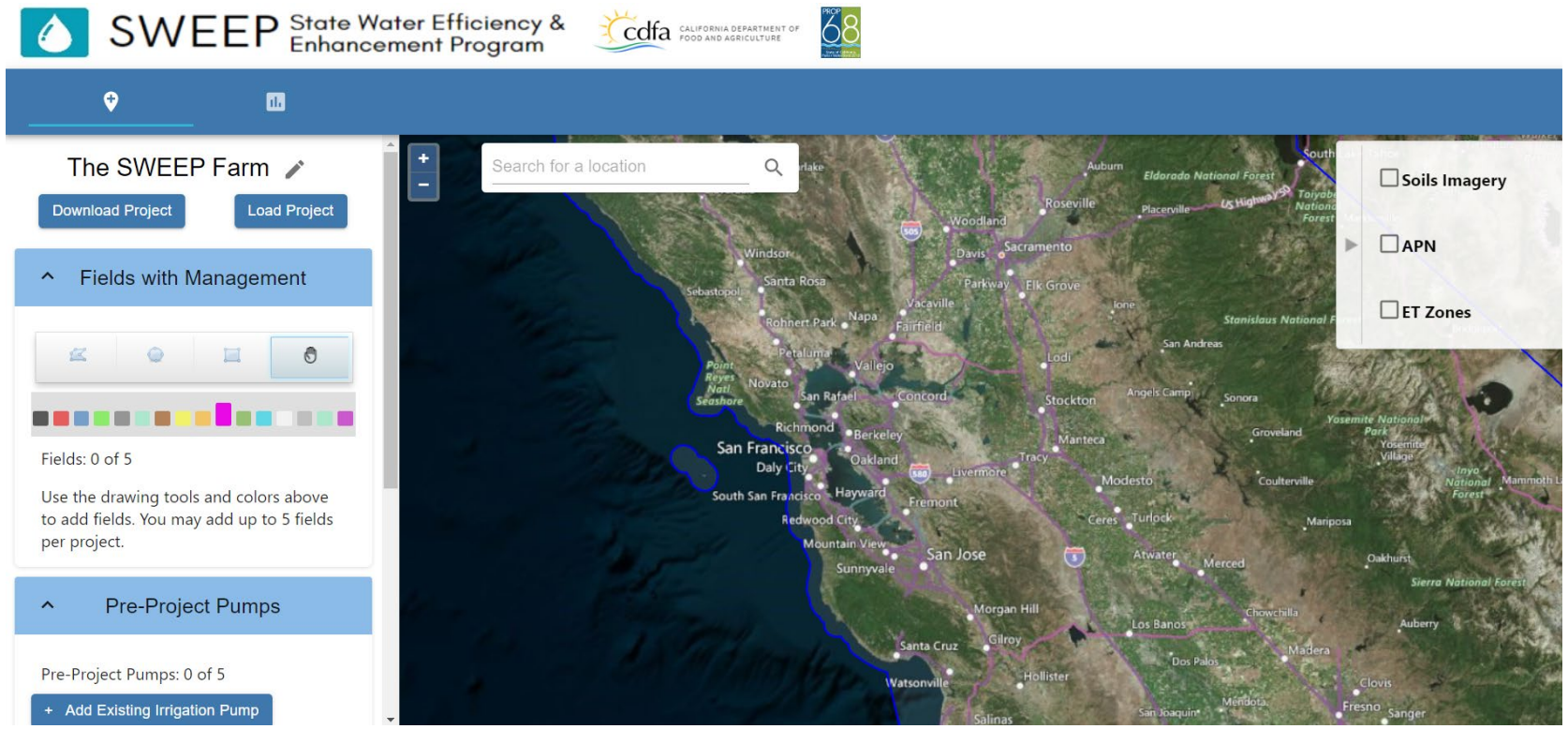
State Water Efficiency and Enhancement Program

