State Water Efficiency and Enhancement Program Overview

AD HOC ADVISORY GROUP 2021

Meeting 1 Questions and Follow up

- Identified 18 specific questions that were relevant to the Ad Hoc Advisory Group

- Provided a response to all questions identified

- Will review some of the questions in this presentation

| Question #	Data Request	Response
1	Provide information on ground water vs surface water projects, irrigation types that are being adopted, pump types being used, conversation of fuel, IWM and telemetry adoption.	CDFA has done an analysis of the number of groundwater and surface water projects. See meeting 1 materials. CDFA has also prepared a breakdown of project components. Many projects combine multiple project components. See meeting 2 materials. There are some limitations on this analysis. CDFA does not have a breakdown of types of pumps included in projects nor how many projects involve telemetry. Additionally, all applicants must indicate that they will have water measurement following the project. This leads to nearly all projects implementing some elements of irrigation water management (IWM) (i.e. a flowmeter to achieve at minimum IWM Level 1).
2	Provide a break out of who takes irrigation training and the type and irrigation training resources that are available.	CDFA provides applicants with one point in the additional consideration category during technical review if they commit to taking an irrigation training course over the course of the grant agreement or if they can provide evidence of taking a course within the last two years. This training must be beyond the training that the farmer would receive from their vendor that is associated with new hardware installation. The farmer or their employee (e.g., irrigator) can take the training. CDFA hosts a list of free or low-cost training resources on the SWEEP webpage, but farmers are able to select a training outside of these or work with their local technical assistance providers for training. See meeting 2 materials for more details on the percentage of SWEEP awardees who make this commitment. CDFA has not done an analysis of the type or provider of the training. Here is a link to CDFA Irrigation Technical Resources: https://www.cdfa.ca.gov/oefi/sweep/IrrigationTechnicalResources.html
3	Provide insight as to why groundwater projects apply more frequently (and information on tail water, recycled water, storm water capture, etc.).	SWEEP projects are required to reduce greenhouse gas emissions from on-farm irrigation pumps. This requirement means that farmers without on-farm pumps are not able to submit an eligible project. Surface water users do apply and are awarded (see meeting 1 materials), but they must have some irrigation pumps (frequently a booster or reservoir pump) to achieve the required GHG reductions. Sweep projects often involve multiple components which can include tailwater systems, recycled water or storm water capture. In the latest funding appropriation, projects that involved stormwater capture and/or recycled water received an extra point in the additional considerations category during technical review. This is to align with Proposition 68 funding objectives. Review meeting 1 materials for the scoring breakdown.
4	Provide and elevate success stories.	CDFA hosts videos to highlight implemented projects on the SWEEP webpage. CDFA has also posted blog posts on notable SWEEP projects. See meeting 2 materials. Link to SWEEP Videos: https://www.cdfa.ca.gov/oefi/sweep/
5	Provide information from growers on what was challenging and what worked for them.	CDFA gathers feedback from awardees during the verification interview. CDFA has not specifically gathered feedback from unsuccessful applicants beyond public comment opportunities and listening sessions that are commonly held prior to a funding solicitation. CDFA does receive feedback regarding the challenges of unsuccessful applicants through technical assistance providers and other active stakeholders.
6	Categorize what projects are not funded. What is challenging in application process?	CDFA has not done an analysis to identify trends in the unfunded projects. Due to the high-oversubscription rate of SWEEP, many high-scoring projects are not funded. Technical reviewers do provide feedback for all projects, but if a project has scored well there is often little actionable feedback for the applicant to use to improve in a future application. See meeting 2 materials.
7	Provide data on which projects were prepared by third parties and what type of third party.	In the most recent funding round, CDFA asked applicants if they had received technical assistance from a third party. This question does not currently specify if the project received support from a CDFA funded technical assistance provider, a third party vendor, or other forms of assistance. See meeting 2 materials.
8	Provide a graph illustrating which technologies have received the highest award amount.	SWEEP awardees often combine multiple components and technologies within one project. The SWEEP budget data is not broken out in a way that would allow for analysis of the award funding provided for each type of technology.
9	Provide an analysis of grant applications and grants awarded by the primary language spoken of the applicant.	CDFA has not collected information on the primary language of SWEEP applicants nor awardees.
10	Provide an analysis of grants by farm size in comparison to 2017 Ag Census Data on CA farm sizes.	For several rounds of SWEEP funding, CDFA has asked applicants to indicate their farm size. This information can be compared to Ag Census data. See meeting 2 materials.
11	Provide an analysis of grants awarded by county.	See meeting 1 materials

