

California Department of Food and Agriculture  
 2017 Healthy Soils Program (HSP) Incentives Program - Second Solicitation  
 Projects Selected for an Award of Funds (Updated as of July 9 2018)

Recipient Organization	Project Description	Amount Awarded	Estimated Cost Sharing	County	GHG Reduction Estimation (Tonnes CO <sub>2</sub> eq/yr)
ACMII CALIFORNIA 1, LLC	The Recipient will plant over 7,000 feet of hedgerows optimized for native pollinator habitat. The project helps increase the quality and yield of blueberry and almond crops, preserving the soil health and carbon sequestration benefits of permanent cropping systems. The Recipient will evaluate project success based on soil health, pollinator abundance and diversity of wildlife, and crop quality and yields.	\$46,412.22	\$22,000.00	San Joaquin	12.0
B&W Farm LLC	This project will improve soil health by increasing soil organic matter content, and improve water use efficiency. Compost application, cover crop and hedgerows are the chosen practices to achieve these goals. Compost with a C:N ratio above 11 and a high Nitrogen-fixating legume cover crop increases the input of biomass in the soil. Hedgerows around the fields will help reduce wind speed and the risk of wind erosion. Cover crops and compost will cover the soil and therefore decrease loss of carbon from the soil (decrease carbon oxidation) and evaporation of soil moisture. Increased soil organic matter will further increase the capacity of the soil to hold water in the root zone for plants to utilize. The outcome of these farming practices is increased plant production and reduced water use. Soil samples will be taken every year to measure increase in soil organic matter. Monitoring the water use will show the reduction in water use and result in a reduced water bill. Co-benefits of the above-mentioned measures also include improved habitat for pollinators and beneficial insects.	\$26,183.22	\$10,000.00	San Diego	87.2
Bolin Farming Company	The Recipient will be able to continue farm in organic production and continue to improve yields, soil quality, and grazing capacity for the ranch. The project will include annual compost application of 5.3 tons per acre on approximately 130 acres of irrigated pasture in fall 2018 through 2020.	\$50,000.00	\$49,420.00	Solano	1049.0
Bordessa Family Dairies	The project will improve soil health by increasing soil organic matter, water retention capacity, soil permeability and the improved ability to sequester carbon through the annual application of certified organic compost on 134 acres of rangeland used for grazing organic dairy cows. Additionally, the project will reduce atmospheric greenhouse gases (GHG) and improved pasture production as well as nutrient content. The Carbon Farm Plan will be used as a baseline natural resource assessment from which to evaluate and measure increased carbon sequestration and GHG emission reduction potential through the implementation of recommended practices, including compost application.	\$49,714.00	\$26,346.00	Marin	603.6

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Chico Flax LLC	On a site newly established for fiber flax production, the Recipient will incorporate cover cropping, mulch, and multispecies hedgerows to improve soil health, provide wildlife and insect habitat, sequester carbon and minimize greenhouse gas (GHG) emissions. The fiber flax development project, carried out in collaboration with CSU Chico Department of Agriculture, will utilize this 3.75-acre parcel as a prototype of sustainable flax production in the region.	\$10,684.29	\$4,960.00	Butte	2.3
Dixon East, LLC	The Recipient will plant cover crop to assist in the need for weed suppression, dust control, compaction management, water infiltration and holding capacity, as well as addressing the reduction of runoff. The Recipient will also apply compost to the orchard for increased soil health and organic matter. The goal is to implement more sustainable farming practices, the project will be evaluated annually to ensure desired outcomes of increased soil health for the trees, lower greenhouse gas (GHG) emissions and improved air quality.	\$17,458.68	\$15,328.00	Solano	130.1
Fat Uncle Farms	The project will implement a farm system in which natural ecosystem processes enhance the nutrient and water cycles, as well as overall health and productivity of the plant community. The operation will measure annual increased total nutrient yield of the field (nutrient density x net productivity), soil organic matter, water holding capacity, and above and below ground biodiversity. The operation of the system will depend on the interaction of three components; trees, livestock, and a harvestable pasture (technically called a poly-culture pasture-crop). This grant fills the need of building and integrating the first and third of these components. Whereas previously, the field had been rotated between seasonal grazing and monocropping, now sheep and cows will be able to graze a diverse paddock of grains and legumes before and after harvest, all while benefitting from the shade and deep nutrient cycling of a tree canopy, which will in turn be harvested for human and animal consumption.	\$41,575.80	\$59,000.00	Modoc	14.0
Flight Investment, LLC	The Recipient will implement soil management practices on 30.73 acres of wine grapes. Certified compost will be banded and hydraulically ripped into the root zone of the vines. Soil samples will be taken annually to monitor soil health and changes due to management losses from harvesting. This project is expected to reduce greenhouse gas (GHG) emissions by 48.10 tons of CO <sub>2</sub> equivalent per acres.	\$6,538.19	\$10,556.52	San Luis Obispo	48.1