UPDATES FOR THE 2023 DIRECT-TO-FARMER SOLICITATION

PRESENTATION TO THE ENVIRONMENTAL FARMING ACT SCIENCE ADVISORY PANEL

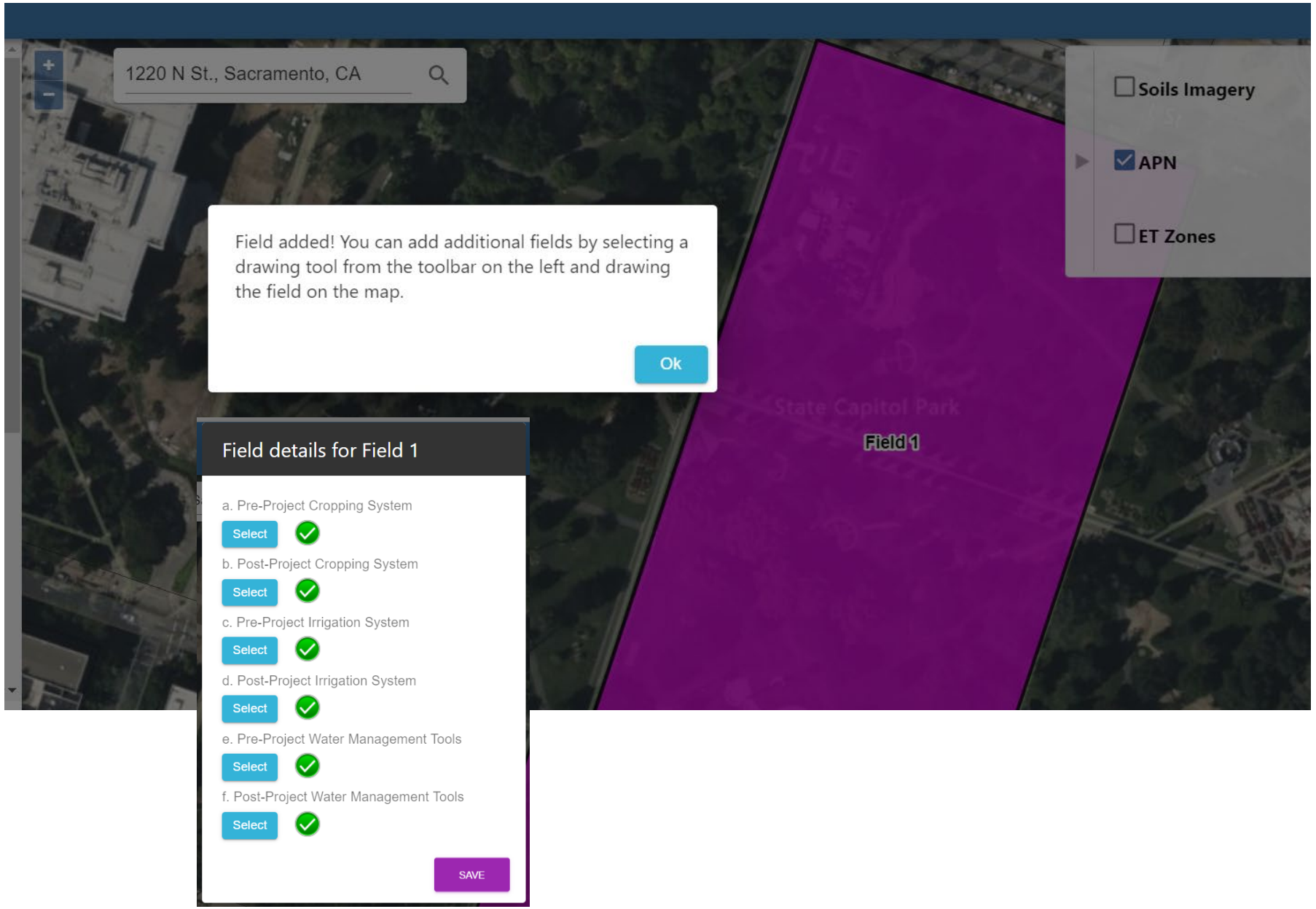
AUGUST 2023

New SWEEP Assessment Tool



- Water Savings
- GHG emissions, including N_2O emissions and pump related emissions
- Provides project design information
- Spatial layers important to calculations and application

