

# INVESTING IN CALIFORNIA AGRICULTURE'S CLIMATE SOLUTIONS

California launched the country's first Climate Smart Agriculture programs in 2014. The programs provide needed resources for farmers and ranchers to reduce greenhouse gas (GHG) emissions, increase carbon sinks, and protect agricultural lands—all while improving the health and resiliency of our farms, ecosystems and communities.

## SUSTAINABLE AGRICULTURAL LANDS CONSERVATION PROGRAM (SALCP)



SALCP protects at-risk farmland from sprawl development by funding conservation easements on our valuable agricultural lands. It also provides unique planning grants to local governments to improve farmland conservation planning and policy development.

- Launched in 2014 by the Strategic Growth Council (SGC) in conjunction with the Department of Conservation (DOC)
- Amount awarded to date: \$180.86 million
- GHG reductions: Updated number available in March 2020 (the quantification methodology for the program has been recently revised)
- FY 2019-20 budget: SALCP receives 10% of SGC's annual allocation of the Greenhouse Gas Reduction Fund

## STATE WATER EFFICIENCY & ENHANCEMENT PROGRAM (SWEEP)

The only state program of its kind, SWEEP funds on-farm water use efficiency projects, including solar-powered pumps and soil moisture monitoring equipment, that save water and energy use and reduce GHG emissions.

- Launched in 2014 by the California Department of Food & Agriculture (CDFA)
- Amount awarded to date: \$72 million
- GHG reductions annually: More than 79,987 metric tons of CO<sub>2</sub>e (equivalent to removing more than 16,000 cars from the road every year)
- FY 2019-20 budget: Program funding was cut for this year



## CLIMATE SMART AGRICULTURE TECHNICAL ASSISTANCE (TA) PROGRAM

The new TA program, created by AB 2377 (Irwin), greatly expands available technical assistance for farmers and ranchers interested in developing climate smart agriculture projects on their operations. Administered by CDFA, the grants fund outreach, education, project planning and design, application assistance and project implementation. In its first round of funding in the fall of 2019, CDFA awarded \$2.1 million to 33 technical assistance providers throughout California, including \$525,000 earmarked to support socially disadvantaged farmers and ranchers.

## HEALTHY SOILS PROGRAM (HSP)



The country's first Healthy Soils Program recognizes the unique climate solution of storing more carbon in agricultural lands through transformative farming practices. HSP provides financial and technical assistance to farmers and ranchers to implement new management practices that increase carbon stored

in soil and woody plants. Demonstration projects are also funded to encourage farmer-to-farmer learning and adoption of practices.

- Launched in 2017 by CDFA
- Amount awarded to date: \$17.8 million
- GHG reductions over 3 years: 39,673 metric tons of CO<sub>2</sub>e (equivalent to removing 8,423 cars from the road every year)
- FY 2019-20 budget: \$28 million

