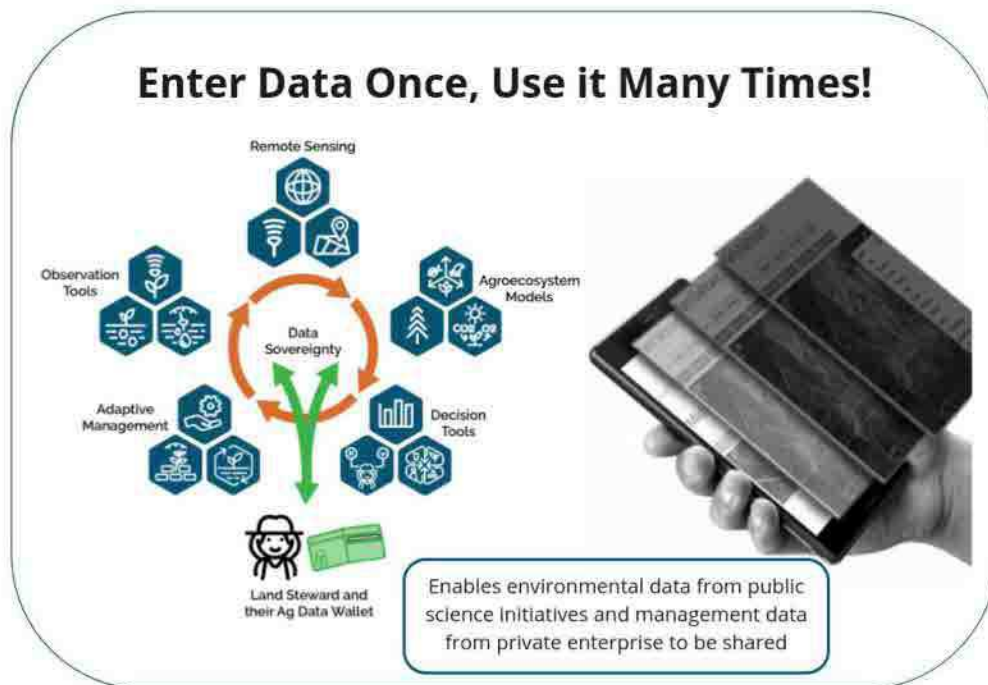
The items circled in red form the focus of our development efforts and the backbone of the exchange infrastructure required for the CSA connector. Common enrollment and the Ag Data Wallet structure will create rich TSP and producer profiles, and allow for user-friendly data control and permissioning structures.

Diagram 6 captures the core technical components needed for interoperability and creation of the Ag Data Wallet and CSA connector. The OpenAPI switchboard will enable access to public data conventions, and generate a translation table for API development across tools. The Environmental Claims Clearinghouse will make sure that carbon and ecosystem credits are

allocated in a way that allows producers to access multiple benefits, without double-counting of areas. Ultimately, the creation and integration of this whole ecosystem of open and interoperable tools will create accessible incentive structures at every step of the CSA transition process.

Further, the goal of the Ag Data Wallet is to create a multitude of benefits for a single data entry. This system will allow enrolled producers and TSPs to input data in one system, and then consent to its transfer to other systems that could provide co-benefits with that data. The interoperability and consent management that the Ag Data Wallet will bring to a whole set of management, decision-support, observation, modeling, and other types of tools works to maintain data sovereignty for the producer, while improving efficiency and creating more valuable data use.

Once producers are enrolled in the Ag Data Wallet structure, the value of their data will compound. Initially, producers may gain most value from farm-level decision-support tools. However, as trust and equity in the system increases, public data sets will scale to the extent that they will provide value in research and development contexts, certification processes, and ecosystem service marketplaces.

Diagram 7 – Enter Data Once, Use It Many Times

Data Wallet Compounds Value: *Enter Data Once, Use It Many Times!*



i. E. Approach To Minimize Transaction Costs Associated With Project Activities

As an alliance, ACTION will create systemic frameworks for catalytic transition incentives throughout open networks. By replicating on-the-ground, multi-stakeholder networks already in place across agricultural supply chains, economies of scale will support producer networks to drive down transaction costs. Through interoperable, free and open source collaborative tools, producers will be able to access the best possible technical support networks from across the country and benchmark progress as they share information and resources to locally adapted climate-smart practices. The most costly aspects include MMRV, differentiating field methods protocols, lack of consistent and systematically chosen soil sampling sites, and lack of direct transition finance incentives based on performance feedback to maximize the impact from each dollar of purchaser premium. MMRV are the expenses of team deployment in the field, sampling intensity to capture spatial heterogeneity with known uncertainty and the cost of processing and analyzing carbon samples. With structured MMRV training, shared field methods protocols, systematically-chosen sampling sites for easier consistent soil testing, and improved performance feedback systems, this project will use a whole systems approach to drive down transaction costs.

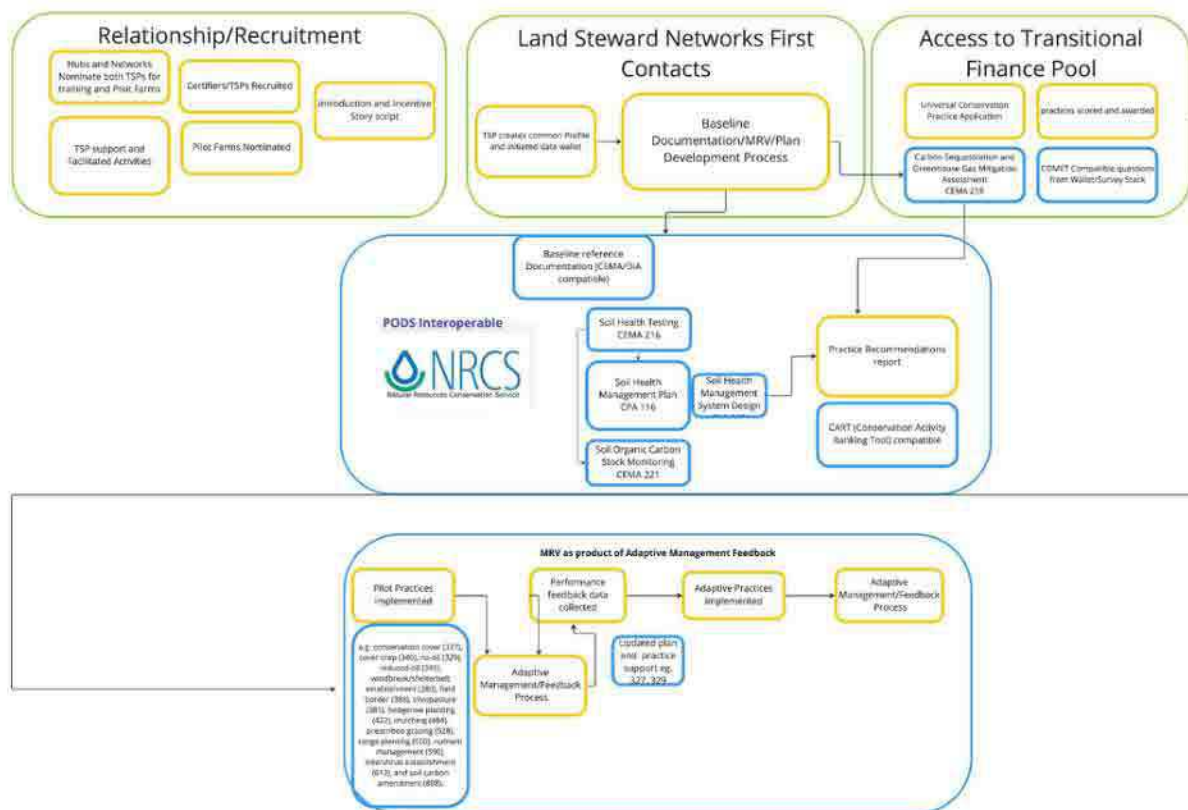
Action Is Implicitly Minimizing Transaction Costs In Four Ways:

1) Planning as MMRV baseline

ACTION will leverage existing TSPs and certifiers in an aligned effort to scale CSA. ACTION will create efficiencies in personnel and reduce overall costs for MMRV by training TSPs and certifiers to conduct field tests using standardized methodologies and to input data into common enrollment tools to enter data once, use it many times, and for many different purposes. By doing this, the common enrollment function is analogous to the Common Application in higher education which streamlines millions of students applying to more than 900 colleges worldwide. Common enrollment utilizes a set of intake questions shared across multiple organizations, enabling producers to enter data once in order to access many programs, services and opportunities across organizations. MMRV can then be created as a byproduct of digital certification, adaptive management planning and decision support tools, streamlining

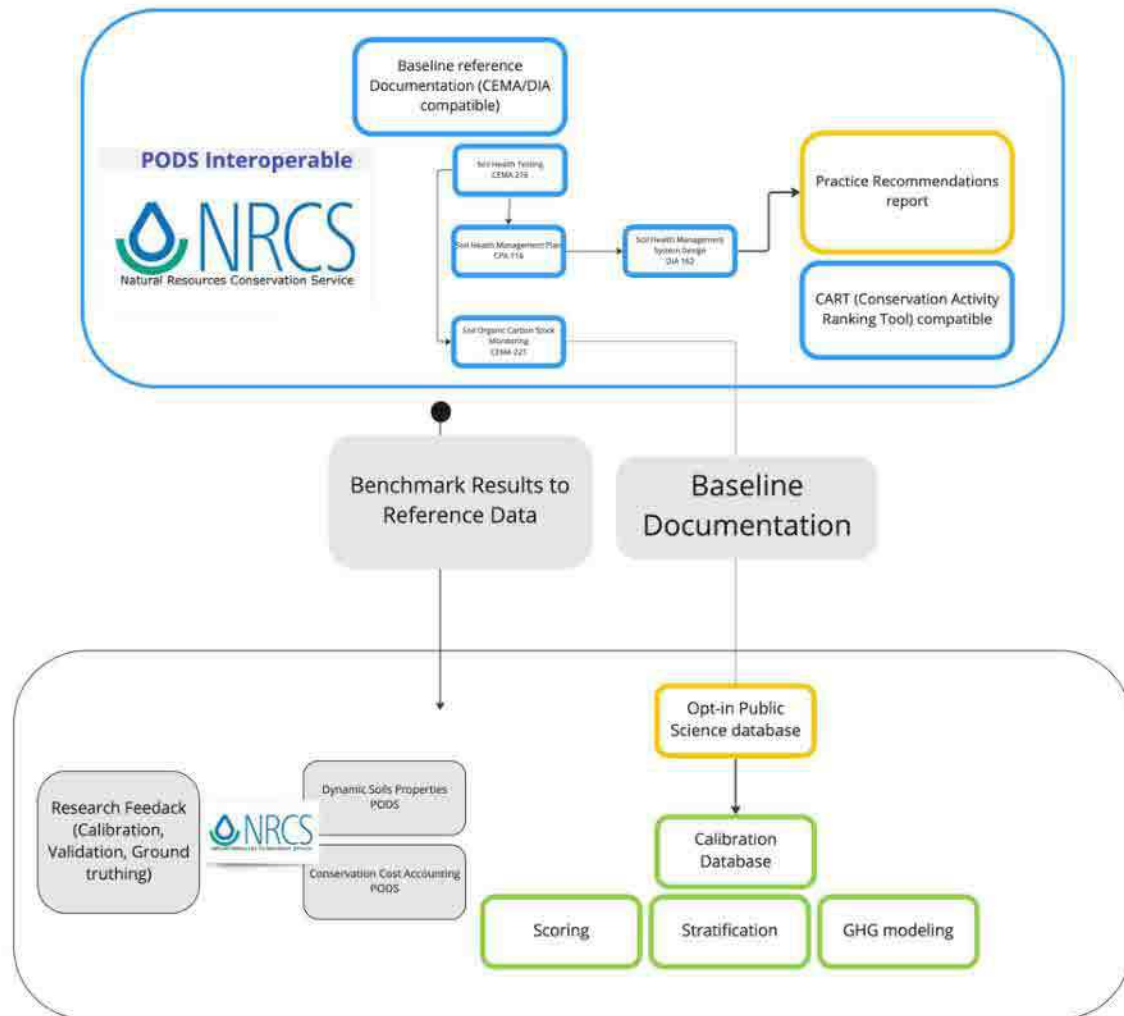
connectivity and interoperability of open technology platforms. We will make use of a whole value approach to create producer benefit from MMRV as part of the planning process coupled with recent significant advances in geospatial information systems, biogeochemical modeling and remote sensing to drive MMRV down the cost-curve at every stage - from sample site selection, to Digital Certification, to remote sensing and model calibration.

Diagram 8 – Flow of MMRV observations and producer incentives and flow of data products with attestations(See Appendix for full resolution diagram)



The common onboarding process starts with 1) TSP engagement 2) Baseline Monitoring with NRCS and PODS compatible protocols such as CEMA 216 and DIA 261 3) necessary to rank projects and for producers to access transition finance and 4) to provide management feedback on conservation practices that are implemented.

Diagram 9 – Flow of MMRV observations, Zoomed In (See Appendix for full resolution diagram)



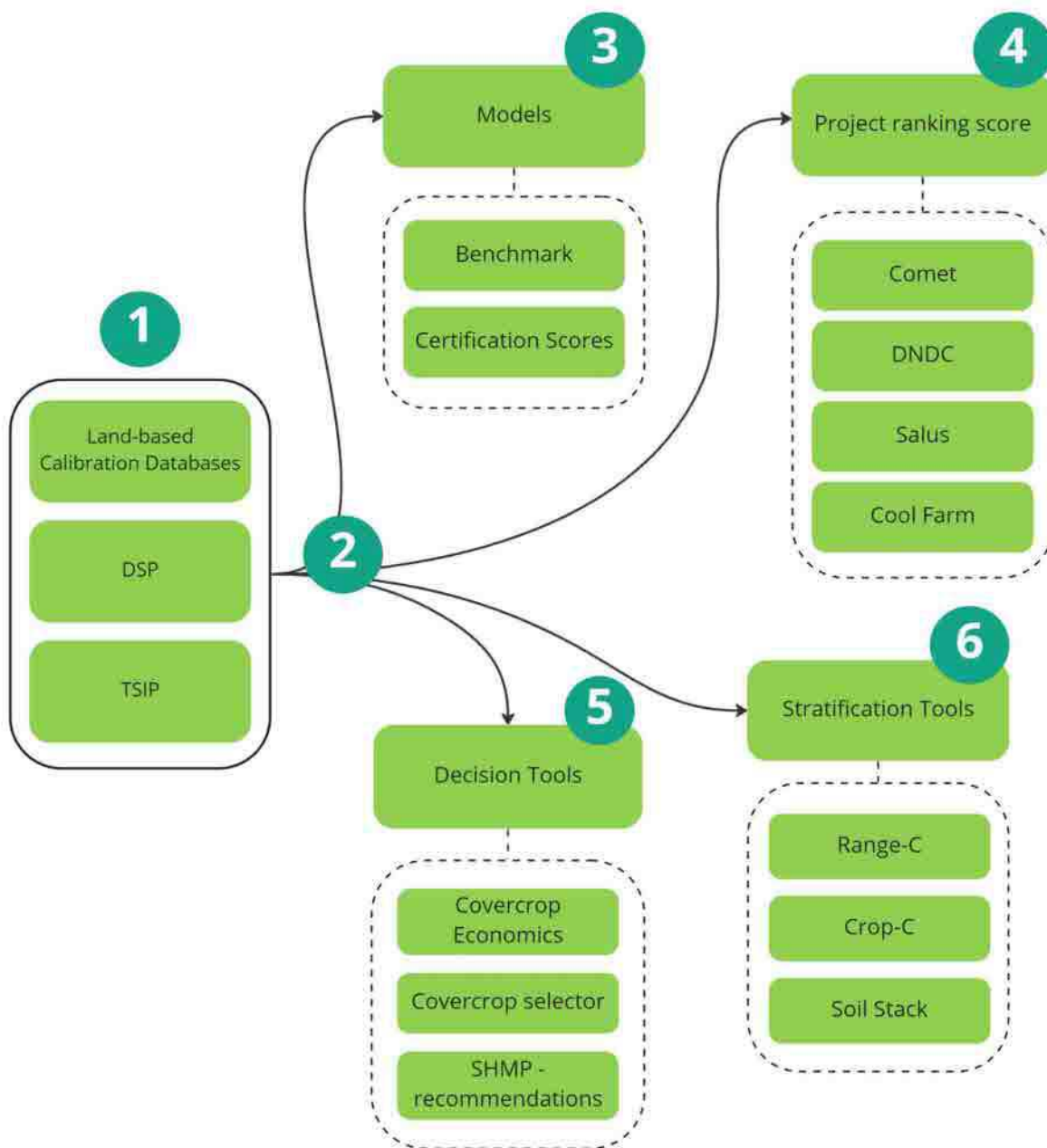
In addition to the process outlined in figure 8, the use of NRCS/PODS compatible CEMAs and protocols will enable the aggregation of baseline and outcome based to be contributed to national databases for benchmarking and performance assessment, as well as informing and improving science based models and MMRV tools.

2) Improved Field Monitoring Protocols

ACTION will democratize on-the-ground monitoring of carbon associated with cropland and rangeland management by standardizing protocols, which will make data collected from

these protocols more compatible across systems, better informing biogeochemical models like COMET/DayCent, Salus and DeNitrification-DeComposition (DNDC). Adhering to scalable protocol designs will create a rigorous but accessible framework that balances the level of inference with transaction costs for sampling densities and measurement/monitoring approaches.

Diagram 10 –Continual improvement from NRCS/PODS compatible data structures



Building off of Diagram 9, NRCS/PODS data standards enable 1) the aggregation of data national calibration data sets which 2) flow to inform 3) models, 4) ranking tools, 5) Management decision tools 6) stratification/sample site selection tools.

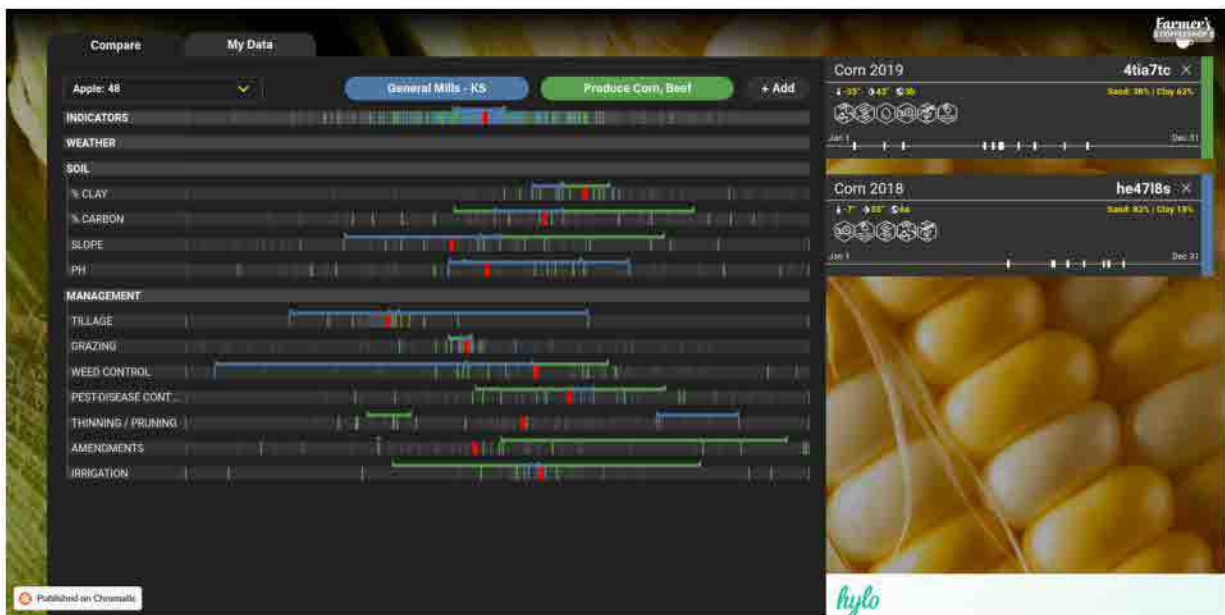
3) Continual Improvement Network System

By establishing a network of monitoring sites for intensive soil sampling and by conducting ex-ante power analyses to establish adequate sampling densities, we can ensure that data collected has sufficient power to detect changes over time. These intensive monitoring sites will be selected systematically as part of producer practice planning processes to represent a range of regions, cropping systems, and soil types, so that the data can feed back into and improve underlying data sets that inform models, such as COMET, and allow future extrapolation at significantly lower costs. These sites will also be leveraged for calibration of novel tools/technologies, like SoilStack, an app designed for smart soil sampling by capturing patterns of spatial variability and guiding users through field collection in a transparent, replicable, and user-friendly way, reducing the labor/cost barrier for future monitoring.