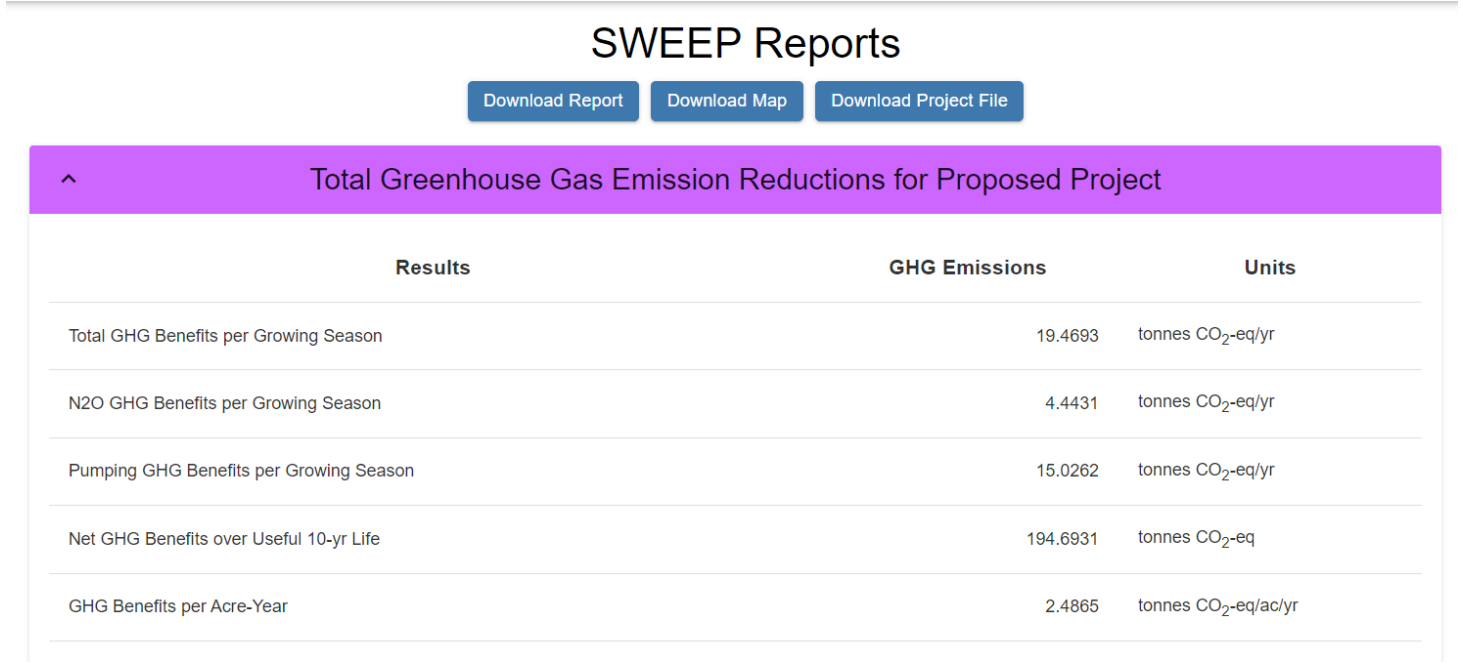
https://calirrigationtool-sweep.com/user/Map



Basic Steps:

- Name Project
- Add Fields
- Add Field Management
- Add Current Pumps
- Add Planned Pumps
- Add Baseline energy data
- View Report
- Download Report
- Download Project File
- Optional: Download Map

Comprehensive Report



Results	GHG Emissions	Units
Total GHG Benefits per Growing Season	19.4693	tonnes CO_2-eq/yr
N2O GHG Benefits per Growing Season	4.4431	tonnes CO_2-eq/yr
Pumping GHG Benefits per Growing Season	15.0262	tonnes CO_2-eq/yr
Net GHG Benefits over Useful 10-yr Life	194.6931	tonnes CO_2-eq
GHG Benefits per Acre-Year	2.4865	tonnes CO_2-eq/ac/yr

The downloadable report is in excel format and provides all inputs and the outputs. This will be useful to technical review of the project.

A downloadable project .json file allows users to “save” their work and return later.

