



NOTICE OF GRANT AND AGREEMENT AWARD

| | | | |
|--|---|---|---|
| 1. Award Identifying Number NR233A750004G074 | 2. Amendment Number | 3. Award /Project Period Date of final signature - 07/23/2028 | 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) White Buffalo Land Trust P.O. Box 5100 Santa Barbara CA 93150 UEI # DJK1BKZ9C9Y4 | |
| 7. NRCS Program Contact Jade Nield (b)(6) | 8. NRCS Administrative Contact Daniel Curtis | 9. Recipient Program Contact Ana Smith | 10. Recipient Administrative Contact Ana Smith |
| 11. CFDA 10.937 | 12. Authority 15 USC 714 et seq | 13. Type of Action New Agreement | 14. Program Director Jesse Smith (b)(6) |
| 15. Project Title/ Description: Expands climate-smart western blue elderberry in counties and tribal areas of the Central Coast of CA and supports farmers and ranchers with 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 | \$4,633,935.00 | \$96,100.00 | |
| Additional funds total | \$0.00 | \$0.00 | |
| Grand total | \$4,633,935.00 | \$96,100.00 | |

18. Approved Budget

| | | | |
|-------------------|----------------|-----------------------------|----------------|
| Personnel | \$896,130.83 | Fringe Benefits | \$0.00 |
| Travel | \$18,700.00 | Equipment | \$179,000.00 |
| Supplies | \$125,299.90 | Contractual | \$497,312.23 |
| Construction | \$0.00 | Other | \$2,917,492.04 |
| Total Direct Cost | \$4,480,874.63 | Total Indirect Cost | \$153,060.37 |
| | | Total Non-Federal Funds | \$96,100.00 |
| | | Total Federal Funds Awarded | \$4,633,935.00 |
| | | Total Approved Budget | \$4,730,035.00 |

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

| | | |
|--|---------------------------------------|--|
| Name and Title of Authorized Government Representative Katina Hanson Acting Senior Advisor for Climate-Smart Commodities | Signature KATINA HANSON | Date Digitally signed by KATINA HANSON Date: 2023.08.03 19:29:52 -05'00' |
| Name and Title of Authorized Recipient Representative Jesse Smith Director of Land Stewardship | Signature Jesse Smith | Date Digitally signed by Jesse Smith Date: 2023.08.02 15:09:03 -07'00' |

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, audiotope, 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 White Buffalo Land Trust, 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 "Attachment - 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 FEDERAL FUNDS \$4,633,935.00
PERSONNEL \$814,664.39
FRINGE BENEFITS \$0.00
TRAVEL \$17,000.00
EQUIPMENT \$179,000.00
SUPPLIES \$113,909.00
CONTRACTUAL \$461,100.00
CONSTRUCTION \$ 0.00
OTHER \$2,895,201.25 (includes \$1,475,653.79 in PRODUCER INCENTIVES)
TOTAL DIRECT COSTS \$4,480,874.64
INDIRECT COSTS \$153,060.36

Recipient has elected to use the de minimis indirect cost rate with a MTDC of \$1,530,603.64.

Recipient has elected to voluntarily waive a portion of the indirect costs including \$98,977.75 of the contractual costs and \$8,000 in "Other- "raw, organic elderberries for climate-smart commodity development costs" being applied to the MTDC for indirect.

TOTAL NON-FEDERAL FUNDS \$96,100.00
PERSONNEL \$0.00
FRINGE BENEFITS \$0.00
TRAVEL \$0.00
EQUIPMENT \$0.00
SUPPLIES \$0.00
CONTRACTUAL \$0.00
CONSTRUCTION \$ 0.00
OTHER \$96,100.00
PRODUCER INCENTIVES \$0.00
TOTAL DIRECT COSTS \$96,100.00
INDIRECT COSTS \$0.00

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

Responsibilities of the Parties:

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

RECIPIENT RESPONSIBILITIES

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

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

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

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

Performance Reports: Quarterly

SF425 Financial Reports: Quarterly

Detailed Progress Report: Quarterly

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

Expected Accomplishments and Deliverables

See attached Benchmarks Table and associated Project Narrative.

Resources Required

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

Milestones

See attached Benchmarks Table and associated Project Narrative.

GENERAL TERMS AND CONDITIONS

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

Attachments:

Attachment - Budget Narrative

Attachment - Project Narrative

Attachment - Benchmarks Table

Attachment - Climate-Smart Practices List and Limitations

Attachment - Data Dictionary

Attachment - Climate-Smart Specific Terms and Conditions

| Item No | Payment Type | Expense Category | Description | Obligation Amount | Obligation Direct Cost | Obligation Indirect Cost | NICRA Rate % |
|---------|--------------|------------------|-----------------------------|-------------------|------------------------|--------------------------|--------------|
| 10 | Payment | Personnel | | \$ 896,130.83 | \$ 814,664.39 | \$ 81,466.44 | 10 |
| 20 | Payment | Travel | | \$ 18,700.00 | \$ 17,000.00 | \$ 1,700.00 | 10 |
| 30 | Payment | Equipment | | \$ 179,000.00 | \$ 179,000.00 | \$ - | 0 |
| 40 | Payment | Supplies | | \$ 125,299.90 | \$ 113,909.00 | \$ 11,390.90 | 10 |
| 50 | Payment | Contractual | | \$ 398,334.48 | \$ 362,122.25 | \$ 36,212.23 | 10 |
| 60 | Payment | Contractual | Voluntary No IDC | \$ 98,977.75 | \$ 98,977.75 | \$ - | 0 |
| 70 | Payment | Other | Incentives No IDC | \$ 1,475,653.79 | \$ 1,475,653.79 | \$ - | 0 |
| 80 | Payment | Other | Subaward 1 CEC | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 90 | Payment | Other | Subaward 1 CEC No IDC | \$ 113,496.00 | \$ 113,496.00 | \$ - | 0 |
| 100 | Payment | Other | Subaward 2 UCANR | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 110 | Payment | Other | Subaward 2 UCANR No IDC | \$ 155,243.46 | \$ 155,243.46 | \$ - | 0 |
| 120 | Payment | Other | Subaward 3 SYCEO | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 130 | Payment | Other | Subaward 3 SYCEO No IDC | \$ 146,000.00 | \$ 146,000.00 | \$ - | 0 |
| 140 | Payment | Other | Subaward 4 BTF | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 150 | Payment | Other | Subaward 4 BTF No IDC | \$ 275,000.00 | \$ 275,000.00 | \$ - | 0 |
| 160 | Payment | Other | Subaward 5 CFP | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 170 | Payment | Other | Subaward 5 CFP No IDC | \$ 200,000.00 | \$ 200,000.00 | \$ - | 0 |
| 180 | Payment | Other | Subaward 6 Propagate | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 190 | Payment | Other | Subaward 6 Propagate No IDC | \$ 30,000.00 | \$ 30,000.00 | \$ - | 0 |
| 200 | Payment | Other | Subaward 7 DF | \$ 13,750.00 | \$ 12,500.00 | \$ 1,250.00 | 10 |
| 210 | Payment | Other | Subaward 8 J10 | \$ 27,500.00 | \$ 25,000.00 | \$ 2,500.00 | 10 |
| 220 | Payment | Other | Subaward 8 J10 No IDC | \$ 268,900.00 | \$ 268,900.00 | \$ - | 0 |
| 230 | Payment | Other | Misc | \$ 38,948.79 | \$ 35,407.99 | \$ 3,540.80 | 10 |
| 240 | Payment | Other | Berries Voluntary No IDC | \$ 8,000.00 | \$ 8,000.00 | \$ - | 0 |

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

Withheld pursuant to exemption

(b)(4)

of the Freedom of Information and Privacy Act

a. Project Narrative

White Buffalo Land Trust

i. Executive Summary of Pilot Project**A. Contact Information**

Jesse Smith, Director of Land Stewardship, White Buffalo Land (WBLT)

jesse@whitebuffalolandtrust.org; 805-689-0426

PO Box 5100, Santa Barbara, CA 93150

<https://www.whitebuffalolandtrust.org/about-us-3>

WBLT owns and operates Jalama Canyon Ranch, a 1,000 property located at 3635 Jalama Canyon Road Lompoc, CA 93436

B. List of Project Partners

The project involves five grower/producer partners: Jalama Canyon Ranch; Ted Chamberlin Ranch; Wild Farmlands Foundation; Orella Ranch; and The Santa Ynez Chumash Environmental Office (SYCEO)- Camp 4. The two outreach and advisory partners are Community Environmental Council and The Regents of the University of California – Agriculture and Natural Resources (e.g. UC Sustainable Agriculture Research and Education Program). Please see attached letters of support and below in our application for more details about the partners' roles.

C. List of underserved/minority-focused project partners

All five grower/producer partners involved in this project (listed above) are considered small as they all have annual revenues under \$350,000. Camp 4 is part of Santa Ynez Band of Chumash Indians, which is a historically underserved community. White Buffalo Land Trust's Director of Land Stewardship, and the lead applicant on this proposal, identifies as African American. In addition to our grower partners (listed above), we are partnering with various entities to design, promote, and evaluate the project. One of our partners is the University of California Agriculture and Natural Resources (Sonja Brodt). This partnership includes a subaward to the University of California at Davis (Brittney Goodrich), which is a minority-serving institution. Ms. Goodrich will contribute to the project by performing the cost of production and returns studies

D. Compelling need for the project

Expanding the production of elderberries in the Western US presents an opportunity to demonstrate climate-smart growing practices, meet a growing market demand, support small and disadvantaged farmers to increase their economic viability, and reduce carbon emissions.

A key part of the innovation of this proposal is the product being grown and distributed: native western blue elderberry. This project will grow the western native subspecies. The most common elderberry currently available commercially is the European black elderberry. The native western blue elderberry subspecies consists entirely of wild genotypes with no bred cultivars, offering the possibility to grow local genotypes that are exceptionally well adapted to local conditions in different regions of the Western US.

Elderberries increase carbon sequestration: Incorporating more long-lived, woody perennials (such as elderberries) on farms and rangeland is a viable method for increasing carbon sequestration and other ecosystem services on agricultural landscapes. The practice of

planting elderberries can take many forms, such as Hedgerow, Silvopasture (defined below on page 8), and Riparian Forest Buffer, all of which are considered conservation practices by NRCS. These practices can be overlaid with other climate-smart practices such as compost application, no-till, cover cropping, and mulching to enhance climate benefits. Hedgerows, perennial plantings of shrubs, trees, forbs and grasses on underutilized field and farm edges are an efficient means toward achieving increased carbon sequestration. One California study found that perennial hedgerows stored 18% of an annual crop farm's total carbon while occupying only 6% of the area (Smukler et al., 2010). We have estimated that only 175 miles of hedgerows have been planted in the last 20 years in California, a state measuring over 163,000 square miles (Brodt et al., 2019).

Native Western Blue Elderberries are drought-resistant and low maintenance: Solutions for increasing carbon sequestration must also be adapted to climate stressors. California's 4th Climate Change Assessment declares the state one of the most "climate-challenged" in North America, with escalating heat waves and periods of drought. California farmers and their livelihoods are particularly impacted by these changing climate conditions and need economically viable adaptation strategies. The native western blue elderberry, a common hedgerow species, is well adapted to high heat and water constraints. This elderberry is adapted to the unique climate of California's central coast and will produce a viable crop without supplemental irrigation after the first three years of establishment. Native western blue elderberry also provides valuable wildlife habitat to beneficial insects, crop pollinators, and birds.

Elderberries have growing market demand: Elderberry products have experienced steep gains in market popularity in recent years, with mainstream US sales more than doubling each year from 2017 to 2019, reaching \$107 million in 2019, and growing by 241.4% in the first half of 2020 (Smith et al. 2020; Smith 2020). According to a recent Herb Market Report from ABC (American Botanical Council, Smith, 2010), elderberry supplements have now taken the number three spot for top selling herbal supplements. The majority of this product is made from imported European black elderberry, with just a small percent coming from a nascent Midwestern American elderberry industry. Native blue elderberry in the Western US is currently limited to very small-scale localized production and sales, as well as subsistence use. The attached letters of support from potential buyers (listed in i.v.A below) highlight the demand for elderberries.