## ALTERNATIVE MANURE MANAGEMENT PROGRAM (AMMP)

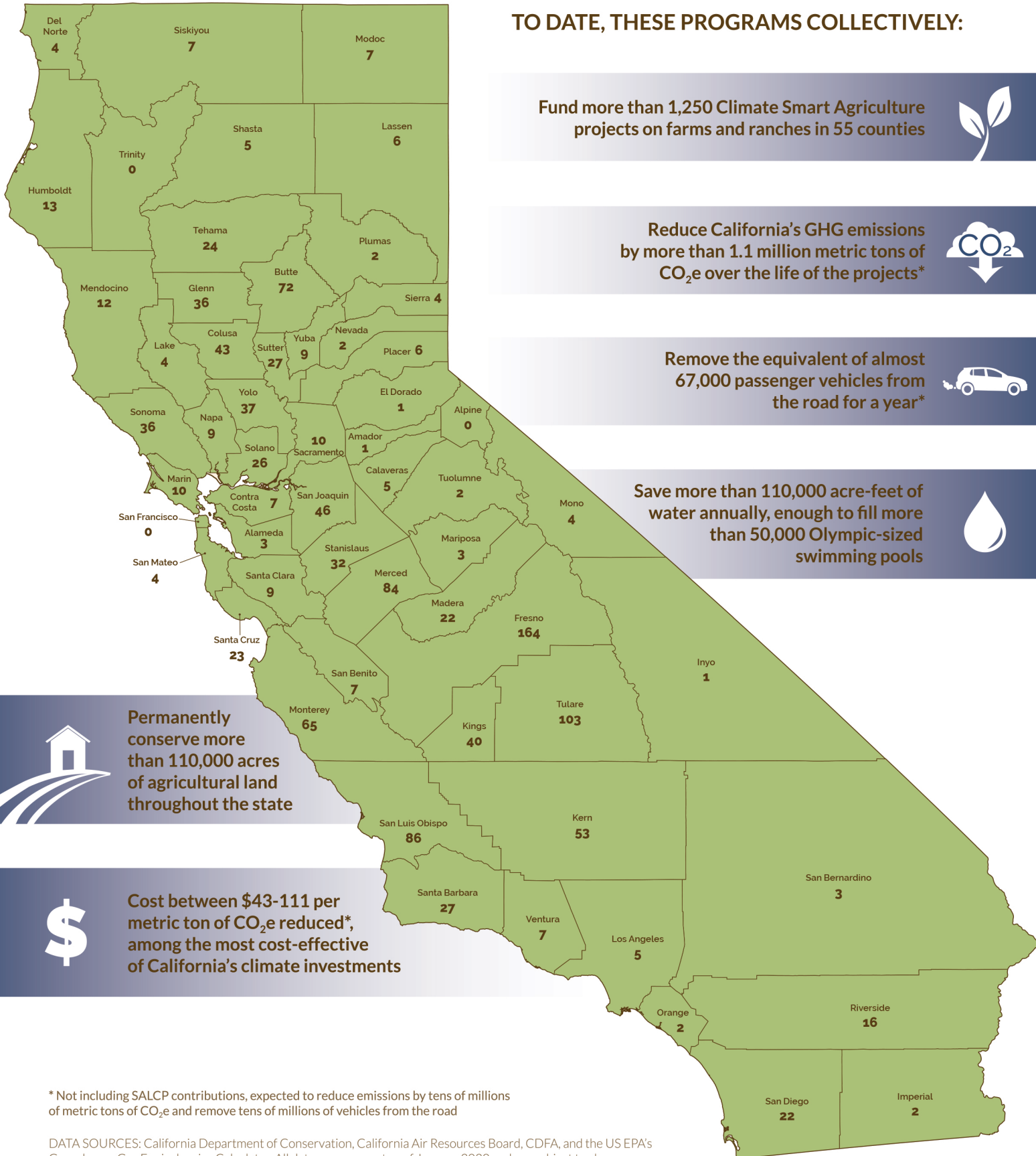


AMMP provides financial and technical assistance to dairy and livestock producers to transition to dry manure handling and storage, including composting of manure, as well as pasture-based systems to reduce potent methane emissions. The program also funds demonstration projects to showcase alternative manure practices and accelerate their adoption through farmer-to-farmer education.

- Launched in 2017 by CDFA
- Amount awarded to date: \$63.1 million
- GHG reductions over 5 years: 1 million metric tons of CO<sub>2</sub>e in the form of methane (equivalent to removing more than 212,314 cars from the road for 5 years)
- FY 2019-20 budget: AMMP will receive 20-35% of \$32.1 million allocated for dairy methane reduction

# CLIMATE SMART AGRICULTURE IN ACTION

## PROJECTS BY COUNTY



TO DATE, THESE PROGRAMS COLLECTIVELY:

Fund more than 1,250 Climate Smart Agriculture projects on farms and ranches in 55 counties



Reduce California's GHG emissions by more than 1.1 million metric tons of CO<sub>2</sub>e over the life of the projects\*



Remove the equivalent of almost 67,000 passenger vehicles from the road for a year\*



Save more than 110,000 acre-feet of water annually, enough to fill more than 50,000 Olympic-sized swimming pools



Permanently conserve more than 110,000 acres of agricultural land throughout the state



Cost between \$43-111 per metric ton of CO<sub>2</sub>e reduced\*, among the most cost-effective of California's climate investments

\* Not including SALCP contributions, expected to reduce emissions by tens of millions of metric tons of CO<sub>2</sub>e and remove tens of millions of vehicles from the road

DATA SOURCES: California Department of Conservation, California Air Resources Board, CDFA, and the US EPA's Greenhouse Gas Equivalencies Calculator. All data were current as of January 2020 and are subject to change.