4) Financial Feedback and Benchmarking

ACTION is not solely reliant on the “pull” mechanism of buyer demand. By utilizing innovative, localized funding pools and governance models, ACTION offers a strong “push” of direct transition finance incentives to maximize the impact from each dollar of purchaser premium. Local dashboards and benchmarking tools will provide performance feedback to funders, buyers and producers on progress towards financial and climate based goals. ACTION’s local funding pool model provides a template for local governance models that may be adapted to RCD local working group and technical committee structure. It is designed to blend funding from private and public sources to create the maximum transition finance incentives and optimize the impact from each dollar spent on planning and practices.

Diagram 11 – Benchmark Process For Peer To Peer Scoring And Market Transparency
 (See Appendix for full resolution diagram)



Visual of the Farmer's Digital Coffeeshop, an anonymized benchmarking tool developed by Our Sci LLC which will be incorporated into the CSA Connector and used for scoring and ranking projects.

i. F. Approach To Reduce Producer Barriers To Implementing Csa Practices For The Purpose Of Marketing Climate-Smart Commodities

Increase ground-level capacity for MMRV through deployment of common onboarding approaches, robust community-driven protocols, and interoperable databases. ACTION will expand ground-level technical training and planning capacity that includes diverse production

types, scales and sizes. ACTION will build on its existing diverse network of farm/ranch communities and their TSPs and leading national certifier networks. These existing programs also support scalable training and certification that will generate baseline documentation, and Digital Certification as a byproduct of adaptive management planning.

The TSP training and common onboarding create rapid progress for CSA adoption on five fronts:

- 1) Generate MMRV baseline documentation in a form that is also agronomically useful through Soil Health Management Conservation Activity Management plans.
- 2) Facilitate a transition to a digital organic certification program supported by national US organic certifiers such as Oregon Tilth. This Digital Certification system is piloted in Canada by OpenTEAM members and will be expanded to include emerging CSA certifications such as R1A RegenScore, Soil Carbon Initiative (SCI), Regenerative Organic Certified (ROC), Ecological Outcome Verified (EOV) as well as private markets such as Ecosystem Services Market Consortium, Nori, IndigoAG and others.
- 3) Automatically populate farmer Ag Data Wallet profiles which also qualifies producers for transition finance resources. These Digital Certification Producer Market Profiles will automatically connect producers to innovative Transition Finance through a self-sustaining, regionally-led funding pool model described later in the application.
- 4) Develop a comprehensive national CSA Connector service connecting buyers, producers, and other stakeholders, including an Environmental Claims Clearinghouse (ECC) and registry service described further in the iii. Marketplace development section.
- 5) Create “Interoperable Claims Standards” for certification entities and technical infrastructure and science to support Environmental Product Declarations (EPD), such as “Climate Smart.” TSPs will facilitate CSA producers market profile development. The Alliance will support the R1A RegenScore with interoperable standards across large purchasers, restaurants and retail consumers to develop recognition and demand for the Climate Smart designations while enabling producers to simultaneously participate in one or more public or private programs.

i. G. Geographic Focus

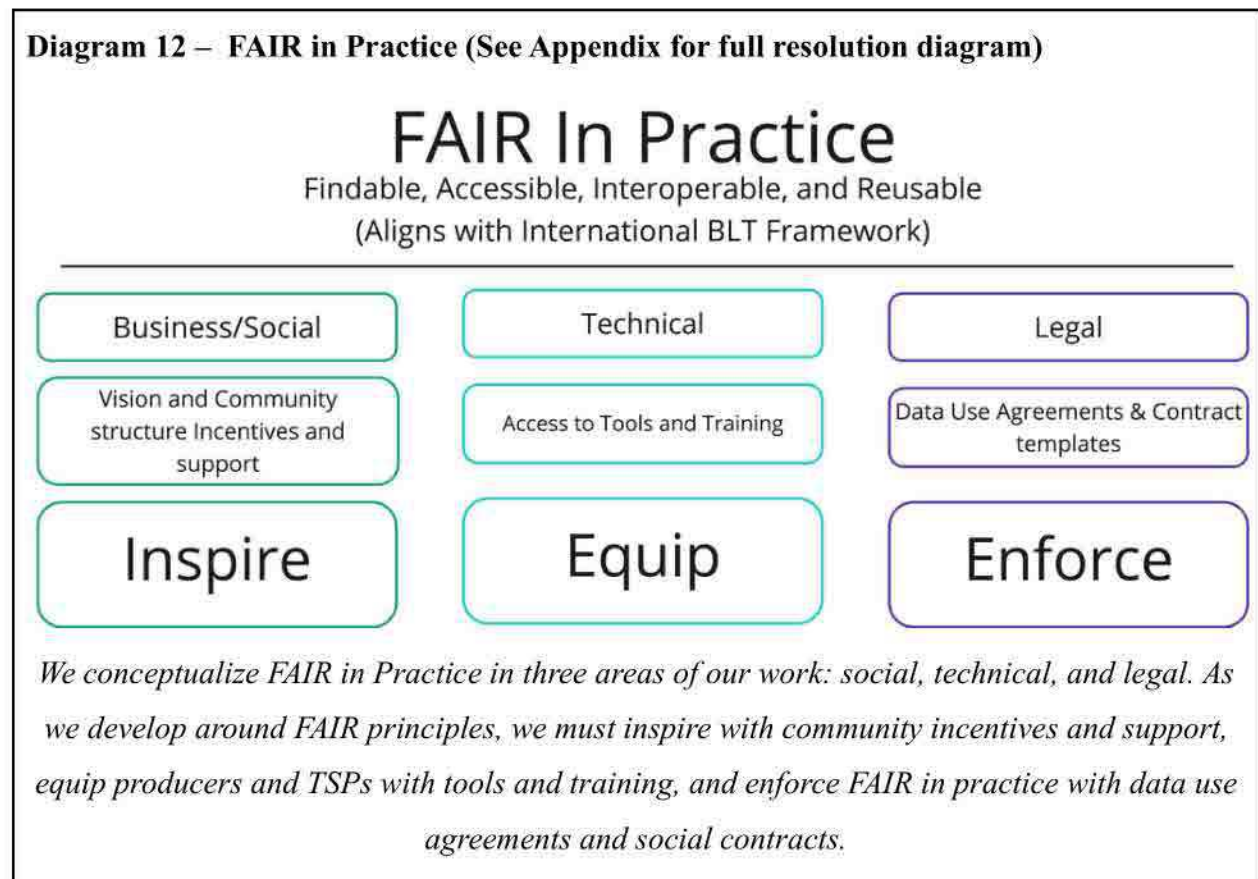
We aim to enroll and implement 385 CSA projects across targeted regions and commodities to CSA production practices, activities, and systems. ACTION will first leverage national producer networks represented by Alliance members across three regions: the West with a focus on California (CA), the Mountain and Midwest with a focus on Colorado (CO), and the Northeast with a focus on Pennsylvania (PA). The Alliance will use a regional hub and network approach to leverage local partner relationships for a phased expansion nationwide through Emerging Region Seed Funds (ERSF). The first projects will include MMRV and associated TSP capacity-building efforts to support integration into the marketplace profiles and data platforms. These early-phase projects will create local hubs for continuous education, grower outreach, and practice promotion. The nationally-aligned effort will also establish critical mass for producers, buyers and funders for interoperability across platforms. This model builds on the proven OpenTEAM framework for regional hub development, and is designed to meet, adapt to, and advance each region's production type, markets and TSP landscape. The system has also been designed for compatibility with Local Working Group and State Technical Committees, national conservation cost accounting and community-driven feedback prioritization processes. OpenTEAM's system is concurrently being piloted by the National Conservation Planning Partnership (NCPPI). (See attached quarterly milestones table for projections of producer onboarding)

i. H. Project Management Capacity Of Partners, Including A Description Of Existing Relationships With And/Or Prior Experience Working With Producers Or Land Owners, Promoting Climate Smart Activities And Marketing Climate Smart Commodities

OpenTEAM is led by Wolfe's Neck Center for Agriculture and the Environment and is a community-driven, soil and climate-focused initiative. OpenTEAM and its more than 45 members, including large food companies, foundations, research universities, NGOs, government agencies, ag tech providers and a diverse network of farming and ranching networks and organizations, have co-designed, built and financed a free-to-modify and open source digital toolkit, with a focus on upholding [FAIR](#) (Findable, Accessible, Interoperable, Reusable) and [CARE](#) (Collective Benefit, Authority to Control, Responsibility, Ethics) data principles. The

intent is to provide a framework for universal access to agricultural knowledge responsive to the needs of producers, purchasers, governments and markets. OpenTEAM convenes active working groups and hundreds of skilled professionals in cross-disciplinary national and international teams. OpenTEAM serves as a technology steward, convener, and technical facilitator that also operates with an MOU to facilitate open source data interoperability with USDA NRCS Systems such as CART and PODS.

Diagram 12 – FAIR in Practice (See Appendix for full resolution diagram)



Zero Foodprint (ZFP), a nonprofit focused on catalyzing transition finance for practice implementation, leads collaborations with state agencies and regional governments in CA and CO to scale CSA. ZFP coordinates projects with regional TSPs and deploys transition finance grants through a reverse auction process based primarily on most efficient use of funds for each modeled ton of CO₂ and/or equivalent (CO₂e) sequestration and characterized by the Optimal and Equitable Deployment (OED) of funds. ZFP's application process is outlined at zerofoodprint.org/apply. ZFP Generates Collective Funding (GCF) for these projects through simple consumer facing mechanisms like a restaurant adding a 1% fee which ZFP collects into regional funding pools and deploys through localized ranking process. ZFP has 75 business members participating in GCF. Since 2020 the program has generated funding for CSA projects on over 50 farms and ranches with an expected sequestration rate of 30,000 tons of modeled CO₂e.

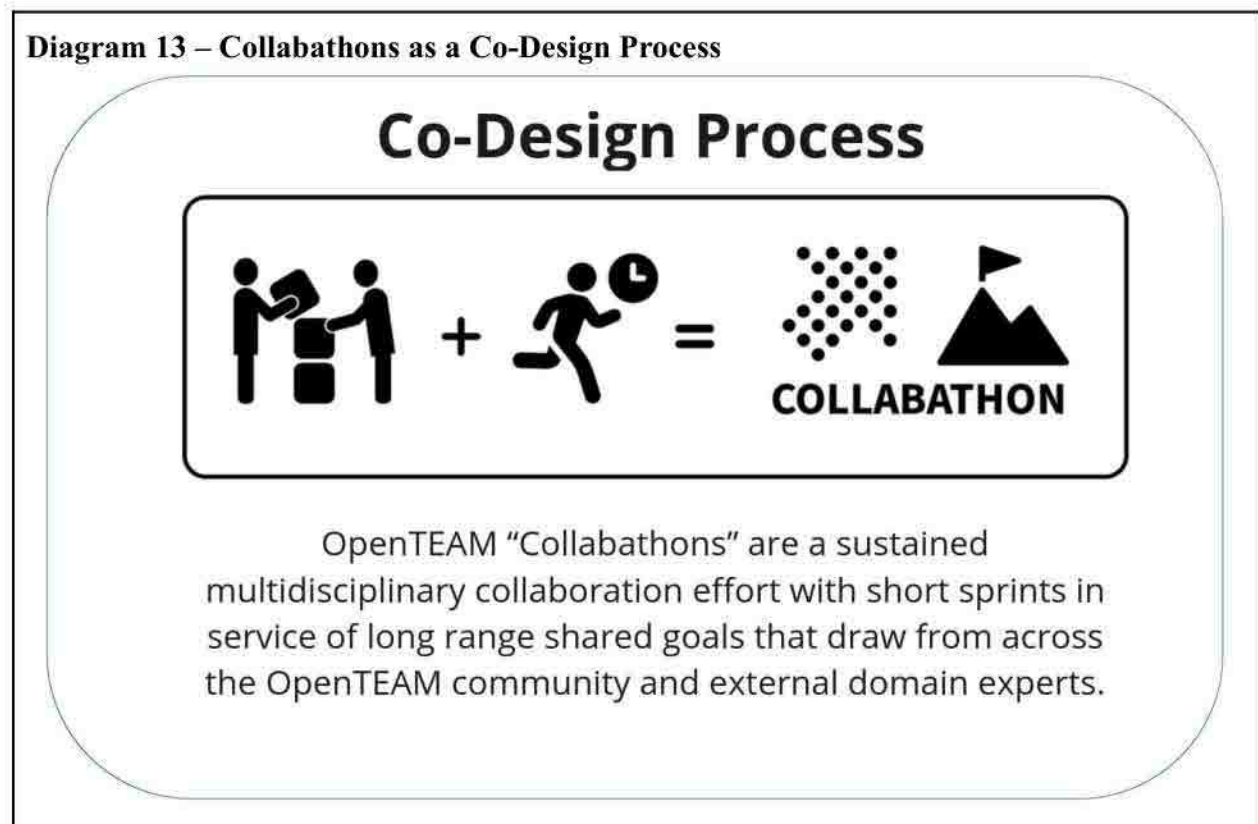
ACTION members represent more than 65 partners including 45 OpenTEAM members who will each play significant roles (see Project Partners). Additional qualifications and experience are provided through Letters of Commitment and throughout this project documentation.

Collaborative Co-Design Process

With OpenTEAM acting as the organization facilitating tech workstreams across a community of technology developers, users, and stewards, we are grounded in the principle of community governance. In order to make sure that our community is in control of our technical development, we have developed co-design processes, and are developing a process for feedback synthesis, versioning, and scaling at every step from initial collaborative design, to iterative release, versioning, and scaled release. We intend to run this process via a system of multiple co-design sprints and feedback channels (forums, surveys, group meetings, one-on-ones, etc.), which will serve as the basis for a public running list of feature and design requests (maintained and periodically updated in GitLab). On a quarterly basis, we intend to facilitate a community-wide voting process on large pieces of feedback. Votes from our community members, as well as developer-submitted cost and impact feedback will feed into a system that prioritizes the next quarter of tech development and design. This transparent and accessible feedback structure is critical infrastructure for scalable collaborative design.

The Co-Design process both generates and is dependent upon community artifacts such as Memorandums of Understanding (MOUs), Service Level Agreements (SLAs), and Working Group Charters which both create the context and trust for collaboration as well as document the outcome of the collaboration which governs resource allocation. In addition individual members of the community also rely on artifacts such as proxy agreements, oaths of care, and conditional use agreements to document and communicate intent and enable trusted transactions.

Diagram 13 – Collabathons as a Co-Design Process



We will run OpenTEAM Collabathons as the first phase of our co-design processes. This will support multiple phases of work, from initial design to iteration for scaled releases.

Each Collabathon has defined goals, outcomes, and proposed output shaped by community co-hosts. Each session may take anywhere from eight to twelve weeks to complete with a weekly cadence. Collabathons follow this standard process and cadence supported throughout by OpenTEAM staff and community leadership. The output of Collabathons are discovery documents, schematics, case studies, user stories, technical and design documents and scopes of work necessary to support future work streams.

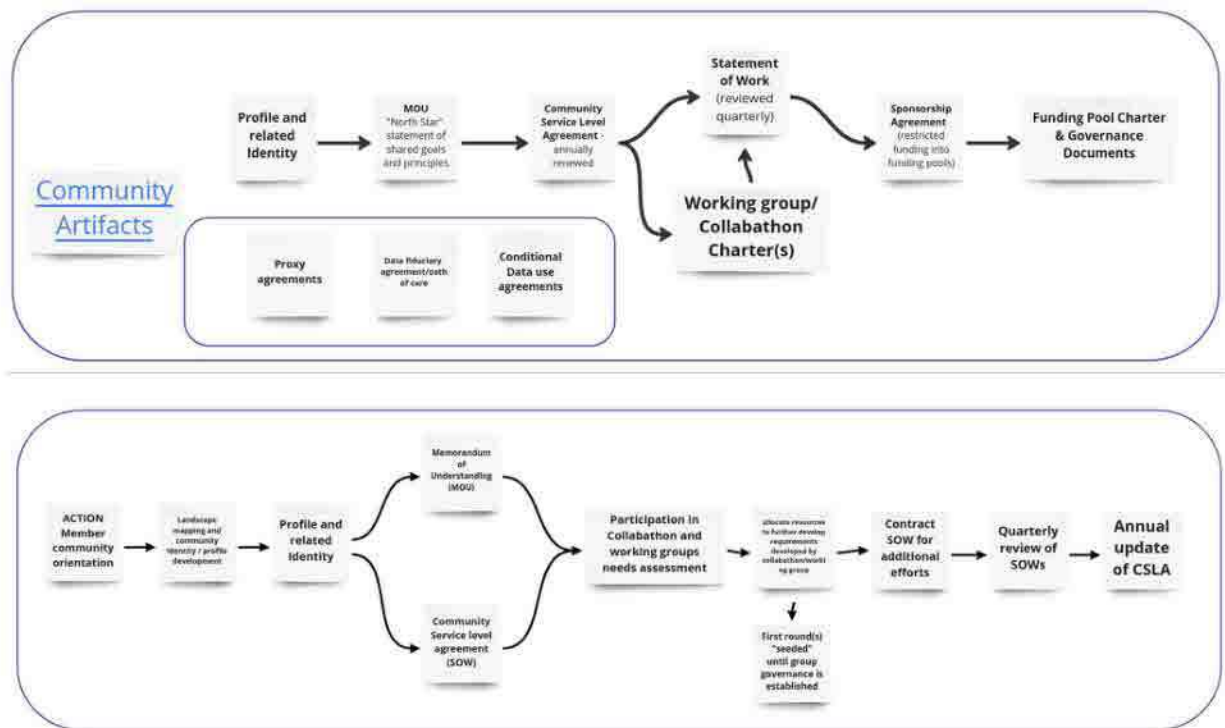
Prerequisites:

- Defined core question and charter for launching the Collabathon
- Defined participants and reviewers
- Define project lead organization, and project facilitation team

Process & Outputs sequential steps:

1. Orientation and guided discovery
2. Facilitated mapping
3. Work-sessions and synthesis
4. Review and refine the outputs
5. Second round work sessions to refine outputs
6. Second round work and synthesis
7. Review and report out Scope of Work for contracting full workstream

This process is also supported by the community contract process that supports ACTION member engagement and responsiveness to community needs as feedback is gathered throughout the course of a project.

Diagram 14 – Community Contract Process

OpenTEAM has a mature community contracts and agreements process which will be used to manage the collaborative subawards and govern the contract award process throughout the course of the project.

Diagram 15 – Phase 1 Collaborators

Phase 1 Collaborators	
	Organization
Core Partner	Zero Foodprint
Core Partner	Point Blue
Mid-Level	Purdue OATS
Mid-Level	farmOS
Mid-Level	OpenRivers
Mid-Level	Our.Sci
Mid-Level	CTIC
Mid-Level	IFT-GFTC
Mid-Level	Cool Farm Alliance
Mid-Level	Oregon Tilth
Mid-Level	CCOF (California Certified Organic Farmer)
Baseline	TSIP
Baseline	Houston Engineering
Baseline	Digital Green
Baseline	The Nature Conservancy
Baseline	Tech Matters
Baseline	Regen Network
Baseline	LookINTO
Baseline	Heartland Technology Group
Baseline	Element 84
Other	AgStack
Other	Quivira Coalition
Other	Food Solutions New England
Other	Terran Collective
Other	Terra Genesis

The above list outlines the group of institutions who will engage with us in the phase of the Community Co-Design Processes covered later in this document.

ii. A Plan To Pilot Csa Practices On A Large Scale

ACTION will support CSA practice implementation within three focus areas with distinct agricultural and market characteristics as well as varied technical capacities and organizational networks. ACTION's national implementation for the first on-farm CSA projects focuses in CA, CO and the Northeast. The producer incentive program will build on ACTION's existing national network and regional Transition Funding Pool Capacity created by Restore CA and Restore CO programs and over 100 Farm and Ranch Partner Networks (Farm and Ranch Partner

Networks in Project Partners list) including organizations with a focus on historically underserved (HU) producers. Using ZFP's proven transition finance program enables regional blending of Transition Finance Pools with corporate, foundation and consumer transaction funds to sustain, expand and scale incentive programs. Producer incentive programs will use common enrollment to build upon ZFP's existing program with the creation of CSA Connector profiles and the implementation of usable data. This program expansion via the CSA Connector will provide greater accessibility to available incentives, including the incentive program's regional funding pools. Local governance of these TSP-planning and MMRV funding pools will provide community-controlled access to growers for practice implementation in a way that is highly scalable.

ii. A. Description of CSA Practices to be deployed

ACTION will lead regional working groups to prioritize practices within specific regions/cropping systems. These local ACTION working groups will coordinate with The National Conservation Planning Partnership (NCP) local working groups and State Technical Committee processes to advance and modernize the practice prioritization and feedback process. To facilitate interoperability of data collection and common onboarding, ACTION will use USDA compatible practice codes for all programming.