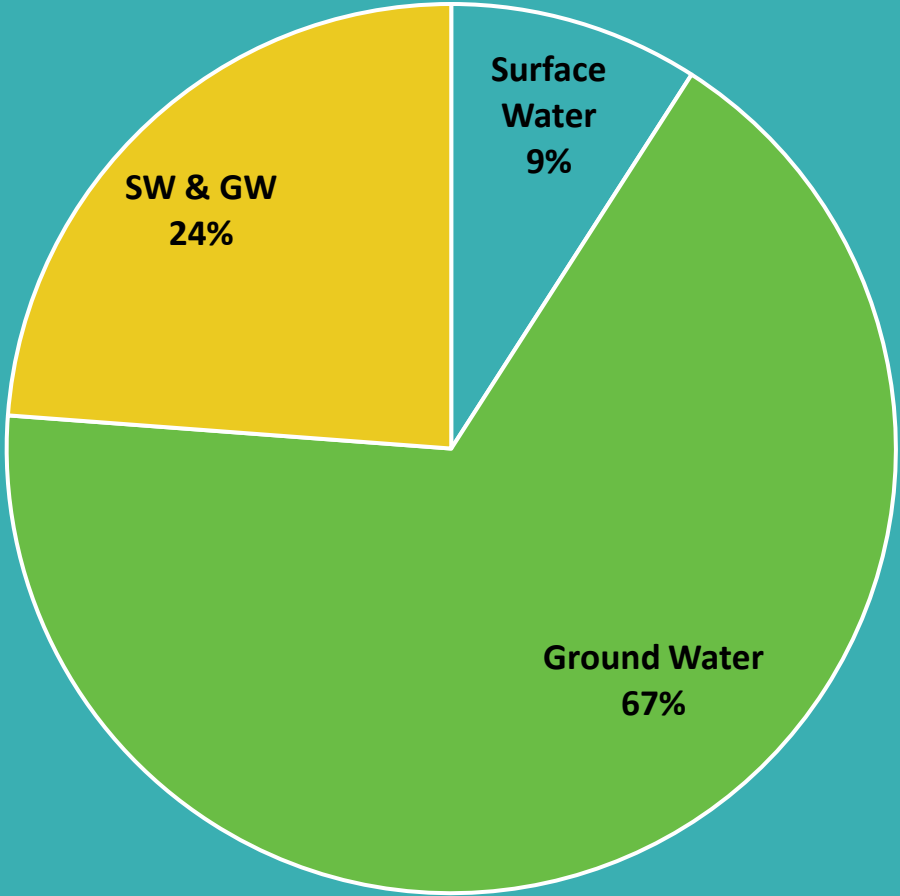# 2018 & 2019 Adopted Project Practices

SWEEP Practice	Number of Projects by Project Component (Total 231)	%
Irrigation Water Management	225	97%
Conversion to Drip/Micro Irrigation	109	47%
Pump Fuel Conversion	106	46%
Improved Energy Efficiency	139	65%
Convert to Low Pressure Irrigation	37	15%
Install a Variable Frequency Drive	134	58%
Reduce Pumping	231	100%
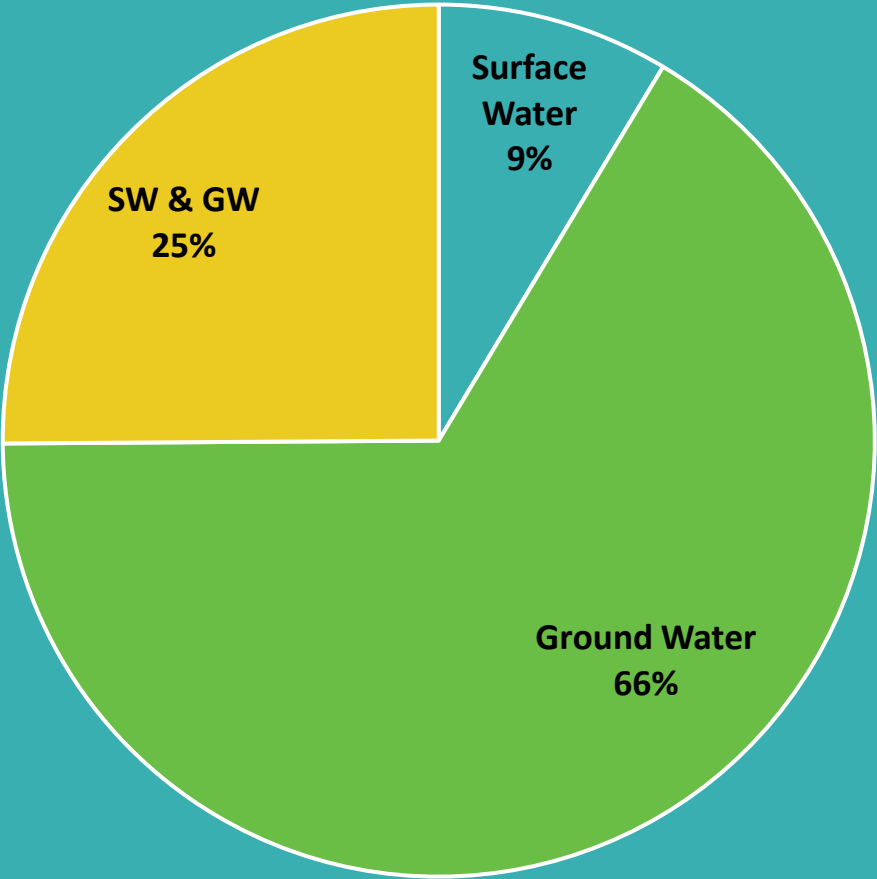
Irrigation Training Resources

- 96.5% agree to undergo irrigation training (2018-2019 Rounds)

- We have a list of resources on our website, many are free

- Recipient and/or irrigator can take the training

- Also provide further irrigation technical resources on our website

**SWEEP Irrigation Training Resources – Updated February 2020**

Below is a list of irrigation training resources for SWEEP awardees who need to obtain training to meet the terms of a SWEEP grant agreement. When participating in a training, obtain evidence (e.g., certificate of completion or receipt) to submit to the grant analyst.

Vendor	Training	Information and Registration
University of California Cooperative Extension	Irrigation seminar or in-field consultation	Find your local UC Cooperative Extension Office
California Polytechnic State University, Irrigation Training and Research Center	Irrigation System Evaluation Short Courses	View irrigation training resources provided by Cal Poly
Fresno State Center for Irrigation Technology	Irrigation Seminars (given periodically)	View irrigation training resources provided by CSU Fresno
US Department of Agriculture, Natural Resource Conservation Service	Irrigation Water Management Plan or irrigation seminar	Development of an Irrigation Water Management Plan (CPS 449) in consultation in a USDA NRCS conservationist. Webinar - Soil Water Sensors for Agriculture - Applications and Usefulness Webinar - Advances in Hi- and Lo-Tech Irrigation Systems: Webinar - Applications for Internet of Things (IoT) for Improved Agricultural Operational Efficiency Webinar - Basics of Pump and Pipeline Design and Selection in Irrigation Systems Webinar - Energy Conservation in Irrigation Systems
Resource Conservation Districts	Irrigation Seminars or in-field consultation	Find your local Resource Conservation District
Irrigation Association	Online course catalog (many courses available)	Irrigation Association Training
California Community Colleges	California Community Colleges Resources	California Community Colleges Agriculture Water Environmental Technology

