2018 Healthy Soils Program Demonstration Projects

The Healthy Soils Program is funded by California Climate Investments and the *California Drought, Water, Parks, Climate, Coastal Protection and Outdoor Access for all Act of 2018.*

Grant Award Procedures Manual

California Department of Food and Agriculture
Office of Environmental Farming and Innovation
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Sacramento, CA 95814
cdfa.HSP_Tech@cdfa.ca.gov

Contents

Overview

Authority and Program Purpose

The Healthy Soils Program (HSP) stems from the California Healthy Soils Initiative, a collaboration of state agencies and departments that promotes the development of healthy soils on California's farmlands and ranchlands. The 2017 HSP Demonstration Projects create a platform promoting widespread adoption of conservation management practices throughout the state by providing financial assistance for funding on-farm demonstration projects showcasing conservation management practices that mitigate greenhouse gas (GHG) emissions and increase soil health. The program is funded by the Greenhouse Gas Reduction Fund (GGRF). All projects that receive GGRF monies are required by Government Code Section 16428.9 to achieve GHG emission reductions and further the purposes of the Global Warming Solutions Act of 2006 (AB 32).

Purpose of the Grant Award Procedures Manual

The HSP Demonstration Projects Grant Award Procedures (GAP) Manual provides direction to Grant Recipients (Recipients) for the successful management of HSP Demonstration Projects. The GAP Manual identifies the roles and responsibilities of the parties to the agreement and describes the processes and procedures required by the terms and conditions in the Grant Agreement.

General Responsibilities

Office of Environmental Farming and Innovation

CDFA's Office of Environmental Farming and Innovation (OEFI) will manage the HSP Grant Agreements and ensure Recipients are compliant with program requirements and grant terms and conditions. This will include providing Recipients with assistance and consultation throughout the Grant Agreement term, and consultation on technical aspects of project implementation as necessary. OEFI is also responsible for conducting verifications for the projects.

Grant Recipients

Recipients are responsible for project implementation as outlined in the Grant Agreement scope of work (SOW) which includes ensuring that all project activities, including contractor activities, comply with program requirements and grant terms and conditions. All management practices must be maintained for a minimum of three years. Implementation of the practice(s) must be according to United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Conservation Practice Standards (CPS), 2018 HSP Demonstration Projects Request for Grant

Applications (RGA) and/or guidelines in the [CDFA Compost Application White Paper](#). For Establishment of Woody Cover Practices, the expected practice life span is ten years. Reference the [Post-Project Requirements](#) section for details regarding expectations and responsibilities for continuing the implementation of management practices after the project term. Recipients should contact their assigned Grant Specialist with questions.

Recipient Resources

Forms and templates referenced in this manual, as well as other resources, can be found on the CDFA HSP Demonstration Projects [Recipient Resources page](#).

Prior Approval Required

Prior approval is required from OEFI for the following:
- Revision of the SOW, eligible agricultural management practices, work plan, activities, milestones, dates, or deliverables.
- Budget changes.
- Line item shifts.
- Purchase of special purpose equipment.
- Contracting out or obtaining the services of a third party.
- Change in Recipient organization or key personnel.
- Absence of key personnel.

Recipients should contact their assigned Grant Specialist in writing whenever a change requiring prior approval is necessary or if they are uncertain whether a project activity or cost requires prior approval. Failure to obtain prior approval may result in costs being deemed unallowable and request for grant funds being denied.

Project Management

Recipients are responsible for the overall management of the project, ensuring all project activities are completed as identified in the SOW and comply with program requirements and the Grant Agreement terms and conditions.

Recipients must maintain clear and consistent communication with OEFI regarding project progress status throughout the project term, particularly if problems and/or delays occur resulting in delays.

Program Requirements

Implementation

Eligible agricultural management practice implementations must occur on the Assessor Parcel Number(s) (APNs) identified in the approved SOW. Implementation must begin on or

after August 1, 2019, but no later than December 31, 2019. Failure to implement the project prior to December 31, 2019 may result in all or any portion of the grant funding withheld or termination of the Grant Agreement.

Selected eligible agricultural management practices must be implemented each year for the three Project Years from August 1, 2019 through March 31, 2022. Implementations must begin prior to December 31 of each Project Year.

All implementations must include a Treatment field (T) where the selected eligible management practices (which must include at least one of the eligible soil management practices) will be implemented and a corresponding Control field (C) to be maintained without any changes to the pre-implementation management practices that will serve as a comparison to T.

T and C fields must not be moved to a different location within the APN during the entire project term (August 1, 2019 through March 31, 2022).

Data Collection

Reports on soil organic matter content[1] are required for all T and C fields:
- Prior to initial implementation of funded practices in Project Year 1 (2019).
- One year after implementation (2020).
- Two years after implementation (2021).
- Three years after implementation (2022).
- Providing additional data collection on soil health, co-benefits (e.g., water and air quality improvements, reduction of on-farm fuel use, crop yield etc.), and/or ecosystem services is required if included in the SOW.

In addition, submitting a detailed economic analysis is required if included in the SOW.

Outreach Requirements

A minimum of 120 different individual farmers and/or ranchers must attend the demonstration project sites during the project term (August 1, 2019 to March 31, 2022; i.e., 40 attendees per year).

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[1] A laboratory report of soil organic matter content for each T and C can come from laboratories at the University of California, California State Universities or Cal Poly, or any of the accredited soil analytical laboratories recommended by CDFA:
• Selected Plant and Soil Laboratories in Northern and Central California: http://cesonoma.ucanr.edu/files/27431.pdf
• UC Cooperative Extension El Dorado County List of Laboratories for Tissue/Soil/Water – Agricultural Analysis: http://cecentralsierra.ucanr.org/files/115331.pdf
• UC ANR Soils Testing Laboratories for Home Gardeners: http://ccmg.ucanr.edu/files/51308.pdf
Follow the "Soil Sampling Protocol" provided in Appendix C when collecting soil samples.

Recipients must provide within thirty days of execution of a grant agreement, a schedule of outreach events, specifically on-farm field days. CDFA may attend some of the events as part of Project Verification.

Recipients are required to provide documentation showing outreach efforts and attendance records as part of the Reporting Requirements.

Failure to meet outreach and education requirements may be considered grounds for termination of the Grant Agreement.

Allowable Costs

A cost is allowable if it directly relates to the approved project and is incurred solely to advance the work under the Grant Agreement. Allowable costs may include salaries and wages, fringe benefits, travel, supplies, special purpose equipment (used only for project-related research, scientific or other technical activities), subcontractors and materials, data collection and analysis, and equipment rentals.

Examples of allowable costs include, but are not limited to:

- Costs to implement eligible agricultural management practices.
- Costs for sample analyses.
- Costs of meals/snacks/refreshments may be allowed when reasonable and necessary for hosting an official demonstration of the project's eligible management practices (excluding travel meal costs). Expenses must be reasonable and appropriate for the purpose and nature of the meeting. Allowable costs should follow California State Human Resources (CalHR) policy except for awards to the Regents of the University of California (UC) which should follow the established UC policy.
- Costs of materials needed for outreach activities (e.g., printed handouts or brochures).

Expenditures must conform to CDFA program requirements, be made in compliance with State laws and regulations as applicable, and be:

- Necessary and reasonable for proper and efficient performance and administration of the project.
- Authorized or not prohibited under State or local laws or regulations.
- Consistent with policies, regulations, and procedures that apply uniformly to State funds and other activities of the governmental unit.
- Determined in accordance with generally accepted accounting principles.
- Adequately documented.

Unallowable Costs

A cost is unallowable if it does not comply with program requirements or other terms and conditions of the Grant Agreement. A cost is also unallowable if it is not contained in the approved SOW and is not necessary and reasonable to advance the work of the project.

Specific expenses that are unallowable include, but are not limited to, predevelopment costs (project design), training and certification costs to obtain professional certification, general purpose equipment (office equipment and furnishings), and purchasing and leasing land or buildings.

If a Recipient is uncertain whether a cost is allowable, they must contact their assigned Grant Specialist before the cost is incurred.

Direct and Indirect Costs

Indirect Cost Rate

The indirect cost rate specified in the Recipient's approved SOW will remain in effect for the duration of the agreement.

Recipients should contact their assigned Grant Specialist with questions regarding indirect cost rates.

Charging Direct and Indirect Costs Consistently

It is not allowable to charge an indirect cost as a direct cost. Recipients are responsible for presenting costs incurred for the same purpose in like circumstances consistently and must not include costs associated with their organization's indirect cost as direct cost.

Direct costs are costs that can be identified specifically with a particular project or can be directly assigned to a project activity relatively easily with a high degree of accuracy. Typically, direct costs include, but are not limited to, compensation for employees who work directly on the project, travel, and supplies necessary to the project.

Indirect costs (also known as "facilities and administrative costs") are costs incurred for a common or joint objective that cannot be identified specifically with a particular project. Typically, indirect costs include, but are not limited to, compensation for executive officers and administrative and clerical staff, costs of operating and maintaining facilities, general administration expenses (such as supplies that cannot be identified specifically with a particular project), accounting and personnel services, depreciation, and insurance.

The salaries of administrative and clerical staff should normally be treated as indirect costs. However, direct charging of these costs may be appropriate where all of the following conditions are met:

- Administrative or clerical services are integral to the project or activity;
- Costs involved can be specifically identified with the project or activity;
- Such costs are explicitly included in the approved budget; and,
- The costs are not also recovered as indirect costs.

All criteria above must be met before a determination can be made whether the costs are allowable as direct costs. Approval must also be obtained from OEFI. Compliance with other requirements, such as Timekeeping Requirements, must also be met.

The following are considered indirect and may not be charged to the grant as direct costs:

- Information technology services

- Rent
- Utilities and internet service
- Telephone service (mobile and land-line)
- General office supplies
- Insurance and indemnification

Cost Share

Cost share refers to matching funds and/or in-kind contributions.