Elderberry has the potential to increase economic viability for small land stewards: A small-scale demonstration project in 2017-2019 in California's Central Valley calculated substantial net revenue potential from mature hedgerows containing a significant component of native western blue elderberry (Brodt et al 2021). Hedgerow-grown crops such as elderberry provide business diversification opportunities for small-scale farms, and also offer opportunities for mid-scale growers to nurture new business opportunities through models such as renting of hedgerows to young entrepreneurs, herbal U-pick operations, and other direct market approaches.

Elderberry has cultural significance and potential for economic and workforce development for Indigenous communities: Although native western elderberry might be a "new" crop for mainstream settler farmers and ranchers, California's indigenous people have stewarded elderberry for centuries, and have depended on the flowers, fruit, and branches for food, medicine, ceremonial instruments and other uses. Since Euro-American colonization of

California, indigenous people have experienced devastating loss of access to traditional gathering lands. Present-day efforts to revitalize native cultures and regain stewardship access to traditional lands have prompted native Tribes to seek both traditional and new knowledge about ways to plant, manage, and use native plants like elderberry.

Teresa Romero of The Santa Ynez Chumash Environmental Office (SYCEO), who identifies as a member of the broader Chumash community, shared this insight on the importance of elderberry: *“We want to build the skills to grow elderberry and educate the community about the use of elderberries by indigenous communities. Elderberry has been used both medicinally and materially by all Chumash tribes (berry, flower, and wood). The elderberry wood is used for tools and musical instruments (namely, the clapping sticks that are important for ceremony, singing, and dancing). Elderberry wood is also used to make bows for hunting. Additionally, we hollow out the wood to create carrying tubes for items such as tobacco and medicine. All of the medicinal properties of elderberries are well known; those are equally important to Chumash. The proposed project with WBLT is important for three primary reasons. First, because this is going to support our tribal nursery and help make it sustainable. Second, it will allow us to have access to the elderberry resources, such as the wood. We can prune elderberry trees and provide sticks to the community. We’ll be able to share and grow material use within the Chumash community. Finally, it is a workforce development opportunity. We plan to create workforce development for youth through this project. Youth can help with propagation, gathering, and tending to the elderberry. Potentially on multiple locations (not just Camp 4).”*

This project will have lasting impacts beyond the partners who will participate in this initial phase. We will demonstrate the benefits of climate-smart agriculture to our peers and global network of land stewards, thus encouraging more land stewards to adopt these practices, leading to further environmental benefits and resilience in the agricultural sector.

There are numerous producers in the Central Coast of California who have the potential and interest in growing elderberries. This is an opportunity to support our community of producers in accessing a new market while practicing and demonstrating the impact of climate-smart agriculture practices. This project will result in economic benefits for the producers (small farmers who are at risk due to small profit margins and high operating costs) as well as environmental benefits for their land bases.

E. Approach to minimize transaction costs associated with project activities We will minimize the transaction costs associated with growing and piloting a new commodity by providing support in 1) processing and packing, 2) identification of buyers, 3) product marketing, and 4) monitoring, reporting and verification of the associated climate benefits. The WBLT and CEC project team will connect growers with processing opportunities and potential buyers. The project team will also help the growers tell the story of elderberry through marketing support (including videography, photos, website, and marketing materials). With our support, many of the usual transaction costs (marketing, storytelling, identifying buyers) will be lowered for the producers. WBLT will also streamline the necessary activities of estimating carbon sequestration and communicating yield data.

F. Approach to reduce producer barriers to implementing Climate Smart Agriculture & Forestry (CSAF) practices for the purpose of marketing climate-smart commodities

Our team will reduce the barriers to implementing CSAF practices for the purpose of marketing climate-smart commodities. The key barriers to implementing CSAF include the following: ●

The high cost of nursery-grown native plants for hedgerows

- The lack of financial returns from traditional hedgerow and conservation buffer plantings
- Lack of familiarity with how to grow and manage elderberry
- Uncertainty regarding the environmental benefits of incorporating native woody perennials on farm and rangeland
- Lack of market development for native western blue elderberry

We will address these barriers with the following measures:

- Assist early-adopter producers successfully establish and manage an innovative production model that will produce a marketable crop from perennial plantings ● Provide funding to cover the costs of elderberry establishment and maintenance over the first few years
- Provide technical assistance in designing plantings and ascribing maintenance practices ● Match ecological monitoring protocols to production systems and land bases to measure carbon sequestration and other ecosystem services
- Develop local processing capacity by working with brands to create a thriving regional market for native western blue elderberry

G. Geographic Focus

The geographic focus of this project is the Central Coast of California, with particular emphasis on Santa Barbara, Ventura and San Luis Obispo Counties. WBLT has a strong network of partners throughout this region as well as in the Central Valley of California (where we are active in four projects, described below). The partners that will participate in the pilot phase of this project are all located in Santa Barbara County. We expect our project to expand to include land owners throughout California and the West Coast during the 5 year time period of this project. Please see below for the participation of UC SAREP to broadcast the project to a state wide and Western region audience (pg 15).

H. Project management capacity of partners, including a description of existing relationship with and/or prior experience working with producers or land owners, promoting climate-smart activities and marketing climate-smart commodities. Founded in 2018, WBLT has several years of experience working with land owners, promoting climate-smart agriculture and marketing climate-smart commodities. Specifically, we have played a key role in three existing projects to grow and market climate-smart commodities: almonds, cotton, and Figure Ate (various value added products):

Almonds: WBLT has gathered stakeholders to participate in two almond growing market development projects in the Central Valley of California focusing on implementing climate smart practices (multi-species cover crops, animal integration, increased compost application, input reduction) in commercial almond orchards. Both of these projects are five years in duration and include scientific research, collaboration with technical assistance providers, and partnership with almond orchard management. Purchasers of the almonds have become project stakeholders contributing to funding research, purchasing supply, and communicating to customers the

uniqueness of this approach to sourcing. WBLT is supporting marketing and storytelling via resources, including talking points, an annual report, coordination of photography, and written copy for the website. More information can be found here: www.thealmondproject.com.

Cotton: WBLT is developing a market for climate smart cotton growing practices. WBLT partnered with Fibershed and technical textile developers to create a coalition of cotton fiber purchasing companies. WBLT supports companies who source cotton from soil-health research plots on two large scale commercial farms in the Central Valley of California. The scientific research is conducted by Chico State University in collaboration with growers, technical assistance providers, Fibershed and WBLT. The coalition provides cotton to companies that join at a premium price (i.e. companies pay a fee to join and pay a premium on the cotton), provides transparency into growing practices, and offers pre competitive technical textile development so coalition members can meet domestic manufacturing minimums together. Additionally, WBLT works with the coalition of purchasers to provide marketing resources that educate on how to source farm-forward to differentiate products in the marketplace. The project is working on building capabilities with all stakeholders to source farm-forward without the need for a coalition in the future. Products from C4 (California Cotton and Climate Coalition) will be in the marketplace starting in Fall 2022.

Figure Ate: WBLT also started its own food brand, Figure Ate, to develop an outlet and value in the marketplace for climate beneficial crops. The brand is owned by WBLT and released its first product in late 2019 - a persimmon vinegar. The persimmon vinegar preserves and value adds a crop that is climate appropriate to California; persimmons ripen once a year and lose a lot of fruit due to lack of value adding the preservation of the crop. Recently, Figure Ate has added two additional value-added products: Spicy and Original Biltong (air dried beef), sourced from White Oak Pastures, a carbon negative ranch according to a LCA conducted by General Mills. More information available here: www.figureatefoods.com.

WBLT is a trusted leader in education and promotion of climate-smart agriculture practices. In addition to leading efforts to grow and market climate-smart commodities (listed above), WBLT offers education and training for land stewards. We are curating the learning experiences needed to develop the capacity of current and aspiring land stewards throughout our region transitioning from conventional practices to climate-smart systems of agriculture. As a Savory Hub (one of two hubs in California), we offer courses throughout the year to fellow farmers and ranchers as well as those aspiring to be land stewards (<https://www.whitebuffalolandtrust.org/savory-hub-ca>)

The Community Environmental Council's (CEC) Climate Smart Agriculture Program is uniquely positioned to provide technical assistance in implementing, monitoring, and marketing climate smart agriculture and its products. CEC has worked with numerous local farmers and ranchers in order to scale the adoption of climate-smart agriculture as a climate solution and a key to regional agricultural viability. CEC has successfully completed the following projects:

- Project lead on a California Department of Agriculture (CDFA) Healthy Soils Demonstration Project focused on implementing compost application on rangeland in Santa Barbara and studying its effects on soil health and forage productivity.
- Outreach lead on a CDFA Healthy Soils Demonstration Project comparing mulch and compost application in a citrus orchard in Ventura County.
- Co-chair of the Land Stewardship & Carbon Farming sub-committee with the County of

Santa Barbara, bringing together farmers and ranchers with county staff to accelerate the adoption of climate smart agriculture.

- Co-managed webinar series as part of the Central Coast Climate Collaborative’s “Getting to Carbon Neutrality Through Sequestration and Offsets” which focused on local natural solutions for carbon sequestration by bringing the supply and demand side together.
- Co-hosted Community Supported Grazing Summit, which brought diverse stakeholders together to examine the viability of grazing as a carbon-negative solution for wildfire mitigation.
- Member of the Gaviota Agricultural Project which addresses regulatory barriers and funds carbon farming projects along the Gaviota Coast.
- Received private foundation grant to scale the use of compost application on agricultural lands in Santa Barbara County

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

A. A description of CSAF practices to be deployed,

All practices to be deployed (listed below) are NRCS approved practices and are accompanied by their CPS code. All practices implemented through this project will meet NRCS standards. This will be verified via an environmental review. These practices will only be implemented on land that is currently used for agricultural production.

The following three practices describe the system in which elderberries will be planted:

Hedgerow Planting (CPS 422) - Establishment of dense vegetation in a linear design to achieve the following benefits: habitat, including food, cover, and corridors for terrestrial wildlife; enhance pollen, nectar, and nesting habitat for pollinators; food, cover, and shade for aquatic organisms that live in adjacent streams or watercourses; provide substrate for predaceous and beneficial invertebrates as a component of integrated pest management; reduce chemical drift, odor, noise and dust; and increase carbon storage in biomass and soils.

Riparian Forest Buffer (CPS 391) - Establish trees and/or shrubs adjacent to and up-gradient from watercourses or water bodies to achieve the following benefits: create shade to lower or maintain water temperatures to improve habitat for aquatic organisms; create or improve riparian habitat and provide a source of detritus and large woody debris; reduce excess amounts of sediment, organic material, nutrients and pesticides in surface runoff and reduce excess nutrients and other chemicals in shallow groundwater flow; reduce pesticide drift entering the water body; restore riparian plant communities; and increase carbon storage in plant biomass and soils.

Silvopasture (CPS 381) - An application establishing a combination of trees or shrubs and compatible forages on the same acreage to achieve the following benefits: provide forage for livestock, increase carbon sequestration, improve water quality, reduce erosion, enhance wildlife habitat, reduce fire hazard, provide shade for livestock, develop renewable energy systems.

The following practices will accompany elderberry planting to enhance climate benefits:

Compost Application (Interim CPS 808) - Using carbon-based amendments to increase soil carbon and improve the physical, chemical, and biological properties of the soil to achieve the following benefits: maintain, increase, or improve soil organic matter quantity and quality; maintain or improve soil aggregate stability; maintain or improve habitat for soil organisms; improve plant productivity and health; and improve the efficient use of irrigation water

Conservation Cover (CPS 327) - Establishing and maintaining permanent vegetative cover to achieve the following benefits: reduce sheet, rill, and wind erosion and sedimentation; reduce ground and surface water quality degradation by nutrients and surface water quality degradation by sediment; reduce emissions of particulate matter (PM), PM precursors, and greenhouse gasses.); enhance wildlife, pollinator and beneficial organism habitat' and improve soil health.

Cover Crop (CPS 340) - Grasses, legumes, and forbs planted for seasonal vegetative cover to achieve the following benefits: reduce erosion from wind and water; maintain or increase soil health and organic matter content; reduce water quality degradation by utilizing excessive soil nutrients; suppress excessive weed pressures and break pest cycles; improve soil moisture use efficiency; and minimize soil compaction.

Mulching (CPS 484) - Apply plant residues or other suitable materials produced off site, to the soil around a perennial crop to achieve the following benefits: conserve soil moisture; reduce energy use associated with irrigation; provide erosion control; improve soil health; reduce airborne particulates.