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George A. Lester	<p>The Recipient will apply compost to 38 acres of two-year-old conventionally managed walnuts. This compost is used to supply critical nutrients to the orchard and help build soil organic matter, develop a natural ecosystem which will sequester carbon, as well as ensure the land's future productivity for California farmers.</p> <p>The Recipient will use light tillage before applying the seed for a legume cover crop to the orchard. The legume cover crop will grow over winter, capturing nitrogen from the atmosphere. The cover provided by the vegetation will prevent erosion and run off, as well as sequestering carbon and acting as natural filtration. During Spring, it will provide a natural habitat for beneficial insects necessary for the orchard's organic system. This will begin the process of creating a natural ecosystem that will allow the orchard to transition to Certified Organic. Once this cover crop is established, the Recipient will no longer till throughout the orchard. An orchard shredder will be used in late Spring to "top" the cover crop, spreading the seeds so the cover will naturally regenerate next winter. A combination of the shredder and cover crops will eliminate the need for tillage.</p> <p>On an adjacent field, the Recipient will plant a hedgerow consisting of native plants, grasses, and trees which will surround all perimeters. This field is already managed using compost and cover cropping. With the assistance of Solano RCD and NRCS, an appropriate mix will be chosen to provide year-round habitat for beneficial insects and wildlife, as well as reducing noise and air pollution.</p>	\$48,750.92	\$22,882.96	Solano	87.5
James B. Lawrence	<p>The Recipient will apply compost on 76.3 acres of irrigated walnut orchard to improve the soil health.</p>	\$28,707.30	\$14,353.65	Contra Costa	350.0
Joe B. Plummer	<p>The Recipient will implement soil management practices on 67 acres of wine grapes to promote soil health, increased organic matter, increased water holding capacity, and reduce greenhouse gas (GHG). Certified compost will be banded and hydraulically ripped into the root zone of the vines. Soil samples will be taken annually to monitor soil health and changes due to management losses from harvesting. This project is expected to reduce GHG emissions by 102.1 tons of CO<sub>2</sub> equivalent per acres.</p>	\$13,751.00	\$22,008.00	San Luis Obispo	102.1
John Swift	<p>Project practices include: 1) Application of compost to grazed rangelands, crop lands and perennial crops/orchards, 2) Mulching perennial plants, and 3) Planting a Riparian Forest Buffer. Soil testing and overall health of the land will highlight results.</p>	\$15,511.46	\$23,745.00	San Luis Obispo	154.6