All cost share, including any optional cost share for the project term, must be reported on Progress Reports and Final Reports (see Reporting Requirements).   Reporting on Progress and Final Reports includes the type of cost share (i.e., matching funds or in-kind contributions) and the amount.

The Recipient is to notify the assigned Grant Specialist if the amount or activities covered by the cost share has changed.

Scope of Work Revisions

SOW revisions are required when implementation dates or eligible agricultural management practices must be altered, especially if such changes affect the Recipient's ability to implement practices within each designated Project Year or complete implementation of the approved practices. Request for revisions must be made in writing to the assigned Grant Specialist and provide a detailed justification explaining the need for the change and how the proposed change benefits or enhances the project.
Revisions must be requested by an authorized official of the Recipient organization and approved by OEFI. Reimbursement is available only for approved project activities. Failure to obtain prior approval of SOW revisions may result in costs being deemed unallowable and request for reimbursement denied.

Examples of project changes that require SOW revisions include, but are not limited to:
- Changes within the budget line items (addition/deletion of personnel, travel, supplies, indirect costs, etc.).
- Replacement or changes in the status of the Principal Investigator or Project Director such as withdrawing from the project entirely, being absent during any continuous period of three months or more or reducing the time base by 25 percent or more.
- Transfer of project work to a third party through a contract, sub-grant, or any other means.

- Addition or deletion of activities, deliverables, or a contractor, or revisions to existing activities, deliverables, or contractor activities or deliverables.
- Change of Recipient, Recipient organization name, or Recipient organizational status.

Line Item Shift Request

In the event a change to a budget line item is necessary, Recipients are required to complete and submit to OEFI a SOW revision along with a Line Item Shift Request (LISR). Approval for the LISR must be obtained from OEFI prior to incurring costs under the revised budget.

The following restrictions and requirements apply to LISRs:
- The project award amount cannot be increased or decreased through this process.
- LISRs must be accompanied by a SOW revision.

Notification of Problems and Delays

Recipients must immediately notify OEFI of any delays, problems, and/or adverse conditions that may materially affect the project. Examples include but are not limited to: inability to collect data; inability to implement the approved eligible agricultural management practices according to specifications; inability to implement the approved management practice(s) according to the work plan or work plan schedule; and inability to meet outreach and education requirements.

In such cases, Recipients must contact their assigned Grant Specialist immediately for purposes of resolving such delays and/or problems.

Timekeeping Requirements

Activity reports are required to support salary and wage, and fringe benefit expenditures charged to HSP Demonstration Projects grants. Each report must account for the total activity for which each hourly and salaried employee is compensated, as well as the hours worked on a particular HSP Demonstration Projects grant project. A description of activities must be included, and the description must include enough detail to determine whether the activity is project-related. Costs not adequately supported are unallowable and will not be reimbursed.

Travel

All travel costs must be substantiated by receipts. Costs not substantiated by receipts are considered unallowable and will not be reimbursed. Credit card statements are not acceptable as receipts to support travel costs.

Restriction on Travel to States with Discriminatory Laws

California Assembly Bill 1887 prohibits the use of state-funded or state-sponsored travel to any state that has enacted discriminatory laws or practices. The Attorney General will maintain a current list of states that are subject to the travel prohibition on its website: https://oag.ca.gov/ab1887. The following states are currently subject to California's prohibition on state-funded or state-sponsored travel: Alabama, Kansas, Kentucky, Mississippi, North Carolina, Oklahoma, South Carolina, South Dakota, Tennessee, and Texas. Costs associated with travel to the states affected by this restriction are unallowable.

Reimbursement is available for actual costs up to the maximum allowance for meal, incidental, and lodging expenses for each complete 24 hours of travel. The maximum travel rates allowable are established by CalHR and can be found on their website http://www.calhr.ca.gov, except for awards to the UCs which will be reimbursed at the UC travel rates.

Meals

The maximum allowable per diem rates established by CalHR are:

Meals	Max. allowed
Breakfast	$ 7.00
Lunch	$ 11.00
Dinner	$ 23.00
Incidentals	$ 5.00

Lodging

Reimbursements for lodging and applicable taxes are for actual costs and must be substantiated with a receipt. The maximum lodging rates established by CalHR are:

Counties in California	Max. amount allowed for lodging per night
California counties/cities not listed below	Actual expense up to $90 per night, plus tax

Napa, Riverside, Sacramento counties	Actual expense up to $95 per night, plus tax
Los Angeles, Orange, Ventura counties, excluding the City of Santa Monica	Actual expense up to $120 per night, plus tax
Alameda, Monterey, San Diego, San Mateo, Santa Clara counties	Actual expense up to $125 per night, plus tax
San Francisco County and the City of Santa Monica	Actual expense up to $150 per night, plus tax

Rental Vehicle

Recipients should utilize the most economical rental vehicle option available. Reimbursement is up to the actual cost. Excessive costs will be disallowed and/or reduced to a reasonable, allowable rate. In cases where there is a need for another type of vehicle (such as several people traveling together with luggage or carrying equipment), the Recipient must provide a justification to the assigned Grant Specialist.

Fuel reimbursement when using a rental vehicle will be at the actual cost for the fuel and must be supported with receipts.

Privately Owned Vehicle

Mileage reimbursement for using a privately-owned vehicle will be at the standard mileage rate established by the United States Internal Revenue Service (IRS) in effect at the time of travel. The standard mileage rate in effect at the time of travel can be found on the IRS website. Mileage logs should be utilized to substantiate mileage costs.

Parking

Recipients should utilize the most economical parking option available. Reimbursement for parking is up to the actual cost. Excessive costs will be disallowed and/or reduced to a reasonable, allowable rate.

Air Travel

Reimbursement is available up to actual airfare expenses incurred. Economy-based rates are to be used by all travelers.

Contractors

Recipients may contract for services that cannot be provided by staff employed by the Recipient.

Generally, these services are for a short-term period and provide a specific and identifiable product or service. Recipients are responsible for ensuring their contractors comply with program requirements. Contracting out must not affect the Recipient's overall responsibility for the management of the project, and the Recipient must reserve sufficient rights and controls to enable it to fulfill its responsibilities for the project.

Prior approval is required when contracting out or obtaining the services of a third party. Refer to Scope of Work Revisions.

Written Agreement

The Recipient must have a written agreement with each contractor. The written agreement must include at a minimum: beginning and ending dates, dollar amount of the contract, a description of activities, services to be performed with a time schedule, or deliverables, and a budget. The budget must include the same line item categories as the Grant Agreement budget.

Compensation

Contractor invoices must include sufficient information to determine that the expenditures invoiced are allowable. Recipients must maintain contractor invoices as supporting financial documentation along with documentation for all project expenditures submitted for reimbursement. Refer to Invoicing for Payment.

Compensation based on a flat-rate for services requires pre-approval from OEFI. When utilizing a flat-rate for services, Recipients must include a justification for the flat-rate fee and demonstrate the rate is reasonable and consistent with fees in the marketplace for similar services. The inclusion of costs that would otherwise be unallowable within a flat-rate for services is prohibited.

Indirect Rate

Indirect costs for contractors are allowed. Indirect costs must be treated in accordance with the contractor organization's policies and procedures. In the absence of a policy, indirect costs must not exceed ten percent.

Equipment

Equipment is tangible, nonexpendable, personal property having a useful life of more than one year and an acquisition cost of $5,000 or more per unit.

Special purpose equipment used only for project-related research, scientific or other technical activities is allowable with prior approval from OEFI. General purpose equipment is not allowable.

Publicity and Acknowledgement

Acknowledgement of Support

Recipients must acknowledge the California Climate Investments as a funding source of CDFA's Healthy Soils Program whenever projects funded, in whole or in part, are publicized in any conferences, meetings, news media, brochures, publications, audiovisuals, or other types of promotional material. The acknowledgement must read as follows:

'This publication [or project] was supported by the 'California Climate Investments' program."

Recipients must use the California Climate Investments logo but may not use the CDFA logo. Guidance on California Climate Investments logo usage, signage guidelines, and high-resolution files is contained in a style guide at: http://www.caclimateinvestments.ca.gov/logo-graphics-request.

Invoicing

Payment Methods

There are two payment methods for allowable costs incurred – advance payments and reimbursement payments. It may take up to 45 days from the date the invoice or advance payment request is approved for a check to be issued by the State Controller's Office on behalf of CDFA.

Advance Payments

Recipients may be eligible to receive a one-time advance payment to cover anticipated project expenditures at the start of the project implementation during the first year. The advance payment may not exceed 25 percent of the total award and must be expended within a three-month period. The remaining funds will be allocated on a reimbursement basis. Requests must be submitted using the Advance Payment Request form provided by CDFA.

Advance Payment Requests Procedures

To ensure timely processing of an Advance Payment Request, Recipients must do the following:
- Estimate the advance amount needed for up to a three-month period;
- Complete an Advance Payment Request and justification (e.g., cash flow issues); and

- Submit the Advance Payment Request and justification to their assigned Grant Specialist no fewer than 45 days before the cost will be incurred.

Reimbursement Payment

Recipients submit invoices to OEFI for reimbursement of actual expenditures incurred. Invoices must be submitted at least quarterly, but not more than monthly, in arrears. The quarterly periods are:

Project Year 1   August 2019 – June 2020

Quarterly Period	Invoice Due (no later than)
August 1 – September 30[2]	October 31
October 1 – December 31	January 31
January 1 – March 31	April 30
April 1 – June 30	July 31

Project Year 2   July 2020 – June 2021

Quarterly Period	Invoice Due (no later than)
July 1 – September 30	October 31
October 1 – December 31	January 31
January 1 – March 31	April 30
April 1 – June 30	July 31

Project Year 3   July 2021 – March 2022

Quarterly Period	Invoice Due (no later than)
July 1 – September 30	October 31
October 1 – December 31	January 31
January 1 – March 31	March 31[2]

Invoicing for Payment

Recipients are accountable for all grant funds awarded and must ensure all funds are used solely for their authorized purposes. Recipients must maintain supporting financial documentation (i.e., receipts, invoices, etc.) for all project expenditures submitted to their assigned Grant Specialist for reimbursement.