All options require gopher protection and browse control. The plants will need irrigation at first, but may not need irrigation once established. Elderberry production will include a block of orchard style layout at 15x15 spacing, all other production strips will be single row hedgerow style at 15' spacing. Once established, livestock and wildlife will be excluded from browse impact through additional fencing and tree guards. Each elderberry shrub will be individually protected by gopher cages and welded wire deer cages. All of these plantings will be planted approximately parallel to the topographic contours of these management units. This strategy, in addition to the use of micro-terracing where determined appropriate for erosion control, as well as both living and organic (wood chip) mulches, will be implemented to increase the impediment to surface flow of water in large rain events. Decreasing the rate and intensity of surface flow on these sloped management units will restore the stability of topsoil, and reduce the risk of future sediment erosion. *None of the producers will be involved in multiple USDA programs that fund the same practice on the same land.*

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

CEC and WBLT have already convened five (5) of land stewards (27,921 linear feet) who are committed to implementing a variety of CSAF practices to increase the regional production of elderberry (listed above). We plan to implement an additional approximately 17,000 linear feet of elderberry plantings during the grant period incorporating additional growers and land bases. WBLT and CEC will leverage our existing network of growers, demonstrating the viability of elderberry plantings as a climate-smart commodity.

UC SAREP will play a leading role in educating land stewards and recruiting more growers to join the project between year 2-5 of the grant period. UC SAREP will provide grower-focused educational outreach to publicize information on native western blue elderberry as a feasible crop; this will include fact sheets on the 3 production models, new pages on the existing [Elderberries in California](#) website, 1-3 blog posts in UC ANR Food Blog or UC ANR Green Blog, and distributing the content to the UC SAREP-managed elderberry email list that currently comprises 325 people and UC SAREP agroforestry list that currently comprises 30 people (details in attached letter of support).

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

White Buffalo Land Trust is partnering with Community Environmental Council (CEC) to reach out to our shared network of land stewards in the Central Coast of California. CEC will provide technical assistance and training to the partner growers mentioned above on the climate smart growing practices for elderberry. This Technical assistance will be provided specifically by Molly Taylor from the Community Environmental Council. Please see her role and responsibilities outlined on Page 9 of the Budget Narrative.

ABOUT CEC - CEC works on multiple levels to advance policy, build programs, and educate the community via three food programs: Climate-Smart Agriculture, SBF Food Rescue, and SBC Food Action Network. CEC has a long history of partnering with and training land stewards; CEC has a strong network among the food growers in Santa Barbara County. CEC's impact includes reaching 755 ranchers, policymakers, and community members through on-farm demonstrations at three Central Coast farms where CEC is piloting programs to scale up carbon farming.

MOLLY TAYLOR, CLIMATE SMART AG PROGRAM MANAGER, CEC - Molly will be lead staff member from CEC to provide outreach, technical support, and training to the implementation partners. Molly Taylor joined CEC in 2021 as a Climate Smart Ag Program Manager. She works to bridge the gap between the agriculture industry and environmentalists to help local farmers turn their land into carbon sinks, while turning a profit. Prior to CEC, Molly managed a ranching operation in Northern California and was a Healthy Soils Technical Assistance Provider with the Amador Resource Conservation District.

White Buffalo Staff members will play a supporting role in providing outreach, technical support, and training to the implementation partners.

JESSE SMITH, DIRECTOR OF LAND STEWARDSHIP, WBLT - Jesse is the Director of Land Stewardship and is guiding the development of our flagship farm as well as working with our team, contractors, and partners to grow the land under our management and the impact in our community. His passion and expertise in agricultural system design and community engagement are a cornerstone of our strategy to achieve a systemic paradigm shift towards a regenerative food economy and ecology.

AARUSHI JHATRO, ECOLOGY AND GIS MANAGER, WBLT - Aarushi is working on measuring how regenerative agricultural practices impact soil properties, biodiversity, and water

cycling through the landscape. With master's degrees in water resources management and environmental science, she brings a holistic understanding of natural systems and a passion for integrating data into the development of natural resources management plans. She believes that regenerative practices are key to transitioning agriculture into harmonious systems capable of producing food while restoring ecosystem services.

ANN CLOSE, DIRECTOR OF EDUCATION AND RESEARCH, WBLT - Ann comes to the WBLT team with decades of experience developing programs in research, education and outreach for a wide variety of audiences. With a background in oceanography, a deep passion for the environment, and a fierce commitment to making science accessible to all, Ann utilizes her background in scientific research to help better understand and quantify our practices and create engaging programs that provide everyone the opportunity to become involved in WBLT's critical mission.

LAUREN TUCKER, BEYOND THE FARM (CONSULTANT) - Lauren is an entrepreneur and community organizer. Lauren holds a B.A. in international studies and psychology from American University. Her experience as the Co-Founder, and former Executive Director, of Kiss the Ground, has led her to develop an extensive network of farmers, ranchers, food product manufacturers, scientists, and regenerative agriculture leaders. She is currently focused on our regenerative cotton and almond demonstration projects located in the Central Valley of California.

D. Plan to provide financial assistance for producers/land owners to implement CSAF practices, and

WBLT will provide an incentive payment per linear foot of elderberry planting (\$11.91 per linear foot for implementation; \$2.75 per linear foot for maintenance). This payment is designed to include the costs of establishment, maintenance, and the implementation of the additional suite of climate smart agriculture practices (compost application, etc.). WBLT will also cover the cost associated with monitoring, reporting, and verification of climate smart benefits.

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. As mentioned above, this project currently has five producer partners (listed above). Of the producers, all five are small producers (annual revenue under \$350,000) and two of the producers are from historically underserved communities. One of the producers is the Santa Ynez Chumash Environmental Office, an historically underserved community. White Buffalo Land Trust's Director of Land Stewardship, and the lead applicant on this proposal, identifies as African American. Furthermore, this project emphasizes workforce development within the Chumash community and will include funding to train Chumash tribal members to harvest elderberries for cultural purposes. The target audience for our outreach will include other underserved and small producers; we have a strong network and expect several other small/underserved producers to participate. Technical assistance will be provided by CEC. The cost of CEC's technical assistance for this project is \$134,408 (shared among five current producers and three potential producers).

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

A. Approach to greenhouse gas benefit quantification, including methodology approach

consistent with the section titled “Quantification Requirements” below, Incorporating plantings of a perennial crop like native western blue elderberry can achieve long term carbon storage in agricultural soils. It is estimated that there are 154,334 hectares of farm edges in California that could be revegetated in hedgerows. *Assuming a 50% adoption rate and an average increase in C storage of 38.3 Mg/ha, this could amount to 2,955,498 Mg C stored.* This translates to 10.8 MMT CO₂e (million metric tons of CO₂ equivalents). This is equivalent to greenhouse gas emissions from 2.3 million gasoline-powered passenger vehicles driven for one year ([EPA Greenhouse Equivalencies Calculator](#)). Quantifying the GHG benefits, co benefits of soil carbon sequestration and agricultural yield of climate smart practices such as perennial plantings is essential to understand the potential of these practices to mitigate climate change and to promote their adoption on a larger scale.

GHG Benefit and Co-Benefit Quantification: We will use the USDA’s COMET Planner to evaluate the potential of native western blue elderberry plantings to sequester carbon and reduce GHG emissions by individual landbase and cumulatively for the project. The COMET Planner accounts for GHG benefits from emission reductions of carbon dioxide (CO₂), nitrous oxide (N₂O), and methane (CH₄). We will use certification/verification protocols to monitor and verify quantitative and qualitative ecological indicators and CO₂ emission reduction through soil carbon sequestration and provide participating landbases a pathway to the climate smart market. These protocols include Land to Market Ecological Outcome Verification (EOV), Soil Carbon Initiative (SCI) and Regenerative Organic Certification (ROC). These three protocols were selected for the following rationale: 1) they offer a science-based approach that combines in-field and laboratory measurements to measure and monitor soil carbon sequestration and 2) they measure co-benefits of soil carbon sequestration, including soil health (EOV, SCI and ROC) and ecological health monitoring.

Crop Yield Quantification: Monitoring crop yield, or the biomass harvested annually will provide a metric for understanding and tracking the GHG benefits from a standard unit (kilograms or pounds) of elderberries harvested from a property. This is a valuable metric for communicating the GHG, soil and ecologic health, and economic impacts of elderberry plantings to agricultural and market stakeholders. We will quantify crop yield using on-site measurement of harvested elderberries. The weight of elderberries harvested from each row within a planting system will be quantified during harvest to provide a weight/linear feet yield measurement. This data will be used to provide a cumulative estimate of yield per row, per landbase, and for the entire project.

Use of Remotely Sensed Data: Remotely sensed data (from satellite or drone imagery) offers a cost effective pathway for monitoring physical parameters (such as soil carbon, biomass, soil moisture etc.) over large areas and more frequent time periods, than field sampling. However, often these remotely sensed datasets can be inaccessible to growers. IrriWatch is a satellite data based irrigation service that provides growers with a wealth of physical parameters, including net carbon supply in soil (lb/acre/day) and accumulated biomass (lb/acre/day), on a 10mx10m spatial resolution, on a daily basis. This service is based on a recurrent data subscription system, of \$6/acre/year. We propose using this service to monitor changes in soil carbon, and accumulated

biomass from elderberry plantings for all landbases through the project timeline.

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

The implementation of elderberry plantings will be monitored at each site using geospatial technologies to document the number of sites and areas under the practice. WBLT's Ecology and GIS Manager, Aarushi Jhatro, will create a spatial inventory of project sites for each participating landbase. This inventory will include polygons representing site boundaries and lines representing planting rows, to provide a measure of area and linear footage under practice. ESRI's Survey123 tool will be utilized to create geolocation enabled digital surveys. These surveys can be used on a phone or another smart device in the field by participating landbases to: 1) map out areas and rows under project implementation and 2) collect data associated with project sites such as crop yield data from a row, or locations at which soil samples and other monitoring data is collected.

The spatial data collected through Survey123 will be uploaded to a central repository in WBLT's ArcGIS Online account. This data will be consolidated to assess and track practice implementation from farm to project level. The spatial boundaries of project sites will be used to obtain remotely sensed data through the IrriWatch program to monitor impacts of practice implementation on parameters such as soil carbon and biomass.

With guidance from the WBLT team, participating landbases will also be given the option to import and use the spatial inventories created through Survey123 in OpenTeam's farmOS software (free). farmOS is a web and mobile application for farm management, planning and record keeping. This option is provided to offer landbases an open access tool for managing their operations on a day to day basis. Additional OpenTeam tools will be explored to enter data into ecosystem service markets (Ag Data Wallet), and connect with other participants in the project (Hylo).

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

The following metrics will be tracked on an annual basis, and will be used to quantify the greenhouse gas benefits per farm, per project, per commodity and per dollar expended:
Area Under Practice: Enrolled landbases implement practices and are onboarded to the project using ESRI suite of tools, which includes a spatial inventory of practice type (hedgerow/ orchard/ riparian buffer) for each landbase. This step will provide the number of landbases enrolled, type of practice implemented and area under each practice (acres and linear feet).

Anticipated GHG Benefits: COMET-Planner will be used to calculate the anticipated annual GHG benefits for each enrolled landbase using area under practice (linear feet or acres). This data will be aggregated to obtain an estimate for the anticipated GHG benefits for the entire project.

GHG Verification: Each landbase will determine which certification/verification protocol (EOV/SCI/ROC) is best suited for their production system and landbase. Monitoring and soil

sampling will be conducted according to the protocol identified. Regardless of the protocol chosen, two rounds of soil sampling will be conducted through the project timeline. The first round of soil sampling will provide a field collected baseline estimate of soil carbon stocks (C1). The second round of soil sampling will provide a soil carbon stock (C2) estimate (3-5 years) later in the project, and will be used to quantify the amount of carbon sequestered (C2 - C1) in soil at each project site. Carbon sequestered in soil and in biomass accumulated from blue elderberry plantings (and other practices such as cover cropping) will also be monitored using remotely sensed data from IrriWatch. This will help us estimate carbon sequestration at an annual timescale. Results from the GHG verification step will quantify carbon sequestered (in soil and in accumulated biomass) at each project site (lbs C/linear foot).

Commodity Produced: Beginning in year 2-3 (2025), as elderberry harvest begins, crop yield will be quantified at each landbase by collecting geolocated data on the weight of elderberries harvested from each row of trees (lbs of elderberry harvested/linear foot). The harvested berries will be transported to the processing facility for destemming and cleaning. These cleaned destemmed berries will be either dried, frozen or pureed to a juice concentrate, depending on requests from market partners. The cleaned, destemmed berries are considered the final commodity produced. The GHG benefit for the final commodity produced will be obtained by equating the crop yield (lbs elderberry/linear foot) with carbon sequestered (lbs C sequestered/linear foot) for each site.

