How to Participate in the State Water Efficiency and Enhancement Program (SWEEP)

Guidance for Producers Interested in SWEEP Funding

SWEEP Background

In 2014, the Legislature established the State Water Efficiency and Enhancement Program (SWEEP) in response to severe drought conditions. The California Department of Food and Agriculture (CDFA), Office of Agricultural Resilience and Sustainability (OARS) administers SWEEP. SWEEP provides funding to producers in California to improve irrigation systems for the purposes of water conservation, energy use reduction, and the reduction of greenhouse (GHG) emissions. While OARS historically provided grants directly to producers, OARS now administers SWEEP as a block grant program. The awarded organizations, referred to as Block Grant Recipients (BGRs), provide technical assistance and financial assistance to producers through their own independently-operated funding solicitations.

How to Use this Resource

While each SWEEP Block Grant Recipient will have their own unique goals and criteria for selecting projects, you can use this document to understand whether your project may be a good fit for SWEEP funding and to prepare you to gather necessary plans and documentation.

OARS prepared this document to help producers understand:

1. How much funding you can request.
2. What types of projects SWEEP can fund.
3. Who is eligible to receive funding for a SWEEP project.
4. Where a SWEEP project can be located.
5. What to gather and prepare.
6. What the expectations are for funded SWEEP projects.

7. How to seek funding.

How Much Funding You Can Request

For each SWEEP funding cycle, an eligible entity may receive funding for **only one on-farm project of up to $200,000**. The program is reimbursement-based, meaning producers that have secured an award agreement will only be reimbursed after they complete the project. Producers may only receive funding from one Block Grant during a CDFA lead SWEEP funding cycle. In some cases, producers may receive partial advance payments.

What Types of Projects SWEEP Can Fund

SWEEP supports custom irrigation improvement projects that combine multiple strategies to achieve the program's dual purposes of water conservation and GHG emission reductions. SWEEP helps growers achieve these benefits in several ways. Water conservation is targeted through improved irrigation scheduling and more efficient irrigation methods. GHG emissions can be reduced by reducing pumping and associated energy use and/or reducing emissions of nitrous oxide (N_2O). N_2O is a potent GHG, that is released from soils due to microbial processes and fertilization. In irrigated settings, farmers may reduce agricultural N_2O emissions by applying less fertilizer and using micro-irrigation methods, including sub-surface irrigation.

SWEEP encourages producers to develop a holistic project and will fund the critical components of irrigation systems such as, but not limited to, flow meters, filters, and pressure sensors. Producers should consider incorporating several strategies from the table below to achieve the required estimates of water conservation **and** GHG emission reductions. Producers must utilize the SWEEP Project Assessment Tool to estimate water savings and GHG emissions reductions associated with the proposed project.

Strategies

Strategy	Description and Examples
Irrigation Scheduling	This strategy involves the deployment and use of tools to schedule the timing and duration of irrigation events. • Flow Meters • Soil Moisture Sensors

Strategy	Description and Examples
	• Plant Sensors • Weather stations • Telemetry components for the above and system automation
Irrigation System Improvements or Conversions	This strategy involves conversion to a more water-efficient irrigation method, for example flood to drip, or improvement of the existing method. As part of a SWEEP project, CDFA allows groundwater dependent farms to connect to surface water resources.
Fuel Conversion	This strategy involves conversion from a higher GHG-emitting energy source to a lower one. For example, removing a diesel pump and installing an electric pump or off-setting electricity from the grid with renewable energy installation. This strategy may involve utility interconnection.
Energy Efficiency	This strategy involves improving the energy efficiency of existing pumps through retrofit or replacement of an existing pump. This strategy also includes the installation of variable frequency drives (VFDs) to reduce energy use and match pump flow to load requirements.

CDFA encourages producers to maintain flood irrigation infrastructure along with proposed efficient microirrigation system(s) to facilitate groundwater recharge when surface water is available for recharge.

On-Farm SWEEP Project Requirements and Restrictions

- All projects must include flow meters in their proposed project or demonstrate that water use is measured at the project site through existing flow meters or by the water supplier.
- Projects may not involve removing SWEEP-funded hardware from previous awards if that hardware is still within its useful life of 10 years.
- Projects may not involve installation of the same components or practices on a previously funded assessor's parcel number (APN).
- Projects may not involve drilling new or expanding groundwater wells.

Who is Eligible to Receive Funding for a SWEEP Project

The following agricultural land managers are eligible for one on-farm SWEEP project per SWEEP funding cycle:

- Individual farmers and ranchers that are at least 18 years of age operating as sole proprietors, single member LLCs, or lessees.
- Businesses and shared property entities engaged in agricultural production that are registered with the California Secretary of State including Trusts, Estates, Partnerships, LLCs and Corporations, including non-profit (public benefit) corporations.
- California Native American Tribes.

The following individuals or entities are ineligible for a SWEEP on-farm project:

- University farms
- Employees of the individual or entity that owns or leases the land on which the project would occur.
- Individuals that have a conflict of interest, such as:
    - Employees of the BGR or BGR's Contractor(s) or Subrecipient(s)
    - Members of the Board or of another governing body of the BGR
    - Immediate family members (parents, spouses, or children) of individuals who make subaward decisions, either as BGR employees delegated with that task, or as members of scoring or awarding committees.