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[2] Due to the HSP project term starting on August 1, 2019 and ending on March 31, 2022, the timeframe for these quarter has been adjusted accordingly.

OEFI initiates each invoice cycle by generating an electronic invoice template. OEFI emails Recipients an invoice template with the Grant Agreement Number, Recipient Name, Project Title, Invoice Number, Project Budget, and Invoiced to Date entered. The invoice template provided by OEFI must be used; invoices generated or altered by the Recipient will not be accepted.

Invoices and supporting financial documentation submitted to the assigned Grant Specialist will be reviewed for completeness and accuracy. The assigned Grant Specialist will promptly notify the Recipient of any incompleteness or deficiencies which appear on the invoice. Once the incompleteness or deficiencies are corrected, the assigned Grant Specialist will process the invoice for payment.

When to Submit Invoices

Invoices are due no later than 30 days after the quarterly invoice period and are required even if no project costs are incurred during the invoice period. Final invoices are due no later than 30 days following the expiration of the Grant Agreement term or after the project is complete, whichever comes first.

Recipients can email a scanned, legible copy of the signed invoice to their assigned Grant Specialist, or a hard copy can be mailed to:

<div align="center">

California Department of Food and Agriculture
Office of Environmental Farming and Innovation
Healthy Soils Program
1220 N Street
Sacramento, CA 95814

</div>

Completing an Invoice

Invoice

Recipient completes the Amount Requested column on the invoice, signs, dates, and submits the invoice with supporting documentation to OEFI.

No Expenditure Invoice

Recipient checks the "NO EXPENDITURES" box, signs, dates, and submits the invoice to OEFI. No Expenditure Invoices must be accompanied by an explanation of why no costs were incurred during the billing period.

Advance Payment Offset Invoice

Recipient follows the instructions for an Invoice. The invoice template automatically calculates the amount to be paid less the advance payment amount. The Grant Specialist

adjusts the 'Less Advance' amount each billing period until the advance is offset 100 percent by expenditures.

Final Invoice

Recipient follows the instructions for an Invoice, and checks the "FINAL INVOICE" box, indicating all payment obligations have been met and no further payments are due. Final Invoices (required at the end of Project Year 2) are due no later than 30 calendar days following the completion of the Project Year 2 implementation. Invoicing and closeout of all project expenditures must be completed no later than March 31, 2022.

For detailed instructions on completing the CDFA invoice template, refer to Appendix A.

Withholds

Withhold Payment Notification

OEFI will issue a Withhold Payment Notification to delay payment of an invoice if there is an invoice discrepancy or error, unallowable costs claimed, or outstanding reports. The Withhold Payment Notification describes the reason for withholding payment and what actions, if any, are required to resolve the issues for withholding payment. Invoices are processed once all issues are resolved. A Withhold Payment Notification will not be sent for funds withheld pending closeout, see Withhold Pending Closeout below.

See Appeal Process for information regarding appealing a Withhold Payment Notification.

Withhold Pending Closeout

OEFI will withhold ten percent of the Grant Agreement award until approval of the Final Invoice, Project Verification, and/or resolution of any performance issues through the project term. A Withhold Payment Notification will not be sent, and the 10 percent withheld may not be appealed. The 10 percent withholding will be released contingent upon approval of the Project Verification and resolution of all outstanding performance issues.

Reporting Requirements

Reporting Requirements

Recipients are required to submit mid-year and annual progress reports during the project term and a Final Report. Financial records and other project documentation may be required to ensure HSP funds are used in compliance with the Grant Agreement terms and conditions.

Progress Reports

The progress report is used to identify milestones, results achieved, success stories, potential concerns and other pertinent information and to report data collected.

Mid-year progress reports should include:
- Status of project implementation, including all work completed and any reportable data.
- Plan for the next six months (including anticipated dates of all Project Demonstrations).

Annual progress reports should include:
- Management practice implementation activities and impacts.
- Outreach activities and impacts.
- Soil organic matter data (reference Data Collection).
- Co-benefits and ecosystem services (optional).
- Demonstration and outreach plan for the next year (including anticipated dates of all Project Demonstrations).

Recipients are required to submit progress reports no later than 30 days after each reporting period ends. Recipients will receive a progress report template from OEFI approximately one month prior to each reporting due date, which are:

Reporting Period	Report Due (no later than)
August 1 – December 31, 2019[3]	January 31, 2020
January 1 – June 30, 2020	July 31, 2020
July 1 – December 31, 2020	January 31, 2021
January 1 – June 30, 2021	July 31, 2021
July 1 – December 31, 2021	January 31, 2022

Final Reports

Final reports should include:
- Summary of project implementation activities, barriers encountered and overcome, and recommendations for successful implementation.
- Summary of outreach activities and impacts, including:
  - Recommendations on forms and methods for effective outreach events.
  - Changes in participants' number, knowledge, and depth of involvement.
  - Adoption of demonstration practices by farmers and/or ranchers.
- Improvement in soil health and/or co-benefits, ecosystem services including quantitative (e.g., soil organic matter; refer to Data Collection) and qualitative description impacts for the three-year implementation of the practices.

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[3] Due to the HSP project term starting on August 1, 2019 and ending on March 31, 2022, the timeframe for these quarter has been adjusted accordingly.

Recipients are required to submit a Final Report no later than 30 calendar days after the project is complete, or April 30, 2022, whichever is earlier. Recipients will receive a final report template from OEFI approximately one month prior to the end of the project.

Compliance

Project Verification

HSP Demonstration Projects are subject to at least one Project Verification within the Grant Agreement term. Field site visits will be conducted by CDFA or a third-party CDFA appointed entity who will attend on-farm field day events to verify program compliance during the Grant Agreement term.

Verification will ensure that the eligible agricultural management practices have been implemented according to the SOW and in a manner consistent with the USDA NRCS CPS guidelines and Compost Application requirements noted in the 2018 HSP Request for Grant Applications; and, outreach activities are provided to a diverse group of farmers/ranchers. Additionally, it will determine whether and when deliverables are being met and evaluate project progress to ensure all project activities are completed within the Grant Agreement term.

Consistent with the CCI Funding Guidelines for Administering Agencies (2018), and Bond Accountability requirements for Prop 68, the State of California has the right to review project documents and conduct audits during project implementation and over the project life.

Termination of Grant Agreement

CDFA may terminate a Grant Agreement for noncompliance. The Recipient will be notified in writing of the reasons for termination, the date the termination is effective, and the method for appealing the termination.

Appeal Process

Actions that may be appealed include but are not limited to:

- Withhold Payment Notification (see page 18);
- Termination of Grant Agreement (see above)

Appeals must be in writing either emailed to: CDFA.LegalOffice@cdfa.ca.gov

Or via mail to:

California Department of Food and Agriculture
Legal Hearing and Appeals Office
1220 N Street
Sacramento, CA 95814

The appeal must include a copy of the notification or the name of the Recipient organization, the project number, the title of the project, the reasons the action should not be imposed, including any documentation to support the appeal, and the signature of the authorized representative.

Appeals must be postmarked (date stamped if via email) within 10 business days of the notice of action from OEFI. Appeals not received within this timeframe will be denied.

The action specified in the notification remains in effect while the appeal is under review.

Closeout

Before the project is closed, OEFI will review the Final Invoice, Project Verification, and Final Report, as well as verify resolution of any project performance concerns. A closeout letter will be issued when closeout review is completed.

Note: Close-out does not cancel record retention, financial accountability, or post-project requirements.

Record Retention

Recipients must retain invoices, project records, and any other relevant supporting documents for a period of three years from the date of the close-out letter.

Post-Project Requirements

Recipients are required to maintain implementation of practices incentivized through the HSP Demonstration Projects for a minimum of three years from the date of the close out letter. However, benefits from implementation of practices are expected to be achieved in the long term. Recipients have a continued expectation to expand these practices on their operations to achieve long-term benefits. Additionally, Recipients are required to maintain documentation related to their HSP funded projects, including records documenting maintenance of the agricultural management practice(s) and any soil testing reports for the project APNs, to report actual benefits achieved for three years after the project close out.

Critical Project Review

Grant recipients must agree to a Critical Project Review and audit during the project term to verify project progress. If it is determined by CDFA from the Critical Project Review that at that time the grant project is not meeting and is unlikely to meet certain milestones, CDFA has the right to terminate the Grant. Termination may result in forfeiture by the grantee of any funds retained pursuant to 10 percent retention policy. Critical Project Review may be completed through an auditing process.

Appendix A: CDFA Invoice Template

Recipient must complete all yellow sections below.

Bill to:
CA DEPARTMENT FOOD & AGRICULTURE
1220 N STREET
SACRAMENTO, CA 95814

INVOICE
Healthy Soils Program Demonstration Projects

Make Check Payable to:
ABC Farms
Address
City, State Zip
Attn: xxxx

EXAMPLE

Grant Agreement Number: ___ 18-xxxx-000-HS ___   Billing Period: | 1/1/2020 – 3/21/2020 | Invoice Date: | April 10, 2020 | Invoice Number: ___ 18-xxxx-000-HS-1 ___

2 Month/Year to Month/Year   3

Recipient's Name: _____ ABC Farms _____   Project Title: Carbon Sequestration & Healthy Soils

Project Budget		Invoiced to Date	Amount Requested	Remaining Balance
1 PERSONNEL				
a) Salaries & Wages	$25,000.00	$0.00	$5,000.00	$20,000.00
b) Fringe Benefits	$5,000.00	$0.00	$1,000.00	$4,000.00
2 OPERATING EXPENSES				
a) Travel	$2,000.00	$0.00	$0.00	$2,000.00
b) Special Purpose Equipment	$10,000.00	$0.00	$0.00	$10,000.00
c) Supplies	$20,000.00	$0.00	$13,000.00	$7,000.00
3 CONTRACTORS	$20,000.00	$0.00	$4,000.00	$16,000.00
4 OTHER DIRECT COSTS	$8,000.00	$0.00	$2,000.00	$6,000.00
5 INDIRECT COSTS (specific rate entered here)	$10,000.00	$0.00	$2,500.00	$7,500.00
Totals:	$100,000.00	$0.00	$27,500.00	$72,500.00

10% withhold $10,000.00

Approved Line Item Shifts: [0]

Matching Funds to Date: [$645.00] 10

5 Less Remaining Advance: $0.00

6 **Amount to be Paid: $27,500.00**

9 NO EXPENDITURES

11 I certify the amount requested is for actual and allowable expenditures incurred for HSP Demonstration Projects activities performed in accordance with the Grant Agreement provisions.