Per dollar expended: The GHG benefit of elderberry plantings will be calculated as the ratio of carbon sequestered and the cost of project implementation and management for each landbase (lbs C sequestered/dollar expended). The costs included in this analysis include implementation costs (soil preparation and planting), and management costs (irrigation, fertilization, pruning, livestock and animal protection).

The anticipated longevity of GHG benefits: The greenhouse gas benefits will continue for the lifespan of the elderberry plant, which is approximately 60 years on average.

D. Approach to verification of greenhouse gas benefits

The project will serve as an incubator for a series of market-driven ecological monitoring protocols to verify greenhouse gas benefits. Given that each land base has unique primary commodities (such as beef vs berries), certain ecological monitoring protocols may prove better adapted for that land base. The goal of this project is to match a protocol to a land base and a production system. For example, EOV (defined below) lends itself to rangeland based meat production systems. Whereas, SCI (defined below) is better suited to verify the carbon sequestration of perennial crops such as berries. Greenhouse gas benefits, specifically soil carbon sequestration, resulting from the climate smart commodity, elderberry, plantings will be verified through the certification/verification protocol (EOV/SCI/ROC) selected by the participating landbase:

Ecological Outcome Verification (EOV): The Savory Institute's EOV protocol monitors a suite of leading and lagging indicators to track the impacts of practices on ecological health as a function of carbon, water, mineral and energy cycles. Leading indicators of ecological health are measured every year (short term monitoring or STM), and lagging indicators are measured every 5 years (long term monitoring or LTM). Leading indicators include indicators of ecological

health that provide value about the direction of change, such as bare soil, canopy abundance, vigor and reproduction of contextually desirable functional groups, water erosion, wind erosion, and more. Lagging indicators include indicators of change that are slower to manifest, but provide validation of ecological change, and include soil carbon sequestration, water infiltration and increase in biodiversity. Under the EOV protocol, baseline monitoring for both leading and lagging indicators would be conducted in the first year. This includes quantification of baseline soil carbon stocks (soil organic carbon and bulk density), and soil health measurements (pH, soil organic matter, total nitrogen and phosphorus) for a soil profile from the surface to a 30 cm (6 inch) depth. Following the baseline year, leading indicators will be surveyed annually and lagging indicators (including soil carbon) will be quantified in the 5th year from when the project began. Therefore, GHG benefits through soil carbon sequestration will be verified in year 5 after project implementation. WBLT is an accredited Savory hub and serves as a demonstration and teaching site within the network. WBLT's Director of Landstewardship, Jesse Smith, and Ecology & GIS Manager, Aarushi Jhatro, are certified EOV monitors, and will perform EOV monitoring at participating landbases who choose to pursue EOV certification. Additionally, WBLT has hosted EOV training events, and will offer this training to participating landowners interested in becoming EOV monitors.

Soil Carbon Initiative (SCI): Green America's SCI framework and standard monitors soil carbon, soil health, biodiversity and indicators of water cycle functioning. All these indicators are measured in the first (baseline) year of enrollment, after which soil carbon and water infiltration are measured every 3 years, and indicators of soil health (Haney test, soil organic matter) are measured every year. These indicators are tested for two soil depths: 0-15 cm (0-6inches), and 15-30 cm (6-12inches). Therefore, GHG benefits through soil carbon sequestration will be verified in year 4 after project implementation.

Regenerative Organic Certified (ROC): The Regenerative Organic Alliance's ROC protocol builds upon the USDA's organic certification as a baseline, ROC monitors for soil health (including soil carbon), animal welfare and farmer and worker fairness. These indicators are tested for soil profile from the surface to 15 cm (6 inches) deep. Soil organic carbon and bulk density are measured in the first (baseline) year of enrollment, after which these indicators are measured every three years. Therefore, GHG benefits through soil carbon sequestration will be verified in year 4 after project implementation.

The protocols mentioned above will provide an estimate of carbon sequestered in soil over a time scale of 3-5 years from project beginning. Remotely sensed data from IrriWatch will be used to obtain an understanding of carbon sequestration (in soil and in accumulated biomass) from blue elderberry plantings on an annual basis throughout the project timeline.

Please see our anticipated MMRV schedule below:

Year 1:

- Baseline Measurements for all protocols on all landbases

Year 2:

- Annual Irriwatch data analysis
- EOV Short Term Monitoring and Analysis

Year 3:

- Annual Irrigate data analysis
- EOY Short Term Monitoring and Analysis

Year 4:

- Annual Irrigate data analysis
- EOY Short Term Monitoring and Analysis
- ROC Monitoring and Analysis
- SCI Monitoring and Analysis

Year 5:

- Annual Irrigate data analysis
- EOY Long Term Monitoring and Analysis

E. Agreement to participate in the Partnerships Network

Jesse Smith of WBLT agrees to participate in the Partnerships Network.

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

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

With WBLT's experience (see i.H.), we will utilize our learnings and relationships from these projects to design a system for value-adding and marketing the climate smart commodity, western blue elderberry. We have identified the following potential sales channels and market development partners for the market development of the climate smart commodity, elderberries:

- A. Direct sales locally - farmers markets, CSA's, herbalists
- B. Value-added products created by the farms
- C. Sales directly to companies
 - a. Existing relationships (Carmel Berry; Brew Lab; Apiary Beverage Co.; Fibershed; Twenty-Four Blackbirds Chocolate; JustOne Organics)
 - b. Potential relationships (partial list: Vive Organic; Goldthread; True Grace Nutrition; Purely Optimal; Whole Harmony; Wineries)
- D. Sales to distributors
- E. Sales to WBLT's food brand: Figure Ate
- F. Usage within a network of Indigenous tribes including the Chumash.

Providing processing capabilities will be key to marketing the native western blue elderberry. By partnering with processing facilities, processing can be conducted without a lot of additional overhead. Nutritional analysis and flavor profiling are also necessary for brands that currently source the European black elderberry to test the nutritional difference and flavor differentiation of the native western blue elderberry.

WBLT will help the growers and processing facility develop multiple markets for the native western blue elderberry. The commodity is used for a diversity of products including: cough syrup, teas, flavor syrups, sparkling beverages, health shots, liquor, jam, wine, champagne, fabric dyeing, and chocolate.

To support the marketing of elderberries conducted by companies that are purchasing from us, we will produce videography and photography assets, a simple website (similar to

www.thealmondproject.com), and talking points and storylines. We have found early success in doing this with our cotton and almond projects (described previously in the application). We will enlist the help of Cage Free Productions for filmmaking.

We will begin processing set up and market development activities in the spring of 2023, which will be one year ahead of the first crop. This will allow us plenty of time to test the processing infrastructure with existing statewide elderberry producers and begin customer / market development with their supply as we work with them on implementing climate beneficial practices and on new plantings with producers in this grant.

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

Transparency will be key to maintaining a link between the grower and the end purchaser of elderberries, so that the chain of custody can incentivize some premium for elderberry as a climate beneficial crop. By establishing a centralized processing facility with governance from WBLT and founding partners, there will be traceability to the grower level. We will pilot blockchain traceability technology to assess its applicability at our scale of production and its ease of use by all supply chain participants; this will be useful for future scalability.

C. Estimated economic benefits for participating producers including market returns

Native western blue elderberry is a crop that has demonstrated profitability to the producers currently growing and marketing it. Additionally, it is native to the region of California and has been adapted to this growing climate over thousands of years. Thus, the management of this elderberry requires few inputs or labor beyond harvest. We are planning to implement three types of growing systems with producers (listed above), all of which should provide an additional revenue stream to their operations. Additionally, elderberry is a growing product ingredient with health benefits where global demand is exceeding supply. Through UC ANR as an advisory and partner in this project, we are in communication with the Midwest Elderberry Cooperative to learn from their economic model and how they have supported a growing number of elderberry producers. We will create a similar model that allows for transparency from harvest to end customer and gives producers the ability to process and sell direct through our processing infrastructure as well as potential governance and voting in the market development process.

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.

There is immense potential to scale the project throughout California and beyond. Once the elderberry is established at the sites that are included in this grant proposal, the plants will require minimal management and will be viable in the long-term. There is a growing network of interested producers in growing and marketing this commodity. This project will enable a system to function beyond the scope of our project, similar to WBLT has created in the past (see i.H.). By developing both processing infrastructure and a valuing in the marketplace for the elderberry, producers will have an established market in the future that lives beyond the scope of this grant.

Involvement of UC SAREP/UC ANR will ensure distribution of production and marketing information generated in this project to a broader, statewide and region-wide audience. UC SAREP maintains connections with elderberry producers and product makers across the West

Coast, including in Oregon and Washington, and will be able to share new information with those networks. Please refer to the attached letter of support for more details.

The US market share of all herbal products occupied by elderberries has continued to grow at a phenomenal pace since 2017 and before. This growth together with the increasing buyer and consumer interest in climate-smart products is very likely to continue to spur interest among producers and marketers in making products from blue elderberry across the western US., beyond the term of this project.

| Benchmark / Milestone | Associated Activity, if Applicable | Year 1 Total | | | | Year 2 Total | | | | Year 3 Total | | | | Year 4 Total | | | | Year 5 Total | | | | | | | | | | |
|---|--|--------------|--------------|--------------|--------------|----------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|----------------|-------------|
| | | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | Q1 | Q2 | Q3 | Q4 | | | |
| Required Quantitative Targets by Quarter (Cumulative) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of producers involved | Account for producers involved at any stage of the project | 5 | 0 | 0 | 0 | 5.00 | 0 | 0 | 0 | 0 | 5.00 | 0.00 | 0.00 | 7.00 | 0.00 | 7.00 | 0.00 | 8.00 | 0.00 | 8.00 | 0.00 | 8.00 | 0.00 | 8.00 | 0.00 | 8.00 | 0.00 | 8.00 |
| Number of underserved producers involved | Account for underserved producers involved at any stage of the project | 2 | 0 | 0 | 0 | 2.00 | 0 | 3 | 0 | 0 | 2.00 | 2.00 | 2.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 | 3.00 |
| Number of acres involved | Track number of acres involved in the project | 10.5 | 10.5 | 10.5 | 10.5 | 10.50 | 10.5 | 10.5 | 10.5 | 10.5 | 10.50 | 10.50 | 10.50 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 | 14.22 |
| Number of Linear Feet Planted of Climate Smart Crop | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Number of haal involved (if applicable) | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Dollars provided to producers | Practice implementation and maintenance, transportation of berseem | \$151,999.00 | \$283,879.38 | \$395,819.07 | \$527,758.76 | \$127,758.76 | \$554,373.20 | \$680,995.84 | \$807,614.08 | \$934,232.52 | \$634,232.52 | \$800,850.06 | \$687,469.40 | \$714,087.84 | \$740,706.28 | \$740,706.28 | \$767,324.72 | \$703,943.16 | \$400,561.60 | \$847,180.04 | \$847,180.04 | \$873,798.48 | \$900,416.92 | \$927,035.36 | \$953,653.80 | \$980,272.24 | \$1,006,890.68 | |
| GHG Benefits (Metric Tons of CO2e Reduced or Sequestered) | Track GHG benefits as result of this project | 0 | 0 | 0 | 0 | 0.00 | 82 | 52 | 52 | 59 | 52.00 | 54.00 | 64.00 | 54.00 | 84.00 | 84.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 | 122.00 |
| Number of new marketing channels established | Track number of marketing channels | 0 | 0 | 1 | 1 | 1.00 | 2 | 2 | 3 | 3 | 3.00 | 3.00 | 3.00 | 4.00 | 4.00 | 4.00 | 4.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 | 5.00 |
| Number of marketing channels expanded | Track number of marketing channels: Website, Social Media, POS, Email Marketing, Events, Digital Ads | 0 | 0 | 4 | 4 | 4.00 | 4 | 4 | 6 | 6 | 6.00 | 8.00 | 8.00 | 8.00 | 10.00 | 10.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 | 12.00 |
| Number of measurement tools utilized | Ecological Outcome Verification Protocol, Cover Planner | 2 | 2 | 2 | 2 | 2.00 | 2 | 2 | 2 | 2 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 | 2.00 |
| Other Required Benchmarks that may be quantitative or qualitative: | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Outreach, training and other technical assistance | Number of individuals reached via website, social media posts, digital newsletters, educational videos, and events | | 8700 | 8700 | 10600 | 10600.00 | 10000 | 10000 | 11000 | 11000 | 11000.00 | 11500.00 | 11500.00 | 11500.00 | 12000.00 | 12000.00 | 12000.00 | 12000.00 | 14000.00 | 14000.00 | 14000.00 | 14000.00 | 14000.00 | 15000.00 | 15000.00 | 16000.00 | 16000.00 | 16000.00 |
| Other MMRV and supply chain traceability attributes | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Other measurements of work related to marketing of commodities | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Demonstrated engagement of major partners | Engagement with Partners via meetings and events | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Climate smart technologies employed (if applicable) | Geospatial Data | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Projected Expenses | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Total Direct Costs | | \$332,698.02 | \$332,698.02 | \$332,698.02 | \$332,698.02 | \$1,330,792.07 | \$202,887.01 | \$202,887.01 | \$202,887.01 | \$202,887.01 | \$810,748.04 | \$188,924.01 | \$188,924.01 | \$188,924.01 | \$188,924.01 | \$755,696.04 | \$194,321.01 | \$194,321.01 | \$194,321.01 | \$194,321.01 | \$777,284.04 | \$202,150.76 | \$202,150.76 | \$202,150.76 | \$202,150.76 | \$808,603.05 | \$808,603.05 | |
| Inirect | | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$30,862.74 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$30,862.74 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$30,862.74 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$30,862.74 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$7,465.89 | \$30,862.74 |
| Total Budget | | \$340,163.70 | \$340,163.70 | \$340,163.70 | \$340,163.70 | \$1,360,654.81 | \$210,352.70 | \$210,352.70 | \$210,352.70 | \$210,352.70 | \$840,610.78 | \$196,389.70 | \$196,389.70 | \$196,389.70 | \$196,389.70 | \$786,558.78 | \$201,786.70 | \$201,786.70 | \$201,786.70 | \$201,786.70 | \$807,146.78 | \$209,616.45 | \$209,616.45 | \$209,616.45 | \$209,616.45 | \$838,465.79 | \$838,465.79 | |