Wolfe's Neck Farm Foundation inc. has included an allowance for a site-specific environmental review or the completion of the NRCS-CPA-52 if required for technical assistance for Climate Smart practice implemented.

The project will primarily be using the following NRCS codes:

Planning Codes

CEMA 216 Soil Health Testing
 CEMA 218 Carbon Sequestration and Greenhouse Gas Mitigation Assessment
 CEMA 221 Soil Organic Carbon Stock Monitoring
 CPA 116 Soil Health Management Plan
 DIA 162 Soil Health Management System Design

Practice Codes

311 Alley Cropping
 327, Conservation Cover
 328, Conservation Crop Rotation
 329, Residue and Tillage Management, No Till
 336, Soil Carbon Amendment
 340, Cover Crop
 345, Reduced-till
 380, windbreak/shelterbelt establishment
 381, Silvopasture
 386, Field Border
 422, Hedgerow Planting
 484, Mulching
 512, Pasture and Hay Planting
 528, Prescribed Grazing
 550, Range Planting
 590, Nutrient Management
 612, Tree/Shrub Establishment
 808, Soil Carbon Amendment

NRCS practices have a relationship to one another and data from some practices are built upon data generated from others. ACTION is designed to enable continual improvement by supporting the use of NRCS practice codes that enable adaptive management. This includes interoperability with the Producer Operations Data System (PODS), the NRCS branded instance of farmOS and modules and related OpenTEAM tech ecosystem. OpenTEAM will continue to work closely with the Natural Resources Conservation Service (NRCS) and provide expertise to facilitate FAIR in practice standards and promote open data, open source tools, and data interoperability across the agency and to assist with modernizing data integration to improve economic and ecological outcome analysis.

Our goal is to adhere to all NRCS practice standards, and to model our training and curriculum after regulations. This applies not only to the 300 practice codes, but also to CEMA/DIA/CPA codes we are actively working with USDA through a cooperative agreement to support through PODS.

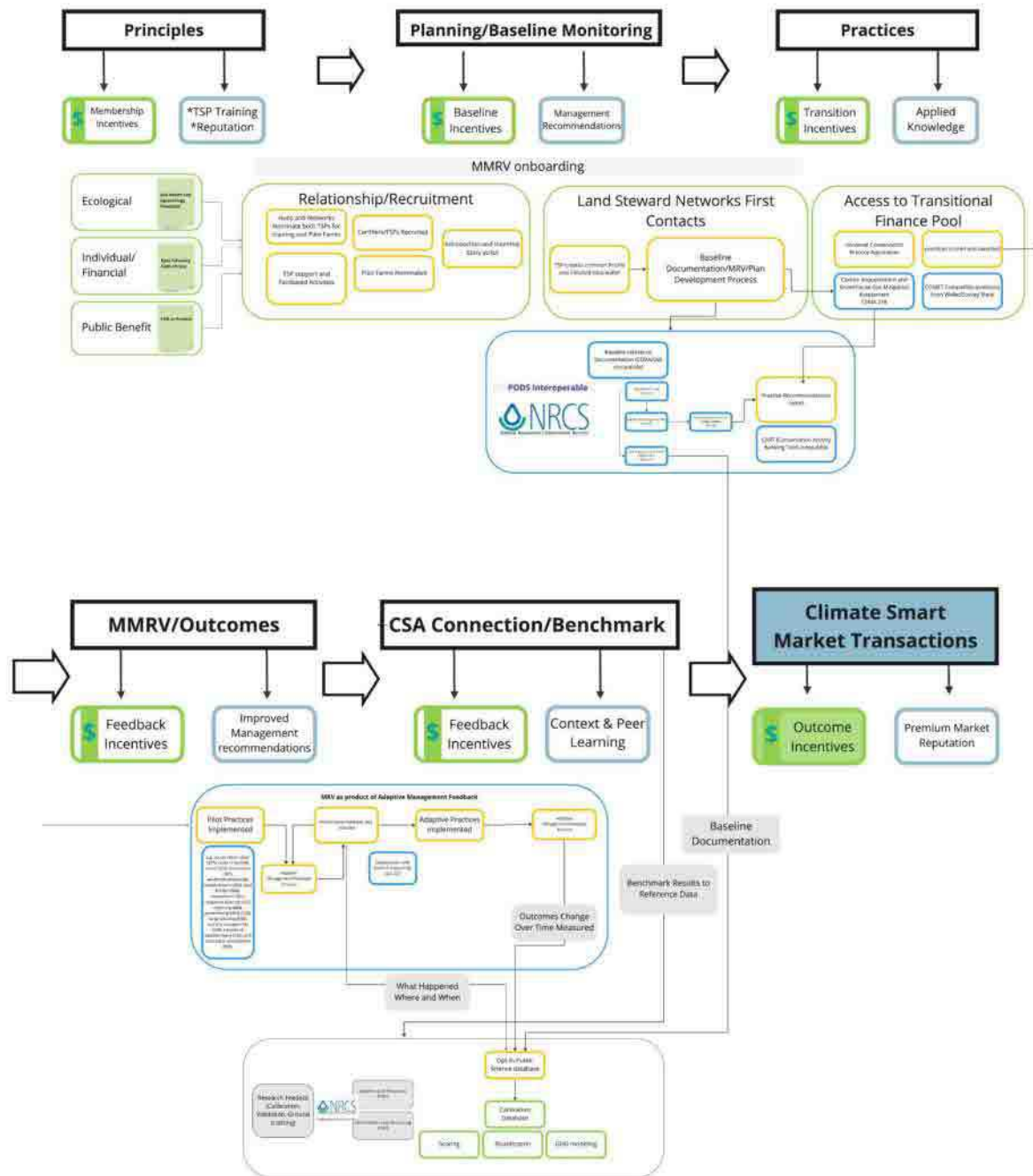
Are you proposing to implement any practices on land that is not currently used for agricultural production? • No

Will any practices involve ground disturbance below the plow zone, such as fencing? • No

Please describe any potential project activities that may involve concentrated animal feeding operations (CAFOs)? • N/a

Technical assistance is the responsibility of the grant recipient. Please clarify in your proposal who will be providing the technical assistance.

• Technical assistance will be provided by Point Blue and OpenTEAM and OpenTEAM hub and network members.

Diagram 16 – Creating Interoperable NRCS Processes (See Appendix for full resolution diagram)

Planning and Monitoring practices such as CEMA 216, and CEMA 221 provide quantitative baseline documentation that can feed into CPA 116 (Soil Health Management Planning) and DIA 162 (Soil Health Management System Design) can be collected in a “PODS” format

which can then be shared with NRCS but also used to recommend the most effective practices and feed into climate scoring systems used to rank project plans.

ii. B. Plan To Recruit Producers And Landowners, Including Estimated Scale Of The Project (E.G., Number Of Landowners, Acres Targeted, Head Of Livestock, Etc.)

OpenTEAM has the support of all the signatories on this project, who have committed to conducting outreach to their various communities (including targeted outreach to HU producers). For example, Frontline Farmers have committed to conduct 100 hours of outreach to BIPOC farmers to this project. University of New Hampshire has committed to conduct outreach to its New England network of producers. Organic Valley has committed to enrolling 4 of its producers into trials of the Ag Data Wallet. We also rely upon our already existing Hub Network of over 15 institutions such as Quivira, Pasa Sustainable Agriculture, and Black Farmer Fund.

Internally, the process for successful engagement has been developed through the last three year's worth of producer and organizational feedback, including through our OpenTEAM fellowship and training curriculum.

Additionally, the PCSC grantee ecosystem is already working together to amplify each other's work.

(See attached quarterly milestones table for projections of producer onboarding)

Diagram 17 – OpenTEAM's Existing Hub Network

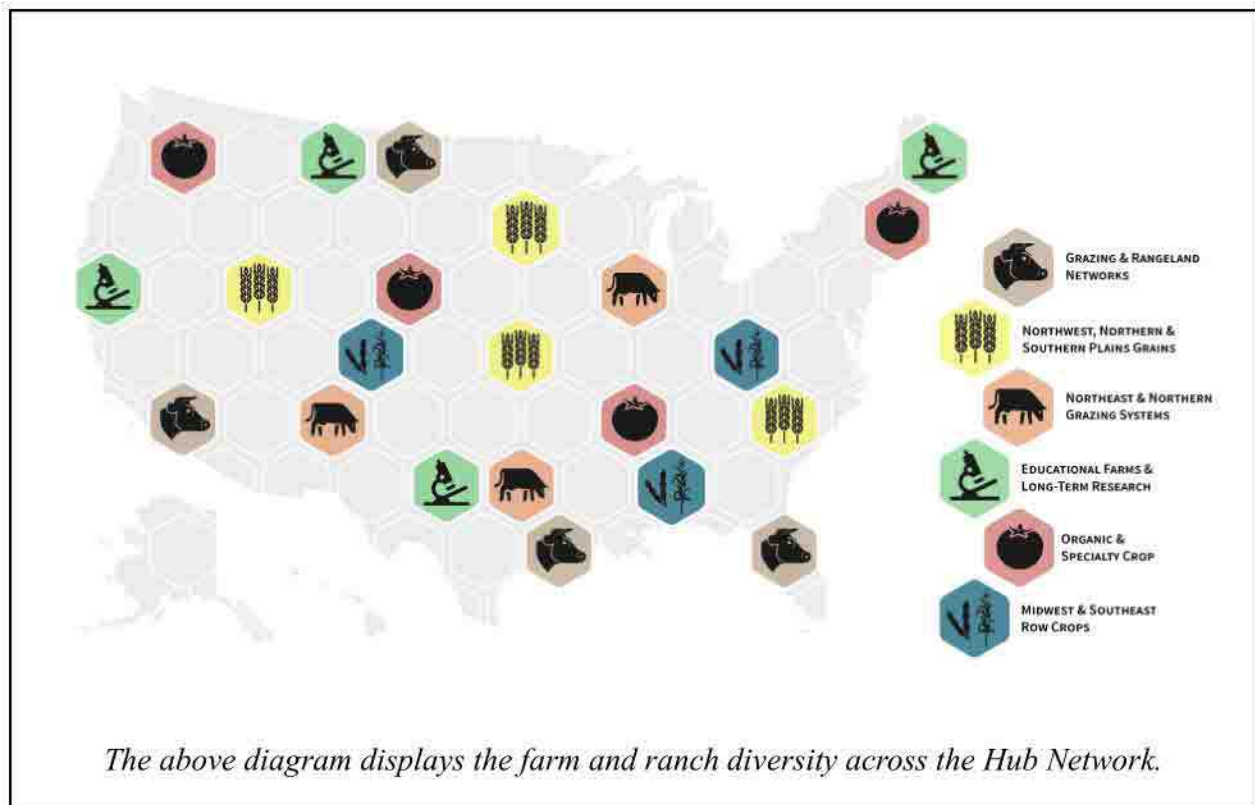


Diagram 18 – MMRV Adaptable Management Sign-Up Journey



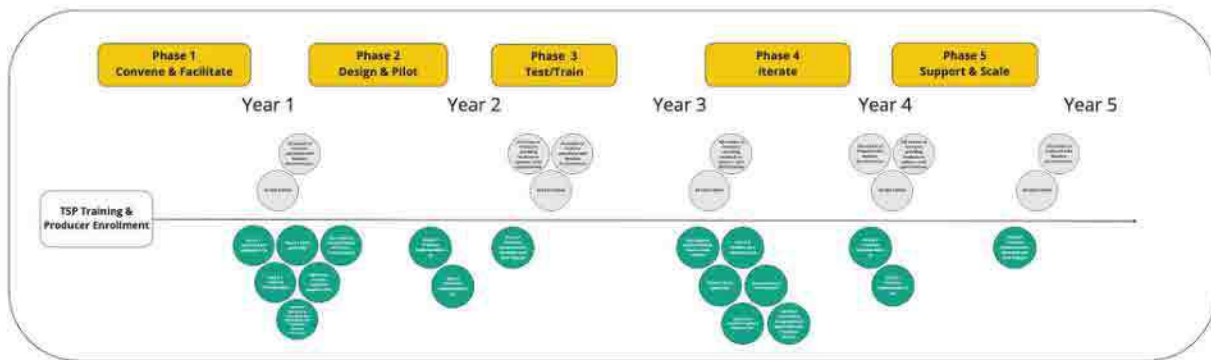
The ACTION network will build upon a field tested process to provide value and incentives from 1) recruitment 2) common enrolment and baseline MMRV to 3) sharing, benchmarking and scoring 4) access to marketplace incentives

ii. C. Plan To Provide Tsp, Outreach, And Training, Including Who Will Be Conducting These Activities, Qualifications And Projected Timeline

Support for TSP, outreach, and training is built into the ACTION model led by Point Blue along with nationally recognized Alliance members such as Pasa and Quivira Coalition, and

national certifiers such as Oregon Tilth, California Certified Organic Farmers (CCOF) and others. The Alliance's strong relationship with local and regional and national level Conservation Districts, NRCS offices, Conservation Agencies, and Cooperative Extension will enable interoperability of the TSP training curriculum and outreach working through the The National Conservation Planning Partnership (NCP). The technical training will enable a hybrid curriculum model that builds on the current conservation bootcamp curriculum and the Carbon Farm curriculum co-created by Chico State and Colorado State University (CSU) and supported by OpenTEAM using the same CSA Connector and open technology tech toolkit. The CSA Connector will provide a transparent pathway for TSPs and Producers to connect and share the latest versions of hybrid TSP certifications, core curriculum and monitoring toolkits, and create the infrastructure for TSPs to seamlessly match Transition Financing to planned CSA practices.

Diagram 19 – TSP Training & Producer Enrollment Timeline



Proposed 5-year timeline and key accomplishments for TSP training and producer enrollment to the Ag Data Wallet and CSA Connector systems.

Table 3. Regional Hub TSP Training generating additional common onboarding MMRV						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Total TSPs Trained	8	25	43	62	12	150

Total Producers Onboarded into profiles by TSPs		250	430	620	120	1500
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In Table 3, these are producers that are accessing the system through other means of support through the use of TSPs in the field - not counted in Direct producer payments but may be accessing other sources of transition finance or technical support

Outreach To Producers

ACTION's national TSP network will be equipped with tools, training and support to provide third party digital verification. National organic certifier programs will be able to enhance their field services and provide MMRV as part of Technical Service Provider and certifier engagements. The training and common onboarding process is designed to be compatible with USDA and OpenTEAM and data collection tools that are being developed through an ongoing USDA Cooperative agreement that will equip USDA project owners and field staff with interoperable tools.

Training and Access to Decision (Support) Tools

In addition to typical face-to-face training sessions, ACTION will launch a CSA Connector portal which will provide a registry of more than a dozen OpenTEAM interoperable decision-support tools including but not limited to TechMatters/Terrasos; LookINTO Profile Builder; SurveyStack; SoilStack; FarmStack; Hylo; farmOS; LiteFarm; PastureMap; LandPKS; COMET-Farm; Cool Farm Tool; Field to Market; FieldPrint; Cover Crop Decision Tools; AFT Economic Calculator tools; National Soil Inventory System; USDA tools such as the Conservation Activity Ranking Tool (CART) and Producer Operational Data System (PODS). PODS is a modular system used for collecting producer data for the Conservation Innovation Grants (CIG) in-field trials and developed by OpenTEAM in alignment with the published 20221-2023 USDA Data Strategy which includes interoperability with Farmers.gov, and Dynamic Soils Database within EDAPT (Enterprise Data Analytics Platform and Toolset) and compatibility with USDA Electronic Authentication (E-Auth) systems. These efforts are currently being coordinated through the Prometheus Agile Development Train.

ii. D. Plan To Provide Financial Assistance For Producers To Implement Csa Practices

ACTION will build on the network of TSPs and FRPNs listed in project partners in the three regions and expand nationally to target financing for impact and improvement of MMRV modeling. TSPs will provide planning and baseline documentation to access the CSA Connector system that will match buyers, funders and producers based on customized individual profiles and automatically create funding applications for transition practices. Producers will not only be able to access ACTION transition finance pools, but will also be able to access other financial service products and incentives through the ACTION Funder network of more than 80 foundations and a network of more than 100 buyers that will enable additional funding to flow through the same pathways established by this proposal. ZFP will administer transition funding assistance through regional funding pools that are designed to ensure OED of capital. This public-private model has been proven in CA and CO. ZFP will administer contracts and all funding to farmers, ranchers and TSPs for the generation of more than 400 project plans with baseline documentation and multi-party communications around funding requests, selection, contract, and implementation logistics. The OED process includes a proven and streamlined reporting process that details practice implementation, financial accounting, acreage, crop types, outcomes, and confirmation that practices were completed using Conservation Practice Standards, as well as photo evidence.

ii. E. Plan To Enroll Underserved And Small Producers, Including Estimated Number Of Underserved And Small Producers Participating And Associated Dollar Amounts Anticipated To Go Directly To Producers, In The Form Of Technical And Financial Assistance

ACTION will deploy at least 25% of producer incentive program funds to HU producers. OpenTEAM and ZFP will announce HU producer funding opportunities through existing relationships with FRPNs, TSPs, corporate partners, and non-profit/advocacy groups that work specifically within HU communities. This focused effort will include info sessions available at no cost and a website with detailed FAQ, information, and dedicated phone and email assistance in English and Spanish. ACTION will ensure accessibility by making targeted materials,

services, and tech platforms available in languages prevalent among producer communities such as: Chinese, Hmong, Vietnamese, and Punjabi. In recognition that TSPs are often less available to HU populations, additional support will be provided to TSPs that require it through a dedicated equity and accessibility funding pool budgeted for within the MMRV budget. The OED funding model establishes demographically-linked and regionally appropriate minimums for capital deployment to support HU producers, as well as bonuses which boost the scores within the selection process. ACTION will work closely with California Association of Resource Conservation Districts (CARCD) and 19 RCDs which already have NRCS funding for outreach to HU producers, as well as American Farmland Trust for outreach in CA. In CO, ACTION will work with Mile High Farmers. In the Northeast with Northeast Farmers of Color and Food Solutions New England.

iii. A Measurement/Quantification, Monitoring, Reporting, And Verification Plan

With ACTION, TSPs will be equipped with tools and training for common onboarding processes used to generate baseline MMRV and project plans to support Digital Certification. The common onboarding training enables TSPs to help producers use the same data to: 1) Access transition incentive programs; 2) Generate RegenScore or compatible Environmental Asset Claims; 3) Help buyers provide incentives to support Scope 3 emissions claims (cleared through the Environmental Claims Clearinghouse service); 4) Support Digital Certification.

ACTION will provide MMRV by expanding the capacity of existing TSPs and equipping them with updated training and cutting-edge technological support systems. Verification and reporting of practice implementation will be tracked with a unique scoring system developed by R1A (see below). In-field monitoring of carbon associated with climate-smart management will be conducted on all public and privately funded projects using a collaboratively developed, scalable monitoring framework. This framework (The Range-C Monitoring Framework for rangeland producers) was co-developed with 35+ scientists, practitioners, and USDA agency staff to be rigorous but accessible for monitoring carbon by TSPs and producers alike. A companion Crop-C Monitoring Framework for cropland producers will be developed and deployed as part of this project in a similar way. Fundamental development activities for the

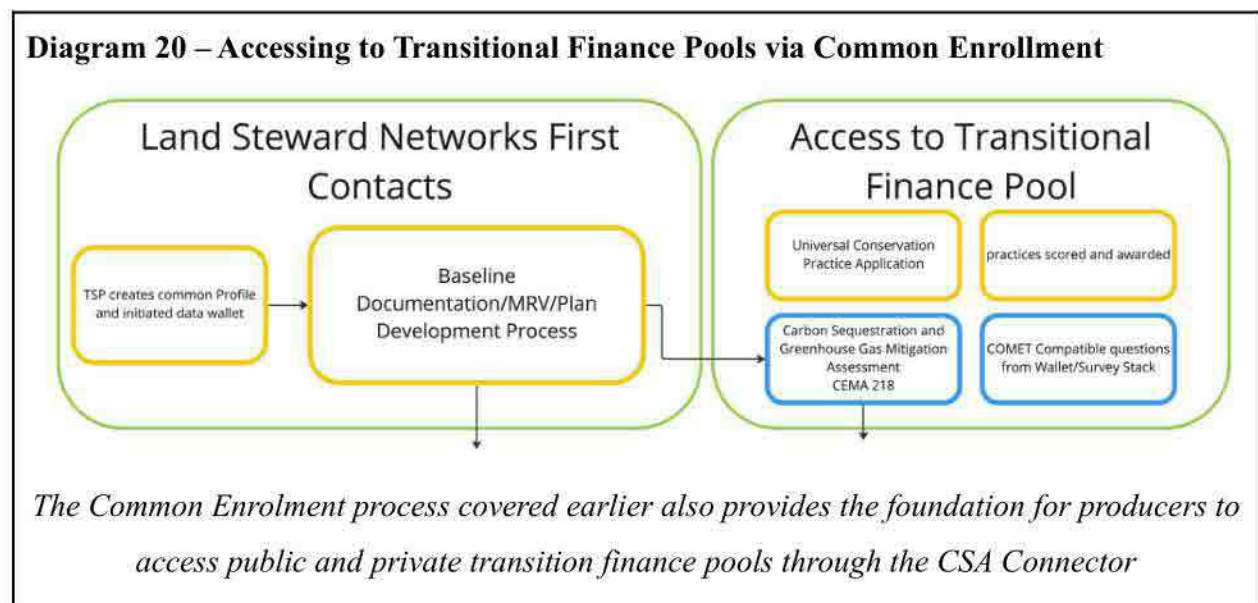
Range-C and Crop-C Frameworks supported by this proposal will bolster the success of other applications which are proposing to use the frameworks.