PREPARER'S SIGNATURE _____   PHONE NUMBER   E-MAIL ADDRESS   DATE

AUTHORIZED SIGNATURE (REQUIRED) _____   PHONE NUMBER   E-MAIL ADDRESS   DATE

FOR STATE USE ONLY

$	2019-20				
AMOUNT	STATE FISCAL YEAR	GRANT SPECIALIST INITIALS AND DATE	ACCOUNT CODE	PROGRAM CODE	SUPPLIER ID
	X				
CDFA AUTHORIZED APPROVER	CDFA AUTHORIZED SIGNATURE	DATE	OBJECT CODE	PRGM COST ACCT (PCA)	VENDOR ID

☐ Liquidate against Advance payment.   ☐ Withhold 10% of Grant Award until Project is verified.   ☐ Project verified. Final payment.

CDFA Invoice Template Instructions and Definitions

Recipients must complete all yellow sections identified on the CDFA invoice template. The following provides definitions and instructions on completing specific sections of the

CDFA invoice template to request reimbursement payments for costs incurred to implement the project. For questions regarding and assistance with completing this template, Recipients should contact their assigned Grant Specialist.

1. **Project Budget:** The total grant award amount for each budget category as identified in the approved Budget. Reimbursement for project expenditures is based on these categories and amounts.

2. **Billing Period:** The quarterly or monthly period in which project costs were incurred. For example, if project costs were incurred during the first billing quarter, the billing period is August 1 – December 31, 2019.

3. **Invoice date:** The date Recipient completes and signs the CDFA Invoice template.

4. **Amount Requested:** Enter the dollar amounts in each budget category to request reimbursement for project costs that were incurred during the billing period. The amount requested in each budget category cannot exceed the total amounts listed under the "Grant Budget."

5. **Less Remaining Advance:** The OEFI adjusts the "Less Remaining Advance" amount based on approved advance payment. The invoice template will automatically calculate the amount to be paid less the advance payment.

6. **Amount to be Paid:** The total payment amount requested for project costs that were incurred during a billing period. The invoice template will automatically calculate this total. Once OEFI approves the invoice, the "Amount to be Paid" will be the payment check amount issued for reimbursement.

7. **Remaining Balance:** The amount of grant funding remaining that has not been paid. OEFI will not approve an invoice with negative balances in this column. Contact your assigned Grant Specialist if a budget revision is needed.

8. **Invoiced to Date:** The total project cost amount reimbursed for each budget category based on previously approved invoices. OEFI will adjust the "Invoiced to Date" amount each billing period.

9. **No Expenditures:** Mark this box if no project costs were incurred during billing period. In addition, explanation of why costs were not incurred must accompany the invoice.

10. **Matching Funds to Date:** Input the total matching funds and/or in-kind contributions contributed by Recipient to implement the project.

11. **Preparer/Authorized Signatures:** An authorized representative of the recipient organization/ operation (Recipient) must print their name and sign on the "authorized signature" line to certify the amount requested for each billing period. If the invoice was prepared on behalf of the Recipient, the preparer should print their name and sign on the "preparer's signature" line. OEFI will not approve invoices without the Recipient signing as the "authorized signature."