https://www.cdfa.ca.gov/oefi/sweep/IrrigationTechnicalResources.html

Elevate SWEEP Success Stories
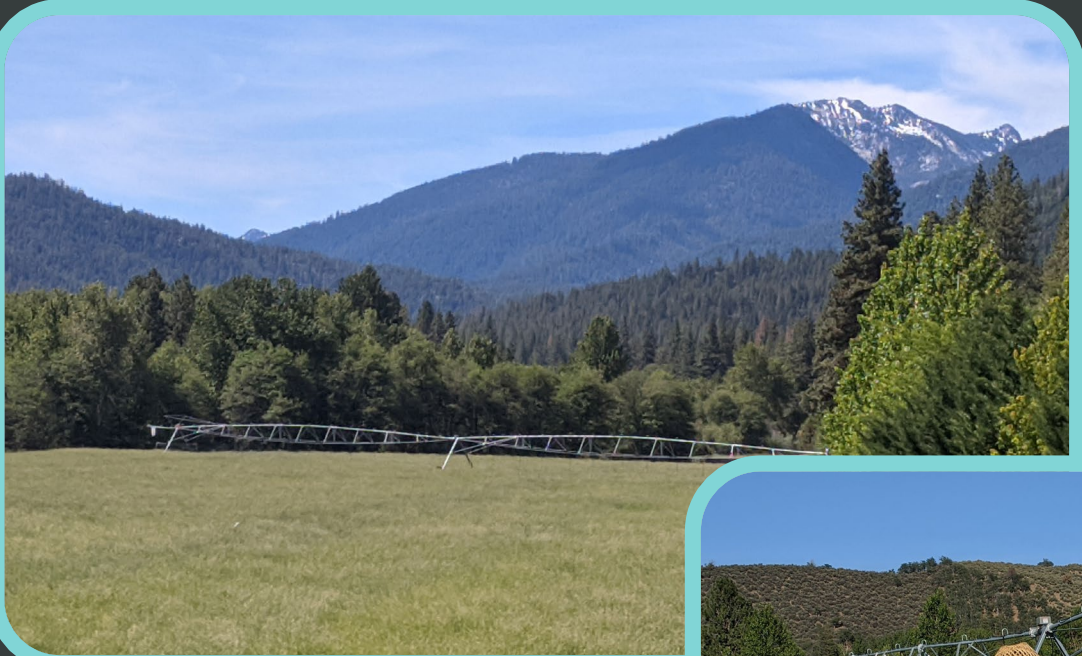
Located next to French Creek, these farmers have been focused on protecting and enhancing habitat.

"Ranching and wildlife protection go together hand in hand"

Michael and Betsy Stapleton

French Creek Ranch (2018 SWEEP)
- Etna, California - Siskiyou County
- Located in SDAC
- 12 acre hay grass production

SWEEP Project Overview
- Switched from big gun sprinkler to center pivot
- Installed new electric pump with VFD
- New solar system

SWEEP Videos:
https://www.cdfa.ca.gov/oefi/sweep/

Projects That Were Not Funded

Admin Review

- Projects are disqualified if they lack required information, request above the maximum award amount, and/or have missing attachments

- Approx. 8% of applications are administrative disqualified (2018-2019 projects)
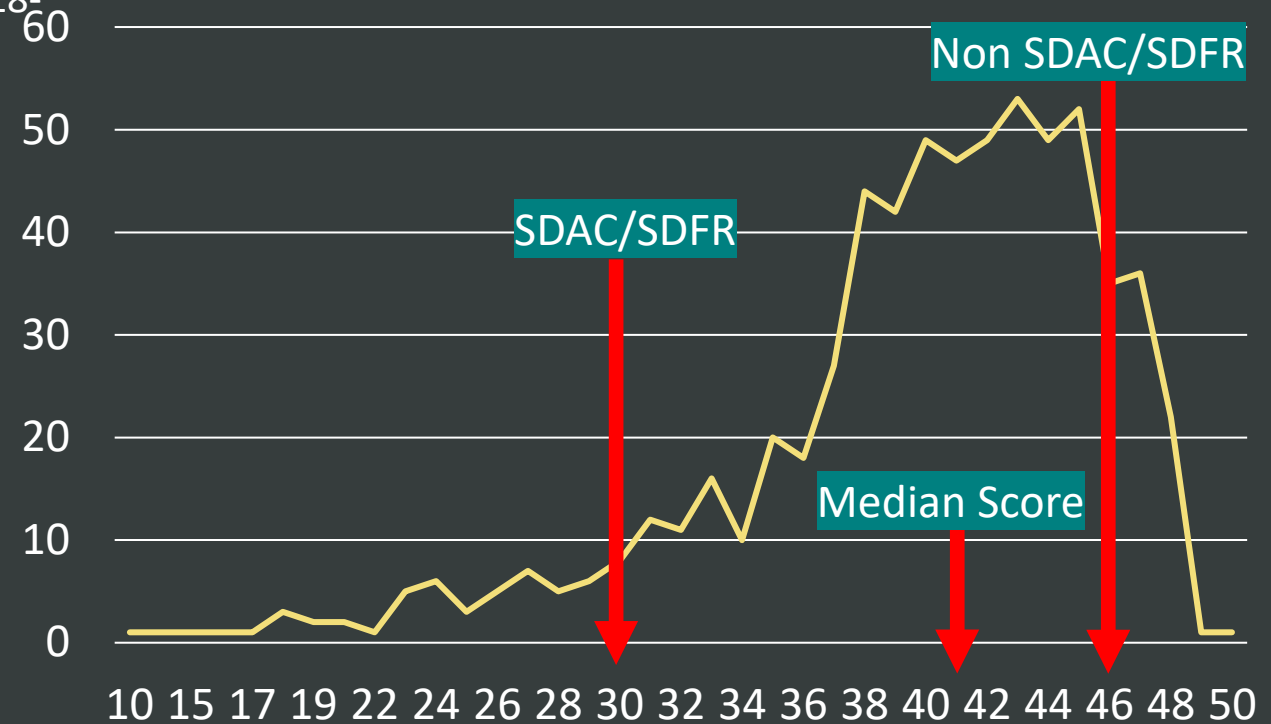
- Have appeal period