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

| NRCS Practice Code | Practice Name |
|---------------------------|------------------------|
| 327 | Conservation Cover |
| 336 | Soil Carbon Amendment |
| 340 | Cover Crop |
| 381 | Silvopasture |
| 391 | Riparian Forest Buffer |
| 422 | Hedgerow Planting |
| 484 | Mulching |

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

Table of Contents

| | |
|--|----|
| Overview of Reporting Requirements | 2 |
| Project Summary | 3 |
| Partner Activities | 4 |
| Marketing Activities | 5 |
| Producer Enrollment | 6 |
| Field Enrollment | 7 |
| Farm Summary | 8 |
| Field Summary | 9 |
| GHG Benefits - Alternate Modeled | 10 |
| GHG Benefits - Measured | 11 |
| Additional Environmental Benefits | 12 |
| Supplemental Data Submission | 13 |
| Data Descriptions | 14 |
| Unique IDs | 14 |
| Project Summary | 15 |
| Partner Activities | 20 |
| Marketing Activities | 25 |
| Producer Enrollment | 30 |
| Field Enrollment | 38 |
| CSAF Practice Sub-questions | 44 |
| Farm Summary | 45 |
| Field Summary | 49 |
| GHG Benefits - Alternate Modeled | 57 |
| GHG Benefits - Measured | 61 |
| Additional Environmental Benefits | 65 |
| CSAF Practice Sub-questions | 75 |
| Appendix A: Climate-smart Agriculture and Forestry Practices | 83 |
| All NRCS Practice Standards (not limited to climate-smart practices) | 83 |
| Other CSAF Practices | 85 |
| Appendix B: Commodity List | 86 |

Overview of Reporting Requirements

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

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

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

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

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

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

Project Summary

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

Table 1. Project Summary elements

| Data element name | Description | Frequency |
|-------------------------------------|--|------------------|
| Commodity type | Type of commodity(ies) incentivized by the project | Quarterly |
| Commodity sales | Indicates sales of the commodity(ies) related to the project occurred this quarter | Quarterly |
| Farms enrolled | Indicates enrollment activities occurred this quarter | Quarterly |
| GHG calculation methods | Methods used to calculate greenhouse gas (GHG) benefits | Quarterly |
| GHG cumulative calculation | Method used to calculate cumulative GHG benefits | Quarterly |
| Cumulative GHG benefits | Whole project estimate of total GHG (CO ₂ e) emission reductions | Quarterly |
| Cumulative carbon stock | Whole project estimate of total carbon sequestration | Quarterly |
| Cumulative CO ₂ benefit | Whole project estimate of total CO ₂ emission reductions | Quarterly |
| Cumulative CH ₄ benefit | Whole project estimate of total CH ₄ emission reductions | Quarterly |
| Cumulative N ₂ O benefit | Whole project estimate of total N ₂ O emission reductions | Quarterly |
| Offsets produced | Amount of carbon offsets produced by project | Quarterly |
| Offsets sale | Name of marketplace where carbon offsets were sold | Quarterly |
| Offsets price | Price of carbon in offset sales | Quarterly |
| Insets produced | Amount of carbon insets produced by project | Quarterly |
| Cost of on-farm TA | Cost of on-farm technical assistance (TA) provided to producers | Quarterly |
| MMRV cost | Cost of measurement, monitoring, reporting, and verification (MMRV) activities | Quarterly |
| GHG monitoring method | Methods used by project to monitor GHG benefits (up to 5) | Quarterly |
| GHG reporting method | Methods used by project to report on GHG benefits (up to 5) | Quarterly |
| GHG verification method | Methods used to verify GHG benefits (up to 5) | Quarterly |


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

Partner Activities

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

Table 2. Partner Activities elements

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

Marketing Activities

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

Table 3. Marketing Activities elements

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

Producer Enrollment

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

Table 4. Producer Enrollment elements

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

Field Enrollment

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

Table 5. Field Enrollment elements

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

Farm Summary

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

Table 6. Farm Summary elements

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

Field Summary

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

Table 7. Field Summary elements

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

GHG Benefits - Alternate Modeled

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

Table 8. GHG Benefits – Alternate Modeled elements

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

GHG Benefits - Measured

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

Table 9. GHG Benefits - Measured data elements

| Data element name | Description | Frequency |
|---|---|------------------|
| Farm ID | Unique Farm ID assigned by FSA | |
| Tract ID | Unique Tract ID assigned by FSA | |
| Field ID | Unique Field ID assigned by FSA | |
| State | State name | |
| County | County name | |
| GHG measurement method | Method of measurement | Annual |
| Lab name | Entity that conducted analysis | Annual |
| Measurement start date | Start date of measurements | Annual |
| Measurement end date | End date of measurements | Annual |
| Total CO ₂ reduction calculated | Calculation of total CO ₂ reduction | Annual |
| Total carbon stock change calculated | Calculation of change in carbon stock | Annual |
| Total CH ₄ reduction calculated | Calculation of total CH ₄ reduction | Annual |
| Total N ₂ O reduction calculated | Calculation of total N ₂ O reduction | Annual |
| Soil sample result | Numeric result from soil sample | Annual |
| Measurement type | Type of analysis conducted | Annual |

Additional Environmental Benefits

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

Table 10. Additional Environmental Benefits elements

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

Supplemental Data Submission

Project MMRV Plan

Definition of MMRV elements:

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

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

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

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

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

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

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

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

Field modeled GHG benefit reports

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

Field direct measurement results

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

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

Data Descriptions

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

Unique IDs

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

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

State or territory of operation: State or territory name

County of operation: Physical county name

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

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

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

Project Summary

Commodity type

Data element name: Commodity type

Reporting question: What climate-smart commodity types are produced by this project?

Description: Type of commodity incentivized by the project. These commodities include those for whom farmers are directly receiving incentives or other types of marketing support. See full list of commodity options in Appendix B. List one commodity per row.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Commodity sales

Data element name: Commodity sales

Reporting question: Did project activities result in sales this quarter of the commodity(ies) produced by this project?

Description: Indicator of sales of commodity(ies) related to project activities. If sales are reported, complete the *Marketing Activities* worksheet (Table 3) as part of the quarterly performance report.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Farms enrolled

Data element name: Farms enrolled

Reporting question: Did the project enroll any producers or fields this quarter?

Description: Indicator that the project enrolled producers or fields. If enrollment activities occurred this quarter, complete the *Producer Enrollment* and *Field Enrollment* worksheets (Tables 4 and 5) as part of the quarterly performance report.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG calculation methods

Data element name: GHG calculation methods

Reporting question: What methods is the project using to calculate GHG benefits?

Description: List the way(s) that GHG benefits are being measured and calculated by the project this quarter.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Models
- Direct field measurements
- Both

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

GHG cumulative calculation

| | |
|---|--|
| Data element name: GHG cumulative calculation | Reporting question: What method(s) was used to calculate the total cumulative GHG benefits reported here? |
| Description: List the method(s) that was used to calculate the total cumulative GHG benefits reported by the project this quarter. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Models • Direct field measurements • Both |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Cumulative GHG benefits

| | |
|--|---|
| Data element name: Cumulative GHG benefits | Reporting question: What are the project's estimated total GHG emission reductions (CO ₂ eq) to date? |
| Description: Total cumulative estimated greenhouse gas emission reductions from practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Cumulative carbon stock

| | |
|---|---|
| Data element name: Cumulative carbon stock | Reporting question: How much carbon has the project sequestered to date? |
| Description: Estimated total cumulative change in carbon stock based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of carbon = 3.67 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Cumulative CO₂ benefit

| | |
|--|---|
| Data element name: Cumulative CO ₂ benefit | Reporting question: What are the project's estimated total cumulative CO ₂ emission reductions to date? |
| Description: Estimated total cumulative carbon dioxide emission reductions based on practice implementation. This is updated quarterly. If there are no changes, enter the same number as the previous quarter. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Cumulative CH₄ benefit

| | |
|---|--|
| Data element name: Cumulative CH ₄ benefit | Reporting question: What are the project's estimated total CH ₄ emission reductions to date? |
| Description: Estimated total cumulative methane reduction based on practice implementation. This is updated quarterly. If there are no changes, enter the same numbers as the previous quarter. Conversion rate is one ton of CH ₄ = 25 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CH ₄ reduced in CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Cumulative N2O benefit

| | |
|---|--|
| Data element name: Cumulative N2O benefit | Reporting question: What are the project's estimated total N2O emission reductions to date? |
| Description: Estimated total cumulative nitrous oxide reduction based on practice implementation. This is updated quarterly. If there are no updated numbers enter the same number as the previous quarter. Conversion rate is one ton of N ₂ O = 298 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons N2O reduced in CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Offsets produced

| | |
|---|---|
| Data element name: Offsets produced | Reporting question: How many carbon offsets have been produced in the project? |
| Description: Total carbon offsets produced by enrolled project fields during the quarter. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Offsets sale

| | |
|--|---|
| Data element name: Offsets sale | Reporting question: To what marketplace(s) were carbon offsets sold? |
| Description: Marketplaces to which carbon offsets produced by enrolled project fields were sold. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. List each marketplace name. Separate names with commas. | |
| Data type: Text | Select multiple values: NA |
| Measurement unit: Name | Allowed values: Text |
| Logic: Respond if >0 to 'Offsets produced' | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Offsets price

| | |
|--|---|
| Data element name: Offsets price | Reporting question: What was the average price of carbon received for offsets? |
| Description: Average price per metric ton paid for carbon offsets produced by enrolled project fields. Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Dollars per metric ton | Allowed values: 0-500 |
| Logic: Respond if >0 to 'Offsets produced' | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

Insets produced

| | |
|--|--|
| Data element name: Insets produced | Reporting question: How many carbon insets have been produced in the project? |
| Description: Total carbon insets produced by enrolled fields during the quarter. Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

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

Cost of on-farm TA

| | |
|--|--|
| Data element name: Cost of on-farm TA | Reporting question: What is the total amount that has been spent to provide on-farm TA? |
| Description: Total cost of any field- or practice-specific technical assistance provided by the project (by recipient or partners) to any producers. This is updated quarterly. If there are no changes, enter the same number as the previous quarter. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Dollars | Allowed values: \$0-\$50,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

MMRV cost

| | |
|--|---|
| Data element name: MMRV cost | Reporting question: What is the total amount that has been spent on MMRV activities? |
| Description: Total cost of all MMRV activities paid for by the project (recipient or partners). MMRV components are defined as measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practices have been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable). This is updated quarterly. If there are no changes, enter the same number as the previous quarter. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Dollars | Allowed values: \$0-\$50,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

GHG monitoring method

| | |
|---|---|
| Data element name: GHG monitoring 1-5 | Reporting question: How did the project monitor GHG benefits? |
| Description: Up to the five most common forms of monitoring GHG benefits used this quarter as part of MMRV requirements. Monitoring is defined as ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time. Include up to 5 methods, based on which methods are most commonly used for this project. The worksheet provides five columns with a drop-down list of the allowed values. Choose one value for each column. If fewer than 5 GHG monitoring methods are used, leave unnecessary columns blank. If "other" is chosen, use the additional column to enter other GHG monitoring methods as free text. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Drones • Ground-level photos and videos • On-farm visit • Plot-based sampling • Producer records or attestation • Satellite monitoring or remote sensing • Soil metagenomics • Soil sensors • Water sensors • Other (specify) |
| Logic: None – all respond | Required: Yes |
| Data collection level: Project | Data collection frequency: Quarterly |

GHG reporting method

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

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

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

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

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

GHG verification method

Data element name: GHG verification method 1-5**Reporting question:** How did the project verify implementation of practices to reduce GHG emissions?