A key component of data collection via monitoring and measurements is data storage and ownership. OpenTEAM is developing the Ag Data Wallet prototype with the AgStack/Linux Foundation, Digital Green, Our Sci and FarmOS to create a system that gives complete control and data sovereignty to producers while also maximizing the value of shared data through efficient, secure and cost-effective management tools. As we work toward a completely interoperable set of tools, we are also developing modular data use agreements to create a concise and user-friendly method of data consent that maintains farmer control of data. This is necessary for building trust in the Ag Data Wallet, and will address sensitivity around land and financial data, as well as personally identifiable information, such as that covered in the USDA Section 1619 rules. The Ag Data Wallet will enable farm-level data portability, as well as interoperability across systems, and will improve the measurement, verification and reporting of on-farm outcomes as well as the ability to aggregate data across projects from local to national scale.

iii. A. Approach To Greenhouse Gas Benefit Quantification, Including Methodology Approach Consistent With The Section Titled "Quantification Requirements"

ACTION's quantitative approach involves both ecological and financial disciplines to quantify costs, economic and ecological outcomes. Point Blue Conservation Science will be leading the field sampling and modeling program consistent with current collaborative projects with the CSU COMET team, MadAg and other OpenTEAM members. Expected carbon gains associated with all projects will be initially estimated using COMET-Planner and/or COMET Farm if available through more detailed common enrolment profiles. To verify these estimates, carbon stocks for each project will be monitored using the Range-C or Crop-C Monitoring Frameworks. These frameworks include flexible but rigorous protocols with minimum standards, fit-for-purpose design decisions, and a transparent inference scoring system. Of the projects, 5% will be monitored intensively using these frameworks to produce strong levels of inference, 75% will be monitored more moderately, and 20% will be monitored at low intensities. Monitoring

intensity and schema will be chosen project-by-project based on producer goals for communicating results through market articulation and, if pertinent, program or label requirements. The Standard Operating Procedures (SOPs) administered by TSPs during the baseline documentation and planning process will also enable a unique, state-of-the-art, scalable carbon monitoring system, including the Range-C Monitoring framework and the creation of the Crop-C monitoring framework. The framework, developed via a collaborative process, provides guidance for TSPs and land stewards on the selection of monitoring design, sampling protocols, and measurements, to detect the influence of management practices on carbon.



iii. B. Approach To Monitoring Practice Implementation, Including The Anticipated Number Of Farms And Acres Reached Through Project Activities

Existing certifications can be used to monitor practice implementation annually. Most producers participate in at least one certification. The planning and record keeping data needed for certifications such as food safety, organic, grass-fed, regenerative, animal welfare and others have substantial overlap with data that is needed to monitor practice completion as well as model farm-level greenhouse gas (GHG) emissions. Ultimately this can support certifiers in expanding the services they offer farms to include verification of practices as well as the creation of climate

smart commodities. Technical assistance for planning and project development will also generate third party verification through documentation and storage of the management records in producers' Ag Data Wallet. Types of documentation will include management records, photos, videos, aerial and satellite imagery as well as measurement and third party monitoring data. All data can also be reused to create compelling Marketplace profiles that will share producer information with potential buyers and storytelling assets, particularly used for marketing throughout the supply chain and to consumers. These tools, provided by LookINTO, will add value to the product throughout the supply chain. Practice implementation will also be self-reported with digital verification through common onboarding questionnaires administered by TSPs and producers. Ag Data Wallets enable producers to "opt-in" to voluntarily share management records with third party verifiers and services. Observations from multiple sources can be combined with user-generated data to provide high fidelity digital provenance to both environmental claims and practice completion.

iii. C. Approach To Reporting And Tracking Of Greenhouse Gas Benefits Including The Anticipated Ghg Benefits Per Farm, Per Project, Per Commodity Produced, Per Dollar Expended, And The Anticipated Longevity Of Ghg Benefits

ACTION will expand the comprehensive RegenScore system developed by R1A and project partners to track the provenance, fidelity and resolution of observations over time. The RegenScore enables all producers to be scored and access transition incentives and begin quantifying baseline documentation towards continual improvement. The Ag Data Wallet and interoperable benchmarking tools will enable producer financial and partial budget data sharing to facilitate local price discovery and cost effectiveness of practices over time for producers, USDA program rankings, and private project funders. ACTION will establish a National Calibration Dataset that is interoperable with existing databases such as DayCent, DNDC, and Cool Farm Tool as part of a larger effort to create a FAIR Public Land Library, improving the Findability, Accessibility, Interoperability, and Reuse of digital assets. Furthermore, management data in the Ag Data Wallet integrates directly with GHG models and farm calculators such as COMET-Farm or Cool Farm Tool, allowing producers to complete certification recordkeeping

GHG benefit through the same process. These modeled datasets can be supplemented with soil test results, satellite data and imagery, and other site specific data points within one platform for managing all of the information needed to model, monitor, report, and verify a farms' impact on climate change and carbon sequestration.

iii. D. Approach To Verification Of Greenhouse Gas Benefits

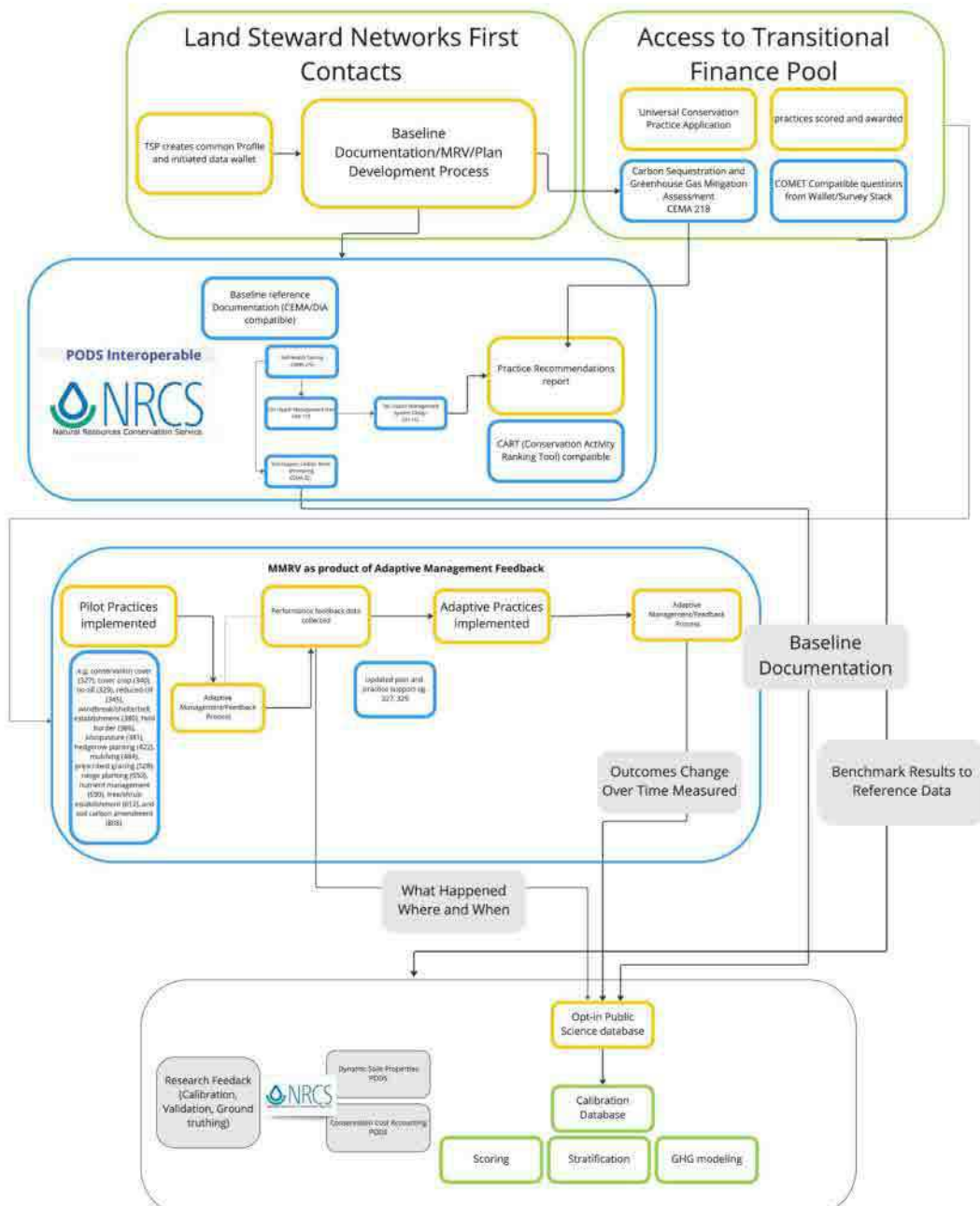
ACTION will develop, test and deploy a GHG benefit tracking system throughout purchaser supply chains. This will be done in partnership with a national network of CD/RCDs and organic certifiers including but not limited to Oregon Tilth, California Certified Organic Farmers (CCOF), CARCD, Pasa as well as buyer-focused verifiers such as The Center for Good Food Purchasing and HowGood.

ACTION's GHG benefit tracking plan has six primary components:

- 1) Soils property mapping and direct measurement informed by remote sensing and using sample site selection models and stratification tools to create third party verified observations as part of existing planning, Digital Certification and CSA planning visits and onboarding process.
- 2) Digital certification and leverage of existing TSP planning processes for baseline documentation and change-over-time monitoring to reduce cost and increase quality and resolution of claims using the same field visits, interoperable tools and data structures.
- 3) Organizational support to create Digital Certification standards for organic producers, which will expand from four pilots initially focused on California Rice, Midwest Grains and Northeast Grazing and Dairy programs from which a national Digital Certification program standard and verification network can be built.
- 4) Verification of claims, and attestations will be generated through TSP support for producers in transition, providing access to transition funds regardless of their current certification status. The TSP-facilitated planning services will provide third-party verification of market opportunities. Onboarding will populate a producer-controlled Ag Data Wallet with the digital claim assets to facilitate Digital Certification - both for current and future needs.

- 5) Baseline observations and direct measurements from third-party verifiers and TSP planners can then be combined with model based and remote sensing results to further improve the quality of the claim, and contribute to a constantly improving public land library to track change over time which will persist across land tenures.
- 6) Enhancement of Technical MMRV Training Programs developed in conjunction with Point Blue, OpenTEAM, UC Davis, Cornell, Chico State and CARCD to certify new TSPs. This will expand on the existing OpenTEAM fellows and other programming through regional hub partnerships that are tied into service level agreements (SLAs).

Diagram 21 – MMRV Process, Zoomed Out (See Appendix for full resolution diagram)



This diagram provides a systems level view from TSP engagement that support continual improvement of producer outcomes and MMRV tools, while providing high quality transition financing and access to premium markets.

iii. E. Agreement To Participate In The Partnerships Network

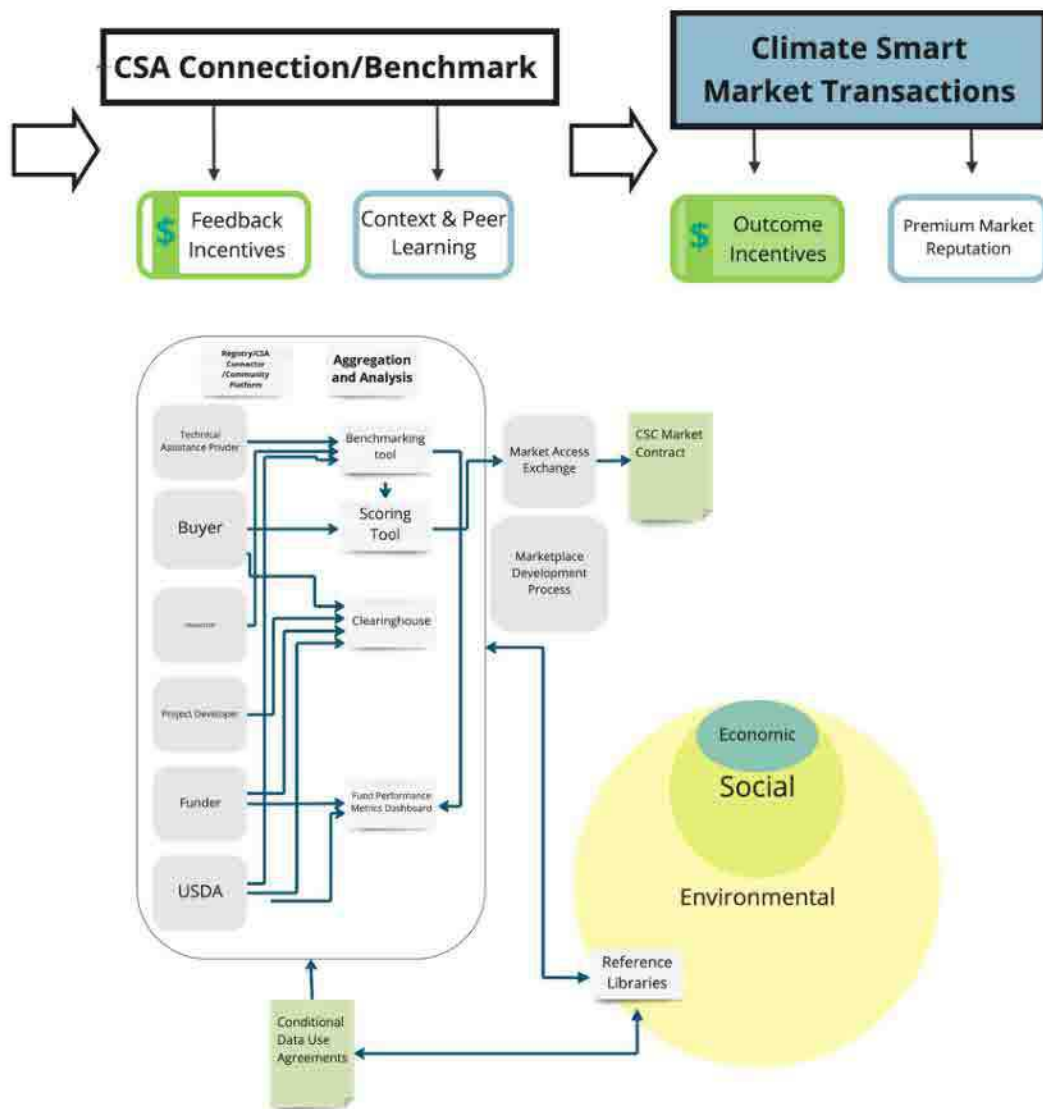
ACTION members agree to participate in the Partnerships Network and lessons learned. Examples of Service Level agreements and MOUs are available upon request.

iv. A Plan To Develop And Expand Markets For Climate-Smart Commodities Generated:

The Market Expansion strategy is to leverage the immense breadth of the network across ACTION through:

- 1) Expanded purchaser commitments
- 2) Innovative Transition Financing models
- 3) CSA Connector and Marketplace Exchange for matching buyers, funders and producers
- 4) Community engagement and consumer marketing.

Diagram 22 – Marketplace Development Diagram, Focused On CSAConnector (See Appendix for full resolution diagram)



The Common Enrollment process will allow for different stakeholders to onboard onto the Ag Data Wallet and access resources in the CSA connector. Question sets will be created for producers, TSPs, buyers, project developers, funders, government workers, and network coordinators to generate profiles in the Ag Data Wallet system. These identities will vary by user type, but they will all include context about an individual's interest, projects, and areas of

collaboration in order to facilitate networking in the CSA Connector. The CSA Connector will also contain a registry of tools, funder performance and dashboards, benchmarking and scoring tools, and reference libraries. The goal of this system is to create a user-friendly way to connect producers, funders, buyers, researchers, and other actors in order to promote CSA practices and develop an active marketplace.

Expanded and Transparent Purchaser Commitments

ACTION members are leveraging the strength of existing relationships and networks with many large institutions primed for climate-smart purchasing and transition finance commitments for CSA practice implementation. Partners such as The Alliance Center, Regenerative Rising and the RIA have already begun to secure commitments from companies such as (not limited to): Sodexo, Timberland, and LinkedIn. Networks include: Timberland, VF Corporation, United Airlines, Applegate, Compass Group, The University of California System, Stanford University, The Culinary Institute of America, Califia Farms, Oatly, Colorado's Community College System, Natural Grocers, Danone, RedRocks Theatre, Denver Zoo, Denver Botanic Gardens, Denver Museum of Nature and Science, General Mills, Stonyfield and retail allies like Whole Foods.

A primary mechanism for expanding and tracking purchaser/procurement commitments will be through the comprehensive CSA Connector system - a producer, buyer, funder exchange which is accessed through the TSP-facilitated Ag Data Wallet after common onboarding. RegenScored projects will enable an evidence-backed, place-based, market-driven common rating system that can be used from consumer packaging, to buyer selection criteria as well as provide the foundation for Scope 3 claims and Environmental Marketplace claims to rapidly scale CSA marketplace options and supply.

ACTION members will proactively solicit engagement of buyers at all scales, including national retailers, distributors and corporate food service, as well as the regional distributors and local restaurants and retailers that serve as the primary market outlets for smaller growers. Participation in the CSA Connector will give buyers visibility to CSA producers, as well as an opportunity to promote their own CSA purchasing policies and commitments, both to CSA producers and if relevant to their own customers. In addition, ACTION partners with expertise in

values-driven procurement data collection, tracking/verification and assessment, will help develop and pilot mechanisms for third-party verification of buyers' commitments. In turn, such buyer accountability mechanisms will directly open up new markets in municipalities that are prioritizing the purchase of CSA products as a means to meet goals of their own Sustainability and Climate Action Plans.

Ongoing, Transition and Innovative Financing Models

Combined ACTION member funds from FORA (Fundors for Regenerative Agriculture) and TIFS (Transformative Investment in Food Systems) represent more than 100 funding organizations and foundations representing \$27B under U.S. management with more than \$270 million that could be accessed for transition finance under the proposed structure. The operationalizing of these new tools for enhanced data-driven market storytelling, GHG benefit tracking, and data interoperability across these broad networks will create the foundational circumstances in which the producers funded through this grant (and every other USDA CSC grant) comprise a market for CSC. ACTION's localized funding pool model will enable the movement of funds from multiple sources into a purpose built structure that will: 1) Enable expansion and long-term, sustained funding from multiple sources including but not limited to public financing, private foundations, opt in/out consumer funding, voluntary institutional transaction fees, and corporate commitments; and 2) Use a common enrollment application to enable efficient CSA and Equity evaluation and ranking and provide a seamless producer experience from planning to finance and market access.

In addition to direct private capital match, this project also relies on conditional match to provide sustained project growth that will be generated through the success of private funding pools. These pools will be established starting in the first year to use the same project development, training, MMRV and project ranking system to generate privately funded projects that leverage the federal investment in those systems.

To scale climate smart commodity production, the engagement of the private financial sector is critical. Impact investors, foundations, and some banks and institutional investors are already investing in transitions to regenerative and climate smart practices. For climate-smart production to become mainstream, the Federal investment in climate-smart commodities should attract new private capital in all its forms – from grants to commercial investments – to

regenerative and climate-smart commodity production. The current landscape of regenerative financing – both the sources of finance and the investable projects – is highly fragmented.

