Healthy Soils Program

CDFA OFFICE OF ENVIRONMENTAL FARMING & INNOVATION

REQUEST FOR PROPOSALS ON HSP NEW PRACTICES, 2024

OUTLINE

- Program overview
  - Grant Type
  - Categories of Currently funded practices
- Process of adding new practices funded by the program
  - Multiple-step evaluation and public commenting process
  - Tentative Timeline
- Proposal Guidelines
- Evaluation Criteria

HEALTHY SOILS PROGRAM

The Healthy Soils Program (HSP) stems from the California Healthy Soils Initiative, a collaboration of State agencies and departments. The program promotes the development of healthy soils on California's farmlands and ranchlands through conservation management practices using three grant types:

- The HSP Incentive Grants provide financial incentives directly to grower and ranchers to implement practices that sequester carbon, reduce atmospheric greenhouse gases (GHGs), and improve soil health.
- The HSP Demonstration Grants fund on-farm demonstration projects that collect data, promote display conservation management practices and assess the potential of innovative practices in California.
- The HSP Block Grant Pilot funds projects by farmers and ranchers through regional block grant administrators, while building their technical assistance capacity.

CATEGORIES OF HSP ELIGIBLE PRACTICES

The practices are divided in two categories based on the availability of implementation standards and Quantitative methodology for calculation of GHG reduction benefits from practice implementation.

Funded by Program Grant Type	Practice Implementation Standards		Quantitative Methodology for Calculation of GHG Reduction Benefits	
HSP Incentive Grants (Including HSP Block Grant Pilot on-farm projects) **HSP Demonstration Grants** - Type B projects	Available	NRCS CPS; CDFA report or white paper	Available	QM developed by CDFA and CARB with NRCS, Colorado State University for inclusion in HSP COMET-Planner
HSP Demonstration Grants - Type A Research projects	Not available	Grant recipients to develop, with other available studies	Not available	Grant recipients to take measurements of on-farm GHG emissions

List of Conservation Management Practices included in the Healthy Soils Program

PRACTICES Funded By Incentive Grants (I)

Practices Eligible on Cropland

1. Alley Cropping (USDA NRCS CPS 311)
2. Compost Application (CDFA White Paper)
3. Conservation Cover (USDA NRCS CPS 327)
4. Conservation Crop Rotation (USDA NRCS CPS 328)
5. Contour Buffer Strips (USDA NRCS CPS 332)
6. Cover Crop (USDA NRCS CPS 340)
7. Field Border (USDA NRCS CPS 386)
8. Filter Strip (USDA NRCS CPS 393)
9. Forage and Biomass Planting (USDA NRCS 512)
10. Grassed Waterway (USDA NRCS CPS 412)
11. Herbaceous Wind Barrier (USDA NRCS CPS 603)
12. Hedgerow (USDA NRCS CPS 422)
13. Mulching (USDA NRCS CPS 484)
14. Multi-story Cropping (USDA NRCS CPS 379)
15. Nutrient Management (USDA NRCS CPS 590) (15% reduction in fertilizer application *only*)
16. Residue and Tillage Management – No-Till (USDA NRCS CPS 329)
17. Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)
18. Riparian Forest Buffer (USDA NRCS CPS 391)
19. Riparian Herbaceous Cover (USDA NRCS CPS 390)
20. Strip Cropping (USDA NRCS CPS 585)
21. Tree/Shrub Establishment (USDA NRCS CPS 612)
22. Vegetative Barriers (601) (USDA NRCS CPS 601)
23. Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)

PRACTICES Funded By Incentive Grants (II)

II. Practices Eligible on Orchard and Vineyard

1. Compost Application (CDFA White Paper)
2. Conservation Cover (USDA NRCS CPS 327)
3. Cover Crop (USDA NRCS CPS 340)
4. Filter Strip (USDA NRCS CPS 393)
5. Hedgerow Planting (USDA NRCS CPS 422)
6. Mulching (USDA NRCS CPS 484)
7. Nutrient Management (USDA NRCS CPS 590) (15% reduction in fertilizer application *only*)
8. Residue and Tillage Management – No-Till (USDA NRCS CPS 329)
9. Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)
10. Whole Orchard Recycling (CDFA Report)
11. Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)

III. Practices Eligible on Grazing Land

1. Compost Application (CDFA White Paper)
2. Hedgerow Planting (USDA NRCS CPS 422)
3. Prescribed Grazing (USDA NRCS CPS 528)
4. Range Planting (USDA NRCS CPS 550)
5. Riparian Forest Buffer (USDA NRCS CPS 391)
6. Tree/Shrub Establishment (USDA NRCS CPS 612)
7. Silvopasture (USDA NRCS CPS 381)
8. Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)

NON-OVERLAPING PRACTICES (1)

Practices in the same group cannot be funded for implementation on the exact same land area/field.