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

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

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

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

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

Partner Activities

Unique IDs

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

Partner name

Data element name: Name of partner organization **Reporting question:** What is the official name of the recipient or partner organization?

Description: Legal name of recipient or partner organization

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Partnership initiation

Partner type

Data element name: Type of partner organization **Reporting question:** What type of organization is this?

Description: Legal/financial structure of recipient or partner organization

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Commodity groups (501c5)
- For-profit
- Individual
- Nonprofit
- State or local agency
- Tribal agency
- University

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Partnership initiation

Partner POC

Data element name: Partner POC **Reporting question:** Who is the point of contact for this project at the recipient or partner organization?

Description: Name of a point of contact for the recipient or partner organization

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Partnership initiation; update as necessary

Partner POC email

Data element name: Partner POC email **Reporting question:** What is the point of contact's email address?

Description: Email of the point of contact for the recipient or partner organization

Data type: Text

Select multiple values: NA

Measurement unit: NA

Allowed values: Text

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Partnership initiation; update as necessary

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

| Partnership start date | |
|--|---|
| Data element name: Partnership start date | Reporting question: When did the partnership start? |
| Description: Date that the partner organization and the recipient began formally partnering on the project | |
| Data type: Date | Select multiple values: NA |
| Measurement unit: MM/DD/YYYY | Allowed values: 01/01/2023 – 12/31/2030 |
| Logic: No response for recipient | Required: Yes |
| Data collection level: Partner | Data collection frequency: Partnership initiation |
| Partnership end date | |
| Data element name: Partnership end date | Reporting question: When did the partnership end? |
| Description: Date that the partner organization and the recipient stopped formally partnering on the project | |
| Data type: Date | Select multiple values: NA |
| Measurement unit: MM/DD/YYYY | Allowed values: 01/01/2023 – 12/31/2030 |
| Logic: No response for recipient | Required: Yes |
| Data collection level: Partner | Data collection frequency: Partnership end quarter |
| New partnership | |
| Data element name: New partnership | Reporting question: Is this a new partnership? |
| Description: A new partnership means that the recipient and the partner organization have not had a formal working relationship (under contract or on a grant) prior to the start of the project. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: No response for recipient | Required: Yes |
| Data collection level: Partner | Data collection frequency: Partnership initiation |
| Partner total requested | |
| Data element name: Partner total requested | Reporting question: What is the total amount of funding the partner has requested to date from this project? |
| Description: Cumulative (total) amount of funds that the partner has requested reimbursement for from the recipient from the start of the partnership to the end of the reporting quarter. For each quarter's data entry, the value must be the sum of all previous entries plus the amount of funds requested in the reporting quarter. If there are no changes, report the value from the previous quarter. | |
| Data type: Decimal | Select multiple values: NA |
| Measurement unit: Dollars | Allowed values: \$0-\$100,000,000 |
| Logic: No response for recipient | Required: Yes |
| Data collection level: Partner | Data collection frequency: Quarterly |

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

Total match contribution

Data element name: Total match contribution

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Total match incentives

Data element name: Total match incentives

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

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match type

Data element name: Match type 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Partner

Data collection frequency: Quarterly

Match amount

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

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

Data type: Decimal**Select multiple values:** NA**Measurement unit:** Dollars**Allowed values:** \$0-\$100,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly

Training type provided

Data element name: Training type 1-3 provided**Reporting question:** What types of training has the organization provided to project partners?

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

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

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

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

Activity by partner

Data element name: Activity 1-3 by partner**Reporting question:** What types of activities has the organization provided to the project?

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

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

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

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

Activity cost

Data element name: Activity cost 1-3**Reporting question:** What is the value of the activities this organization has provided to the project?

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

Data type: Decimal**Select multiple values:** NA**Measurement unit:** Dollars**Allowed values:** \$0-\$100,000,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly

Products supplied

Data element name: Products supplied**Reporting question:** What products or supplies were provided to enrolled fields?

Description: Name(s) of products supplied to enrolled producers as incentives or matching contributions. Enter the name of each product, including its brand. Separate each product name with a comma. If no products or supplies were provided by the organization, leave the column blank.

Data type: Text**Select multiple values:** NA**Measurement unit:** Name**Allowed values:** Text**Logic:** None – all respond**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly

Product source

Data element name: Product source**Reporting question:** Which companies provided the supplies?

Description: Name of firm or company from which supplies were obtained.

Data type: Text**Select multiple values:** NA**Measurement unit:** Name**Allowed values:** Text**Logic:** Respond if text entered for 'Products supplied'**Required:** Yes**Data collection level:** Partner**Data collection frequency:** Quarterly

Marketing Activities

Commodity type

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

Marketing channel type

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

Number of buyers

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

Names of buyers

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

Marketing channel geography

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

Value sold

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

Volume sold

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

Volume sold unit

Data element name: Volume sold unit**Reporting question:** What is the unit of volume?**Description:** The unit associated with the volume of the commodity sold in the marketing channel. If “other” is chosen, use the additional column to enter the appropriate unit as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

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

Price premium

Data element name: Price premium**Reporting question:** What price premium is received for the commodity sold in this marketing channel?**Description:** The price premium received for the commodity sold in this marketing channel this quarter. Price premium is the amount received above a ‘business as usual’ price.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Dollars**Allowed values:** \$0.01-\$10,000**Logic:** None – all respond**Required:** Yes**Data collection level:** Project**Data collection frequency:** Quarterly

Price premium unit

Data element name: Price premium unit**Reporting question:** What is the unit for the price premium?**Description:** The unit associated with the price premium for the commodity sold in the marketing channel. If “other” is chosen, use the additional column to enter the appropriate unit as free text.**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

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

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

Price premium to producer

Data element name: Price premium to producer

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

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

Data type: Decimal

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Product differentiation method

Data element name: Product differentiation method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing method

Data element name: Marketing method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Marketing channel identification method

Data element name: Marketing channel identification method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

Traceability method

Data element name: Traceability method 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Project

Data collection frequency: Quarterly

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

Producer Enrollment

Unique IDs

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

Producer data change

| | |
|---|--|
| Data element name: Producer data change | Reporting question: Is there new/updated information for a producer who is re-enrolling in the project? |
| Description: Indicates that there is new or updated information for a producer who had previously enrolled in the project and is re-enrolling. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Yes • No |
| Logic: None – all respond | Required: Yes |
| Data collection level: Producer | Data collection frequency: Re-enrollment |

Producer start date

| | |
|---|---|
| Data element name: Producer start date | Reporting question: When did the producer enroll in the project? |
| Description: Date that the producer enrolled in the project by signing their first contract. | |
| Data type: Date | Select multiple values: NA |
| Measurement unit: MM/DD/YYYY | Allowed values: 01/01/2023 – 12/31/2030 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Producer | Data collection frequency: Initial enrollment |

Producer name

| | |
|---|--|
| Data element name: Producer name | Reporting question: What is the name of producer enrolled in the project? |
| Description: Name of the producer enrolled in the project; the name must match the name contained in the customer's Business Partner record and the Farm Operating Plan in FSA Business File for that Farm ID. | |
| Data type: Text | Select multiple values: NA |
| Measurement unit: NA | Allowed values: Text |
| Logic: None – all respond | Required: Yes |
| Data collection level: Producer | Data collection frequency: Initial enrollment |

Underserved status

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

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

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

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

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

Total area

Data element name: Total area**Reporting question:** What is the total area of the farm?

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

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

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

Logic: None – all respond**Required:** Yes**Data collection level:** Producer**Data collection frequency:** Initial enrollment and subsequent enrollment(s), if applicable

Total crop area

Data element name: Total crop area **Reporting question:** What percent of the current operation is cropland?

Description: Area of the total farm that is currently used as cropland. If a producer is enrolled in the project for multiple years, review the total crop area each time a new contract is signed and provide any necessary updates.

Data type: Integer

Select multiple values: No

Measurement unit: Acres

Allowed values: 0-100,000

Logic: None – all respond

Required: Yes

Data collection level: Producer

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

Total livestock area

Data element name: Total livestock area **Reporting question:** What amount of the current operation is used for livestock (by area)?

Description: Area of the total farm that is currently used for pasture, grazing, rangeland; or animal housing, feeding or milking. If a producer is enrolled in the project for multiple years, review the total livestock area each time a new contract is signed and provide any necessary updates.

Data type: Integer

Select multiple values: No

Measurement unit: Acres

Allowed values: 0-100,000

Logic: None – all respond

Required: Yes

Data collection level: Producer

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

Total forest area

Data element name: Total forest area **Reporting question:** What amount of the current operation is forested (by area)?

Description: Area of the total farm that is currently considered forest land use. Forest land use means that at least 10% of the land area is covered in trees that will be at least 13 feet tall when mature. If a producer is enrolled in the project for multiple years, review the total forest area each time a new contract is signed and provide any necessary updates.

Data type: Integer

Select multiple values: No

Measurement unit: Acres

Allowed values: 0-100,000

Logic: None – all respond

Required: Yes

Data collection level: Producer

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

Livestock type

Data element name: Livestock type 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

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

Livestock head

Data element name: Livestock head 1-3

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

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

Data type: Integer

Select multiple values: NA

Measurement unit: Head count

Allowed values: 1-10,000,000

Logic: Respond if 'Total livestock area' >0

Required: Yes

Data collection level: Producer

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


Partnerships for Climate-Smart Commodities Data Dictionary for Recipients
 February 2023
Organic farm**Data element name:** Organic farm**Reporting question:** Is any part of the farm currently USDA-certified organic or transitioning to USDA-certified organic?

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

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

- Yes
- No
- I don't know

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

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

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

- Yes
- No
- I don't know

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

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

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

Producer outreach

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

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

Data type: List

Select multiple values: Yes

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF experience

Data element name: CSAF experience **Reporting question:** Has the primary operator implemented CSAF practices in the last ten years anywhere on the farm?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

CSAF federal funds

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

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

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

- Yes
- No
- I don't know

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

CSAF state or local funds

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

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

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

- Yes
- No
- I don't know

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

CSAF nonprofit funds

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

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

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

- Yes
- No
- I don't know

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



CSAF market incentives

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'CSAF experience'

Required: Yes

Data collection level: Producer

Data collection frequency: Initial enrollment

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

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

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

Commodity category

Data element name: Commodity category

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

Description: Category of commodity(ies) produced in field enrolled in the project

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Commodity type

Data element name: Commodity type

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

Description: Type of commodity produced in field enrolled in the project. See full list in Appendix B. The worksheet provides a drop-down list of the allowed values. Choose the appropriate value. Enter additional commodities in subsequent rows.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values: FSA commodity list

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Baseline yield

Data element name: Baseline yield

Reporting question: What is the baseline yield of this field?

Description: Average annual yield of commodity in 3 years prior to enrollment. Provide yield for the enrolled field if possible. If not at field level, provide average annual yield for the specific commodity for the operation.