Appendix B

Instructions to use NRCS California eVegGuide – Selecting Species for Planting

Step 1: Go to the USDA NRCS California eVegGuide website at https://www.calflora.org/nrcs/ as shown below.
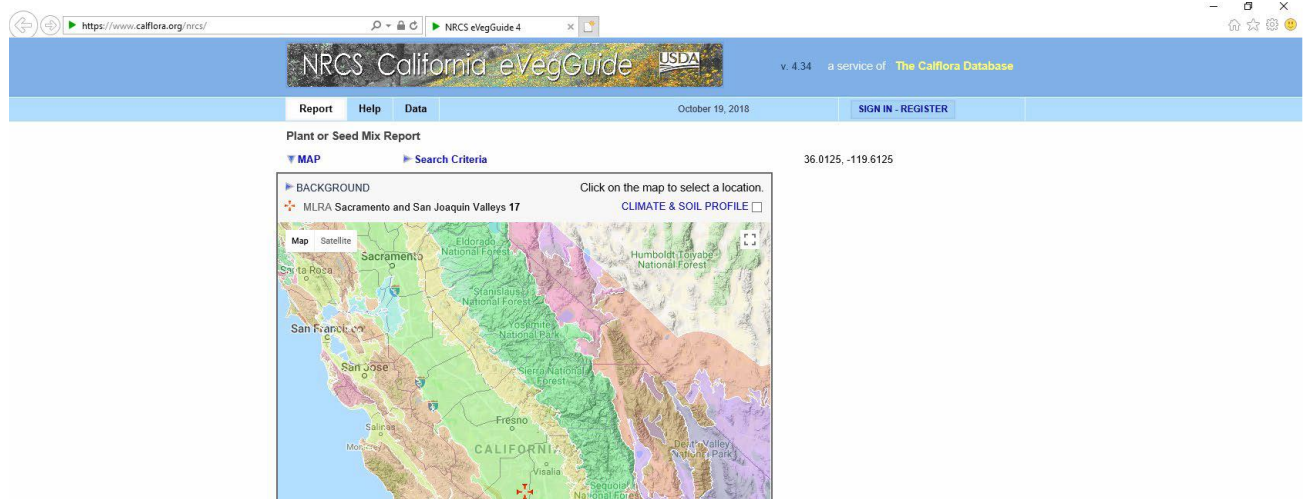
Step 2: Click on the "SIGN IN – REGISTER" link (upper right corner) to create user account.
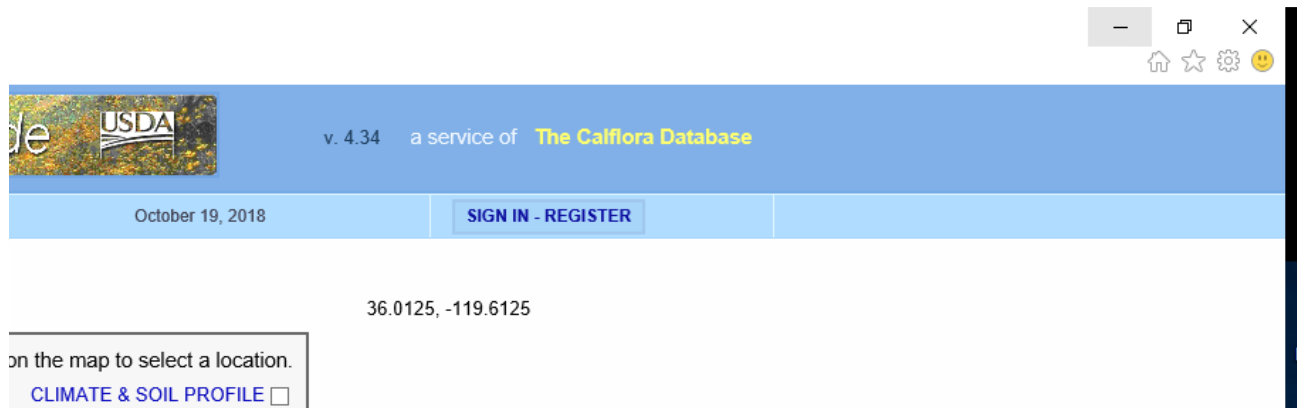
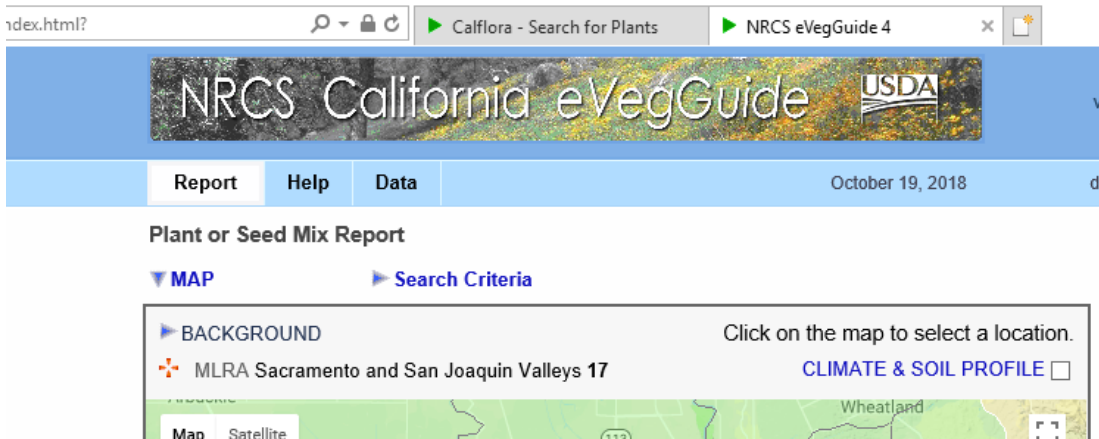**Step 3**: Select "MAKE A NEW ACCOUNT' link shown below.
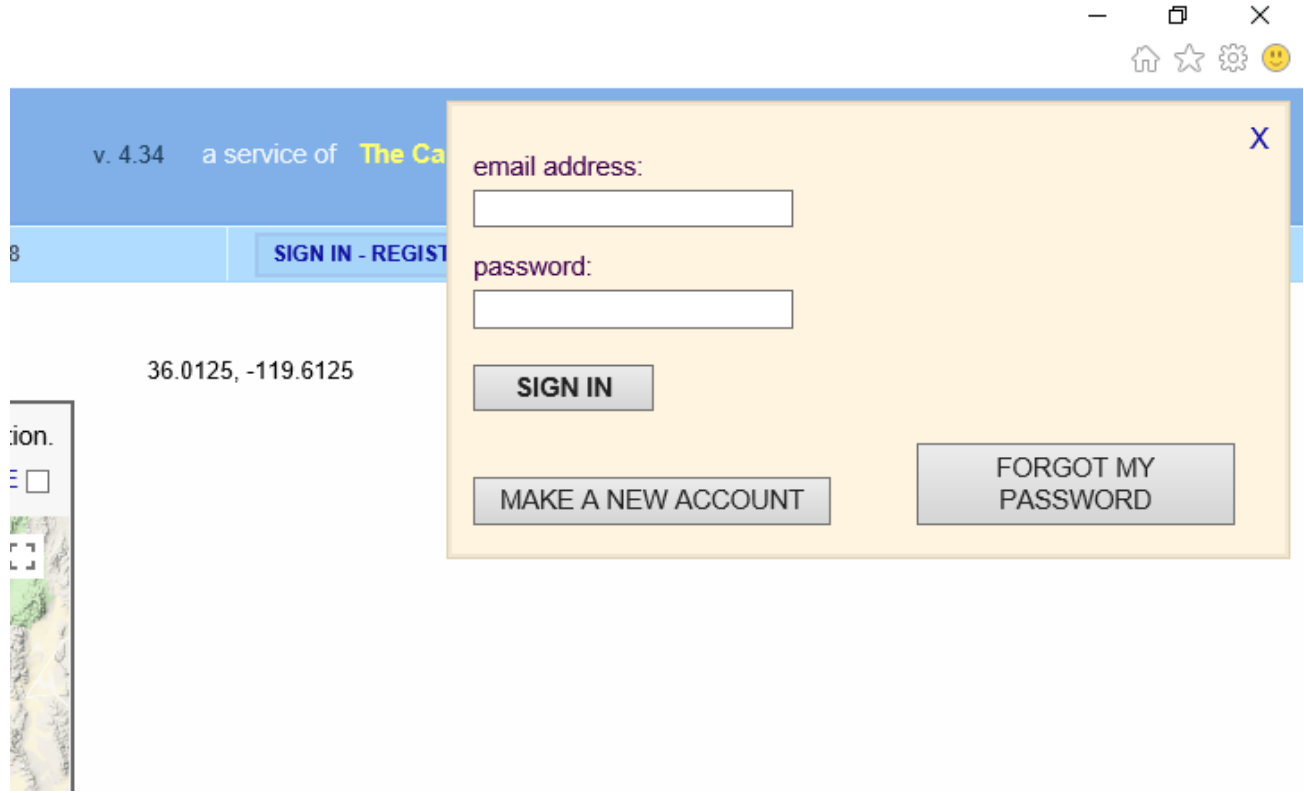
Step 4: Fill out information boxes to create user profile account.
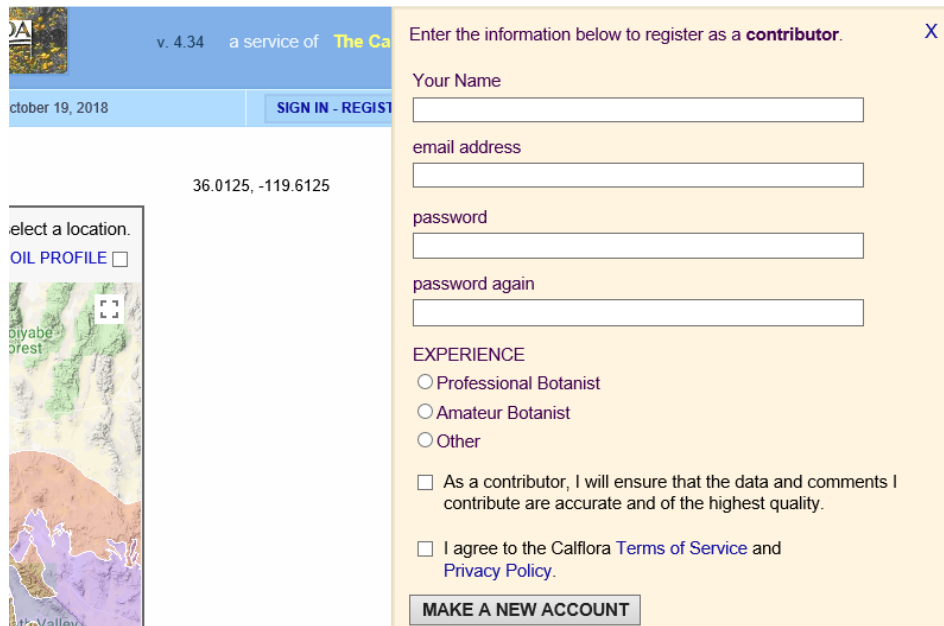
Step 5: Use mouse cursor to select location (location agricultural practice is to be implemented) on the map. **Note**: area selected on map is denoted by red cross.
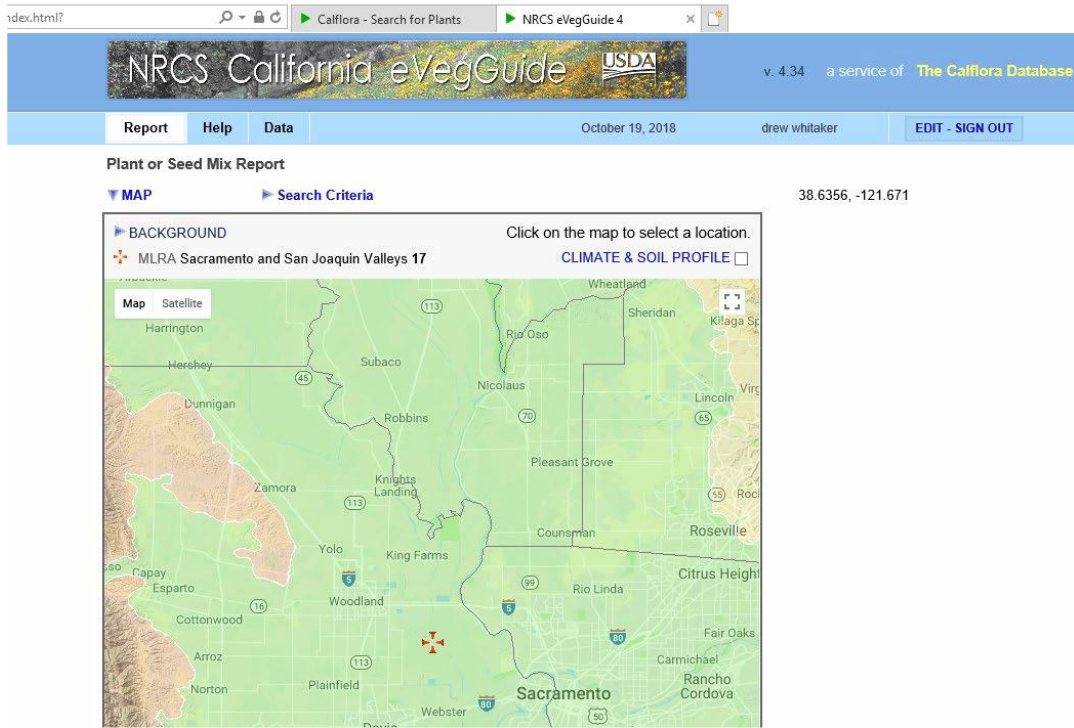
Step 6: Select "Search Criteria" link.

Step 7: Choose appropriate agronomic "Practice" to be implemented. **Note**: Cover crop was selected for this example.

Step 8: Choose "Purpose" dropdown box and "Plant Type" check box. **Note**: for this example, Nitrogen fixation, Legume, and Pollinator Habitat were selected. Select "Search" to bring up a tabulated list of legume cover crops to be used for Nitrogen fixation and Pollinator Habitat based on your location.

Step 9: The tabulated list provides information (Common Name, Scientific Name, Growth Cycle, Plant Type, Planting Rate, etc.) for individual cover crops that can be used based on your location for Nitrogen Fixation and Pollinator Habitat.

Step 10: In the tabulated list, select the legumes that will be used in the cover crop practice. For this example, 50% of the cover crop will be "Sunn Hemp" and 50% will be "Small-flowered lupin". Select "FINAL REPORT" to calculate the appropriate planting/seeding rate based off the 50/50 mixture ratio.

Step 11: Approved pre-mixed bags of seed may also be used by selecting "Select a mix" and then choosing the pre-mixed seed.

Step 12: Select "FINAL REPORT" to calculate the appropriate planting/seeding rate of the pre-mixed seed.

Note: More information about the USDA NRCS California eVegGuide website is available under the "Help" tab.

The NRCS **eVegGuide** (electronic Vegetative Guide) is a tool for finding plants and seeds for NRCS land conservation practices. An eVegGuide report shows recommended plants, seeds, and planting recommendations to implement a particular practice at a chosen location.

The **eVegGuide** is a sub-section of the California eFOTG (electronic Field Office Technical Guide). It contains the most recent information from the Lockeford Plant Materials Center and the USDA Plants database. Further information and documentation is available from the eFOTG web page.

Please contact us if you need immediate help using the **eVegGuide**.