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Kelly Metcalf	The project will continue implementing, maintaining and sharing practices that build soil health and depth, grow trees and habitat for food, forage, fuel and stay directly connected to the land. This will generate local food production systems that will be economically, socially and ecologically viable at creating resilient, life-supporting systems. The measurement of success is to maintain these practices properly and track the progress through soil testing, ground water analysis and overall productivity of the farm.	\$36,354.01	\$34,826.99	San Luis Obispo	27.6
Leonard Speth	This project consists of an ongoing annual cover crop program combined with the addition of composting.	\$4,820.00	\$15,000.00	Colusa	74.1
Lucky Dog Farms, LLC	The operation will improve its hay production and soil health for a more sustainable operation by implementing a suite of conservation practices on over 95 acres. Limited resources have prohibited implementation of cropland management practices such as cover crop, woody planting establishment (windbreak and riparian forest buffer) as well as compost application that will help the operation meet its goal. The greatest potential for on-farm carbon sequestration is by stacking these practices. In doing so, on-farm ecosystem services are enhanced to increase water infiltration and retention, improve nutrient retention in soils, diversify soil organisms, reduce sediment erosion, break pest cycles, and increase connectivity of wildlife and pollinator corridors.	\$36,717.98	\$26,919.00	Tehama	261.4
McClelland Dairy	This project will demonstrate the implementation of two carbon farming conservation practices—compost application and riparian forest buffers. The project will focus on addressing carbon sequestration and greenhouse gas (GHG) emissions reduction potential. The goals of the project are threefold—to improve soil health, restore a riparian forest buffer and demonstrate the benefits and co-benefits of these practices to other agricultural producers. The project outcomes include increasing soil organic matter, water retention capacity and soil permeability, which will lead to improved pasture grass nutrient content. The improved ability to sequester carbon above and below ground will be achieved through the annual application of compost on 43.31 acres of annual grassland and the restoration of 2.6 acres of riparian forest buffer along a tributary to Stemple Creek.	\$40,544.73	\$49,782.73	Sonoma	203.2

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Michelle Rossow	<p>This project will evaluate the synergistic impacts of implementing three soil health practices on irrigated cropland fields. The practices implemented include planting a multi-species legume cover crop annually, spreading compost across the field annually, and residue and tillage management of standard till to reduced till. Throughout the grant period, the project team will evaluate the effectiveness of soil health practices on soil health including organic matter, plant health and yield, and environmental benefits. The project team will also evaluate baseline cost for current soil management practices and evaluate the cost increases or decreases of the practices over the course of the project. The project will improve plant health and yields, increase water infiltration and retention, sequester and reduce greenhouse gases (GHG), reduce sediment erosion and dust, improve water and air quality, and improve biological diversity and wildlife habitat.</p>	\$50,000.00	\$31,884.40	Merced	374.6
Progressive Pastures, LLC	<p>The project consists of establishing a single row, hedgerow along the border of Field 6 located on the western property line adjacent to State Highway 1. The goal is to establish a hedgerow along a mature single row windbreak, creating a multifunctional windbreak. The hedgerow will be configured to capture or distribute surface runoff, from Highway 1, to optimize moisture, sediment and nutrient retention and sequester carbon. Anticipated outcomes include carbon capture, improving microclimate, decrease the loss of soil moisture from the wind, enhance soil water holding capacity, reduce erosion, protect pastures/fields from wind and sun related damage, improve plant growth and diversity, provide shelter for livestock, enhance wildlife and pollinator habitat, increase and improve production of the certified organic pastures, as well as provide a noise and visual screen while reducing particulates. Photo monitoring will be established, photos will consist of pre, during and post project photos for a three-year period.</p>	\$13,856.00	\$5,205.00	Marin	4.0
Rafter Eleven Livestock LLC	<p>Application of compost on property to enhance soils that will, in turn, increase yields.</p>	\$38,884.00	\$19,442.00	Alameda	474.7
Richard B. Kitzman	<p>Mulch will be applied with the goal of lowering power costs and improving soil health. Desired outcomes will be measured by tensiometers to track soil moisture levels as well as monitoring yield and output.</p>	\$5,848.40	\$2,925.00	San Luis Obispo	2.0

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Roberto LeFort	The project will include 1) the application of compost on fruit orchards and annual crop fields in order to increase the biological health of the soil, optimize nutrients available to crops, decrease water usage and reduce labor; 2) the installation of a riparian forest buffer between crop fields and the Huer Huero Creek and a herbaceous cover to replace irrigated cropland adjacent to the creek in order to prevent runoff of sediments and nutrients, provide food and cover for wildlife, and shade the stream and stabilize its banks and 3) planting of inoculated cover crops on an area of farm previously only used for equipment storage and chicken pasture in order to increase soil organic matter content, promote biological nitrogen fixation, increase biodiversity and increase soil water retention, with the goal of utilizing the area for cultivation of pilot crops. The evaluation of the project will consist of soil organic matter analyses, the use of tensiometers to track soil moisture levels, crop quality and yields, and observation of soil stability and wildlife in the creek bed.	\$7,960.94	\$9,300.00	San Luis Obispo	11.0
Ryan Williams	The project will implement five management practices over two ranches (Le Grand Ranch & Winton Ranch) for the transition to organic certification. These practices will build healthy soils through conversion to a non-tillage cropping system, compost applications and legume cover crop. These practices will sequester carbon for a permanent cropping system that will increase organic matter thus increasing cation exchange capacity of the soil. Legume clover establishment through the middles of the orchards improves soil water infiltration and reduces soil erosion. Other environmental practices covered by the Healthy Soil Program (HSP) grant will include the establishment of a riparian forest buffer and hedgerow plantings on the Le Grand Ranch to stabilize the stream bank, improve habitat for wildlife and native bee populations. A hedgerow along the east side of the property along the driveway will help block destructive wind erosion. It will help reduce dust by shading the road and using a sprinkler irrigation system to keep the dust down in the summer. The selection of flowering trees and bushes for the hedgerow will help native bee populations to flourish.	\$49,432.91	\$37,744.88	Merced	256.8