Data type: Decimal

Select multiple values: No

Measurement unit: Production per acre or animal

Allowed values: .01-100,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

Baseline yield unit

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

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

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

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

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

Baseline yield location

Data element name: Baseline yield location**Reporting question:** For what portion of the operation is the baseline yield being reported?

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

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

- Enrolled field
- Whole operation
- Other (specify)

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

Field land use

Data element name: Field land use**Reporting question:** What is this field’s land use history?

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

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

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

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

Field irrigated

Data element name: Field irrigated**Reporting question:** What is this field's irrigation history?**Description:** Prior to enrollment, what was the most common irrigation practice on this field the past 3 years?**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- No irrigation
- Center pivot
- Drip-subsurface
- Drip-surface
- Flood/border
- Furrow/ditch
- Lateral/linear sprinklers
- Micro-sprinklers
- Seepage
- Side roll
- Solid set sprinklers
- Supplemental
- Surface
- Traveling gun/towline
- Wheel Line
- Other

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

Field tillage

Data element name: Field tillage**Reporting question:** What is this field's tillage history?**Description:** Prior to enrollment, what was the most common tillage approach during the past 3 years?**Data type:** List**Select multiple values:** No**Measurement unit:** Category**Allowed values:**

- None
- Conventional, inversion
- Conventional, vertical
- No-till, direct seed
- Reduced till, inversion
- Reduced till, vertical
- Strip till
- Other

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

Practice past extent - farm

| | |
|---|---|
| <p>Data element name: Practice past extent - farm</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: None – all respond</p> <p>Data collection level: Field</p> | <p>Reporting question: What percent of the farm has implemented this CSAF practice (combination) previously?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • 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 <p>Required: Yes</p> <p>Data collection frequency: Initial enrollment</p> |
|---|---|

Field any CSAF practice

| | |
|--|---|
| <p>Data element name: Field any CSAF practice</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: None – all respond</p> <p>Data collection level: Field</p> | <p>Reporting question: What is this field's prior experience with CSAF practices?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don't know <p>Required: Yes</p> <p>Data collection frequency: Initial enrollment</p> |
|--|---|

Practice past use - this field

| | |
|--|---|
| <p>Data element name: Practice past use - this field</p> <p>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.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: None – all respond</p> <p>Data collection level: Field</p> | <p>Reporting question: Have this CSAF practice (combination) been implemented previously in this field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • Some • No • I don't know <p>Required: Yes</p> <p>Data collection frequency: Initial enrollment</p> |
|--|---|

Practice type

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

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

Data type: List**Select multiple values:** No**Measurement unit:** Category**Allowed values:** See list in Appendix A**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment

Practice standard

Data element name: Practice standard 1-7**Reporting question:** What standard does the CSAF practice follow?

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

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

- NRCS
- Other (specify)

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

Planned practice implementation year

Data element name: Practice 1-7 implementation year**Reporting question:** What year is the CSAF practice planned to be implemented?

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

Data type: Integer**Select multiple values:** No**Measurement unit:** Year**Allowed values:** 2022-2030**Logic:** None – all respond**Required:** Yes**Data collection level:** Field**Data collection frequency:** Initial enrollment

Practice extent

Data element name: Practice 1-7 extent**Reporting question:** To what extent is the practice implemented?

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

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

Practice extent unit

Data element name: Practice 1-7 extent unit **Reporting question:** Unit for extent of practice implementation

Description: Unit for extent of practice implementation on the field specified by the contract. If “other” is chosen, use the additional column to enter the appropriate unit.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Initial enrollment

CSAF Practice Sub-questions

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

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

Farm Summary

Unique IDs

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

Producer TA received

Data element name: Producer TA received 1-3
Reporting question: What types of technical assistance were provided to this producer?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Producer incentive amount

Data element name: Producer incentive amount
Reporting question: What is the total value of financial incentives provided to this producer?

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

Data type: Decimal

Select multiple values: NA

Measurement unit: Dollars

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive reason

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive structure

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Producer

Data collection frequency: Quarterly

Incentive type

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

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

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

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

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

Payment on enrollment

Data element name: Payment on enrollment**Reporting question:** What portion of the financial incentive is provided to the producer upon enrollment in the project?

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

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

- Full payment
- Partial payment
- No payment

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

Payment on implementation

Data element name: Payment on implementation**Reporting question:** What portion of the financial incentive is provided to the producer upon implementation of the practices?

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

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

- Full payment
- Partial payment
- No payment

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

Payment on harvest

Data element name: Payment on harvest**Reporting question:** What portion of the financial incentive is provided to the producer upon harvest of the commodity?

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

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

- Full payment
- Partial payment
- No payment

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

Payment on MMRV

Data element name: Payment on MMRV**Reporting question:** What portion of the financial incentive is provided to the producer upon completing MMRV requirements?

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

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

- Full payment
- Partial payment
- No payment

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

Payment on sale

Data element name: Payment on sale**Reporting question:** What portion of the financial incentive is provided to producer upon sale of the commodity?

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

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

- Full payment
- Partial payment
- No payment

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

USDA 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 |

Contract end date

| | |
|---|--|
| Data element name: Contract end date | Reporting question: Contract end date |
| Description: End date listed on the contract that enrolls the field in the project. If contract end date changes, submit updated end date during the next quarter's reporting. | |
| Data type: Date | Select multiple values: No |
| Measurement unit: MM/DD/YYYY | Allowed values: 01/01/2023 – 12/31/2030 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

MMRV assistance provided

| | |
|---|---|
| Data element name: MMRV assistance provided | Reporting question: Was MMRV assistance provided? |
| Description: Was any MMRV assistance provided to the primary operator for this field? MMRV assistance includes in-field support for the use of technologies, consultation on data collection and input, and other support related to MMRV. MMRV is defined a measurement (calculations or estimations of GHG emissions), monitoring (ongoing review and confirmation that the climate-smart practice has been implemented according to the agreed upon standard and documentation of any changes in the site, implementation, or GHG emissions impacts over time), reporting (documenting and sharing monitoring and measurement results with project partners, the recipient, and any third-party verification organization), and verification (independent confirmation that measurement, monitoring and reporting information are complete, accurate and reliable). | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Marketing assistance provided

| | |
|--|---|
| Data element name: Marketing assistance provided | Reporting question: Was marketing assistance provided? |
| Description: Was any marketing assistance provided to the primary operator for the commodity(ies) produced from this field? Marketing assistance includes guaranteeing the sale of the commodity(ies), providing a platform for the sale of the commodity(ies), providing a label, branding, or other support related to marketing. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Incentive per acre or head

| | |
|---|---|
| Data element name: Incentive per acre or head | Reporting question: Is this field receiving a per-acre or per-head incentive? |
| Description: Is this field receiving an incentive payment to implement a specific CSAF practice or set of practices on a per-acre or per-head (livestock) basis? | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |


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

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

Cost unit

Data element name: Cost unit

Reporting question: What is the unit for cost?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Cost coverage

Data element name: Cost coverage

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

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

Data type: Integer

Select multiple values: No

Measurement unit: Percent

Allowed values: 0-100

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG monitoring

Data element name: Field GHG monitoring 1-3

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG reporting

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG verification

Data element name: Field GHG verification 1-3 **Reporting question:** How was implementation of practices to reduce GHG emissions verified for this field?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Field GHG calculations

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

Field official GHG calculation

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

Field official GHG ER

| | |
|--|---|
| Data element name: Field official GHG emission reductions | Reporting question: What are the estimated total GHG emission reductions (CO ₂ eq) in this field? |
| Description: Estimated greenhouse gas emission reductions from practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field official carbon stock

| | |
|---|--|
| Data element name: Field official carbon stock | Reporting question: How much carbon has been sequestered in this field? |
| Description: Estimated total change in carbon stock based on practice implementation in this field. This data element can be reported in any quarter and is cumulative for the year. Conversion rate is one ton of carbon = 3.67 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field official CO2 ER

| | |
|--|--|
| Data element name: Field official CO2 emission reductions | Reporting question: What are the estimated total CO2 emission reductions in this field? |
| Description: Estimated total carbon dioxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field official CH4 ER

| | |
|--|--|
| Data element name: Field official CH4 emission reductions | Reporting question: What are the estimated total CH4 emission reductions in this field? |
| Description: Estimated total methane emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of CH ₄ = 25 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CH4 reduced in CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field official N2O ER

| | |
|--|--|
| Data element name: Field official N2O emission reductions | Reporting question: What are the estimated total N2O emission reductions in this field? |
| Description: Estimated total nitrous oxide emission reductions based on practice implementation in this field that are reported as part of the project's aggregate impact. This data element must be entered upon practice completion or annually, as appropriate. Conversion rate is one ton of N ₂ O = 298 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons N2O reduced in CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field offsets produced

| | |
|--|--|
| Data element name: Field offsets produced | Reporting question: How many carbon offsets have been produced in this field? |
| Description: Total carbon offsets produced in the field during the quarter (not cumulative). Offsets are defined as having been verified and certified using an accepted standard and sold into the carbon marketplace. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Quarterly |

Field insets produced

Data element name: Field insets produced **Reporting question:** How many carbon insets have been produced in this field?

Description: Total carbon insets produced in the field during the quarter (not cumulative). Insets are defined as having been verified and certified using an accepted standard and accounted for within Scope 3 emissions for a firm.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CO₂eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

Other field measurement

Data element name: Other field measurement

Reporting question: Were data collected from the field for reasons other than GHG benefit estimation?

Description: Direct physical measurements or data collection taken in the field for any reason other than GHG benefits estimation. These reasons could include calibration of GHG estimation tools or models, tracking other environmental benefits (see Field environmental benefits report), and other reasons. If yes, submit corresponding reports (see *Supplemental data submission - Field direct measurement results*).

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: None – all respond

Required: Yes

Data collection level: Field

Data collection frequency: Quarterly

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

GHG Benefits - Alternate Modeled

Unique IDs

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

Commodity type

| | |
|---|---|
| Data element name: Commodity type 1-6 | Reporting question: What type of commodity(ies) is produced from this field? |
| Description: Type of commodity(ies) produced in field enrolled in the project. See full list of commodity options in Appendix B. The worksheet provides multiple columns with drop-down lists of the allowed values. Choose one value for each column. Leave unnecessary columns blank | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: FSA commodity list |
| Logic: None – all respond | Required: If project calculates GHG benefits using multiple methods |
| Data collection level: Field | Data collection frequency: Annual |

Practice type

| | |
|--|---|
| Data element name: Practice type 1-7 | Reporting question: What CSAF practice is being implemented by this project? |
| Description: Which CSAF practice or practices are being implemented in this project? CSAF practices are included in a list in Appendix A. The worksheet provides seven columns for this data element. Enter one value for each column. If there are fewer than 7 practices being implemented by the project, leave unnecessary columns blank. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: See list in Appendix A |
| Logic: None – all respond | Required: If project calculates GHG benefits using multiple methods |
| Data collection level: Field | Data collection frequency: Annual |

GHG model

Data element name: GHG model **Reporting question:** What model was used for alternate calculation of GHG benefits?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Model start date

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

Model end date

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

Total GHG benefits estimated

| | |
|--|---|
| Data element name: Total GHG benefits estimated | Reporting question: What is the alternate estimate of the field's total GHG emission reductions? |
| Description: Total greenhouse gas emission reductions from practice implementation in the field estimated using an alternate model. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: If project calculates GHG benefits using multiple methods |
| Data collection level: Field | Data collection frequency: Annual |

Total carbon stock estimated

| | |
|--|---|
| Data element name: Total carbon stock estimated | Reporting question: What is the alternate estimate of how much carbon has the field has sequestered? |
| Description: Total change in carbon stock based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of carbon = 3.67 tons of CO ₂ eq. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ eq | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: If project calculates GHG benefits using multiple methods |
| Data collection level: Field | Data collection frequency: Annual |

Total CO₂ estimated

| | |
|--|---|
| Data element name: Total CO ₂ estimated | Reporting question: What is the alternate estimate of the field's total CO ₂ emission reductions? |
| Description: Total carbon dioxide emission reductions based on practice implementation in the field estimated using an alternate model. | |
| Data type: Decimal | Select multiple values: No |
| Measurement unit: Metric tons CO ₂ | Allowed values: 0-10,000,000 |
| Logic: None – all respond | Required: If project calculates GHG benefits using multiple methods |
| Data collection level: Field | Data collection frequency: Annual |

Total CH4 estimated

Data element name: Total CH4 estimated

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

Description: Total methane emission reductions based on practice implementation in the field estimated using an alternate model. Conversion rate is one ton of CH₄ = 25 tons of CO₂eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons CH4 reduced in CO₂eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

Total field N2O estimated

Data element name: Total N2O estimated

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

Description: Total nitrous oxide emission reductions based on practice implementation in the field estimated using an alternate method. Conversion rate is one ton of N₂O = 298 tons of CO₂eq.