Technical Review (Score out of 50)

- Provides feedback for lower scoring applicant

Score

- Average Score: 40 Points

- Median Score: 41

- SDCA/SDFR Priority with Score of 30

- Non SDAC/SDFR Projects were funded until score of 46

- Over subscribed by over 300% (230/711)

Projects Scores

Project Received Assistance from 3ʳᵈ party in 2019

- 68.5% of applicants indicate that they received some level of technical assistance

- People indicated receiving assistance from

    - Resource Conservation Districts

    - UC Cooperative Extension and UC ANR

    - Vendor such as pump companies

    - CDFA provided Workshops

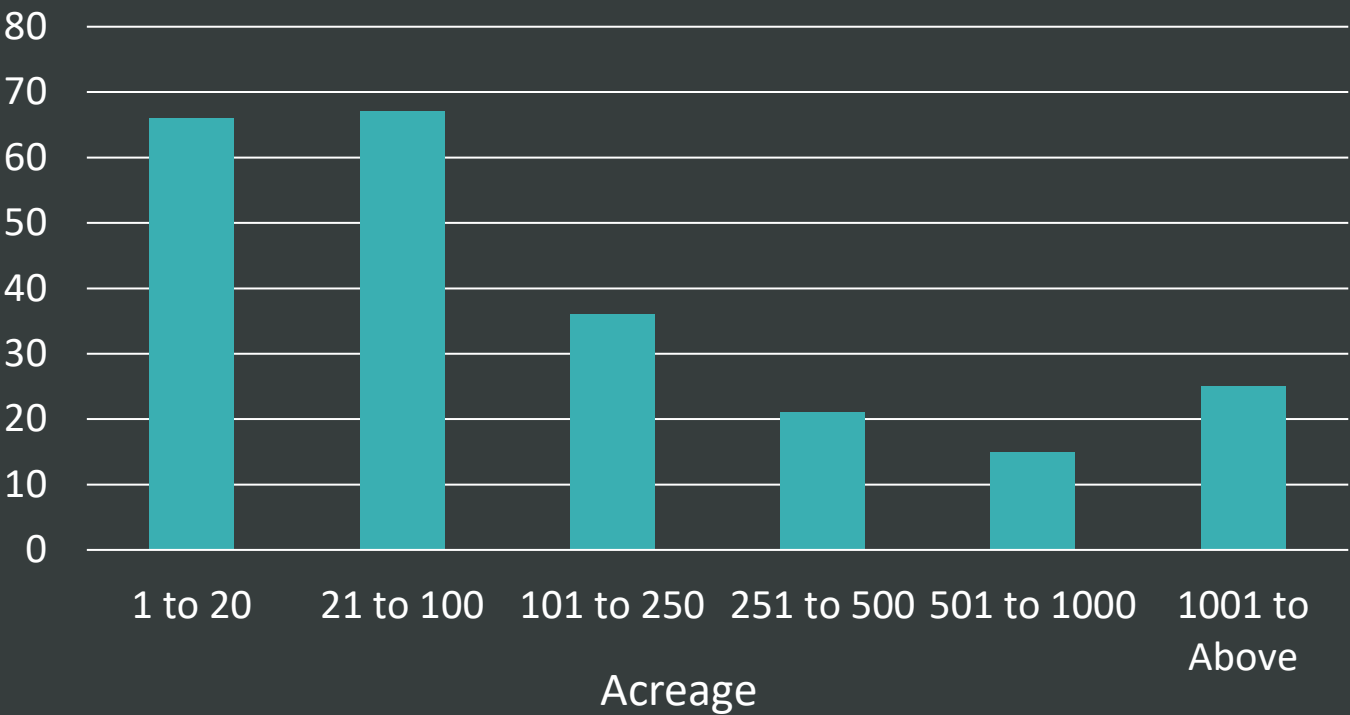   This question will need to be refined in future solicitations