# HEALTHY SOILS PROGRAM (HSP)

NUMBER OF HSP GRANTS: 317  
 NUMBER OF COUNTIES: 48

TOP 7 COUNTIES AWARDED	
COUNTY	AWARDS
Fresno	30
San Luis Obispo	24
Sonoma	24
Merced	18
Solano	18
Yolo	18
San Diego	16

HSP is administered by CDFA. More information is available on their website: [www.cdfa.ca.gov/oe/healthysoils](http://www.cdfa.ca.gov/oe/healthysoils)



HSP provides grants to farmers and ranchers to adopt soil-building practices that increase on-farm carbon sequestration in soils and woody plants and reduce net GHG emissions. Farm management practices like composting, reduced tillage, grazing management, and planting windbreaks and hedge-rows produce healthy, biologically-active soils rich in organic matter, reducing the need for toxic pesticides and fertilizers.

*"The Healthy Soils Program addresses so many challenges that we face in the Central Valley and beyond—from pollution problems due to nitrate leaching in our communities, to severe water insecurity in the state, to the problematic abundance of carbon in the atmosphere."*

— Max Latimer Lasiter, W.H. Latimer Properties, LLC, Tulare County



# STATE WATER EFFICIENCY AND ENHANCEMENT PROGRAM (SWEEP)

SWEEP provides grants to producers to improve the efficiency of their irrigation management systems through soil moisture monitoring technology, drip and micro-irrigation, solar-powered irrigation pumps and more. The program is very popular, with almost three times more applications than awards. SWEEP supports farmers in their efforts to address constrained water resources and water quality.

TOP 10 COUNTIES AWARDED	
COUNTY	AWARDS
Fresno	130
Tulare	90
Butte	55
San Luis Obispo	55
Kern	46
Monterey	39
Colusa	35
Kings	32
Merced	31
Glenn	24

NUMBER OF SWEEP GRANTS: 725  
 NUMBER OF COUNTIES: 37



*"Incentives like the state's Climate Smart Agriculture grants provide an opportunity for us to shift our mindsets toward building even stronger businesses in the long term."*

— Danny Royer, Bowles Farming Company, Merced County

SWEEP is administered by the CDFA. More information is available on their website: [www.cdfa.ca.gov/oe/sweep](http://www.cdfa.ca.gov/oe/sweep)

# ALTERNATIVE MANURE MANAGEMENT PROGRAM (AMMP)

AMMP provides grants to dairy and livestock producers to support their transition to manure handling and storage strategies that reduce methane emissions, a potent greenhouse gas. These strategies include composting manure, shifting from a liquid flush system to dry scraping, solids separation, and improved pasture management. The program supports farmers with modernizing their equipment while reducing air and water quality impacts.

NUMBER OF AMMP GRANTS: 108

NUMBER OF COUNTIES: 14

TOP 7 COUNTIES AWARDED	
COUNTY	AWARDS
Merced	32
Stanislaus	18
San Joaquin	17
Tulare	11
Humboldt	6
Sonoma	6
Kings	5

*"Our business model is to do the right thing at every turn. This project is good for our cattle, our employees, our brand identity and the environment."*

— Blake Alexandre,  
Alexandre Family Farm,  
Del Norte County



AMMP is administered by the CDFA. More information is available on their website: [www.cdfa.ca.gov/oefi/AMMP](http://www.cdfa.ca.gov/oefi/AMMP)

## TECHNICAL ASSISTANCE (TA) PROGRAM

TA plays an integral role in supporting farmers and ranchers participating in the Climate Smart Agriculture programs. In 2018, California created a Technical Assistance Program specifically for SWEEP, HSP, and AMMP. Five percent of each program budget is dedicated to a technical assistance which is targeted at small and mid-sized farms. Furthermore, 25% of the funding must be allocated to serve socially disadvantaged farmers and ranchers.

Eligible TA organizations include Resource Conservation Districts, University of California Cooperative Extension offices and nonprofits. TA activities funded by the grants include:

- Outreach and education
- Project planning and design
- Grant application assistance
- Project implementation
- Monitoring and reporting

In November 2019, the first \$2.1 million in grants were awarded to 33 organizations throughout the state, with \$525,000 dedicated to serving socially disadvantaged farmers and ranchers.

The TA Program is administered by the CDFA. More information is available on their website: [www.cdfa.ca.gov/oefi/technical/index.html](http://www.cdfa.ca.gov/oefi/technical/index.html)



Credit: USDA NRCS



**CalCAN**  
CALIFORNIA CLIMATE &  
AGRICULTURE NETWORK

The California Climate and Agriculture Network (CalCAN) is a statewide coalition that advances policy reforms to realize the powerful climate solutions offered by sustainable and organic agriculture. Since 2009, we have cultivated farmer leadership to face the challenges of climate change and to serve as the sustainable agriculture voice on climate change policy in California.