To increase transparency and facilitate matchmaking, we will bring together information about private finance (including philanthropic grants and impact investments) for regeneration and build a system to facilitate matchmaking between funders, investors, and farmers/companies. The Transformational Investing in Food Systems initiative (TIFS) has developed investment tools aimed at discovering the risks and returns – financial and non-financial - of regenerative and climate-smart production. We will use these tools to create profiles of investable projects (farms and companies) as well as profiles of sources of private capital. Funders for Regenerative Agriculture (FORA) is building an interactive database of regenerative grants. We will connect the profiles and the database with the CSA Connector Platform to facilitate the matchmaking between investors, producers, and buyers.

TIFS, FORA, Regenerative Rising and other partners have been building networks of investors, including foundations and impact investors, interested in scaling climate smart and regenerative agriculture. The project will put in place the structures needed to accelerate dealmaking for CSA transitions. To scale climate smart commodity production, the engagement of the private financial sector is critical. Impact investors, foundations, and some banks and institutional investors are already investing in transitions to regenerative and climate smart practices. For climate-smart production to become mainstream, the Federal investment in climate-smart commodities should attract new private capital in all its forms – from grants to commercial investments – to regenerative and climate-smart commodity production. The current landscape of regenerative financing – both the sources of finance and the investable projects – is highly fragmented. To and increase transparency and facilitate matchmaking, we will bring together information about private finance (including philanthropic grants and impact investments) for regeneration and build a system to facilitate matchmaking between funders, investors, and farmers/companies. The Transformational Investing in Food Systems initiative (TIFS) has developed investment tools aimed at discovering the risks and returns – financial and non-financial - of regenerative and climate-smart production. We will use these tools to create profiles of investable projects (farms and companies) as well as profiles of sources of private capital.

Funders for Regenerative Agriculture (FORA) is building an interactive database of regenerative grants. We will connect the profiles and the database with the CSA Connector Platform to facilitate the matchmaking between investors, producers, and buyers. TIFS, FORA, Regenerative Rising and other partners have been building networks of investors, including foundations and impact investors, interested in scaling climate smart and regenerative agriculture. The project will put in place the structures needed to accelerate dealmaking for CSA transitions.

These investments are contingent on activities supported through Marketplace Development and Testing that will provide the required conditions for the CSA connector to function and unlock private investment. Those requirements include:

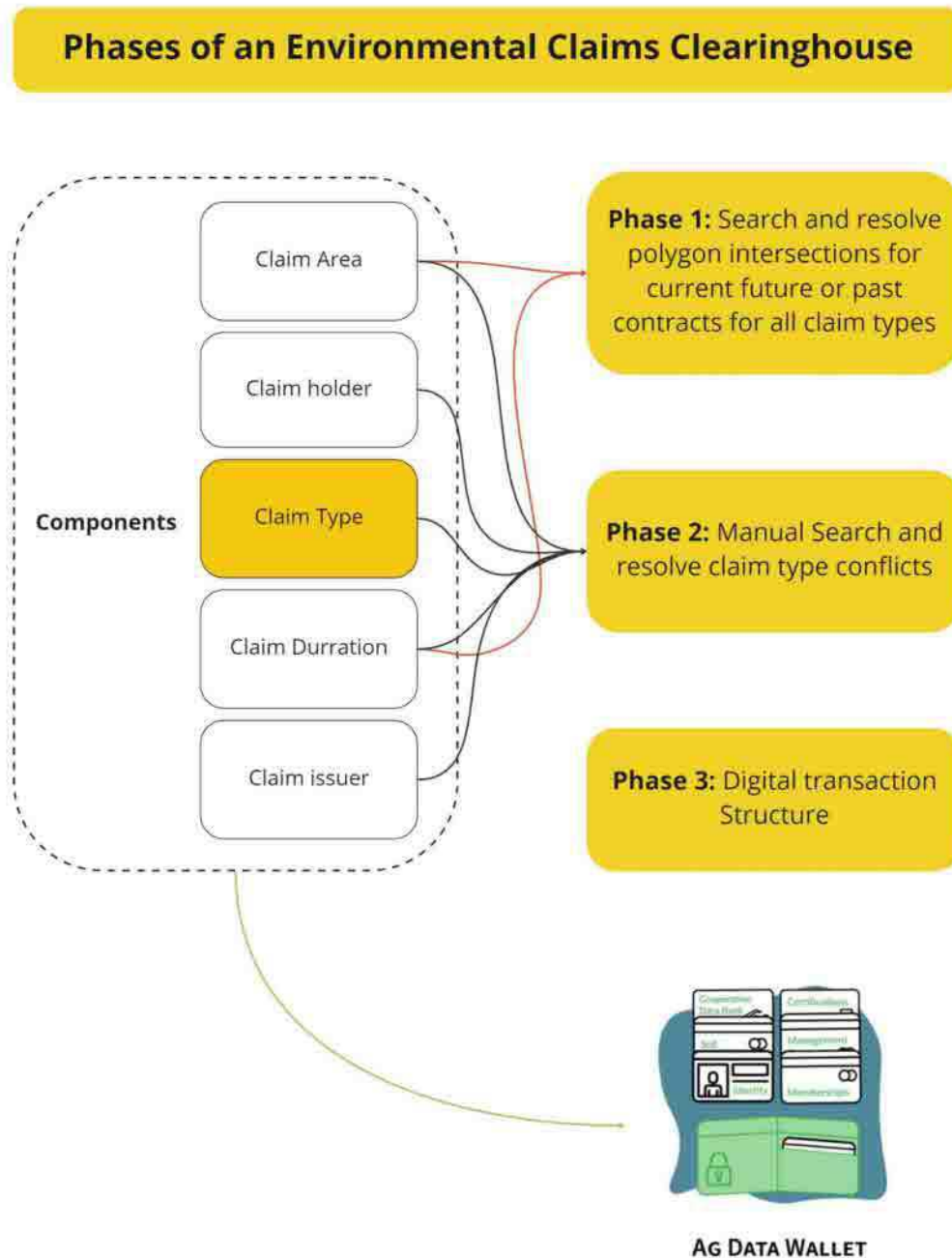
- Market Standards Maintenance and Support
- Digital Certification Buyer and Producer Feedback
- 3rd party verification program
- Hosting and support of MVP Marketplace platform
- Marketplace Working Group Support
- Brand and Private Capital commitment outreach (Transition funding match generation)
- GCF/Local Chapter Development governance support

Environmental Claims Clearinghouse

Ecosystem service registries provide a mechanism to ensure transparency, governance and oversight, providing legitimacy for making claims and avoiding problems and perversions, such as double counting. In 2021, OpenTEAM led a broad collaborative effort to develop the specifications and statement of need for an Environmental Claims Clearinghouse (ECC). An ECC enables the flexible development of new and diverse environmental claim assets classes while providing a trusted methodology for claim identification and assurance of uniqueness. An ECC enables claims searches by boundary, claimant, duration and type and provides a common format to enable registered claims to avoid conflicts related to additionality or double counting. This function was deemed a critical piece of infrastructure by ACTION members. The OpenTEAM collaborative effort to design the prototype ECC included participation by ESMC, IndigoAg, CIBO Technologies, Carbon A List, TerraGenesis, Climate Action Reserve (CAR), Conservation Technology Information Center (CTIC), Nori, Field to Market Alliance, Heartland

STG, Meridian Institute, Regen Network and more, with input from USDA/NRCS FPAC participants, and USDA Software Contractors such as Accenture and SpatialFront.

Diagram 23 – Phases of the Environmental Claims Clearinghouse (See Appendix for full resolution diagram)



Each phase of development of the ECC enables a more nuanced report not only related to overlaps in geography, but also in claim type.

Community Engagement and Consumer Marketing and Awareness

ACTION members are also expanding markets through community engagement and consumer awareness. The combined cultural capital and outreach potential of the alliance is immense as already covered above by purchaser commitments. In addition to participation by national CPG brands and some of the largest buyers in the US, restaurants and food service are the largest sector of the food economy. The James Beard Foundation (JBF), as an ACTION member, includes a newsletter reach of 22,000 and a network of over 1000 chefs/restaurants, including 322 chefs who have undertaken policy and advocacy training, representing the \$860B restaurant industry. Their extended annual customer traffic and social media following includes millions of customers. JBF will create a Chefs for Climate Smart Agriculture program as part of the ACTION plan. Similarly, The Alliance Center's (CO) Regenerative Recovery Coalition (RRC) includes 360 business and organization members with 28,453 members of the CO workforce and \$7,243,911,955 represented in annual revenue, ready to promote CSA and operationalize the GCF program in collaboration with ZFP and the CO Dept of Agriculture.

Diagram 24 – Illustration Of R1A Marketing Approach

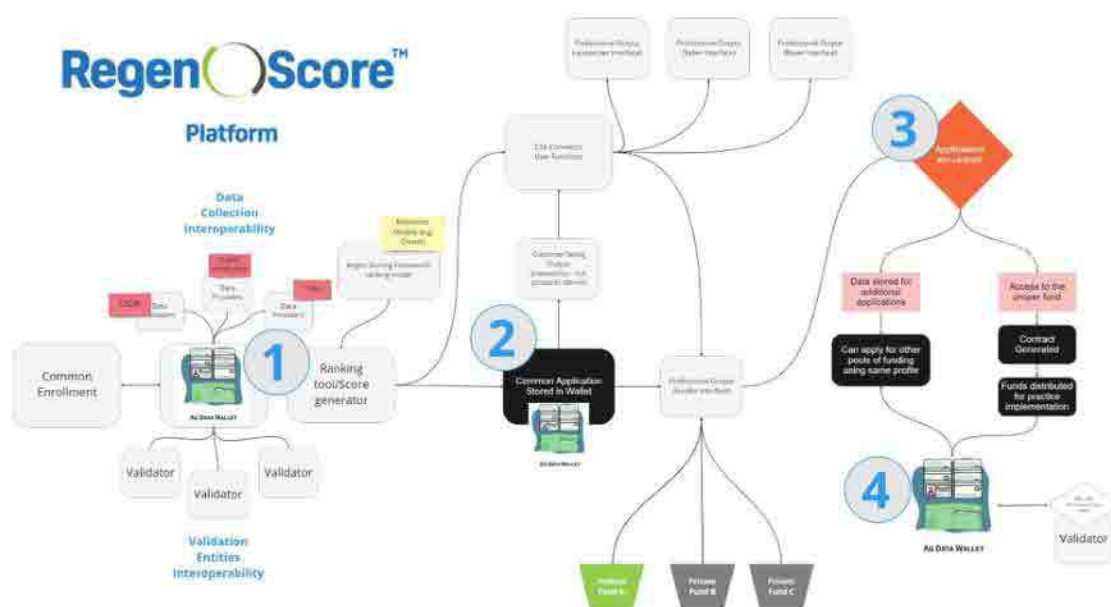




iv. B. A Plan To Track Climate-Smart Commodities Through The Supply Chain, If Appropriate

ACTION members will provide Traceable Transaction handling through digital market profiles and storytelling kits which will provide both meaning and measurement of impact for supporting market development. Global Food Traceability Center (IFT-GFTC) will leverage and extend Electronic Product Code Information Services (EPCIS)/GS1 to attach climate smart attributes to products and enable their tracking and transmission through the supply chain up to retail and/or food service. Additionally, IFT-GFTC will conduct commodity-specific pilots of end-to-end climate smart traceability with all relevant supply chain partners. Together, this will create the critical data infrastructure necessary to grow markets for climate smart commodities with integrity.

Diagram 25 – Marketplace Traceability, 3rd Party Verification, And Scoring Systems
(See Appendix for full resolution diagram)



RegenScore accessed through the CSA connector enable producers to access multiple transition finance funds through a funding registry developed by FORA/TIFS. Additionally 3rd Party Verification and Traceability is a byproduct of common enrolment.

iv. C. Estimated Economic Benefits For Participating Producers Including Market Returns:

As discussed in Diagram 2 , there are monetary, management, social and feedback incentives at every stage of the producer's journey to accessing the CSA marketplace.

Table 4. Estimated Economic Benefits and Return on Investment						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Producer Impact Return on Investment/Marketplace	56%	124%	298%	920%	1968%	482%

development						
	Year 1	Year 2	Year 3	Year 4	Year 5	Total
Direct Producer Equity Allocation	205,000	545,000	975,000	1,775,000	1,850,000	5,350,000

More than 1500 producers onboarded and provided with CSA plans with more than 25% going to HU producers. The return on investment from marketplace development is in the form of sustained producer funding and marketplace infrastructure that is ready to scale.

More than 70% of initial project funding will create direct and in-direct producer benefits with an increasing proportion of project finance coming from non-federal sources. In addition, the project finance model is designed to provide a multiplier effect for producers who are onboarded.

In addition to practice incentive payments, producers will have access to multiple market and agronomic economic benefits through participation:

- 1) Access to premium markets through the CSA Connector System linking producers with buyers and funders. Additionally, the interoperable traceability approach grounded in EPCIS/GS1 will empower producers to structure their data in such a way that they can sell to their choice of buyers.
- 2) Access to transition finance through GCF funding flows and combined potential pool of over \$270M in potential transition finance through TIFS and FORA using the same application
- 3) Technical Assistance to reduce the cost of agronomic planning, baseline documentation, data entry and onboarding to marketplace profiles for populating their Ag Data Wallet and
- 4) Access to free and open source agronomic decision tools to reduce input costs through the use of cover crops and adaptive input use.

iv. D. Post Project Potential, Including Anticipated Ability To Scale Project Activities, Likelihood Of Long Term Viability Beyond Project Period, And Ability To Inform Future Usda Actions To Encourage Climate Smart Commodities.

Building this data infrastructure for post-farmgate data transmission and conveyance via the traceability industry standard EPCIS/GS1 is crucial to scaling and long-term viability necessary to achieve the food and ag sectors' scope 3 greenhouse gas commitments and meet the SEC's proposed climate disclosure rules and investors' climate disclosure requirements. By attaching the data to the same structure that conveys other critical product and trade information, this approach normalizes transmission of climate data, a critical shift from non-scaled niche markets to standard commercial practice. This is the approach that will ultimately empower broad transformation of the food system's climate impact in line with IPCC guidance.

Supply Of CSA: Collective Funding To Finance Ongoing Practice Implementation, TSP And Decision Support For Adaptive Management.

ACTION's model is based on generating sustained funding through the CSA Connector marketplace and individual, corporate, and foundation funder network and related funding pools. This will enable both growing numbers and size of Transition Funding Pools by 2026. This expected growth is exemplified by a commitment to GCF in the Colorado Department of Agriculture's MOU with ZFP and The Alliance Center around a stated goal of scaling Colorado GCF to \$5M/year by 2025. The advancement of the GCF model via ACTION is unique and provides a radically scalable pathway for perpetual transition incentives with maximum impact and minimum transaction costs.

Informing future USDA actions to encourage climate-smart commodities.

Diagram 26 – Broad scale adoption and scalability of structure across PCSC (See Appendix for full resolution diagram)

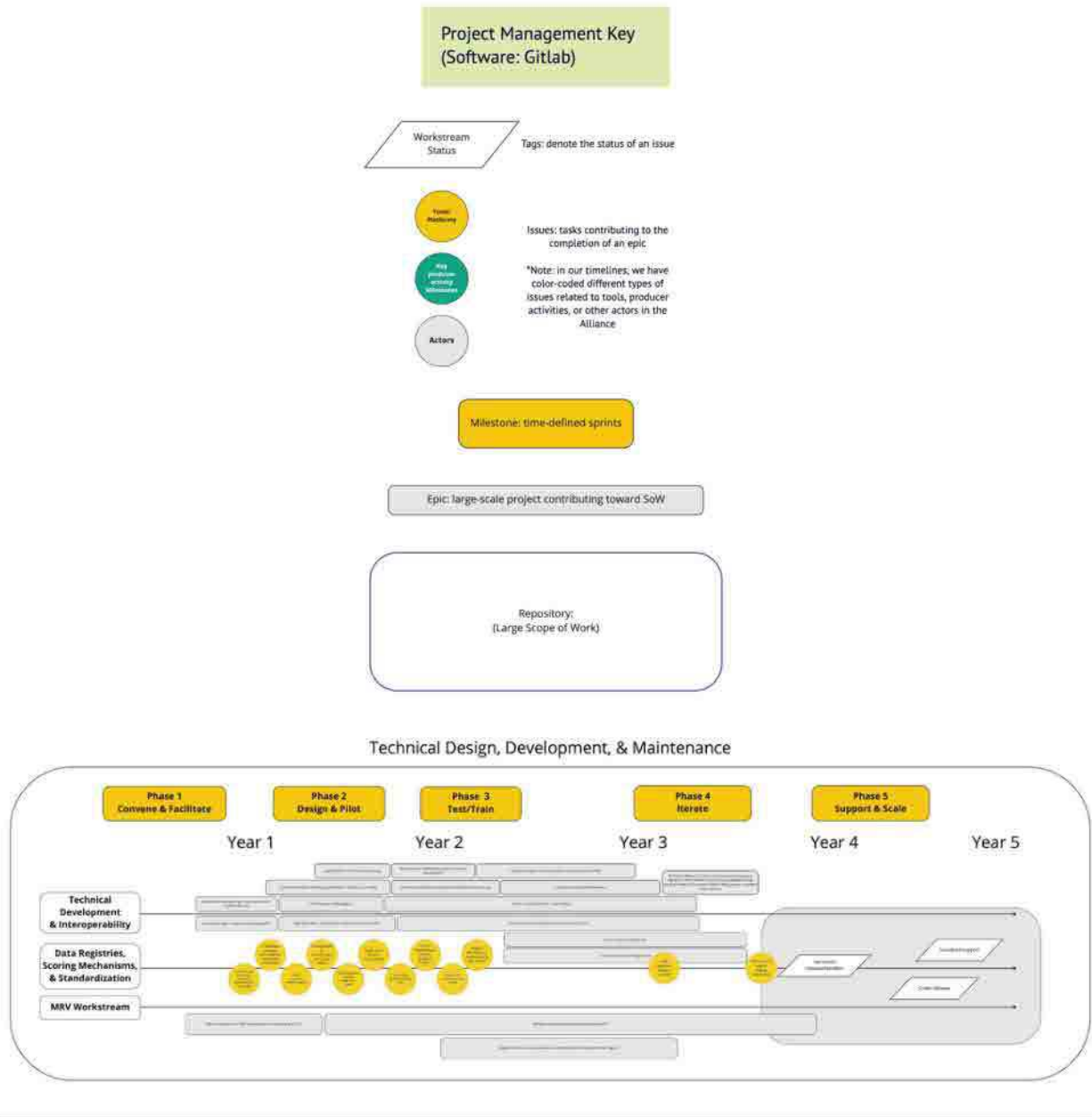


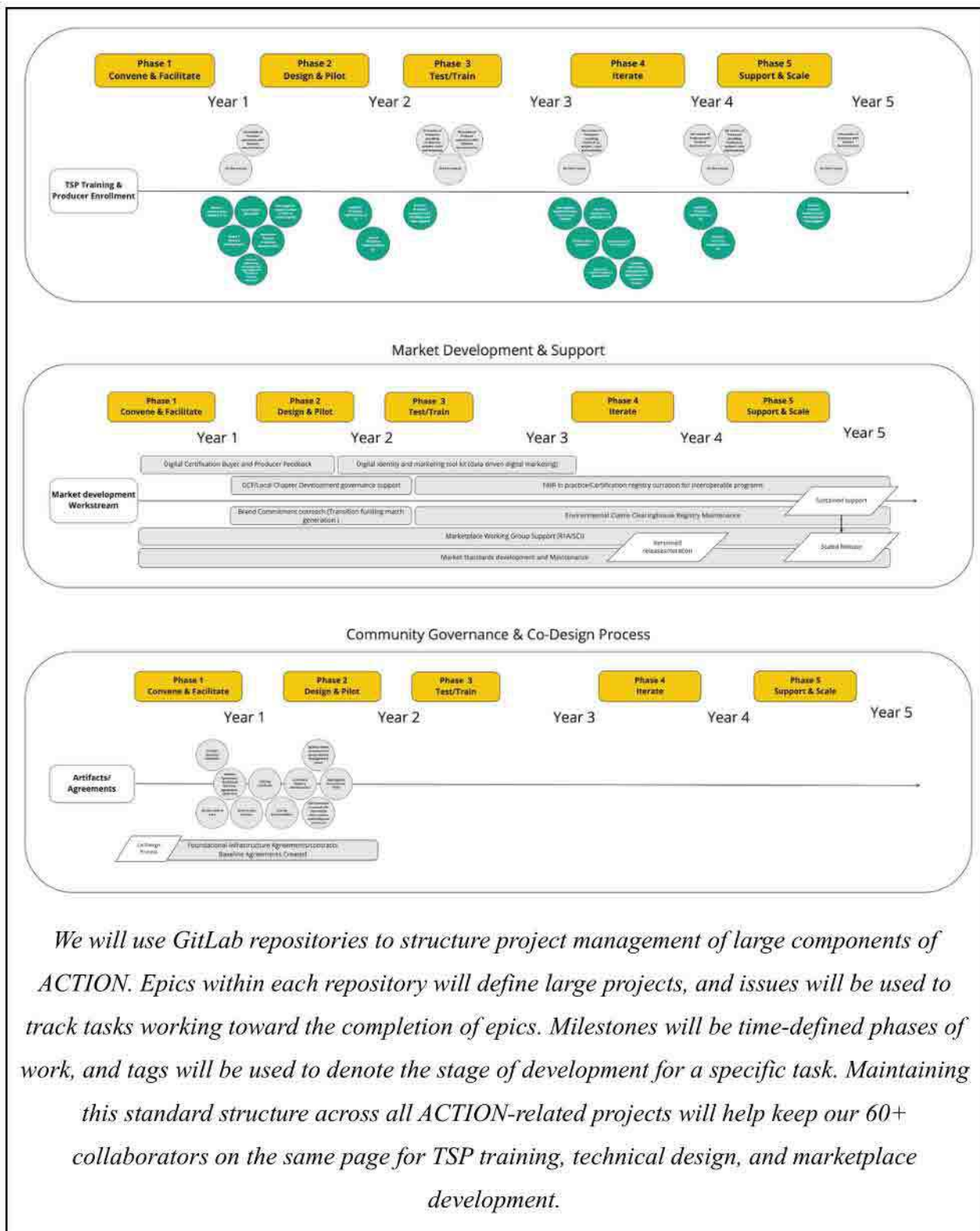
[This map](#) visualizes the connections of organizations with funded Partnerships for Climate-Smart Commodities Projects. Visit this map and presentation to view partnerships and connections.