Grants By Total Farm Size

- "The average farm size (in the state of California) was 350 acres in 2018"

  - https://www.cdfa.ca.gov/statistics/PDFs/2018-2019AgReportnass.pdf

- Average Farm Size: 504 acres

- Median Farm Size: 60 acres

- Smallest: 1.8 Acres

- Largest: 23,000 Acres

Acreage Categories

Acreage

Languages and Outreach Materials

- CDFA Request for Grant Applications materials and the application submission portal are in English

- Some but not all Technical Assistance Providers provide application assistance in several Non-English languages (e.g. Spanish, Hmong)

Outreach to SDAC and SDFR

- AB 2377 (2018) requires that CDFA make available 5% of each SWEEP appropriation for technical assistance grants.

- 25% of the funding is required to be spent to provide assistance to socially disadvantaged farmers and ranchers (SDFRs).

- CDFA established a Farm Equity Advisor position within CDFA. SWEEP works closely with the Farm Equity Advisor to ensure SDFR participation in SWEEP.

- CDFA has performed application workshops and listening sessions in Severely Disadvantage Communities (SDAC) locations. The prioritization of SDACs in the most recent rounds of SWEEP was related to Proposition 68 funding.

- SDAC and SDFR receive funding priority

  - Score 30/50 or above

Data Request

Data was requested on the following

- Country agricultural output

- Number of SWEEP projects awarded

- Number of dollars awarded

- Projected GHG savings associated with the projects

- Projected water savings with the projects

Source: California Agricultural Statistics Review 2018-2019 https://www.cdfa.ca.gov/statistics/PDFs/2018-2019AgReportnass.pdf

			2018-2019 CDFA California Agricultural Statistics Review	2018-2019 SWEEP Project Data				
2018	County	Total Value $1000	Leading commodities	Projects Awaded	Projects Applied	Award Amount	Projected GHG Savings (MTCO2e) per year	Projected Water Savings (Acre-in) per year
1	Fresno	$7,911,893	Almonds, Pistachios, Livestock (Unspecified), Grapes (Table)	74	135	$6,094,260	1302	43999
2	Kern	$7,469,670	Grapes (Table), Almonds, Pistachios, Milk	9	31	$868,255	884	11054
3	Tulare	$7,213,141	Milk, Oranges (Navel), Grapes (Table), Cattle & Calves	29	69	$2,245,014	400	33175
4	Monterey	$4,258,628	Strawberries, Lettuce, Broccoli, Wine Grapes	2	30	$198,191	40	1027
5	Stanislaus	$3,569,989	Almonds, Milk, Chickens, Nursery	5	14	$499,569	499	5229
6	Merced	$3,254,144	Milk, Almonds, Chickens, Cattle	13	21	$1,176,520	904	9825
7	San Joaquin	$2,594,221	Almonds, Grapes (Wine), Milk, Walnuts	11	50	$946,200	207	18577
8	Kings	$2,351,983	Milk, Pistachios, Cotton (Pima), Cattle & Calves	2	22	$185,413	8	857
9	Imperial	$2,226,030	Cattle, Alfalfa Hay, Vegetables, Other Hay	n/a	8	n/a	n/a	n/a
10	Ventura	$2,103,232	Strawberries, Lemons, Celery, Raspberries	1	19	$68,200	0	23
11	Madera	$2,056,955	Almonds, Pistachios, Milk, Grapes (Raisin)	8	21	$740,890	453	21325
12	San Diego	$1,769,801	Nursery (Woody Ornaments), Flowers, Nursery (Plants), Avocados	2	15	$200,000	44	562
13	Santa Barbara	$1,522,120	Strawberries, Vegetables, Grapes (Wine), Flowers (Cut)	1	10	$42,398	1	29
14	Riverside	$1,299,208	Milk, Nursery, Grapes (Table), Lemons	3	6	$282,072	149	525
15	Sonoma	$1,106,663	Grapes (Wine), Milk, Livestock Products, Cattle & Calves	2	10	$125,841	6	338