NRCS California eVegGuide Help Resources

How to use the NRCS California eVegGuide -- a video tutorial (updated March, 2018)

Plant Count by Practice for each MLRA -- how many plants are available for each practice and purpose

Appendix C
Soil Sampling Protocol for Soil Organic Matter Analysis

WHAT DO I NEED?

Bring the following materials with you when heading to the field for soil sampling.

As shown in Figure 1, these materials include:

1. Two buckets (one for sample and one for supplies)
2. Soil sample bags: one-gallon freezer storage bags (or soil sample bags); one bag per sample
3. One clipboard and papers for recording
4. Permanent marker and/or pen
5. A soil probe or straight shovel (sharpshooter or drain spade style).
6. Ice pack(s) (**optional**, needed for hot days when samples for nitrogen content or biological properties.)

Figure 1. Materials needed for soil sampling.

WHERE TO SAMPLE?

Determining the number of samples to be taken from each field (or APN)

Decide whether one sample will adequately represent the field (or APN), or whether an APN should be split to into multiple sampling units. A field is not the same and may vary in soil type, fertility, or cropping and management histories. Divide the field into different sampling units and make sure conditions inside the same sampling unit are as uniform as possible. If a uniform field is very large, you may need to divide it into several sampling units so as each sampling unit is no larger than 20 acres. One soil sample is needed from each unit. Inside a sampling unit, a composite soil sample is taken.

1. Identify locations within the unit where soil samples are representative.
2. Borders and irregular areas should be avoided, unless a sample is specifically being collected from those areas to identify constraints.
3. As shown in Figure 2, one soil core from each location. Total 14 cores will be taken mixed in bucket to make a composite soil sample to represent the sampling unit.
4. For a sampling unit, about 10 -20 locations should be selected to make a composite sample.
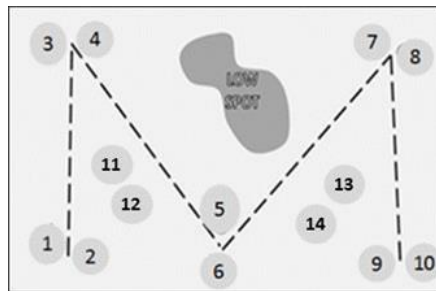
Figure 2. Locations where samples should be taken within a sampling unit.

HOW TO TAKE A COMPOSITE SOIL SAMPLE?

Two important requirements must be met when taking soil samples:

1. A uniform slice of soil from the soil surface to a desired depth must be taken.
2. The same volume of soil must be collected from each sample location.

Determining Depth for Sampling:

Depth to take soil samples is usually determined by the crop, what you are interested to know, and your knowledge about the soil profile. For soil organic matter content for the purpose of the 2018 CDFA Healthy Soils Program, sampling depth should be from surface to 8" deep.

Taking Samples with a Soil Probe (Figure 3)

1. Remove surface debris (A).
2. Push probe steady and straight to the desired depth (e.g., 8" in a tomato field) (B).
3. Remove the core and place it in the clean bucket.
4. Go to the next location and repeat steps 1-3.
5. Finish sampling from all (ten or more) locations.
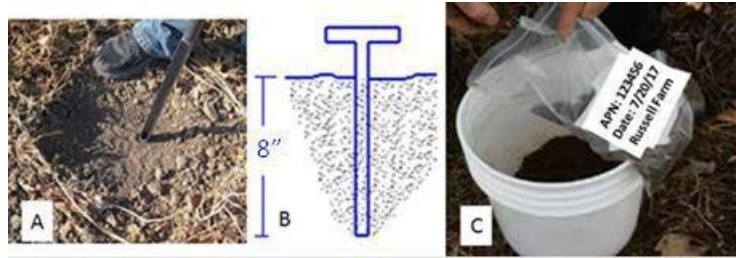
Figure 3. Taking samples with a soil probe.

6. Gently mix soils in the bucket and collect them in the sample bag labeled with the APN, sampling date, and farm name (C).

Taking Samples with a Shovel or Spade (Figure 4)

1. Remove surface debris (A).
2. Use the spade to dig a small hole about 8'' deep. From the side of the hole, **take a vertical, rectangular slice of soil 8" deep and about 2" thick** (B).
3. Remove any extra soil to ensure that the sample is the same width at the top and bottom of the slice. It is important to collect the same amount of soil through the 6" sample profile so that it is not biased with more soil from the surface compared to the subsurface (C).
4. Place sample into a clean bucket.
5. Go to the next location and repeat the steps 1-4 for all locations.
6. Gently mix soils in the bucket and collect 6 cups of well-mixed soils (or no less than 1 lb.) into the sample bag labeled with the APN, sampling date, and farm name (D).

Figure 4. Taking samples with a shovel.

SAMPLE STORAGE AND SHIPPING TO A SOIL TESTING LABORATORY

Before you send your soil samples for analysis, ensure that the laboratory uses University of California test methods, which are test methods proven on California farms by the University. Contact the soil testing laboratory where you plan to send your samples.

CDFA recommends the laboratories listed at the following websites for tests conducted for the 2018 Healthy Soils Program:

- Selected Plant and Soil Laboratories in Northern and Central California: http://cesonoma.ucanr.edu/files/27431.pdf
- UC Cooperative Extension el Dorado County List of Laboratories for Tissue/Soil/Water Agricultural Analysis: http://cecentralsierra.ucanr.org/files/115331.pdf.
- UC ANR Soils Testing Laboratories for Home Gardeners: http://ccmg.ucanr.edu/files/51308.pdf.
- Selected Plant and Soil Testing Laboratories in Central and Southern California: http://ceventura.ucanr.edu/Com_Ag/Subtropical/Avocado_Handbook/Resources/Plant_D_isease_Diagnostics_and_Soil_Testing_Labs_in_California-1999_/

Please check with the laboratory where you intend to send samples to ensure if there are specific requirements regarding sample storage, packing and shipping. Requirements may be different depending on what soil properties are to be tested. Provided below are general guidelines regarding handling of soil samples:

- Ship your soil samples to a soil test laboratory as soon as possible.
- Ensure all sample bags are correctly labeled and sealed.
- Provide a soil sampling form together with samples in the shipping box.
- For tests on soil texture, organic matter content, pH, cation exchange capacity or mineral contents other than nitrogen, samples can be handled at room temperature.
- For tests on nitrogen content and/or biological properties (e.g. microorganisms), keep samples out of direct sunlight and store as cool as possible (ice packs recommended) during sampling and storage. Store samples in a refrigerator or cold room after returning from the field. Pack soil samples with ice packs when shipping.
- Contact the soil testing laboratory a few days after samples are shipped to check they were received and are being handled properly.

Data Collection

A. Required by CDFA

The following data collection is required for both Treatment (T) and Control (C) in each APN identified in the project, for both Type A and Type B projects:

- Soil organic matter from each APN that is part of the project:
    - Prior to initial implementation of funded practices (2019, baseline data)
    - One year after implementation of funded practices (2020)
    - Two years after implementation of funded practices (2021)
    - Three years after implementation of funded practices (2022)

Additionally, the following data are required for Type A projects through the project term:
- Measurements of GHG emissions on T and C project sites where Soil Management Practices are implemented.
- GHG measurements from other eligible management practices are optional, as applicable.
- Crop yield data.

B. Optional data encouraged but not required by CDFA

For both Type A and Type B projects, the following data are not required but strongly encouraged.
- Additional data on soil health, co-benefits, and/or ecosystem services.
- Detailed economic analyses on production profitability for selected practice(s).

Note: Collection of data corresponding to metrics beyond those listed in A. above, and including but not limited to those listed in B. above, if included in project SOW, are considered as a program requirement and must be completed according to the terms of the grant agreement.

References

Moebois-Clune B.N., D.J. Moebois-Clune, B.K. Gugino, O.J. Idowu, R.R. Schindelbeck, A.J. Ristow, H.M. van Es, J.E. Thies, H.A. Shayler, M.B. McBride, D.W. Wolfe, and G.S. Abawi. 2016. Soil sampling protocol. In Comprehensive Assessment of Soil Health. Soil and Crop Science Section, Cornell University. Ithaca, NY. P. 27-30.

USDA NRCS. 2007. Soil sampling for nutrient management. https://www.nrcs.usda.gov/wps/PA_NRCSConsumption/download?cid=nrcs144p2_051273&ext=pdf

UCCE UC Small Farm Program, 2017. Soil sampling.
http://sfp.ucdavis.edu/pubs/Family_Farm_Series/Veg/Fertilizing/soil/

Appendix D

HSP Practices: Implementation Guidelines and Verification Requirements

HSP Agricultural Management Practice Name	Practice Implementation Name* (COMET – Planner)	Scenario Name*	Implementation Guidelines	Verification Requirements
Conservation Crop Rotation (USDA NRCS CPS 328)	Decrease Fallow Frequency **OR** Add Perennial Crop to Rotations	Basic rotation	Effective implementation of a conservation crop rotation to provide high residue and/or perennial crops.	(1) check if rotation practices followed the plan and (2) the acreage
		Specialty crops	Effective implementation of a rotation of organic or non-organic specialty crops (fruits & vegetables).	(1) check if rotation practices followed the plan and (2) the acreage
Residue and Tillage Management, No-Till (USDA NRCS CPS 329)	Intensive Till to No Till or Strip Till on Irrigated Cropland **OR** Non-Irrigated Cropland	No-Till or Strip- Till	(1) No tillage; (2) Planting method is no-till drilling or hand planting.	Any time of the year to look evidence of no soil disturbance

Practice	Action	Type	Description	Verification
Cover Crop (USDA NRCS CPS 340)	Add Non-Legume Seasonal Cover Crop to Irrigated Cropland **OR** Non-Irrigated Cropland	Cover Crop: Basic	Cover crop should be allowed to grow to produce as much biomass as possible without delaying planting of the following crop.	(1) Cover crop is visible in the field at verification. (2) Receipts of cover crop seeds purchased.
	Add Legume Seasonal Cover Crop to Irrigated Cropland **OR** Non-Irrigated Cropland	Cover Crop: multiple species	Planting multi-species cover crop (two or more species) mix includes a small grain, a legume, and may include other species such as forage sorghum, radishes, buckwheat, etc..	(1) Mixed cover crop species are visible in the field at verification. (2) Receipts of cover crop seeds purchased.
Residue and Tillage Management, Reduced Till (USDA NRCS CPS 345)	Intensive Till to Reduced-Till on Irrigated Cropland **OR** Non-Irrigated Cropland	Reduced-Till	(1) Mulch or vertical tillage, chiseling or disking to limit soil disturbance, or (2) Fewer tillage operations.	Must meet depth, frequency or percent area of soil disturbance.
Residue and Tillage Management, Reduced Till (USDA NRCS CPS 345)	Intensive Till to Reduced-Till on Irrigated Cropland **OR** Non- Irrigated Cropland	Reduced-Till	(1) Mulch tillage, vertical tillage, chiseling or disking; (2) Fewer tillage operations.	Must meet depth, frequency or percent area of soil disturbance.
Mulching (USDA NRCS CPS 484)	Add High Carbon Mulch to Croplands	Natural Materials	1-3 inches thickness of straw or other natural materials	(1) ≥ 60% soil surface covered; (2) Receipts of materials purchased.