Summary of Major Updates for 2023

FROM MOST RECENT DIRECT TO FARMER SOLICITATION

Return to Competitive Process

First-come, First-serve to Competitive

The SWEEP application involves significant time gathering baseline records, preparing project design, consultation with vendors or technical assistance providers. It's a customizable program.

We expect the competitive process with single deadline:

- Improve applications, outcomes and grant management
- Support Technical Assistance Providers (TAPs) in their assistance of Socially Disadvantaged Farmers and Ranchers (SDFRs)
- Relieve administrative challenges of first come first serve, namely the time-critical administrative review

Choice of Quantification Tools

Applicants may choose to use the established, excel-based water and GHG calculators or they may opt to use the new tool.

Applicants will continue to submit supporting documentation for pumps impacted by the project:

- Pump efficiency test (within 3 years)
- 12 months utility or fuel records
- Pump specifications for new pumps
- Quote for renewable energy (if relevant)

<u>Incentive to use new tool:</u>

N_2O benefits are calculated and may increase GHG reductions

Option 1	Option 2
SWEEP Irrigation Water Savings Assessment Tool (excel)	SWEEP Project Assessment Tool
California Air Resources Board Greenhouse Gas Calculator (excel)	

Eligibility of Previously Funded Parcels

Applicants may apply for funding on parcels that have previously been funded by SWEEP

- SWEEP Project life is 10 years
- SWEEP is nearly 10 years old
- Many early projects were simple with an opportunity to improve other aspects of irrigation water and energy efficiency
- This will benefit small-acreage farmers who have not been able to benefit from SWEEP more than once.
- Restriction: SWEEP components less than 10 years old may not be removed.
- Cumulative maximum award of $600,000 will remain in effect.

Scoring Rubric

The Technical Review Scoring Criteria To Be Converted to a Benefit-Focused Rubric

- Focus the work of technical reviewers on validating water and GHG calculations
- Integrate "Additional Considerations" which have been objective, yes/no factors that reflect priorities

Criteria	Maximum Points
Merit and Feasibility	12
Water Savings & Calculations	12
Greenhouse Gas Reductions & Calculations	12
Budget	8
Applicant Not Previously Awarded	3
Additional Considerations	3
Total	**50**

Concept for Scoring Rubric

Category	Criteria	Points Available
Quantity of Water Savings ***(ac-in per acre)***	Less than 1 ac-in Not Eligible 1 to 4 ac-in = 6 >4 to 8 ac-in =8 >8 to 12 ac-in = 12 >12 ac-in = 15	15
Quantity of GHG Savings ***($MTCO_2e$ per acre)***	Less than .01 Not Eligible .01 to .05 = 6 >.05 to .1 = 8 >.1 to .5 = 12 >.5 = 15	15
Project Elements & Expected Benefits	• Groundwater Sustainability (2) • Energy Efficiency (2) • Renewable Energy (2) • Water Recycling or Capture (2) • Air Quality (2) • Climate and Drought Resilience (2) • Water Quality (2) • Commitment to Training (2)	Up to 10 points
Budget	• The itemized budget includes all the major components identified in the application (4) • Renewable energy components are greater than 25% of the budget (-2) • Irrigation scheduling tools are greater than 25% of the budget (-2)	X
Total		**X**

Discussion and Feedback

Problem Statement: In some projects the proportion of the budget dedicated to Irrigation Water Management or Renewable Energy Components may be outsized or unbalanced in relation to expected benefits or alignment with program.

- IWM tools can save water and increase efficiency, but SWEEP quantification tool estimates 15% at the most.
- Renewable energy installations help applicants achieve the necessary GHG reductions to be eligible for a SWEEP project, but at times the renewable energy costs outweigh irrigation system improvements. There are other incentives for installation of renewable energy.

Proposal: To encourage applicants to propose a well-rounded project that will have lasting benefits tied to irrigation improvements, a scoring penalty is proposed for projects that dedicate >25% of the budget to renewable energy or irrigation management tools.

- What are the Panel members' thoughts on this proposal?
- How can the SWEEP program strike the appropriate balance?