Data type: Decimal

Select multiple values: No

Measurement unit: Metric tons N2O reduced in CO₂eq

Allowed values: 0-10,000,000

Logic: None – all respond

Required: If project calculates GHG benefits using multiple methods

Data collection level: Field

Data collection frequency: Annual

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

GHG Benefits - Measured

Unique IDs

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

GHG measurement method

Data element name: GHG measurement method

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

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

Data type: List

Measurement unit: Category

Select multiple values: No

Allowed values:

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

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

Logic: None – all respond

Data collection level: Field

Data collection frequency: Annual

Lab name

Data element name: Lab name

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

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

Data type: Text

Select multiple values: No

Measurement unit: NA

Allowed values: Free text

Logic: None – all respond

Required: If applicable

Data collection level: Field

Data collection frequency: Annual

Measurement start date

Data element name: Measurement start date**Reporting question:** On what date did the measurement start?**Description:** Date that the measurements began. If it was a single point in time, use the same date for start date and end date. If multiple measurements took place over a time period, use the date that the measurements first began.**Data type:** Date**Select multiple values:** No**Measurement unit:** MM/DD/YYYY**Allowed values:** 01/01/2023 – 12/31/2030**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual

Measurement end date

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

Total CO2 reduction calculated

Data element name: Total CO2 reduction calculated**Reporting question:** What are the total measured CO2 emission reductions?**Description:** Total annual CO2 emission reductions based on practice implementation in the field calculated from in-field measurements.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons CO₂**Allowed values:** 0-10,000,000**Logic:** None – all respond**Required:** If a project takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual

Total field carbon stock measured

Data element name: Total field carbon stock measured**Reporting question:** What is the total amount of carbon sequestered based on repeat measurements in this field?**Description:** Change in carbon stock based on practice implementation in the field calculated from repeat soil sampling in this field. (Results for initial field soil samples should be reported in the 'Soil sample result' and 'Measurement type' columns.) Conversion rate is one ton of carbon = 3.67 tons of CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons CO₂eq**Allowed values:** 0-10,000,000**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock measurements in this field**Data collection level:** Field**Data collection frequency:** Annual

Total CH4 reduction calculated

Data element name: Total CH4 reduction calculated**Reporting question:** What are the total measured CH4 emission reductions?**Description:** Total annual methane emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of CH₄ = 25 tons of CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons CH4 reduced in CO₂eq**Allowed values:** 0-10,000,000**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual

Total N2O reduction calculated

Data element name: Total N2O reduction calculated**Reporting question:** What are the total measured N2O emission reductions?**Description:** Total annual nitrous oxide emission reductions based on practice implementation in the field calculated from in-field measurements. Conversion rate is one ton of N₂O = 298 tons of CO₂eq.**Data type:** Decimal**Select multiple values:** No**Measurement unit:** Metric tons N2O reduced in CO₂eq**Allowed values:** 0-10,000,000**Logic:** None – all respond**Required:** If a project conducts soil samples or takes carbon stock or greenhouse gas emission measurements in this field**Data collection level:** Field**Data collection frequency:** Annual

Soil sample result

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

Soil sample result unit

Data element name: Soil sample result unit **Reporting question:** What is unit for the soil sample result?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Measurement type

Data element name: Measurement type

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

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: None – all respond

Required: If a project conducts soil samples in this field

Data collection level: Field

Data collection frequency: Annual

Additional Environmental Benefits

Unique IDs

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

Environmental benefits

| | |
|--|--|
| Data element name: Environmental benefits | Reporting question: Are environmental benefits other than GHGs being tracked in the field? |
| Description: Tracking of environmental benefits other than greenhouse gas emission reductions and carbon sequestration in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: None – all respond | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Reduction in nitrogen loss

| | |
|---|--|
| Data element name: Reduction in nitrogen loss | Reporting question: Are reductions in nitrogen losses being tracked in the field? |
| Description: Tracking reductions in nitrogen losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Yes • No • I don't know |
| Logic: Respond if yes to 'Environmental benefits' | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Reduction in nitrogen loss amount

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

Reduction in nitrogen loss amount unit

| | |
|---|---|
| Data element name: Reduction in nitrogen loss amount unit | Reporting question: What is the unit for how much reduction in nitrogen losses have been measured in the field? |
| Description: Unit for the total amount of reduction in nitrogen losses that is measured and reported in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Kilograms • Metric tons • Pounds • Other (specify) |
| Logic: Respond if yes to ‘Reduction in nitrogen loss’ | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Reduction in nitrogen loss purpose

| | |
|--|---|
| Data element name: Reduction in nitrogen loss purpose | Reporting question: What is the purpose of tracking reduction in nitrogen losses? |
| Description: Purpose of tracking reduction in nitrogen losses in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) |
| Logic: Respond if yes to ‘Reduction in nitrogen loss’ | Required: Yes |
| Data collection level: Project | Data collection frequency: Annual |

Reduction in phosphorus loss

| | |
|--|---|
| Data element name: Reduction in phosphorus loss | Reporting question: Are reductions in phosphorus losses being tracked in the field? |
| Description: Tracking of reductions in phosphorus losses in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: |
| | <ul style="list-style-type: none"> • Yes • No • I don’t know |
| Logic: Respond if yes to ‘Environmental benefits’ | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Reduction in phosphorus loss amount

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

Reduction in phosphorus loss amount unit

Data element name: Reduction in phosphorus loss amount unit

Reporting question: What is the unit for the reduction in phosphorus losses measured in the field?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

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

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduction in phosphorus loss purpose

Data element name: Reduction in phosphorus loss purpose

Reporting question: What is the purpose of tracking reductions in phosphorus losses?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

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

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Other water quality

Data element name: Other water quality

Reporting question: Are other water quality metrics being tracked in the field?

Description: Project tracking of other water quality metrics in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don't know

Logic: Respond if yes to 'Environmental benefits'

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Other water quality type

| | |
|---|--|
| Data element name: Other water quality type | Reporting question: What type of other water quality metric have been measured in the field? |
| Description: Type of other water quality metric (besides nitrogen loss and phosphorus loss reductions) that is measured in the field. If “other” is chosen, enter the appropriate value as free text in the additional column. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Sediment load reduction • Temperature • Other (specify) |
| Logic: Respond if yes to ‘Other water quality’ | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Other water quality amount

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

Other water quality amount unit

| | |
|--|--|
| Data element name: Other water quality amount unit | Reporting question: What is the unit for the reduction in other water quality metrics measured in the field? |
| Description: Unit for the total amount of reduction in other water quality metrics that is measured in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column. | |
| Data type: List | Select multiple values: No |
| Measurement unit: Category | Allowed values: <ul style="list-style-type: none"> • Degrees F • Kilograms • Kilograms per liter • Metric tons • Pounds • Other (specify) |
| Logic: Respond if yes to ‘Other water quality’ | Required: Yes |
| Data collection level: Field | Data collection frequency: Annual |

Other water quality purpose

| | |
|---|--|
| <p>Data element name: Other water quality purpose</p> <p>Description: Purpose of tracking other water quality benefits in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Other water quality’</p> <p>Data collection level: Field</p> | <p>Reporting question: What is the purpose of tracking other water quality benefits?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|---|--|

Water quantity

| | |
|--|--|
| <p>Data element name: Water quantity</p> <p>Description: Tracking of water conservation or reduction in use in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Environmental benefits’</p> <p>Data collection level: Field</p> | <p>Reporting question: Is water conservation being tracked in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don’t know <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|--|--|

Water quantity amount

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

Water quantity amount unit

| | |
|---|--|
| <p>Data element name: Water quantity amount unit</p> <p>Description: Unit for the total amount of water conservation or reduced use that is measured and reported in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Water quantity’</p> <p>Data collection level: Field</p> | <p>Reporting question: What is the unit for the amount of water conservation measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Acre-feet • Cubic feet • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|---|--|

Water quantity purpose

Data element name: Water quantity purpose

Reporting question: What is the purpose of tracking water conservation?

Description: Purpose of tracking water conservation or reductions in water use in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

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

Logic: Respond if yes to ‘Water quantity’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced erosion

Data element name: Reduced erosion

Reporting question: Is reduced soil erosion being tracked in the field?

Description: Tracking of reduced soil erosion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don’t know

Logic: Respond if yes to ‘Environmental benefits’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced erosion amount

Data element name: Reduced erosion amount

Reporting question: How much erosion reduction has been measured in the field?

Description: Total amount of erosion reduction that is measured in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to ‘Reduced erosion’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced erosion amount unit

Data element name: Reduced erosion unit

Reporting question: What is the unit for the amount of erosion reduction measured?

Description: Unit for the total amount of erosion reduction from enrolled fields that is measured and reported by the project. If “other” is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Tons
- Other (specify)

Logic: Respond if yes to ‘Reduced erosion’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced erosion purpose

Data element name: Reduced erosion purpose

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

Data type: List

Measurement unit: Category

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

Select multiple values: No

Allowed values:

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

Logic: Respond if yes to ‘Reduced erosion’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced energy use

Data element name: Reduced energy use

Reporting question: Is reduced energy use being tracked in the field?

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

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Yes
- No
- I don’t know

Logic: Respond if yes to ‘Environmental benefits’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced energy use amount

Data element name: Reduced energy use amount

Reporting question: How much energy use reduction has been measured in the field?

Description: Total amount of energy use reduction that is measured in the enrolled field.

Data type: Decimal

Select multiple values: No

Measurement unit: Amount

Allowed values: 0-1,000,000

Logic: Respond if yes to ‘Reduced energy use’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced energy use amount unit

Data element name: Reduced energy use unit

Reporting question: What is the unit for the energy use reduction measured in the field?

Description: Unit for the total amount of energy use reduction that is measured in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.

Data type: List

Select multiple values: No

Measurement unit: Category

Allowed values:

- Kilowatt hours
- Other (specify)

Logic: Respond if yes to ‘Reduced energy use’

Required: Yes

Data collection level: Field

Data collection frequency: Annual

Reduced energy use purpose

| | |
|---|---|
| <p>Data element name: Reduced energy use purpose</p> <p>Description: Purpose of tracking reduced energy use in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Reduced energy use’</p> <p>Data collection level: Field</p> | <p>Reporting question: What is the purpose of tracking reduced energy use in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Commodity marketing • Producing insets • Producing offsets • I don’t know • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|---|---|

Avoided land conversion

| | |
|---|---|
| <p>Data element name: Avoided land conversion</p> <p>Description: Tracking of avoided land conversion in the enrolled field. Tracking means at a minimum using some form of monitoring and reporting that can quantify benefits. Land conservation means land use changing from agricultural uses to non-agricultural uses.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Environmental benefits’</p> <p>Data collection level: Field</p> | <p>Reporting question: Is avoided land conversion being tracked in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Yes • No • I don’t know <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|---|---|

Avoided land conversion amount

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

Avoided land conversion amount unit

| | |
|---|---|
| <p>Data element name: Avoided land conversion unit</p> <p>Description: Unit for the total amount of avoided land conversion that is measured in the enrolled field. If “other” is chosen, enter the appropriate value as free text in the additional column.</p> <p>Data type: List</p> <p>Measurement unit: Category</p> <p>Logic: Respond if yes to ‘Avoided land conversion’</p> <p>Data collection level: Field</p> | <p>Reporting question: What is the unit for the amount of avoided land conversion measured in the field?</p> <p>Select multiple values: No</p> <p>Allowed values:</p> <ul style="list-style-type: none"> • Acres • Other (specify) <p>Required: Yes</p> <p>Data collection frequency: Annual</p> |
|---|---|

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

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

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

CSAF Practice Sub-questions

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

Table 11. Follow-on questions for select CSAF practices

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

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

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


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

| | | |
|---|---|--|
| 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 |
| | 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 |


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

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

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


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

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


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

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

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

| | | |
|--|---|---|
| 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 | |


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

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

Other CSAF Practices

Traditional or cultural practices

Microbial products

Solar power generation


Grain bin construction

Pre-season drainage

Appendix B: Commodity List

CROPS

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


 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 (HEL) 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.