Where A SWEEP Project Can Be Located

SWEEP on-farm projects must be:

- Located completely within the boundaries of the State of California
- Located on an irrigated agricultural operation.
    - An agricultural operation is defined for the purpose of this program as row, vineyard, field and tree crops, commercial nurseries, nursery stock production and greenhouse operations producing food crops or flowers as defined in Food and Agriculture Code §77911.
    - Hemp cultivation fields are eligible, but medicinal and recreational cannabis cultivation fields are ineligible.

What To Gather and Prepare

To prepare to request funding for a SWEEP project a producer must gather and prepare several documents. This will often involve working with a technical assistance provider and/or vendor to determine the goals of the project and the appropriate strategies to achieve water savings and GHG emission reductions and explore the cost of such a project. BGRs offer **free** technical assistance to producers.

Project Design

At a minimum the SWEEP project design must include the following:

- Schematic of the locations of proposed or improved infrastructure and technology including irrigation piping, reservoirs, pumps, and sensors. For low complexity projects, producers may utilize commonly available mapping or imagery platforms to create a holistic project design
- Labeled Assessor's Parcel Numbers (APNs)
- Pertinent agronomic information, such as the crop type, acreage and water source
- Location, engineering, and energy output specifications of any proposed renewable energy installations
- Location of existing and proposed flow meters and sensors (e.g., soil, plant evapotranspiration)

SWEEP Project Assessment Tool and Supporting Documentation

Producers must use the SWEEP Project Assessment Tool to estimate the water and GHG savings of the proposed project. The assessment tool must show that the proposed project will reduce both GHG emissions and water use. To use the project assessment tool, producers will need the following information:

- ***Crop History and Projection:*** Three years of crop history and details of the crop that will be cultivated after the project is complete
- ***Project Site Details:*** The acreage of each crop involved in the project, the source(s) of irrigation water (groundwater, surface water, or both), if specific irrigation hardware is already present (flow meter, VFD, etc.).
- ***Irrigation System History and Projection:*** The current irrigation system type and the type of irrigation system or improvements being proposed

- ***An Overall Pump Efficiency (OPE) test for every existing irrigation pump that would be involved in the project:*** This test should document horsepower, pumping depth, output pressure, and other factors used to calculate the OPE. The pump test must have been conducted within the previous three years.
    - If there are no existing pumps, producers will prepare an attestation confirming that there are no existing irrigation pumps that provide irrigation water to the project site.
- ***Twelve months of energy records for the pumps identified as being part of the project:*** These records can include utility bills, fuel logs, and/or field operational logs documenting pumping energy use. OARS defines field operational logs as on-farm data compiled during a growing season and maintained as a common business practice by the agricultural operation to capture an actual time period of on-farm energy use. CDFA does not consider documents that provide estimates retroactively to be field operational logs.
    - In situations where there are no baseline energy inputs for the project location, producers will prepare an attestation confirming that current irrigation systems have no energy inputs.
- ***Renewable Energy Design and Specifications:*** If the proposal involves the installation of renewable energy, the capacity (kW) of the renewable system is a required input**.**
- ***Proposed Pump Details:*** Pump and motor specifications for all proposed pumps

SWEEP On-Farm Project Budget and Supporting Documentation

Using the SWEEP On-Farm Project Budget, identify the costs of all project components. When proposing to include a renewable energy installation in the project, producers must obtain and submit a vendor quote as supporting documentation for the budget.

- OARS enforces several budgetary limits and a maximum request of $200,000 per project:

- 25% or less of the total cost of the on-farm project may be allocated to labor.

- Irrigation water management or renewable energy must be less than 40% of the grant request.

Unallowable costs, include, but are not limited to:

- Project design costs (e.g., engineering)
- Costs associated with project management, grant-writing or vendors, including drive time and fuel cost
- Post-project service charges and maintenance costs associated with the irrigation system
- Any labor provided by the applicant or applicant's employees (such costs
- could be categorized as "in-kind")
- Supplies and equipment costs not related to irrigation or water distribution systems
- Equipment with useful life of less than two years
- Irrigation training courses
- Pump efficiency tests

Implementing an Awarded On-Farm SWEEP Project

If your project is selected for an award of funding by a SWEEP Block Grant Recipient, they will work with you to implement your project. BGRs will require producers to maintain and submit documentation and receipts associated with the project, communicate regularly about the project and will report details of the project to CDFA. BGRs will perform site visits and take geotagged photographs before and at the close of your project to ensure that the project was completed as planned.

After your project is complete, OARS expects you to use and maintain your funded project for a minimum of 10 years. OARS may directly, or through a contractor, reach out to you to collect data and information for program evaluation. This data can include water and energy use records following project completion.

How to Seek Funding

Identify a Block Grant Recipient. BGRs' contact information will be posted on the SWEEP webpage - consider the counties they serve when selecting who to contact.

Request Technical Assistance. Block grant recipients provide technical assistance to producers as they participate in SWEEP. This assistance includes:

- One-on-One project development support
- Implementation assistance

Submit Your Funding Request. When they are accepting applications, BGRs will provide a list of application items to submit. OARS will assist BGRs in screening projects for eligibility. Specifically, OARS will screen for producer' or organization' eligibility and whether the project location is eligible.

Funding is Limited - Stay informed. To stay up to date on future OARS funding opportunities, including SWEEP, visit the CDFA Grants Webpage or sign up for the OARS Newsletter to receive timely updates and announcements.

Contact us at CDFA.Sweeptech@cdfa.ca.gov with any questions!