ACTION will create a Common Land Asset Registry Service, which will serve as the long term foundation for other necessary authoritative reference and calibration data sets that can be generated by every conservation program and research project across USDA. It will also facilitate interagency data interoperability as outlined by the USDA 2021-2023 Agricultural Data Plan published by the office of the USDA Chief Data Officer. Interagency interoperability is critical to accelerate research, technology development, and the next generation of effective climate programs. The Environmental Claims Clearinghouse, which provides the equivalent of a cadaster that functions like a registry of deeds/title search to clear claims based on boundaries, duration, claim type and claimant, will also be a powerful tool for interoperability between public and private claims. The Public Land Library (which in turn serves as a reference for the ECC) also provides a pathway for producers to opt-in to contribute to a durable, searchable, publicly accessible library of land attributes; the National Soil Inventory Project and National Calibration Data Sets will enable multi-model calibration including but not limited to

COMET/DayCent, DNDC, and Salus, as well as improved machine learning and remote sensing and spectral analysis calibration and continual improvement.

Diagram 27 – Timelines, Projects, and Milestones by Workflow Over 5 years (See Appendix for full resolution diagram)





Success Criteria - SMART Goals

Specific - What do we want to accomplish?

Measurable - How will we know when we have accomplished our goal?

Attainable - How can the goal be accomplished?

Relevant - How will the goal meet our short- and long-term needs?

Timely - When will the goal be accomplished?

Success Criteria: Foundational Infrastructure Agreements/contracts; Baseline Agreements Created

- ❖ **Specific:** Scalable governance - with both accountability and flexibility
- ❖ **Measureable:** All members have up to date contracts and agreements that reflect the scope of work and services they are providing
- ❖ **Attainable:** Grants and agreements templates (MOU, SLA, SOWs, Code of conduct etc.) maintained by manager and agreement specialist in close communication across all activities
- ❖ **Relevant:** Necessary for short term expectations and communication and reporting norms and embed cultural aspects of collaboration into every document and interaction.
- ❖ **Timely:** Baseline agreements should be completed in three phases over the first year and then updated annually throughout the course of the project.

Success Criteria: TSPs/Certifiers

- ❖ **Specific:** Trained TSP are necessary as first point of contact and key trusted intermediary for delivery of services
- ❖ **Measureable:** Level of training accomplished; Number of Trained TSPs; Number of plans created; Release of TSP training program (and updates); Detail of baseline documentation
- ❖ **Attainable:** Develop accepted and trusted training program; Recruit trusted TSPs from existing farm networks; Develop regional training programs and remote learning network to keep up to date and reduce costs; Partner with existing training networks
- ❖ **Relevant:** To scale on-boarding, and every step afterward a trained network of ag tech

professionals will be necessary; relevant from initial signup and sustained growth.

- ❖ **Timely:** Will start in first year but be sustained and grow throughout the project

Success Criteria: Scientific Advancement

- ❖ **Specific:** Universal Access to continually improved trusted reference data sets, models and analytic tools
- ❖ **Measureable:** (FAIR) Findable, Accessible, Interoperable, Reusable; Plus+ Accurate, Low Cost, Ubiquitous (used across other public and private projects)
- ❖ **Attainable:** Consistent data intake standards and conventions; Trusted utility infrastructure; engaged community to curate standards; based on adaptive management - and high quality on farm planning
- ❖ **Relevant:** All claims will need to be based in science to be credible
- ❖ **Timely:** Reference data sets will begin to be created from the first year data of consistent collection protocols; Improved models and analytic tools, benchmarking and decision tools follow as reference data sets grow

Success Criteria: Co-Design Process

- ❖ **Specific:** Trusted tools processes that are designed with input from the users that will scale with the community
- ❖ **Measureable:** Community creates design specifications that are broadly accepted and create key utilities, applications and related tools that support a vibrant and adaptive marketplace
- ❖ **Attainable:** Build on existing Collaboration process with sufficient trained facilitation and support over time
- ❖ **Relevant:** Agricultural and food systems are complex with diverse stakeholders which require trusted processes and third parties to hold space to develop shared specifications for enabling infrastructure.
- ❖ **Timely:** Co-design processes are one of the first tasks that will be implemented across the project. Pace will be based on dependencies and stakeholder overlap and facilitation capacity

Success Criteria: Field testing

- ❖ **Specific:** Technical service providers and End users must trust the quality of the tools they use. TSPs should see themselves as key team members in improving the quality of tools they use in their daily work
- ❖ **Measureable:** Number of TSPs that have access to suite of stable/mature tools; number of TSPs that are testing V1/Beta tools
- ❖ **Attainable:** Build upon the TSP training and fellowship program to support technical orientation and introductions to new releases
- ❖ **Relevant:** Continual improvement, trust and scalable adoption requires tools that are meeting the needs of the users
- ❖ **Timely:** It follows the release cycle. Continual field testing is part of adaptive management, agile development, and processes of continual improvement that will be necessary to scale a system in a dynamic environment.

Success Criteria: Versioned releases/Iteration

- ❖ **Specific:** The co-design process must be supported and sustained over time for continual improvement; Beta or early version product releases should quickly demonstrate how improvements recommended by end users were incorporated into new designs
- ❖ **Measureable:** Regular updates are an indication of a healthy community (quarterly or annual updates depending on scope); Releases on annual schedule that incorporate feedback
- ❖ **Attainable:** Releases are a byproduct of successful design specifications and development teams and coordinated project management; feedback is built into the TSP network and support process and into all field testing systems - that are captured into change, feature requests.
- ❖ **Relevant:** Trust that new versions will be released is key to enable compromise in short term design process and keep directionally correct momentum; Continual improvement, trust and scalable adoption requires tools that are meeting the needs of the users
- ❖ **Timely:** Releases should be on transparent schedule to enable stakeholder planning and create an accessible process (quarterly or Annual)

Success Criteria: Scaled Release

- ❖ **Specific:** Larger releases over time
- ❖ **Measureable:** Measured in numbers of adopters of new release and use of standards/tools/platform
- ❖ **Attainable:** As TSP capacity is increased and number on-boarded increases - the releases should also be
- ❖ **Relevant:** Continual growth of supply and demand are required for products with ubiquitous CS attributes
- ❖ **Timely:** Release schedule should be on a regular basis with larger releases at least annually.

Success Criteria: Sustained and growing community

- ❖ **Specific:** Growth in versioning governance community year over year.
- ❖ **Measureable:** Measured in numbers of active participants engaged in maintaining updated versions and quantity of program updates over time
- ❖ **Attainable:** Build on existing trusted community and organizational relationships that have already been established.
- ❖ **Relevant:** The success of the project is not possible without community engagement and increasing use and growth of communities of practice linking with agricultural place based communities on the ground.
- ❖ **Timely:** Community engagement and growth is measured from start to finish through from the first commitment letters through the final progress report.

Success Criteria: Sustained support

- ❖ **Specific:** Diverse and sustained funding streams support grow of supporting infrastructure and processes over time.
- ❖ **Measureable:** Measured in increased size of funding pools and diversity of sources of those funding pools
- ❖ **Attainable:** Create funding and governance structure that enables aggregation of chartered funding pools that create necessary customized performance reports to meet

both federal and private capital requirements.

- ❖ **Relevant:** Diverse funding is necessary to sustain growth over time and support marketplace standards, MMRV infrastructure and transitional funding incentive pools.
- ❖ **Timely:** Structure is scaled over time with increased matched funding and associated governance structure becoming majority funding by year 5.

V. A. Glossary of Terms and Definitions

Adaptive Management Planning

Adaptive Management is a process of continual improvement by adjusting actions taken to achieve a goal or objective based on high-frequency observations and data-driven analysis rather than by expert opinion, best practice recipe, or prescription. It requires a high level of system understanding and observation, analysis, and communications feedback.

Ag Data Wallet

An ag data wallet would provide secure storage and transactions of important data, populated by producers or trusted advisors, under the control of the producer. While the word “wallet” evokes both a place where important documents are kept, and something that is under an individual’s control, an ag data wallet can go beyond that by providing mechanisms for individuals to safely exchange data and giving opportunities for financial compensation for ecosystem services. This system will give complete control of data back to producers while also maximizing the value of that data through efficient, secure and cost effective data management at the producer’s discretion. The technology enables farm-level data portability and interoperability across systems, using the MMRV of on-farm outcomes to support management and decision making and increase access to various opportunities. This system further enables security, trust and data sovereignty.

Cadaster

An official register showing details of ownership, boundaries, and value of real property in a district, made for taxation purposes. In terms of this narrative, the functionality of a cadaster is similar to that of an environmental claims clearinghouse.

CARE Data Principles

The CARE Principles for Indigenous Data Governance were created to advance the legal principles underlying collective and individual data rights in the context of the United Nations Declaration on the Rights of Indigenous Peoples (UNDRIP). CARE is an acronym that stands for collective benefit, authority to control, responsibility, ethics.

While CARE can be considered part of the open data movement, it aims to build on other standards such as FAIR (findable, accessible, interoperable, reusable) by considering power differentials and historical contexts. The CARE Principles for Indigenous Data Governance are “people and purpose-oriented, reflecting the crucial role of data in advancing Indigenous innovation and self-determination.”

Collabathon

This was a compound word created by combining collaboration with marathon. Collabathons are a sustained collaboration effort with short sprints in service of long range shared goals implemented by the OpenTEAM community to accomplish goals in key work streams. Each Collabathon session has a defined goal, outcome, and proposed output shaped by a community co-hosts. They may take anywhere from three to eight weeks (or even longer) to complete with likely a weekly cadence of hour-long meetings to keep the momentum going.

Common Onboarding

Common Onboarding is the process of entering the minimum amount of data for producers to be able to benefit from the tools and community, and providing the minimum level of technical skills to access the tools using the Common Onboarding Form. This form will allow producers to enter the minimum amount of data required of them to benefit from different opportunities through a shared question set, accessing multiple tools, opportunities, and benefits in agriculture. This can be compared to the common application for high school students applying to higher education institutions.

Community-Driven Protocols

Protocols that are developed and maintained by a community of users and developers, rather than a single entity. They are designed to be open-source and decentralized, allowing for greater collaboration and innovation.

CSA Connector

The CSA Connector is a tool that will connect all of the relevant participants in the emerging climate smart commodity marketplace—buyers, producers, technical service providers, and certifiers—with each other and with the information needed to support transactions among them. Those using the connector will ultimately have easy access to a wide range of resources, including environmental claims registries, calibration data sets, and other information libraries.

Data Portability

The ability of an individual or organization to obtain and 'move' their data from one place, platform, etc. to another

Data Sovereignty

Addresses who has control over, ownership, and manages of data or databases and under what conditions (e.g., laws, agreements, etc.). This term is used differently by different groups and lacks a universal definition, data sovereignty is usually referenced in the context of an individual's ability to fully create and control their credentials, identity, and related information about themselves and their work. In the context of this narrative, data sovereignty ensures that the individual or community about whom data is collected has knowledge of and meaningful consent over how that information is used and shared by others by providing these individuals and communities with the tools and resources to control, interpret, and act on their own data.

Decision Support System

The terms Decision Support Tools (DST), or Decision Support Systems (DSS), refer to a wide range of computer-based tools (simulation models, and/or techniques and methods) developed to support decision analysis and participatory processes. A DSS consists of a database and different tools coupled with models, and it is provided with a dedicated interface in order to be directly and more easily accessible by non-specialists (e.g.that is, decision- makers). DSS have specific simulation and prediction capabilities and but are also used as a vehicle of communication, training, and experimentation. Principally, DSS can facilitate dialogue and exchange of information, thus providing insights to non-experts and supporting them in the exploration of management and policy options.

Digital Certification

Certifications can be used to demonstrate green provenance, net-zero and biosecurity claims to enable value creation and market access across supply chains. Most certifications require the

creation of a written plan, recordkeeping, and on-site inspections to verify compliance.

Managing records and written plans for certification digitally can streamline the recordkeeping process for producers, allowing them to use data across a range of certifications and export data in the format needed for any particular certification. Digital and technical infrastructure can enable secure exchange, management, and organization of data across a range of certification needs, including organic, grass-fed, regenerative, food safety, animal welfare, etc.

Digital Certification Standards

Certifications can be used to demonstrate green provenance, net-zero and biosecurity claims to enable value creation and market access across supply chains. Standards for certifications are to be met by producers to achieve a particular certification. In this case, the data necessary to meet those standards is tracked digitally.

Ecosystem Service Markets

Ecosystem services are the many and varied benefits that humans freely gain from the natural environment and from properly-functioning ecosystems such as air and water quality, habitat, esthetics, and recreation. A marketplace quantifies and creates markets based on the change over time in those services.

Electronic Authorization (E-Auth)

The process of establishing confidence in user identities electronically presented to an information system. An example of electric authorization could include verifying the identity of a computer system user.

Environmental Asset Claims

Environmental assets are defined as naturally occurring living and non-living entities of the Earth, together comprising the bio-physical environment, that jointly deliver ecosystem services to the benefit of current and future generation. An environmental asset claim refers to the process of an individual submitting documentation that demonstrates environmental benefit as it relates to that environmental asset, ensuring proper MMRV using tools acceptable to various methodologies.

Environmental Claims Clearinghouse

A clearinghouse of environmental claims enables the flexible development of new and diverse environmental claim assets classes while providing a trusted methodology for claim identification and assurance of uniqueness. An ECC enables claims searches by boundary, claimant, duration and type and a common format to enable registered claims to avoid conflicts related to additionality or double counting.

Environmental Product Declarations (EPD)

An Environmental Product Declaration (EPD) is a comprehensive, internationally harmonized report created by a product manufacturer that documents the ways in which a product, throughout its lifecycle, affects the environment. This report quantifies environmental information on the life cycle of that product to enable comparisons between products fulfilling the same function.

Ex-Ante Power Analysis

The calculations used to estimate the smallest sample size needed for an experiment or research question, given a required significance level, statistical power, and effect size. This ensures adequate sampling densities and that data collected has sufficient power to detect changes over time.

FAIR Data Principles

FAIR data are data that follow the principles of findability, accessibility, interoperability, and reusability. The acronym and principles were defined in a March 2016 paper in the journal *Scientific Data* by a consortium of scientists and organizations. The FAIR principles emphasize machine-actionability (i.e. that is, the capacity of computational systems to find, access, interoperate, and reuse data with none or minimal or no human intervention), because humans increasingly rely on computational support to deal with data as a result of the increase in volume, complexity, and creation speed of data.

Fidelity

In the context of this narrative, we are referring to fidelity of observed greenhouse gas benefits over time. This refers to a system of measuring and analyzing the degree to which a MMRV protocols are implemented as intended.

Generation of Collective Funding (GCF)

GCF is a process of collecting funds from multiple sources to finance a project or venture. It involves pooling resources from different sources, such as individuals, businesses, and other organizations, to create a larger fund for a specific purpose.

High Fidelity Digital Provenance

Observations from multiple sources can be combined with user generated data to provide high fidelity digital provenance to both environmental claims and practice completion.

Historically Underserved (HU) Producers

Some groups of people are identified in Farm Bill legislation and in USDA policy as being Historically Underserved (HU). Members of these groups have been historically underserved by, or subject to discrimination in, Federal policies and programs. Four groups are defined by USDA as “Historically Underserved,” including farmers or ranchers who are: Beginning; Socially Disadvantaged; Veterans; and Limited Resource.

Interoperability

Interoperability is a characteristic of a product or system whose interfaces are completely understood to work with other products or systems, at present or in the future, in implementation or access, and without any restrictions. While the term was initially defined for information technology or systems engineering services to allow for information exchange, a broader definition takes into account social, political, and organizational factors that impact system-to-system performance.

Interoperable Claims Standards

Create technical infrastructure to establish shared standards and protocols for making a claim, such as an environmental product declaration or environmental asset claim, that is interoperable and compatible with different claiming systems, certifiers, agencies, etc...

Measuring, Monitoring, Reporting, and Verification (MMRV)

Data tracking of how implemented changes on a farm or ranch can impact soil carbon levels, greenhouse gas emissions, etc... Basically after collecting baseline data from a farm, additional tracking can be used to measure change over time, verifying benefits to the ecosystem in mitigating climate change.

National Calibration Dataset

The National Calibration Dataset will be an important resource for ensuring that measurements made by different instruments are consistent and reliable. It contains a set of data points that have been carefully collected and tested to ensure accuracy, and these points serve as a benchmark for all instruments to be compared against. This dataset is used by scientists, engineers, and other professionals to make sure that the measurements they take are accurate and reliable.

Open Source

Open source is a publicly accessible software design that can be modified and shared by multiple users. This allows the source code to be inspected and enhanced by anyone. Because open source uses multiple collaborators, it allows for more control, increased security and stability, additional training opportunities, and the foundation of communities centered around software design.

Post-Farmgate Data

Data that is measured, collected, and monitored after agricultural products leave the farm. This is different from farm management data which is collected on-farm, but may include carbon emissions resulting from how far products may have traveled or even transaction information from farther down the supply chain.

Pre-Competitive Approach

Pre-competitive refers to a collective approach to bring together a diverse group of stakeholders from across the agricultural industry to create new technologies and solutions that benefit this shared industry and the larger food system. Diverse efforts can be streamlined into solving systematic problems using multiple industry perspectives. Using such an approach will allow for more rapid advancements in our shared understanding of food systems, agroecosystems, climate science, and relationships between soil health, and human health.

Provenance

Origin and ownership of observed greenhouse gas benefits.

Public Land Library

Public Land Library is a publicly curated knowledge commons comprising a curated set of environmental, geological, and human history records of land that is documented and accessible., Like a just as documents and archives can be contributed to like a public library, its documents and archives can be contributed to, and they are searchable like a registry of deeds, while also protecting sensitive locations or data that might threaten food sovereignty.

Resolution

Data Resolution is the least detectable difference in a measurement, record, or observation.

Technical Service Provider

Technical service providers (TSPs) offer planning, design, and implementation services to agricultural producers such as farmers, ranchers, and private forest landowners on behalf of the

Natural Resources Conservation Service (NRCS). This assistance helps improve the producer's operation.

Third Party Digital Verification

The process of having an independent third party verify user's information and data to ensure accuracy or transparency. In this case, Technical Service Providers will act as a third party to verify environmental impacts of newly implemented, climate-smart practices on farms.

Traceable Transaction Handling

Tracking of climate-smart products and their raw materials/components throughout the supply chain using digital market profile and storytelling kits which will also provide both meaning and measurement of impact for supporting market development.