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Sally B. Donati	<p>The Recipient plans to apply compost on irrigated pasture and in the foothills of Butte County. As part of the project, the Recipient will investigate the benefits of the conservation practice. The multi-generational ranch uses the project sites seasonally as part of a rotational livestock grazing system. The Recipient intends to apply compost in the fall to annual rangeland and irrigated pasture in the summer to improve soil health. The project reduces emissions by putting local green waste to better use, while supporting a local company who manufactures compost. By improving soil health, the family ranch can increase soil organic matter, improving the ability of the site to sequester atmospheric carbon. A partnership has established between the ranching community, UC Cooperative Extension, Point Blue Conservation Science and Natural Resources Conservation Service (NRCS) to investigate and share the economic and ecological outcomes from the project at Donati Ranch. Results of the project will be shared with local ranchers and stakeholders through a variety of avenues such as feature articles and project presentations.</p>	\$49,950.00	\$28,425.00	Butte	637.9
Serventi Ranch	<p>1. Cover Cropping – The Recipient would like to commence planting of annual cover-crops each fall in between tree rows, to be incorporated in and above the soil late spring (minimum 6 months later). Legume and non-legume crops will be planted on alternating rows. The goal is to renew and reinvigorate depleted soil and improve structure. Organic seed will be used.</p> <p>2. Mulching – The Recipient will place mulch/wood chips under each tree rows. The benefits of the mulch include weed control, moisture conservation, and carbon sequestration. The chips will also help improve drainage in heavy clays. Mulch will be sourced locally and wood chips will be sourced from existing trees onsite that are targeted for removal.</p> <p>3. Hedgerow Implementation – The Recipient would like to add hedgerows that divide the property into different productive zones and to support bee colonies. The result will be to encourage robins, bluebirds, and other birds to establish homes in the orchard and help naturally control pests, and provide a year-round nectar source for the bee colonies.</p>	\$20,230.28	\$9,500.00	Santa Cruz	7.8

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Seth Rossow	This project will evaluate the synergistic impacts of implementing three soil health practices on one irrigated cropland field. The practices include planting a multi-species legume cover crop annually, spreading compost across the field annually, and residue and tillage management of standard till to reduced till. Throughout the grant period, the grant team will evaluate the effectiveness of soil health practices on soil health including organic matter, plant health and yield, and environmental benefits. The grant team will also evaluate baseline cost for current soil management practices and evaluate the cost increases or decreases of the practices over the course of the project. The goal of the project will be to improve plant health and yields, increase water infiltration and retention, sequester and reduce greenhouse gases (GHG), reduce sediment erosion and dust, improve water and air quality, and improve biological diversity of wildlife habitat.	\$50,000.00	\$83,812.18	Merced	706.0
Spring Creek Vineyards LLC	The Recipient will implement soil management practices to promote soil health, increased organic matter, increased water holding capacity, and reduce greenhouse gas (GHG) on 24.55 acres of wine grapes. Certified compost will be banded and hydraulically ripped into the root zone of the vines. Soil samples will be taken annually to monitor soil health and changes due to management losses from harvesting. This project is expected to reduce (GHG) emissions by 39.00 tons of CO <sub>2</sub> equivalent per acres.	\$5,133.65	\$8,254.20	San Luis Obispo	39.0
Stubbs Vineyard	Stubbs Vineyard will apply compost and implement cover crop practices to improve soil health, sequester atmospheric carbon and reduce greenhouse gas (GHG) emissions. The Recipient will measure the effectiveness of the management practices by testing soil health over the three-year duration of the compost and cover crop application period. The Recipient will also measure the amount of crop production to see if there are improvements in crop yield as well as the characteristics of the grapes and the wines afterwards.	\$4,837.04	\$5,971.00	Marin	53.8