- Group I
  - Cover Crop (USDA NRCS CPS 340)
  - Conservation Crop Rotation (USDA NRCS CPS 328)
  - Conservation Cover (USDA NRCS CPS 327)
  - Strip Cropping (USDA NRCS CPS 585)
  - Mulching with wood chips (USDA NRCS CPS 484)
- Group II:
  - Whole Orchard Recycling (CDFA Report)
  - Mulching (USDA NRCS CPS 484)

NON-OVERLAPING PRACTICES (2)

Practices in the same group cannot be funded for implementation on the exact same land area/field.

- Group IV
  - Conservation Cover (USDA NRCS CPS 327)
  - Contour Buffer Strips (USDA NRCS CPS 332)
  - Field Border (USDA NRCS CPS 386)
  - Filter Strip (USDA NRCS CPS 393)
  - Grassed Waterway (USDA NRCS CPS 412)
  - Herbaceous Wind Barrier (USDA NRCS CPS 603)
  - Range Planting (USDA NRCS CPS 550)
  - Vegetative Barriers (USDA NRCS CPS 601)
  - Residue and Tillage Management – No-Till (USDA NRCS CPS 329)
  - Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)

NON-OVERLAPING PRACTICES (3)

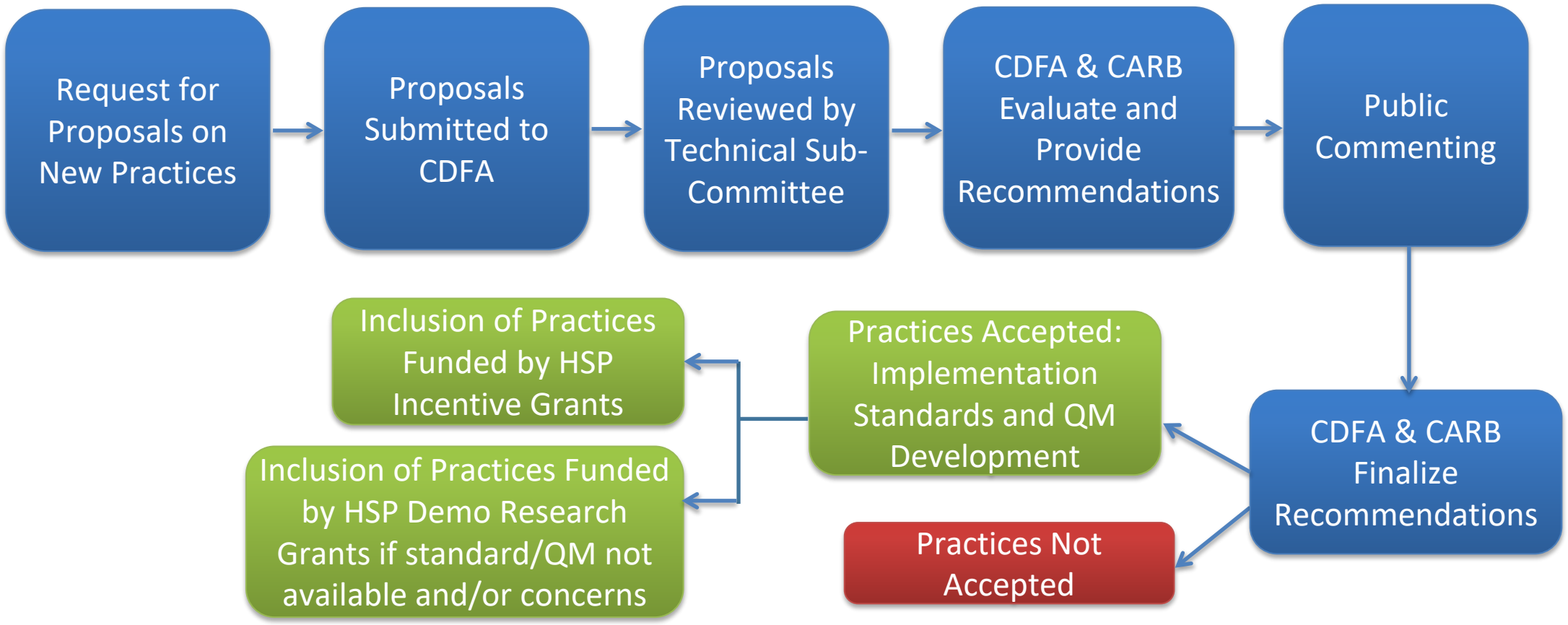
Practices in the same group cannot be funded for implementation on the exact same land area/field.