V. B. List of Tables and Diagrams

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V. C. Appendix - High Resolution Graphics and Support Materials

See Attached Zip File

	Phase 1*				Phase 2				Phase 3				Phase 4				Phase 5			
	Convene & Facilitate				Design & Pilot				Test/Train				Iterate				Support & Scale			
	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
Community Governance	Internal Creation: Memorandums of Understandings	Implement feedback & vetting process for privacy, data policies, and codes of conduct	Maintenance of Privacy & data policies, codes of conduct		Maintenance of Privacy & data policies, codes of conduct				Maintenance of Privacy & data policies, codes of conduct				Maintenance of Privacy & data policies, codes of conduct				Maintenance of Privacy & data policies, codes of conduct			
	Internal Creation: Service level agreements and Statements of Work	Community review of technical training curriculum	Implement feedback & vetting process for Consent Agreement/ conditional Data Use agreement/ USDA 1519 compatible	Creation of Consent Agreement/ conditional Data Use agreement/ USDA 1519 compatible																
	Onboarding of new partners	Creation of Consent Agreement/ conditional Data Use agreement/ USDA 1519 compatible	Community review of Consent Agreement/ conditional Data Use agreement/ USDA 1519 compatible																	
Co-Design Processes	Phase I: Co-Design CSA Connector Begins	Phase I: Co-Design Process Begins: Ag Data Wallet (individual and group identity management)	Phase I: Co-Design Process Begins: Land Asset Registry Services (includes ecosystem claims clearinghouse scoping)	Phase I: Co-Design Process Begins: Digital Certification Buyer and Producer Feedback Begins	Phase I: Co-Design: Buyer and Producer Feedback Begins															
Transitional Finance Development			Transition funding match generation system design begun	Generation of Collective Funding Begins w/ establishment of Local Chapter Development Governance			Technical Deliverable: Transformational Finance Application Portal			CSA Connector Technical Deliverable: Funding and Financial Services registry-incentive programs registry for Direct Assistance					CSA Connector Technical Deliverable: Project Finance funding loans, compatible crop insurance					
Internal ACTIONS (processes)	Hiring New staff	Annual staff and financial reviews			Annual staff and financial reviews			Annual staff and financial reviews			Annual staff and financial reviews			Annual staff and financial reviews			Annual staff and financial reviews			
	Internal Creation: Memorandums of Understandings	Maintenance of Memorandums of Understandings			Maintenance of Memorandums of Understandings			Maintenance of Memorandums of Understandings			Maintenance of Memorandums of Understandings			Maintenance of Memorandums of Understandings			Maintenance of Memorandums of Understandings			
	Internal Creation: Service level agreements and Statements of Work	Maintenance of Service level agreements and Statements of Work			Maintenance of Service level agreements and Statements of Work			Maintenance of Service level agreements and Statements of Work			Internal Creation: Service level agreements and Statements of Work			Internal Creation: Service level agreements and Statements of Work			Internal Creation: Service level agreements and Statements of Work			
	Onboarding of new partners	Maintenance of partner relationships			Maintenance of partner relationships			Maintenance of partner relationships			Maintenance of partner relationships			Maintenance of partner relationships			Maintenance of partner relationships			
			Phase II: Co-Design CSA Connector Scopes of Work Created	Phase II: Co-Design Ag Data Wallet Created	Phase II: Land Asset Registry Scopes of Work Created	Phase II: Marketplace Standards Development Scopes of Work Created	Phase II: Co-Design Digital Certification Buyer and Producer Feedback Scopes of Work Created													

Climate-Smart Practices and Limitations

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

NRCS Practice Code	Practice Name
311	Alley Cropping
327	Conservation Cover
328	Conservation Crop Rotation
329	Residue and Tillage Management, No Till
345	Residue and Tillage Management, Reduced Till
336	Soil Carbon Amendment
340	Cover Crop
380	Windbreak/Shelterbelt establishment
381	Silvopasture
386	Field Border
422	Hedgerow Planting
484	Mulching
512	Pasture and Hay Planting
528	Prescribed Grazing
550	Range Planting
590	Nutrient management
612	Tree/Shrub Establishment

All practices applied under this grant will follow NRCS practice standards unless noted below: **N/A**



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



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Overview of Reporting Requirements

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

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

Descriptions of each level:

Project level: Information about activities and impacts at a whole project/aggregate level (i.e., reflecting all activities under the grant agreement). Some project-level reporting is further subdivided by commodity type or a combination of commodity and CSAF practice(s) (commodity x practice).

Partner level: Information about activities related to a single organization (recipient, subrecipient, contractor, or other partner) within a project.

Producer level: Information about individual producers who have one or more farms enrolled in a project.

Field level: Information about individual fields enrolled in a project.

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

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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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

Project Summary

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

Table 1. Project Summary elements

Data element name	Description	Frequency
Commodity type	Type of commodity(ies) incentivized by the project	Quarterly
Commodity sales	Indicates sales of the commodity(ies) related to the project occurred this quarter	Quarterly
Farms enrolled	Indicates enrollment activities occurred this quarter	Quarterly
GHG calculation methods	Methods used to calculate greenhouse gas (GHG) benefits	Quarterly
GHG cumulative calculation	Method used to calculate cumulative GHG benefits	Quarterly
Cumulative GHG benefits	Whole project estimate of total GHG (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



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Partner Activities

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

Table 2. Partner Activities elements

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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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Marketing Activities

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

Table 3. Marketing Activities elements

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



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Producer Enrollment

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

Table 4. Producer Enrollment elements

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



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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)



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Farm Summary

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

Table 6. Farm Summary elements

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



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Field Summary

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

Table 7. Field Summary elements

Data element name	Description	Frequency
Farm ID	Unique Farm ID assigned by FSA	
Tract ID	Unique Tract ID assigned by FSA	
Field ID	Unique Field ID assigned by FSA	
State or territory of field	State name	
County of field	County name	
Commodity type	Type of commodity produced from field	Quarterly
Practice type	Type of practice(s) incentivized in field (up to seven)	Quarterly
Date practice complete	Date that practice implementation is certified complete	Quarterly
Contract end date	End date of contract	Quarterly
MMRV assistance provided	Indicator that MMRV assistance is provided to field	Quarterly
Marketing assistance provided	Indicator that marketing assistance provided for commodity from field	Quarterly
Incentive per acre or head	Indicator that a per acre/head incentives is provided for the CSAF practice(s) on this field	Quarterly
Field commodity value	Value of commodity produced from field	Quarterly
Field commodity volume	Volume of commodity produced from field	Quarterly
Cost of implementation	Total cost of practice implementation in field	Quarterly
Cost coverage	Percent of total cost of implementation of practice covered by project incentives	Quarterly
Field GHG monitoring	Methods used to monitor GHG benefits in field (up to 3)	Quarterly
Field GHG reporting	Methods used to report on GHG benefits for field (up to 3)	Quarterly
Field GHG verification	Methods used to verify GHG benefits for field (up to 3)	Quarterly
Field GHG calculations	Methods used to calculate GHG benefits for field	Quarterly
Field official GHG calculation	Method used to calculate official GHG benefits for field	Quarterly
Field official GHG ER	Official estimate of total GHG emission reductions for field	Quarterly
Field official carbon stock	Official estimate of total carbon sequestration for field	Quarterly
Field official CO ₂ ER	Official estimate of total CO ₂ emission reductions for field	Quarterly
Field official CH ₄ ER	Official estimate of total CH ₄ emission reductions for field	Quarterly
Field official N ₂ O ER	Official estimate of total N ₂ O emission reductions for field	Quarterly
Field offsets produced	Amount of carbon offsets produced in field	Quarterly
Field insets produced	Amount of carbon insets produced in field	Quarterly
Other field measurements	Indicator that field data was collected for reasons other than GHG benefit estimation	Quarterly



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GHG Benefits - Alternate Modeled

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

Table 8. GHG Benefits – Alternate Modeled elements

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



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GHG Benefits - Measured

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

Table 9. GHG Benefits - Measured data elements

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



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Additional Environmental Benefits

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

Table 10. Additional Environmental Benefits elements

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



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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.



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Data Descriptions

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

Unique IDs

Project ID: Unique ID at the project level – “Award Identifying Number” shown on award documentation

Partner ID: Unique ID at the partner level – use EIN; if no EIN, a unique ID will be assigned for use in these reports

State or territory of operation: State or territory name

County of operation: Physical county name

Farm ID: Unique ID at the operation level assigned by Farm Service Agency (FSA)

Tract ID: Unique ID at the tract level assigned by FSA

Field ID: Unique ID at the field level assigned by FSA



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Project Summary**Commodity type****Data element name:** Commodity type**Reporting question:** What climate-smart commodity types are produced by this project?**Description:** Type of commodity incentivized by the project. These commodities include those for whom farmers are directly receiving incentives or other types of marketing support. See full list of commodity options in Appendix B. List one commodity per row.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** FSA commodity list**Logic:** None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**Commodity sales****Data element name:** Commodity sales**Reporting question:** Did project activities result in sales this quarter of the commodity(ies) produced by this project?**Description:** Indicator of sales of commodity(ies) related to project activities. If sales are reported, complete the *Marketing Activities* worksheet (Table 3) as part of the quarterly performance report.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No

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

- Yes
- No

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

- Models
- Direct field measurements
- Both

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly



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GHG cumulative calculation**Data element name:** GHG cumulative calculation**Description:** List the method(s) that was used to calculate the total cumulative GHG benefits reported by the project this quarter.**Data type:** List**Measurement unit:** Category**Logic:** None – all respond**Data collection level:** Project**Reporting question:** What method(s) was used to calculate the total cumulative GHG benefits reported here?**Select multiple values:** No**Allowed values:**

- Models
- Direct field measurements
- Both

Required: Yes**Data collection frequency:** Quarterly**Cumulative GHG benefits****Data element name:** Cumulative GHG benefits**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**Measurement unit:** Metric tons CO₂eq**Logic:** None – all respond**Data collection level:** Project**Reporting question:** What are the project's estimated total GHG emission reductions (CO₂eq) to date?**Select multiple values:** No**Allowed values:** 0-10,000,000**Required:** Yes**Data collection frequency:** Quarterly**Cumulative carbon stock****Data element name:** Cumulative carbon stock**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 CO₂eq.**Data type:** Decimal**Measurement unit:** Metric tons CO₂eq**Logic:** None – all respond**Data collection level:** Project**Reporting question:** How much carbon has the project sequestered to date?**Select multiple values:** No**Allowed values:** 0-10,000,000**Required:** Yes**Data collection frequency:** Quarterly**Cumulative CO₂ benefit****Data element name:** Cumulative CO₂ benefit**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**Measurement unit:** Metric tons CO₂**Logic:** None – all respond**Data collection level:** Project**Reporting question:** What are the project's estimated total cumulative CO₂ emission reductions to date?**Select multiple values:** No**Allowed values:** 0-10,000,000**Required:** Yes**Data collection frequency:** Quarterly**Cumulative CH₄ benefit****Data element name:** Cumulative CH₄ benefit**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 CH₄ = 25 tons of CO₂eq.**Data type:** Decimal**Measurement unit:** Metric tons CH₄ reduced in CO₂eq**Logic:** None – all respond**Data collection level:** Project**Reporting question:** What are the project's estimated total CH₄ emission reductions to date?**Select multiple values:** No**Allowed values:** 0-10,000,000**Required:** Yes**Data collection frequency:** Quarterly



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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



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Cost of on-farm TA**Data element name:** Cost of on-farm TA**Reporting question:** What is the total amount that has been spent to provide on-farm TA?**Description:** Total cost of any field- or practice-specific technical assistance provided by the project (by recipient or partners) to any producers. This is updated quarterly. If there are no changes, enter the same number as the previous quarter.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Dollars**Allowed values:** \$0-\$50,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**MMRV cost****Data element name:** MMRV cost**Reporting question:** What is the total amount that has been spent on MMRV activities?**Description:** Total cost of all MMRV activities paid for by the project (recipient or partners). MMRV components are defined as measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practices have been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable). This is updated quarterly. If there are no changes, enter the same number as the previous quarter.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Dollars**Allowed values:** \$0-\$50,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**GHG monitoring method****Data element name:** GHG monitoring 1-5**Reporting question:** How did the project monitor GHG benefits?**Description:** Up to the five most common forms of monitoring GHG benefits used this quarter as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly



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GHG reporting method**Data element name:** GHG reporting 1-5**Reporting question:** How did the project track and report implementation of practices to reduce GHG emissions?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**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

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Partner Activities**Unique IDs**

Partner ID	Unique Project ID for each partner
------------	------------------------------------

Partner name

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

Partner type

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

Partner POC

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

Partner POC email

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



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Partnership start date

Data element name: Partnership start date	Reporting question: When did the partnership start?
Description: Date that the partner organization and the recipient began formally partnering on the project	
Data type: Date	Select multiple values: NA
Measurement unit: MM/DD/YYYY	Allowed values: 01/01/2023 – 12/31/2030
Logic: No response for recipient	Required: Yes
Data collection level: Partner	Data collection frequency: Partnership initiation

Partnership end date

Data element name: Partnership end date	Reporting question: When did the partnership end?
Description: Date that the partner organization and the recipient stopped formally partnering on the project	
Data type: Date	Select multiple values: NA
Measurement unit: MM/DD/YYYY	Allowed values: 01/01/2023 – 12/31/2030
Logic: No response for recipient	Required: Yes
Data collection level: Partner	Data collection frequency: Partnership end quarter

New partnership

Data element name: New partnership	Reporting question: Is this a new partnership?
Description: A new partnership means that the recipient and the partner organization have not had a formal working relationship (under contract or on a grant) prior to the start of the project.	
Data type: List	Select multiple values: No
Measurement unit: Category	Allowed values: <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



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Total match contribution**Data element name:** Total match contribution**Reporting question:** What is the total match value the organization has contributed to the project to date?

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

Data type: Decimal**Select multiple values:** NA**Measurement unit:** Dollars**Allowed values:** \$0-\$100,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly**Total match incentives****Data element name:** Total match incentives**Reporting question:** What is the total value of match provided by this organization for producer incentives?

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

Data type: Decimal**Select multiple values:** NA**Measurement unit:** Dollars**Allowed values:** \$0-\$100,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly**Match type****Data element name:** Match type 1-3**Reporting question:** What types of match contributions has the organization provided to the project?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly



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Match amount**Data element name:** Match amount 1-3**Reporting question:** What is the value of the match contributions the organization provided to the project?

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

Data type: Decimal**Select multiple values:** NA**Measurement unit:** Dollars**Allowed values:** \$0-\$100,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly**Training type provided****Data element name:** Training type 1-3 provided**Reporting question:** What types of training has the organization provided to project partners?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly**Activity by partner****Data element name:** Activity 1-3 by partner**Reporting question:** What types of activities has the organization provided to the project?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly



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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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Marketing Activities**Commodity type**

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

Marketing channel type

Data element name: Marketing channel type	Reporting question: What type of marketing channel is used to sell this commodity?
Description: List a single type of marketing channel used to sell the commodity produced by farmers enrolled in the project. If a single commodity is marketed through multiple channels, use additional rows of the worksheet to report each combination of commodity and marketing channel. If “other” is chosen, use the additional column to enter the other marketing channel type(s) as free text.	
Data type: List	Select multiple values: No
Measurement unit: Category	Allowed values: <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



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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



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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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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 inssetting
- Farm certification
- Label or badge used on packaging or marketing
- Third party certification/verification
- Trademark
- Other (specify)

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**Marketing method****Data element name:** Marketing method 1-3**Reporting question:** What methods are used to market climate-smart commodities in this marketing channel?**Description:** Provide the method(s) used to market this commodity in this market channel. Marketing method is the way that potential buyers of the climate-smart commodity are engaged by the project partners as the sellers or facilitators of sale. Include up to 3 methods, based on which methods are most commonly used for this project. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 marketing methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other marketing methods as free text**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly



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Marketing channel identification method**Data element name:** Marketing channel identification method 1-3**Reporting question:** What methods are used to generate interest in climate-smart commodities in this marketing channel?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly**Traceability method****Data element name:** Traceability method 1-3**Reporting question:** What traceability methods are used for climate-smart commodities in this channel?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly



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Producer Enrollment**Unique IDs**

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

Producer data change**Data element name:** Producer data change**Reporting question:** Is there new/updated information for a producer who is re-enrolling in the project?**Description:** Indicates that there is new or updated information for a producer who had previously enrolled in the project and is re-enrolling.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Re-enrollment**Producer start date****Data element name:** Producer start date**Reporting question:** When did the producer enroll in the project?**Description:** Date that the producer enrolled in the project by signing their first contract.**Data type:** Date**Select multiple values:** NA**Measurement unit:** MM/DD/YYYY**Allowed values:** 01/01/2023 – 12/31/2030**Logic:** None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment**Producer name****Data element name:** Producer name**Reporting question:** What is the name of producer enrolled in the project?**Description:** Name of the producer enrolled in the project; the name must match the name contained in the customer's Business Partner record and the Farm Operating Plan in FSA Business File for that Farm ID.**Data type:** Text**Select multiple values:** NA**Measurement unit:** NA**Allowed values:** Text**Logic:** None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment



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Underserved status**Data element name:** Underserved status**Reporting question:** Is this producer considered an underserved and/or a small producer?

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

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

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

Logic: None – all respond**Required:** No**Data collection level:** Producer**Data collection frequency:** Initial enrollment**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



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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



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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



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Organic farm**Data element name:** Organic farm**Reporting question:** Is any part of the farm currently USDA-certified organic or transitioning to USDA-certified organic?

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

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

- Yes
- No
- I don't know

Logic: None – all respond**Required:** No**Data collection level:** Producer**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable**Organic fields****Data element name:** Organic fields**Reporting question:** Are any of the fields enrolled in the project currently USDA-certified organic or transitioning to USDA-certified organic?

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

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

- Yes
- No
- I don't know

Logic: Respond if yes to 'Organic operation'**Required:** No**Data collection level:** Producer**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable**Producer motivation****Data element name:** Producer motivation**Reporting question:** Which of the following was the primary reason the producer enrolled in this project?**Description:** Primary operator's motivation for enrolling in the project.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment



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Producer outreach**Data element name:** Producer outreach 1-3**Reporting question:** What types of outreach were provided to producers?

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

Data type: List**Select multiple values:** Yes**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment**CSAF experience****Data element name:** CSAF experience**Reporting question:** Has the primary operator implemented CSAF practices in the last ten years anywhere on the farm?

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

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

- Yes
- No
- I don't know

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment



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

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

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

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment**CSAF state or local funds****Data element name:** CSAF state or local funds**Reporting question:** Were prior CSAF practices supported by state or local funds?

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

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

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment**CSAF nonprofit funds****Data element name:** CSAF nonprofit funds**Reporting question:** Were CSAF practices supported by nonprofit funds?

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

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

- Yes
- No
- I don't know

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



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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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Commodity category**Data element name:** Commodity category**Reporting question:** What category of commodity(ies) is (are) produced from this field?**Description:** Category of commodity(ies) produced in field enrolled in the project**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Crops
- Livestock
- Trees
- Crops and livestock
- Crops and trees
- Livestock and trees
- Crops, livestock and trees

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment**Commodity type****Data element name:** Commodity type**Reporting question:** What type of commodity is produced from this field?**Description:** Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides a drop-down list of the allowed values. Choose the appropriate value. Enter additional commodities in subsequent rows.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** FSA commodity list**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment**Baseline yield****Data element name:** Baseline yield**Reporting question:** What is the baseline yield of this field?**Description:** Average annual yield of commodity in 3 years prior to enrollment. Provide yield for the enrolled field if possible. If not at field level, provide average annual yield for the specific commodity for the operation.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Production per acre or animal**Allowed values:** .01-100,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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Baseline yield unit**Data element name:** Baseline yield unit**Reporting question:** Baseline yield unit

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

Data type: List**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)

Required: Yes**Logic:** None – all respond**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)

Required: Yes**Logic:** None – all respond**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

Required: Yes**Logic:** None – all respond**Data collection level:** Field**Data collection frequency:** Initial enrollment



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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

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

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** See list in Appendix A**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment**Practice standard****Data element name:** Practice standard 1-7**Reporting question:** What standard does the CSAF practice follow?

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

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

- NRCS
- Other (specify)

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment**Planned practice implementation year****Data element name:** Practice 1-7 implementation year**Reporting question:** What year is the CSAF practice planned to be implemented?

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

Data type: Integer**Select multiple values:** No**Measurement unit:** Year**Allowed values:** 2022-2030**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment**Practice extent****Data element name:** Practice 1-7 extent**Reporting question:** To what extent is the practice implemented?

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

Data type: Decimal**Select multiple values:** No**Measurement unit:** Extent**Allowed values:** .01-100,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment



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Practice extent unit**Data element name:** Practice 1-7
extent unit**Reporting question:** Unit for extent of practice implementation**Description:** Unit for extent of practice implementation on the field specified by the contract. If "other" is chosen, use the additional column to enter the appropriate unit.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Acres
- Head of livestock
- Linear feet
- Square feet
- Other (specify)

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollmentCSAF 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.