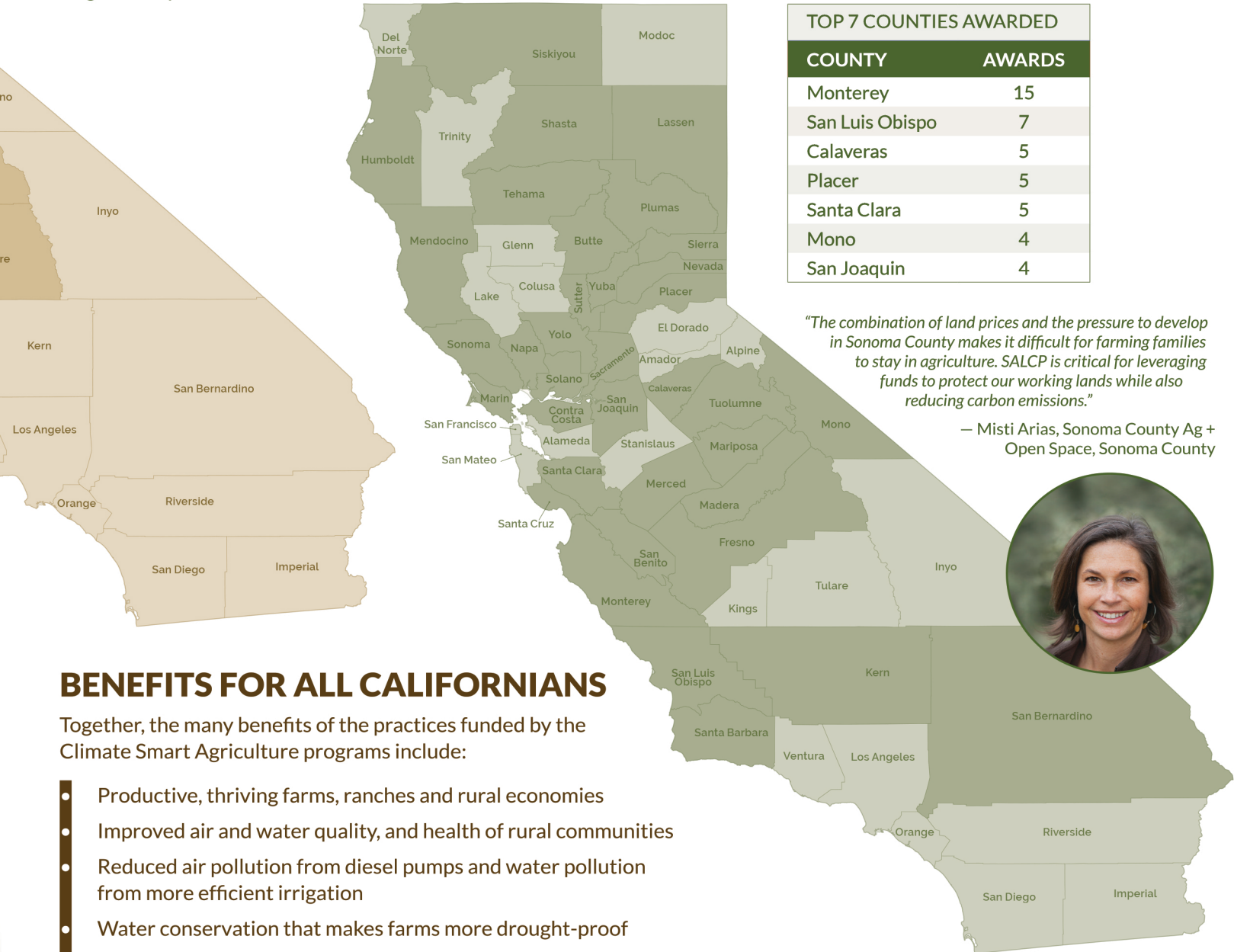
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January 2020

# SUSTAINABLE AGRICULTURAL LANDS CONSERVATION PROGRAM (SALCP)

SALCP funds agricultural conservation easements and strategic planning grants for local governments to protect farm and ranch land at risk of development. California loses an average of 50,000 acres a year of agricultural land, the equivalent of more than one and a half times the area of San Francisco. The loss of farmland, especially to urban and suburban development, contributes to rising GHG emissions. A 2012 study by UC Davis researchers found that an acre of urban land emits 70 times more GHGs than an acre of irrigated cropland.