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Sun Drenched Organics LLC	<p>The project will create a healthy bio-system for nutrient management and production from native land materials. It will sustain critical environmental support practices and will convert stagnant declining soil health into fruitful and fertile nutrient beds supporting organic olive, grapevine and blueberry production. The plan includes compost materials, cover crops, and mulching practices for nutrient enrichment and transpiration conservation, and hedgerow plantings and natural wind barriers to reduce erosive forces and further support growth of nutrient concentrations in the soil ecosystem. The Conservation plan details weed abatement while retaining organic measures. The assessments will drive operational changes including soil, water, and plant matter samplings quarterly to annually including measures of soil organic matter, Ph, nutrient content, water pH and TDS, plant water and nutrient content. The environmental practices will enrich the soil health, creating a healthy soil bio-system, support wild life and native environment preservation, preserve the health of the creek on the land, reduce greenhouse gases (GHG), and retain moisture, reduce transpiration, and retain soil, reducing erosion. The plan details additional practices to support overall environmental preservation, soil health enrichment system, on farm composting process, and retaining of natural environment waterways, wildlife and ecosystems health.</p>	\$12,715.14	\$15,400.00	San Diego	45.4
Terra Cultura	<p>The goal of this project is to create healthy soils and to implement greenhouse gas (GHG) emission reduction strategies including but not limited to establishing cover crops, mulching, implementing no till or reduced till irrigated row crops, applying compost, planting hedgerows, and establishing a silvopasture for grazing. Once these practices have been established, the plan is to become a demonstration site. Terra Cultura's focus is not only on small-scale regenerative agriculture, but on cultivating strong local communities, making it an ideal community hub for education around healthier land management practices. Therefore, an additional goal is to involve, educate, and build strong local community around this project.</p>	\$12,775.16	\$7,087.17	San Benito	16.2

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Thomas D. Donati	The Recipient will compost in the Buttes of Sutter County and investigate the local benefits of the conservation practice. The multi-generational ranch uses the project site seasonally as part of a rotational livestock grazing system. The Recipient will apply compost in the fall to rangeland to improve soil health. The project reduces emissions by sequestering carbon in the soil, while supporting a local company who manufacturers compost from municipal green waste. This project studies the limited number of compost applications occurring in Northern California's Central Valley. A partnership has established between the ranching community, UC Cooperative Extension, Point Blue Conservation Science and Natural Resources Conservation Service (NRCS) to investigate and share the economic and ecological outcomes from the project. Results of the project will be shared with local ranchers and stakeholders though a variety of avenues such as feature articles and project presentations.	\$49,400.00	\$26,425.00	Sutter	630.0
Treborce Vineyards	The Recipient will install cover crops and compost to increase the bio-diversity of the parcel and attract beneficial insects, pollinators and birds to control unwanted insects. The Recipient will perform soil and moisture testing to increase vine health and the biodiversity of the area.	\$6,651.20	\$9,145.00	Sonoma	50.0
Wallace Brothers	This project provides funding for compost application to fields intended for organic tomato production. The fields have been converted to row crop production with drip irrigation and are in process of being certified for organic production of tomatoes. Addition of compost is expected to provide soil organic matter as well as needed soil nutrients.	\$50,000.00	\$69,240.00	Colusa	1252.0
X-Line Farms, LLC	The recipient will implement soil management practices on 82.5 acres of wine grapes. Certified compost will be banded and hydraulically ripped into the root zone of the vines. Soil samples will be taken annually to monitor soil health and changes due to management losses from harvesting. This project is expected to reduce greenhouse gas (GHG) emissions by 128.2 tons of CO <sub>2</sub> equivalent per acres.	\$16,897.50	\$27,030.00	San Luis Obispo	130.1