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

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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



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Incentive reason

Data element name: Incentive reason 1-4 **Reporting question:** Why were incentives provided to this producer?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive structure

Data element name: Incentive structure 1-4 **Reporting question:** What are the units for the financial incentives provided to this producer?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly



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Incentive type**Data element name:** Incentive type 1-4**Reporting question:** What type of incentives were provided to each producer?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Quarterly**Payment on enrollment****Data element name:** Payment on enrollment**Reporting question:** What portion of the financial incentive is provided to the producer upon enrollment in the project?

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

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

- Full payment
- Partial payment
- No payment

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Quarterly**Payment on implementation****Data element name:** Payment on implementation**Reporting question:** What portion of the financial incentive is provided to the producer upon implementation of the practices?

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

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

- Full payment
- Partial payment
- No payment

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Quarterly



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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



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

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



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Contract end date**Data element name:** Contract end date**Reporting question:** Contract end date**Description:** End date listed on the contract that enrolls the field in the project. If contract end date changes, submit updated end date during the next quarter's reporting.**Data type:** Date**Select multiple values:** No**Measurement unit:** MM/DD/YYYY**Allowed values:** 01/01/2023 – 12/31/2030**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**MMRV assistance provided****Data element name:** MMRV assistance provided**Reporting question:** Was MMRV assistance provided?**Description:** Was any MMRV assistance provided to the primary operator for this field? MMRV assistance includes in-field support for the use of technologies, consultation on data collection and input, and other support related to MMRV. MMRV is defined a measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable).**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**Marketing assistance provided****Data element name:** Marketing assistance provided**Reporting question:** Was marketing assistance provided?**Description:** Was any marketing assistance provided to the primary operator for the commodity(ies) produced from this field? Marketing assistance includes guaranteeing the sale of the commodity(ies), providing a platform for the sale of the commodity(ies), providing a label, branding, or other support related to marketing.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**Incentive per acre or head****Data element name:** Incentive per acre or head**Reporting question:** Is this field receiving a per-acre or per-head incentive?**Description:** Is this field receiving an incentive payment to implement a specific CSAF practice or set of practices on a per-acre or per-head (livestock) basis?**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Yes
- No
- I don't know

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly



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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



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Cost unit**Data element name:** Cost unit**Reporting question:** What is the unit for cost?**Description:** The unit associated with the cost of implementing CSAF practices in the field. If "other" is chosen, enter the appropriate value in the additional column.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**Cost coverage****Data element name:** Cost coverage**Reporting question:** What percent of the practice cost is covered by the incentive?**Description:** Estimated proportion of total annual cost of implementing the practice(s) that is covered by project incentives.**Data type:** Integer**Select multiple values:** No**Measurement unit:** Percent**Allowed values:** 0-100**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**Field GHG monitoring****Data element name:** Field GHG monitoring 1-3**Reporting question:** How were GHG impacts monitored in this field?**Description:** Up to the top three forms of monitoring GHG benefits as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 3 methods, based on which methods are most commonly used for this field. The worksheet provides three columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 3 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly



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Field GHG reporting**Data element name:** Field GHG reporting 1-3**Reporting question:** How were GHG benefits reported for this field?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly**Field GHG verification****Data element name:** Field GHG verification 1-3**Reporting question:** How was implementation of practices to reduce GHG emissions verified for this field?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly



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Field GHG calculations**Data element name:** Field GHG calculations**Reporting question:** What methods are used to calculate GHG benefits in this field?**Description:** List the method(s) used to calculate GHG benefits in this field. If yes to direct physical measurements, submit result reports (see *Supplemental Data Submission – Field direct GHG measurement results*).**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Models
- Direct field measurements
- Both

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

- Models
- Direct field measurements

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



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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 CO₂**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 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:** 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 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:** 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 CO₂eq**Allowed values:** 0-10,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Quarterly



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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



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GHG Benefits - Alternate Modeled**Unique IDs**

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

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

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** FSA commodity list**Logic:** None – all respond**Required:** If project calculates GHG benefits using multiple methods**Data collection level:** Field**Data collection frequency:** Annual**Practice type****Data element name:** Practice type 1-7**Reporting question:** What CSAF practice is being implemented by this project?

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** See list in Appendix A**Logic:** None – all respond**Required:** If project calculates GHG benefits using multiple methods**Data collection level:** Field**Data collection frequency:** Annual



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GHG model**Data element name:** GHG model **Reporting question:** What model was used for alternate calculation of GHG benefits?**Description:** Select the model used for the alternate calculation of the field's GHG benefits.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** If project calculates GHG benefits using multiple methods**Data collection level:** Field**Data collection frequency:** Annual



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



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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



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GHG Benefits - Measured**Unique IDs**

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

GHG measurement method**Data element name:** GHG measurement method**Reporting question:** What measurement method is used to calculate GHG benefits?**Description:** Field-based measurement method used to calculate GHG benefits. If “other” is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**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



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Measurement start date**Data element name:** Measurement start date**Reporting question:** On what date did the measurement start?**Description:** Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements first began.**Data type:** Date**Select multiple values:** No**Measurement unit:** MM/DD/YYYY**Allowed values:** 01/01/2023 – 12/31/2030**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual**Measurement end date****Data element name:** Measurement end date**Reporting question:** On what date did the measurement end?**Description:** Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements were completed.**Data type:** Date**Select multiple values:** No**Measurement unit:** MM/DD/YYYY**Allowed values:** 01/01/2023– 12/31/2030**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual**Total CO2 reduction calculated****Data element name:** Total CO2 reduction calculated**Reporting question:** What are the total measured CO2 emission reductions?**Description:** Total annual CO2 emission reductions based on practice implementation in the field calculated from in-field measurements.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons 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



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Total CH4 reduction calculated**Data element name:** Total CH4 reduction calculated**Reporting question:** What are the total measured CH4 emission reductions?**Description:** Total annual methane emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of 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



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Soil sample result unit

Data element name: Soil sample result unit **Reporting question:** What is unit for the soil sample result?**Description:** Unit for the corresponding soil sample result. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** If a project conducts soil samples in this field**Data collection level:** Field**Data collection frequency:** Annual

Measurement type

Data element name: Measurement type**Reporting question:** What type of analysis was conducted for this soil sample?**Description:** Type of soil analysis conducted. The worksheet provides a drop-down list of choices for this data element. If "other" is chosen, use the additional column to enter the appropriate yield unit as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

Logic: None – all respond**Required:** If a project conducts soil samples in this field**Data collection level:** Field**Data collection frequency:** Annual



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Additional Environmental Benefits**Unique IDs**

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

Environmental benefits

Data element name: Environmental benefits

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss

Data element name: Reduction in nitrogen loss

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in nitrogen loss amount

Data element

name: Reduction in nitrogen loss amount

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

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

Required: Yes

Data collection level: Field

Data collection frequency: Annual



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Reduction in nitrogen loss amount unit**Data element name:** Reduction in nitrogen loss amount unit**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**Measurement unit:** Category**Reporting question:** What is the unit for how much reduction in nitrogen losses have been measured in the field?**Select multiple values:** No**Allowed values:**

- Kilograms
- Metric tons
- Pounds
- Other (specify)

Required: Yes**Logic:** Respond if yes to 'Reduction in nitrogen loss'**Data collection level:** Field**Data collection frequency:** Annual**Reduction in nitrogen loss purpose****Data element name:** Reduction in nitrogen loss purpose**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**Measurement unit:** Category**Reporting question:** What is the purpose of tracking reduction in nitrogen losses?**Select multiple values:** No**Allowed values:**

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

Required: Yes**Logic:** Respond if yes to 'Reduction in nitrogen loss'**Data collection level:** Project**Data collection frequency:** Annual**Reduction in phosphorus loss****Data element name:** Reduction in phosphorus loss**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**Measurement unit:** Category**Reporting question:** Are reductions in phosphorus losses being tracked in the field?**Select multiple values:** No**Allowed values:**

- Yes
- No
- I don't know

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



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Reduction in phosphorus loss amount unit**Data element name:** Reduction in phosphorus loss amount unit**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**Measurement unit:** Category**Reporting question:** What is the unit for the reduction in phosphorus losses measured in the field?**Select multiple values:** No**Allowed values:**

- Kilograms
- Metric tons
- Pounds
- Other (specify)

Required: Yes**Logic:** Respond if yes to 'Reduction in phosphorus loss'**Data collection level:** Field**Data collection frequency:** Annual**Reduction in phosphorus loss purpose****Data element name:** Reduction in phosphorus loss purpose**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**Measurement unit:** Category**Reporting question:** What is the purpose of tracking reductions in phosphorus losses?**Select multiple values:** No**Allowed values:**

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

Required: Yes**Logic:** Respond if yes to 'Reduction in phosphorus loss'**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**Measurement unit:** Category**Select multiple values:** No**Allowed values:**

- Yes
- No
- I don't know

Required: Yes**Logic:** Respond if yes to 'Environmental benefits'**Data collection level:** Field**Data collection frequency:** Annual



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Other water quality type**Data element name:** Other water quality type**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**Measurement unit:** Category**Logic:** Respond if yes to 'Other water quality'**Data collection level:** Field**Reporting question:** What type of other water quality metric have been measured in the field?**Select multiple values:** No**Allowed values:**

- Sediment load reduction
- Temperature
- Other (specify)

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

- Degrees F
- Kilograms
- Kilograms per liter
- Metric tons
- Pounds
- Other (specify)

Required: Yes**Data collection frequency:** Annual



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Other water quality purpose**Data element name:** Other water quality purpose**Description:** Purpose of tracking other water quality benefits in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Reporting question:** What is the purpose of tracking other water quality benefits?**Select multiple values:** No**Allowed values:**

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

Required: Yes**Logic:** Respond if yes to 'Other water quality'**Data collection level:** Field**Data collection frequency:** Annual**Water quantity****Data element name:** Water quantity**Reporting question:** Is water conservation being tracked in the field?**Description:** Tracking of water conservation or reduction in use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.**Data type:** List**Measurement unit:** Category**Select multiple values:** No**Allowed values:**

- Yes
- No
- I don't know

Required: Yes**Logic:** Respond if yes to 'Environmental benefits'**Data collection level:** Field**Data collection frequency:** Annual**Water quantity amount****Data element name:** Water quantity amount**Reporting question:** How much water conservation has been measured in the field?**Description:** Total amount of water conservation or reduction that is measured in the field.**Data type:** Decimal**Measurement unit:** Amount**Select multiple values:** No**Allowed values:** 0-1,000,000**Logic:** Respond if yes to 'Water quantity'**Required:** Yes**Data collection level:** Field**Data collection frequency:** Annual**Water quantity amount unit****Data element name:** Water quantity amount unit**Reporting question:** What is the unit for the amount of water conservation measured in the field?**Description:** Unit for the total amount of water conservation or reduced use that is measured and reported in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Select multiple values:** No**Allowed values:**

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

Required: Yes**Logic:** Respond if yes to 'Water quantity'**Data collection level:** Field**Data collection frequency:** Annual



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Water quantity purpose**Data element name:** Water quantity purpose**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**Measurement unit:** Category**Reporting question:** What is the purpose of tracking water conservation?**Select multiple values:** No**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



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

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'**Required:** Yes**Data collection level:** Field**Data collection frequency:** Annual**Reduced energy use amount****Data element name:** Reduced energy use amount**Reporting question:** How much energy use reduction has been measured in the field?**Description:** Total amount of energy use reduction that is measured in the enrolled field.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Amount**Allowed values:** 0-1,000,000**Logic:** Respond if yes to 'Reduced energy use'**Required:** Yes**Data collection level:** Field**Data collection frequency:** Annual**Reduced energy use amount unit****Data element name:** Reduced energy use unit**Reporting question:** What is the unit for the energy use reduction measured in the field?**Description:** Unit for the total amount of energy use reduction that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- Kilowatt hours
- Other (specify)

Logic: Respond if yes to 'Reduced energy use'**Required:** Yes**Data collection level:** Field**Data collection frequency:** Annual



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Reduced energy use purpose**Data element name:** Reduced energy use purpose**Description:** Purpose of tracking reduced energy use in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Logic:** Respond if yes to 'Reduced energy use'**Data collection level:** Field**Reporting question:** What is the purpose of tracking reduced energy use in the field?**Select multiple values:** No**Allowed values:**

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

Required: Yes**Data collection frequency:** Annual**Avoided land conversion****Data element name:** Avoided land conversion**Description:** Tracking of avoided land conversion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. Land conservation means land use changing from agricultural uses to non-agricultural uses.**Data type:** List**Measurement unit:** Category**Logic:** Respond if yes to 'Environmental benefits'**Data collection level:** Field**Reporting question:** Is avoided land conversion being tracked in the field?**Select multiple values:** No**Allowed values:**

- Yes
- No
- I don't know

Required: Yes**Data collection frequency:** Annual**Avoided land conversion amount****Data element name:** Avoided land conversion amount**Description:** Total amount of avoided land conversion that is measured in the enrolled field.**Data type:** Decimal**Measurement unit:** Amount**Logic:** Respond if yes to 'Avoided land conversion'**Data collection level:** Field**Reporting question:** How much avoided land conversion has been measured in the field?**Select multiple values:** No**Allowed values:** 0-1,000,000**Required:** Yes**Data collection frequency:** Annual**Avoided land conversion amount unit****Data element name:** Avoided land conversion unit**Description:** Unit for the total amount of avoided land conversion that is measured in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Logic:** Respond if yes to 'Avoided land conversion'**Data collection level:** Field**Reporting question:** What is the unit for the amount of avoided land conversion measured in the field?**Select multiple values:** No**Allowed values:**

- Acres
- Other (specify)

Required: Yes**Data collection frequency:** Annual



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Avoided land conversion purpose**Data element name:** Avoided land conversion purpose**Description:** Purpose of tracking avoided land conversion in the enrolled field. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Reporting question:** What is the purpose of tracking avoided land conversion in the field?**Select multiple values:** No**Allowed values:**

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

Required: Yes**Logic:** Respond if yes to 'Avoided land conversion'**Data collection level:** Field**Data collection frequency:** Annual**Improved wildlife habitat****Data element name:** Improved wildlife habitat**Description:** Tracking of improvements to wildlife in and around the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.**Data type:** List**Measurement unit:** Category**Reporting question:** Are improvements to wildlife habitat being tracked in the field?**Select multiple values:** No**Allowed values:**

- Yes
- No
- I don't know

Required: Yes**Logic:** Respond if yes to 'Environmental benefits'**Data collection level:** Field**Data collection frequency:** Annual**Improved wildlife habitat amount****Data element name:** Improved wildlife habitat amount**Description:** Total amount of improved wildlife habitat that is measured in and around the enrolled fields.**Data type:** Decimal**Measurement unit:** Amount**Reporting question:** How much improved wildlife habitat has been measured in the field?**Select multiple values:** No**Allowed values:** 0-1,000,000**Required:** Yes**Logic:** Respond if yes to 'Improved wildlife habitat'**Data collection level:** Field**Data collection frequency:** Annual**Improved wildlife habitat amount unit****Data element name:** Improved wildlife habitat unit**Description:** Unit for the total amount of improved wildlife habitat that is measured in and around enrolled fields. If "other" is chosen, enter the appropriate value as free text in the additional column.**Data type:** List**Measurement unit:** Category**Reporting question:** What is the unit for the amount of improved wildlife habitat measured in the field?**Select multiple values:** No**Allowed values:**

- Acres
- Linear feet
- Other (specify)

Required: Yes**Logic:** Respond if yes to 'Improved wildlife habitat'**Data collection level:** Field**Data collection frequency:** Annual



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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 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) Complex mix with energy generation Plug flow with energy generation Other (specify)
		Food waste Straw or bedding Wastewater Other (specify)



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



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Nutrient management (CPS 590)	Nutrient type with CPS 590	Biosolids Commercial fertilizers Compost EEf (nitrification inhibitor) EEf (slow or controlled release) EEf (urease inhibitor) Green manure Liquid animal manure Organic by-products Organic residues or materials Solid/semi-solid animal manure Wastewater
	Nutrient application method with CPS 590	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application method in the previous year	Banded Broadcast Injection Irrigation Surface application Surface application with tillage Variable rate
	Nutrient application timing with CPS 590	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application timing in the previous year	Single pre-planting Single post-planting Split pre- and post-planting Split post-planting
	Nutrient application rate with CPS 590	0-20,000
	Nutrient application rate unit with CPS 590	Gallons per acre Pounds per acre
	Nutrient application rate change	Decrease compared to previous year Increase compared to previous year No change
	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



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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
	Strip width (feet)	1-1,000
Stripcropping (CPS 585)	Crop category (select most common/extensive type if using more than one)	Erosion resistant crops Fallow Sediment trapping crops
	Number of strips	2-100
Tree/Shrub Establishment (CPS 612)	Species category (select most common/extensive type if using more than one)	Coniferous trees Deciduous trees Shrubs
	Species density (number of trees planted per acre)	1-10,000
Vegetative Barrier (CPS 601)	Species category (select most common/extensive type if using more than one)	Grasses Grass forb mix Grass legume mix
	Barrier width (feet)	3-1,000



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



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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
ALMONDS
AMARANTH GRAIN
APPLES
APRICOTS
ARONIA (CHOKEBERRY)
ARTICHOKES
ASPARAGUS
ATEMOYA
AVOCADOS
BAMBOO SHOOTS
BANANAS
BARLEY
BEANS
BEETS
BIRDSFOOT/TREFOIL
BLUEBERRIES
BREADFRUIT
BROCCOFLOWER
BROCCOLI
BROCCOLINI
BRUSSEL SPROUTS
BUCKWHEAT
CABBAGE
CACAO
CACTUS
CAIMITO
CALABAZA MELON
CALALOO
CAMELINA
CANARY MELON
CANARY SEED
CANEERRIES
CANISTEL
CANOLA
CANTALOUPE
CARAMBOLA (STAR FRUIT)
CARROTS
CASHEW
CASSAVA
CAULIFLOWER
CELERIAC
CELERY
CHERIMOYA
CHERRIES
CHESTNUTS
CHICORY/RADICCHIO
CHINESE BITTER MELON
CHRISTMAS TREES
CHUFAS

CINNAMON
CLOVER
COCONUTS
COFFEE
CORN
COTTON ELS
COTTON UPLAND
CRANBERRIES
CRENSHAW MELON
CRUSTACEAN
CUCUMBERS
CURRANTS
DASHEEN
DATES
DURIAN
EGGPLANT
EINKORN
ELDERBERRIES
EMMER
FIGS
FINFISH
FLAX
FLOWERS
FORAGE SOYBEAN/SORGHUM
GAILON
GARLIC
GENIP
GINGER
GINSENG
GOOSEBERRIES
GOURDS
GRAPEFRUIT
GRAPES
GRASS
GREENS
GROUND CHERRY
GUAMABANA/SOURSOP
GUAR
GUAVA
GUAVABERRY
GUAYULE
HAZEL NUTS
HEMP
HERBS
HESPERALOE
HONEY
HONEYBERRIES
HONEYDEW
HOPS
HORSERADISH
HUCKLEBERRIES

HYBRID POPLAR TREES
IDLE
INDIGO
ISRAEL MELONS
JACK FRUIT
JERUSALEM ARTICHOKES
JICAMA
JOJOBA
JUJUBE
JUNEERRIES
KENAF
KHORASAN
KIWIBERRY
KIWIFRUIT
KOCHIA (PROSTRATA)
KOHLRABI
KOREAN GOLDEN MELON
KUMQUATS
LAMBS EAR
LEEKS
LEMONS
LENTILS
LESPEDEZA
LETTUCE
LIMES
LONGAN
LOQUATS
LYCHEE
MANGOS
MANGOSTEEN
MAPLE SAP
MAYHAW BERRIES
MEADOWFOAM
MILKWEED
MILLET
MIXED FORAGE
MOHAIR
MOLLUSK
MORINGA
MULBERRIES
MUSHROOMS
MUSTARD
NECTARINES
NIGER SEED
NONI
OATS
OKRA
OLIVES
ONIONS
ORANGES
PAPAYA



Partnerships for Climate-Smart Commodities Data Dictionary for Recipients

February 2023

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.

Signature Certificate

Reference number: Z9FTH-EWFES-AYEZJ-ALTSS

Signer

Timestamp

Signature

David Herring

Email: dherring@wolfesneck.org

Sent:

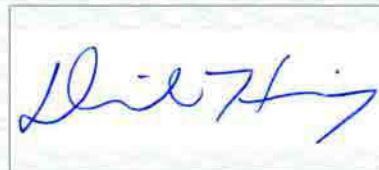
25 Apr 2023 19:14:51 UTC

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