- Group V
  - Alley Cropping (USDA NRCS CPS 311)
  - Hedgerow Planting (USDA NRCS CPS 422)
  - Riparian Forest Buffer (USDA NRCS CPS 391)
  - Tree/Shrub Establishment (USDA NRCS CPS 612)
  - Windbreak/Shelterbelt Establishment (USDA NRCS CPS 380)
  - Silvopasture (USDA NRCS CPS 381)
  - Residue and Tillage Management – No-Till (USDA NRCS CPS 329)
  - Residue and Tillage Management – Reduced Till (USDA NRCS CPS 345)
- Group VI
  - Any herbaceous planting practice listed in Group IV
  - Mulching (USDA NRCS CPS 484)

PRACTICES Eligible for Demonstration Research Grants

1. Anaerobic Digestate Application: Solids generated from anaerobic digestion of organic materials (**1**)
2. Microbial Inoculation with Compost Tea: Diluted compost steeped or brewed in water with aeration/stirring (i.e. compost tea) (**3**)
3. Mycorrhizal Application: Incorporating soil with fungi that form a symbiotic relationship with roots of crop plants (**1**)
4. Nutrient Management (CPS 590): Replacing Synthetic N Fertilizer with Soil Amendments such as beef feedlot manure, chicken broiler/layer manure, dairy manure, sheep manure and swine manure (**0**)
5. Nutrient Management (CPS 590): Use of Nitrification Inhibitors (**0**)
6. Nutrient Management (CPS 590): Use of Slow-Release Fertilizers (**0**)
7. Vermicompost: Compost produced from organic materials using various species of worms (**2**)
8. One-Time Compost Application with Higher Rates on Grazing land: Compost application to grazed grasslands at rates higher than currently funded by Incentive Grants (Grazing land only) (**2**)
9. Biochar Application: Biochar produced from organic materials to soils (**2**)
10. Food Waste Hydrolysate Application: Hydrolysate product produced from food waste treatment (**1**)
11. Re-Saturating Delta Peat Soils through Rice Cultivation (Cropland only) (**0**)

PROCESS FOR ADDING NEW PRACTICES TO THE HSP



TENTATIVE TIMELINE

Activity	Dates (*some subject to change*)
Request for Proposals released	June 5, 2024
Proposals due	August 2, 2024
Evaluation of Proposals by Technical Sub-Committee	September 2024 – January 2025
Agency Review	*February 2025*
Public Comment Period	*March – April 2025*
Finalize Recommendations and QM Development	*May 2025*

PROPOSAL GUIDELINES (IN RFP)

- One proposal per practice, including the submitter's full name, organizational affiliation and contact information.
- The proposal must include peer-reviewed and/or publicly available research literature.
- Field study and research findings in support of the practice must be statistically sound and significant.
- A practice proposed must demonstrate that implementing the practice will:
  - Achieve GHG benefits, including carbon sequestration and reductions of CO_2, CH_4 or N_2O emissions, and
  - Improve soil health.
- A proposed practice must not be proprietary or involve the usage of exclusive, proprietary products, materials or equipment.
- A proposed practice that involves addition of soil additives and/or amendments, a discussion must be included on environmental impacts of its use and materials' safety, waste management and disposal procedures.
- CDFA encourages proposals including additional peer-reviewed data on co-benefits of proposed practices.
- The proposal must be submitted in PDF format, single-spaced with font size of 11 or larger, and maximum five pages, excluding supporting information such as research papers and data.
- All proposals must be emailed no later than 5:00 p.m. PT on Friday, August 2, 2024 to cdfa.HSP_tech@cdfa.ca.gov.

EVALUATION CRITERIA (IN TEMPLATE)

- How robust is the published literature on this practice?
  - Number of published research papers on this practice.
  - Cited studies on quantitative GHG reductions or C-sequestration associated with practice implementation.
  - Available studies show GHG reductions on a variety of specialty crops through practice implementation.
- Are the majority of publications based on field trials, or modeling? Field data is preferred.
- Are California-specific data/studies available to demonstrate that practice implementation achieves carbon sequestration, GHG reductions and improve soil health?
  - If available studies are not located in CA, how are they related/applicable to CA climate and agricultural systems (e.g. soil type, crops, etc.)?
- Is information widely available on how the practice should be implemented?
- Does the practice implementation have the potential to increase crop production and/or soil health?
- Does the practice implementation provide environmental co-benefits?
- Does the practice have any potential for adverse environmental impacts, either broadly or under specific conditions?
- What are the limitations/restrictions on implementing this practice, by location, crop type, or other factors?

Thank you!

Questions and Comments

to

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