How do EQIP and SWEEP Overlap?

- EQIP(USDA:NRCS) and SWEEP (CDFA) might funds similar types projects. EQIP is more broad.

- Farmers may apply for both programs but SWEEP has a restriction on funding the same project components through both programs.

- EQIP has a different payment structure

AGRICULTURAL MANAGEMENT PRACTICES ELIGIBLE FOR FUNDING THROUGH THE CDFA STATE WATER EFFICIENCY AND ENHANCEMENT PROGRAM (SWEEP)

CDFA has identified eligible agricultural management practices that support water conservation, improved water efficiency, improved energy efficiency and/or reduction of greenhouse gas (GHG) emissions from agricultural water distribution systems on farms. These practices were selected from the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS) Conservation Practice Standards (CPS). These practices, used in various combinations, can support SWEEP's objectives of on-farm water savings and GHG emissions reductions from crop irrigation. SWEEP specific Quantification Methodology and tools to estimate GHG reduction, water savings and co-benefits developed in collaboration with the California Air Resources Board (CARB) and USDA NRCS are currently available for these practices. SWEEP also funds project components that, when used in combination with these management practices, contribute to water conservation, water and energy efficiency improvements and GHG reductions.

- Combustion System Improvement (USDA NRCS CPS 372)
- Irrigation Ditch Lining (USDA NRCS CPS 428)
- Irrigation Pipeline (USDA NRCS CPS 430)
- Irrigation Reservoir (USDA NRCS CPS 436)
- Irrigation System, Microirrigation (USDA NRCS CPS 441)
- Sprinkler System (USDA NRCS CPS 442)
- Irrigation Water Management (USDA NRCS CPS 449)
- Irrigation Land Leveling (USDA NRCS CPS 464)
- Pumping Plant (USDA NRCS CPS 553)
- Structure for Water Control (USDA NRCS CPS 587)
- Salinity and Sodic Soil Management (USDA NRCS CPS 610)
- Water Harvesting Catchment (USDA NRCS CPS 636)

Planning and Dialogue History

- In the legislation that established SWEEP, the Department of Water Resources and the State Water Resources Control Board were both named as coordinating agencies. In addition to consulting with DWR and SWRCB, CDFA coordinated closely with the California Air Resources Board to establish the greenhouse gas quantification methodology and with USDA NRCS. Input from USDA NRCS was especially critical to the development of the water savings calculator. During the latest funding appropriation (bond funding), California Natural Resources Agency was the oversight agency and worked with CDFA to adapt the SWEEP program to bond funding requirements. The Governor's Office, University of California ANR and Resource Conservation Districts have also been integral partners as the program developed. The SWEEP program also has public comment periods and listening sessions where members of the general public and advocacy groups can provide feedback.
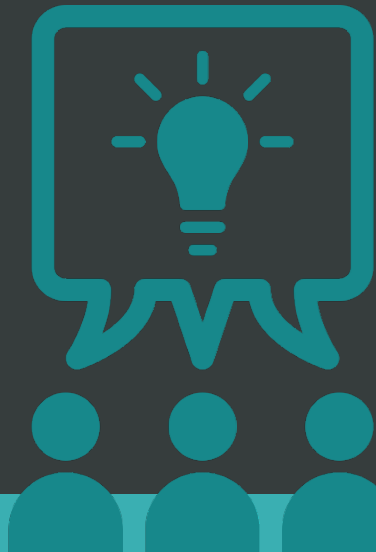
Thank you!

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