		Wood Chips	2-3 inches thickness of wood chips	(1) Tree rows (≥ 4' radius) covered; (2) Receipts of wood chips purchased.
Strip Cropping (USDA NRCS CPS 585)	Add Perennial Cover Grown in Strips with Irrigated Annual Crops **OR** Non-Irrigated Annual Crops	Wind and water erosion control	(1) Two or more strips are required; (2) ≥ 50% vegetation cover must be perennial and erosion resistant crops.	(1) Number, width & length of strips; (2) species (perennial and erosion resistant)
Nutrient Management (USDA NRCS CPS 590)	Improved N Fertilizer Management on Irrigated Cropland **OR** Non-Irrigated Cropland – Reduce Fertilizer Application Rate by 15%	Basic NM	A nutrient management budget will be developed for each field(s) based on soil test analysis and university of California recommendation rates or crop removal rates.	Receipts and farm log of nitrogen fertilizers showing application rates is 15% less than what was used in the past 3 years or UC recommended rates.
Conservation Cover ((USDA NRCS CPS 327)	Convert Irrigated Cropland to Permanent Unfertilized Grass Cover or Grass/Legume Cover **OR** Convert Non-Irrigated Cropland to Permanent Unfertilized Grass Cover or Grass/Legume Cover	Introduced species	Introduced cool season perennial grass to reduce soil erosion, runoff and dust emissions.	(1) Receipts of seeds purchased; (2) species; (3) good growth
		Introduced species with foregone income	Introduced, cool season perennial grass for organically managed lands.	(1) Receipts of seeds purchased; (2) species; (3) good growth; (4) Previous cropland used

			Monarch species - mix	(1) Mix of native grass and forbs for specialized purposes (wildlife, pollinators or ecosystem restoration); (2) Species not readily available and/or difficult to produce.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Monarch species - mix with foregone income	A mix of native grass and forbs for specialized purposes; Species not readily available and/or difficult to produce.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Native species	Mixture of native and warm season perennial grass to reduce soil erosion, water/sediment runoff and dust emissions.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Native species with foregone income	Mixture of native & warm season perennial grass.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Pollinator species	Permanent vegetation, including a mix of native grasses, legumes, and forbs to provide habitat for pollinators.	(1) Receipts of seeds purchased; (2) species; (3) good growth.

		Pollinator species with foregone income	Permanent vegetation, including a mix of native grasses, legumes, and forbs to provide habitat for pollinators.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
Field Border (USDA NRCS CPS 386)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover **OR** Permanent Unfertilized Grass/Legume Cover	Field Border, Introduced Species	(1) Introduced, cool season perennial grass; (2) Around the perimeter of a crop/rangeland.	(1) Visible: cool season perennial grass. (2) Receipts of seeds purchased.
		Field Border, Native Species	Untreated, warm season, native perennial around the perimeter of an agricultural land.	(1) Visible: warm season, native perennials. (2) Receipts of seeds purchased.
		Field Border, Pollinator	Mixed species, native Forb around perimeter of agricultural lands.	(1) Visible: mixed, native forbs. (2) Receipts of seeds purchased.
Contour Buffer Strips (USDA NRCS CPS 332)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover	Introduced Species, Forgone Income	(1) Introduced cool season perennial grass; (2) Area of strips is taken out of production.	(1) Visible: cool season perennial grass in previous cropland. (2) Receipts of seeds purchased.

	OR Unfertilized Grass/Legume Cover	Native Species, Foregone Income	(1) Native warm season perennial grass; (2) Area of strips is taken out of production.	(1) Visible: warm season perennial grass in previous cropland. (2) Receipts of seeds purchased.
		Wildlife Pollinator, Foregone Income	(1) Three or more native warm season perennial that are pollinator friendly species; (2) Area of strips is taken out of production.	(1) Visible: ≥ 3 species of native, warm season, pollinator friendly, perennials species. (2) Receipts of seeds purchased.
Filter Strip (USDA NRCS CPS 393)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover **OR** to Permanent Unfertilized Grass/Legume Cover	Filter Strip, Native species	Native, warm season perennial grass	(1) Visible: perennial species planted in area of previous cropland. (2) Receipts of seeds purchased.
		Filter Strip, Introduced species	Introduced, cool season perennial grass and/or legume mix	
Forage and Biomass Planting (USDA NRCS CPS 512)	Conversion of Annual Cropland to Irrigated Grass/Legume Forage/Biomass Crops **OR**	Nonnative high seeding rate, no lime	(1) Seeding rate: ≥ 30 lb/acre PLS (pure live seed); (2) Planting method: No-Till/grass drill.	(1) Receipts of seeds purchased; (2) species; (3) good growth

	Conversion of Annual Cropland to Non-Irrigated Grass/Legume Forage/Biomass Crops	Nonnative standard seeding rate, no fertilizer	(1) Seeding rate: ≥ 9 lb/acre PLS (pure live seed); (2) Planting method: No-Till/grass drill	(1) Receipts of seeds purchased; (2) species; (3) good growth
		Nonnative standard seeding rate with fertilizer	(1) Seeding rate: ≥ 9 lb/acre PLS (pure live seed); (2) Planting method: No-Till/grass drill	(1) Receipts of seeds purchased; (2) species; (3) good growth
		Non-native high seeding rate, lime	(1) Seeding rate is ≥ 30 lb/acre PLS (pure live seed); (2) No-Till/grass drill is used to seed.	(1) Receipts of seeds purchased (2) species; (3) good growth
Grassed Waterway (USDA NRCS CPS 412)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover **OR** Convert Strips of Non-Irrigated Cropland to Permanent Unfertilized Grass /Legume Cover	Base Waterway	Waterways area measured from top of bank to top of bank. Typical practice is 1200' long, 12' bottom, 8:1 side slopes, and 1.5' depth.	(1) Success of grassed waterway with suitable vegetation; (2) Receipts of materials purchased.
		Base waterway with checks	Area measured from top of bank to top of bank. Fabric or stone checks installed every 100 feet along the waterway perpendicular to waterflow and 2/3 the waterway top width to reduce maintenance and provide temporary protection until vegetation is established. Fabric Checks are installed 18" deep with 12" laid over on the surface.	(1) Success of grassed waterway with suitable vegetation; (2) Receipts of materials purchased.

Herbaceous Wind Barriers (USDA NRCS CPS 603)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover **OR** to Permanent Unfertilized Grass/Legume Cover	Cool Season Perennial Species	Width of the Herbaceous Wind Barrier must be at least 2 feet.	(1) Visible: perennial species planted in area of previous cropland. (2) Receipts of seeds purchased.
Riparian Herbaceous Cover (USDA NRCS CPS 390)	Convert Irrigated Cropland to Permanent Unfertilized Grass Cover Near Aquatic Habitats; **OR** Convert Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover Near Aquatic Habitats	Broadcast Seeding with Foregone Income	(1) Area is removed from crop production; (2) Six species mix, native Forb; (3) Existing plant community is disturbed.	(1) Visible: six or more native, pollinator friendly perennial species planted; (2) Receipts of seeds purchased.
		Plug Planting with Foregone income	(1) Area is removed from crop production; (2) Native aquatic plants, emergent or submerged.	(1) Visible: native, aquatic perennial species plug planted; (2) Receipts of seedlings purchased.
		Combination Broadcast Seeding and Plug Planting with Foregone Income	(1) Area is removed from crop production; (2) One species native forb and native aquatic plants, emergent or submerged.	(1) Visible: native, aquatic perennial species planted; (2) Receipts of seedlings & seeds purchased.
		Pollinator Cover with Foregone Income	(1) Area is removed from crop production; (2) 2-12 native forbs that bloom sequentially during the growing season and at least 2 species in bloom at any given time during the growing season.	(1) Visible: ≥ 4 native forbs bloom at different times in growing season planted in area of previous cropland. (2) Receipts

				of seedlings & seeds purchased.
Vegetative Barrier (USDA NRCS CPS 601)	Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass Cover **OR** Convert Strips of Irrigated Cropland to Permanent Unfertilized Grass/Legume Cover	Seeded Barrier	A strip or strips of stiff, dense vegetation is established by seeding with width ≥ 3 feet.	(1) Visible: perennial species planted in area of previous cropland. (2) Receipts of seeds purchased.
		Vegetative Planting	Permanent strips of stiff, dense vegetation established along the general contour of slopes with width ≥ 3 feet.	(1) Visible: perennial species planted in area of previous cropland. (2) Receipts of sprigs purchased.
Alley Cropping (USDA NRCS CPS 311)	Replace 20% of Annual Cropland with Woody Plants	Tree-planting, single row	(1) Potted or balled and burlapped hardwood tree size: 2-3 gal.	(1) Receipts of seedlings purchased; (2) species, (3) number of live plants
Hedgerow Planting (USDA NRCS CPS 422)	Replace a Strip of Cropland with 1 Row of Woody Plants	Single Row	(1) Inclusion of pollinator-friendly shrubs and perennial wildflowers; (2) Combination of cool and warm season perennial species; (3) ≥200 plants/acre; (2) Row width ≥ 8 feet;	(1) Visible: ≥200 live tree/shrubs plants/acre. (2) Receipts of seedlings purchased.