NUMBER OF SALCP GRANTS:  
 100 easements  
 14 planning grants  
 NUMBER OF COUNTIES: 36



TOP 7 COUNTIES AWARDED	
COUNTY	AWARDS
Monterey	15
San Luis Obispo	7
Calaveras	5
Placer	5
Santa Clara	5
Mono	4
San Joaquin	4

*"The combination of land prices and the pressure to develop in Sonoma County makes it difficult for farming families to stay in agriculture. SALCP is critical for leveraging funds to protect our working lands while also reducing carbon emissions."*

— Misti Arias, Sonoma County Ag + Open Space, Sonoma County



## BENEFITS FOR ALL CALIFORNIANS

Together, the many benefits of the practices funded by the Climate Smart Agriculture programs include:

- Productive, thriving farms, ranches and rural economies
- Improved air and water quality, and health of rural communities
- Reduced air pollution from diesel pumps and water pollution from more efficient irrigation
- Water conservation that makes farms more drought-proof
- Reduced water and energy bills for farmers
- Mitigation of flooding and erosion by absorbing and retaining water
- Reduced use of chemical fertilizers
- Improved on-farm soil fertility and plant health
- Production of aged manure and compost, valuable soil amendments
- Increased biodiversity and wildlife habitat protection
- Open space for hiking, hunting and other forms of recreation

SALCP is administered by the DOC. More information is available on their website: [www.conservation.ca.gov/dlrp/SALCP/Pages/Index.aspx](http://www.conservation.ca.gov/dlrp/SALCP/Pages/Index.aspx)

# CLIMATE SMART AGRICULTURE IN ACTION

## HEALTHY SOILS PROGRAM

Pauma Band of Luiseño Indians  
Pauma Valley, San Diego County  
Award Amount: \$100,000

The Pauma Band is converting a 40-acre vegetable farm to an olive orchard, using their Healthy Soils grant to prioritize climate benefits in the transition. By eliminating tillage, they will reduce diesel tractor use and minimize carbon released by soil disturbance. They will plant cover crops for three years to outcompete weeds and bolster soil health. Theirs is a demonstration project, so they will bring together farmers, tribal representatives and other stakeholders to share their experiences.

*"It's all in the title. Healthier soils grow healthier food for our communities to eat."*  
— Miguel Hernandez



Credit: David Nevala  
for Organic Valley

*"We all have a part to play. Some people drive a hybrid car. Some people recycle. Farmers can play a huge part by managing our operations to the benefit of the environment and climate."* — Jana McClelland

McClelland Dairy is a 1,100-head organic dairy, a third-generation family business. With their AMMP grant, they will convert to a dry, scraping system instead of flushing manure from the barn, saving water and lowering methane emissions. The animal waste is composted on a covered pad so they can produce compost year-round, even in the rainy season. They spread the compost on their pastures to improve soil health and forage, and ultimately the quality of their milk.

## ALTERNATIVE MANURE MANAGEMENT PROGRAM

McClelland's Dairy  
Petaluma, Sonoma County  
Award Amount: \$749,961

## STATE WATER EFFICIENCY & ENHANCEMENT PROGRAM

Pao Yang  
Fresno, Fresno County  
Award Amount: \$100,000

Pao Yang converted 40 acres of family land from almonds and grapes to a diversified Asian vegetable and herb operation. With the SWEEP grant, Pao installed drip irrigation throughout the farm, and estimates his farm's annual \$8,000 energy bill has been halved, along with reducing water use and greenhouse gas emissions. Because Pao can deliver water more precisely to his crops, there is less weed pressure which reduces labor costs, increases yields, and improves his bottom line.

*"We couldn't have done the application without help from University of California Cooperative Extension."*  
— Pao Yang



*"The community values the open space and clean air in our region, and doesn't want the area to turn into another Silicon Valley. Once farmland is paved over, it's gone forever."*  
— Sherwood Darington,  
Managing Director Ag Land Trust

## SUSTAINABLE AGRICULTURAL LANDS CONSERVATION PROGRAM

Ag Land Trust  
Monterey County  
Award Amount (total for 13 projects): \$23,240,700

The Ag Land Trust was established in 1984 to protect some of California's most valuable farmland. To date, they have received 13 SALCP grants that will protect 3,581 acres of cropland located adjacent or within a few miles of the city limits of Salinas, Gonzales, Soledad and others. Their strategy is to direct urban growth away from farmland with high productivity and land values.