			(3) Average height ≥ 3 feet at maturity; (4) Planting protection.	
	Replace a Strip of Grassland with 1 Row of Woody Plants			
Tree/Shrub Establishment (USDA NRCS CPS 612)	Conversion of Annual Cropland **OR** Grassland to a Farm Woodlot	Conservation, hand planting, browse protection	Planting density ≥ 150 trees/acre. Bare root hardwood seedling or transplant: shrubs 6-18" tall trees 18-36" tall. Seedlings protection.	(1) Receipts of seedlings; (2) species, (3) number of live plants
Windbreak/ Shelterbelt Establishment (USDA NRCS CPS 380)	Replace a Strip of Cropland with 1 Row of Woody Plants **OR** Replace a Strip of Grassland with 1 Row of Woody Plants	1-row, trees, containers, hand planted, protected	(1) Minimum width of tree row is 8 feet; (2) Plant protection is required; (3) ≥200 plants/acre.	(1) Visible: live tree/shrubs plants. (2) Receipts of seedlings purchased.
		1-row, Tree or Shrub, Wind Protection Fence	(1) Minimum width 8 feet for tree row and 4 feet for shrubs; (2) Plant protection is required; (3) ≥200 plants/acre.	(1) Visible: live tree/shrubs plants. (2) Receipts of seedlings purchased.
Riparian Forest Buffer (USDA NRCS CPS 391)	Replace a Strip of Cropland Near Watercourses or Water Bodies with Woody Plants **OR** Replace a Strip of Grassland Near Watercourses or Water	Bare-root, hand planted	**General:** (1) Plantings consist of hand planted bare-root shrubs and trees; (2) ≥ 35 plantings per acre; and (3) Tree protection is required. **Materials:** (1) Hardwood trees: 18-36" tall; (2) Conifer trees: 1-1 (2 years old).	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.

	Bodies with Woody Plants			
Riparian Forest Buffer (USDA NRCS CPS 391)	Replace a Strip of Cropland Near Watercourses or Water Bodies with Woody Plants **OR** Replace a Strip of Grassland Near Watercourses or Water Bodies with Woody Plants	Bare-root, machine planted	(1) Bare-root shrubs and trees; (2) ≥35 plants/acre; (3) Tree Protection. **Materials:** (1) Hardwoods: 18-36" tall; (2) Conifer: 1-1 (2 yrs old).	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.
		Cuttings, Small to Medium	(1) Hand planting; (2) ≥ 35 plantings per acre; and (3) Tree protection. **Materials:** 1/4"-1" diameter and 24-48"long.	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.
		Cuttings, Medium to Large	(1) Hand planting; (2) ≥ 35 plants/acre; (3) Trees: from 1/4-1" diameter & 24-48" long to 2-6" diameter & 6' long. (4) protection.	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.
		Small container, hand planted	(1) Shrubs and trees; (2) ≥ 35 plants/acre; (3) Tree protection. Potted shrub or tree size: 1 quart.	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.

		Small container, machine planted	(1) Planting: machine planted shrubs and trees; (2) ≥ 35 plantings per acre; and (3) Tree protection. Potted shrub/tree size: 1 quart.	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.
		Large container, hand planted	(1) Planting: hand planted shrubs and trees; (2) ≥ 35 plantings per acre; and (3) Tree protection. Potted or balled shrub or tree size: 2-3 gal.	(1) Visible: ≥35 live tree/shrubs plants per acre. (2) Receipts of seedlings purchased.
Multistory Cropping (USDA NRCS CPS 379)	Replace 20% of Annual Cropland with Woody Plants	Free trees or shrubs	For enhancement of multi-story agroforests or improvement of overstory on existing cropland.	(1) species names, (2) number of live plants
		Native shrub planting	Seedling size is no less than 1 qt.	(1) Receipts of seedlings purchased; (2) number of plants
		Native tree planting	Seedling size is no less than 1 qt.	(1) Receipts of seedlings purchased; (2) number of plants

		Non-native shrubs	(1) Bare root tree size is 6-18" tall, band pots of common species trees or shrubs, and/or (2) tree or shrub seedling size is ≥ 10 cu. in..	(1) Receipts of seedlings purchased; (2) number of e plants
		Non-native tree planting	(1) Bare root tree size 6-18" tall, band pots of common species trees or shrubs, and/or (3) Seedling containerized size is ≥10 cu. in..	(1) Receipts of seedlings purchased; (2) number of live plants
Prescribed Grazing (USDA NRCS CPS 528)	Grazing Management to Improve Irrigated Pasture Condition **OR** Rangeland **OR** Non-Irrigated Pasture Condition	Pasture, basic	A grazing management plan by a certified professional range manager to enhance rangeland health and ecosystem function; optimize efficiency and economic return through monitoring & record..	(1) Records of grazing dates and stubble height after grazing; (2) short term monitoring- photos and forage production; (3) sensitive area protection.
		Range, basic		
Range Planting (USDA NRCS CPS 550)	Seeding forages to improve rangeland condition	Native species broadcast	(1) Mainly native adapted perennial species (native forb, cool season and native perennial grass); (2) Seeding rate is 18 lb/acre PLS.	(1) Receipts of seeds purchased; (2) species; (3) good growth.

			Native species high forb drilled	(1) Native adapted perennial species (native forb, cool season and perennial grass); and (2) No-till or range drill.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Native species low forb drilled	(1) Predominately native adapted perennial species (native forb, cool season and native perennial grass); and (2) no-till or range drill.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Nonnative species broadcast	(1) Three Species Mix - cool season and introduced perennial grass; (2) Seedbed preparation; and (3) Seeding rate is 18 lb/acre PLS.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Nonnative species drilled	(1) Three Species Mix - cool season and introduced perennial grass; and (2) No-till drill to plant.	(1) Receipts of seeds purchased; (2) species; (3) good growth.
			Shrub plugs	(1) Shrub seedling or transplant, bare root shrubs 3 to 5 feet tall; (2) Planting density: 1000 plants/acre.	(1) Receipts of shrubs purchased; (2) species; (3) good growth.

Silvopasture (USDA NRCS CPS 381)	Tree/Shrub Planting on Grazed Grasslands	Establish Trees, Existing Grasses	≥20 plants/acre is required.	(1) Visible: live tree/shrubs plants. (2) Receipts of seedlings purchased.
Compost Application to Annual Crop (CDFA)	Compost (C:N ≤ 11) application to annual crops	Compost from Certified Composting Facility	Application rate must be between 3-5 tons/Acres	(1) Receipts of total compost purchased from a certified composting facility; (2) conversion factor for compost measured in volume to weight; (3) Compost analysis report including carbon and nitrogen contents and moisture content; (4) Must meet the total dry tonnages in the project; (5) Compost is spread or visible on the ground at verification.
	Compost (C:N > 11) application to annual crops		Application rate must be between 6-8 tons/Acres	
Compost Application to Perennials, Orchards and Vineyards (CDFA)	Compost (C:N ≤ 11) application to annual crops	Compost from Certified Composting Facility	Application rate must be between 2-4 tons/Acres	
	Compost (C:N > 11) application to annual crops		Application rate must be between 6-8 tons/Acres	

Compost Application to Grassland (CDFA)	Compost (C:N > 11) application to grazed, irrigated pasture	Compost from Certified Composting Facility	Application rate must be between 6-8 tons/Acres	
	Compost (C:N > 11) application to grazed rangeland		Application rate must be between 6-8 tons/Acres	
Compost Application to Annual Crop (CDFA)	Compost (C:N ≤ 11) application to annual crops	On-farm produced compost	Application rate must be between 3-5 tons/Acres	(1) A farm log includes materials, method and temperatures during composting process; (2) Compost analysis report including carbon and nitrogen contents and moisture content; (3) Must meet the total dry tonnages in the project; (4) Compost is spread or visible on the ground at verification.
	Compost (C:N > 11) application to annual crops		Application rate must be between 6-8 tons/Acres	
Compost Application to Perennials, Orchards and	Compost (C:N ≤ 11) application to annual crops	On-farm produced compost	Application rate must be between 2-4 tons/Acres	

Vineyards (CDFA)	Compost (C:N > 11) application to annual crops		Application rate must be between 6-8 tons/Acres	
Compost Application to Grassland (CDFA)	Compost (C:N > 11) application to grazed, irrigated pasture	On-farm produced compost	Application rate must be between 6-8 tons/Acres	
	Compost (C:N > 11) application to grazed rangeland		Application rate must be between 6-8 tons/Acres	

*Legend:
Practice Implementation Name: This is corresponding to the quantification tool for GHG reduction benefit estimation. Access the quantification tools at: www.arb.ca.gov/cci-resources.
Scenario Name: This is the corresponding agricultural management practice scenario under which a practice may be funded, as determined by CDFA in collaboration with USDA-NRCS.
Implementation Guidelines: Some agricultural management practices have additional requirements that may not be listed by the USDA- NRCS as a requirement in the Conservation Practice Standard (e.g., compost application rates, minimum widths for establishing some herbaceous and woody practices, or minimum tree densities for woody practices). These requirements ensure alignment with the GHG
estimation methods. For more detail, see: www.arb.ca.gov/cci-resources.