

**2014 STATE WATER EFFICIENCY AND ENHANCEMENT
PROGRAM
SECOND SOLICITATION
APPLICATION GUIDELINES**

PROGRAM PURPOSE:

The California Department of Food and Agriculture (CDFA) is pleased to announce, in coordination with the State Water Resources Control Board (SWRCB) and the Department of Water Resources (DWR), a second competitive application process for the 2014 State Water Efficiency and Enhancement Program (SWEEP).

The program's objective is to provide financial incentives for California agricultural operations to invest in water irrigation treatment and/or distribution systems that reduce water and energy use and increase water and energy efficiencies. CDFA has developed several funding and ranking criteria consistent with this objective; see "Ranking Criteria" section on page 5.

FUNDING:

Emergency drought legislation (Senate Bill 103) authorized CDFA to disperse up to \$10 million to agricultural operations investing in irrigation and distribution systems in California that reduce water use and greenhouse gas (GHG) emissions. The maximum grant award is \$150,000 with a recommended (not required) 50% match of the total grant request. CDFA reserves the right to offer an award different than the amount requested.

ELIGIBILITY:

- Installation must be on a California agricultural operation. For the purpose of this program, an agricultural operation is defined as row, vineyard, field and tree crops, commercial nurseries, nursery stock production and greenhouse operations.
- The project **must** reduce water use **AND** GHG emissions. Applications that do not provide information on reducing water consumption **AND** GHG emissions will be ineligible for funding.

TIMELINE:

The application period begins September 29, 2014 at 8 a.m. PST. The deadline to submit an application is November 10, 2014 at 5 p.m. PST. No exceptions will be granted for late submissions.

CDFA will conduct three workshops and one webinar on how to complete and submit a 2014 SWEEP application.

*Projects must save
water and reduce
greenhouse gases*

*Funding up to
\$150,000
per project*

*Applicants awarded
funding during the
first solicitation may
apply for a new
project*

*Attend one of three
Application
Workshops. For
schedule and
locations;
[www.cdfa.ca.gov/go/
SWEEP](http://www.cdfa.ca.gov/go/SWEEP)*



Applications may be submitted beginning on September 29, 2014

Application must be submitted by November 10, 2014, 5 pm PST

No late proposals – submit early!

See Funding and “Ranking Criteria” in Step 3 (Page 5)

Applicants not awarded funding during the first solicitation are encouraged to apply

Applicants must use and submit documentation on the calculated water savings and GHG reductions

SWEEP grant funds cannot be used to expand existing agricultural operations and bring into production new agricultural lands

SWEEP funding cannot be combined with EQIP financial assistance

September 29, 2014 8:00 am PST	Invitation to submit Grant Applications
October 6 – 16, 2014	Application Workshops and Webinar
November 10, 2014 5:00 pm PST	Grant Applications Due (Grant applications may be submitted beginning September 29 through November 10, 2014)
November 2014	Grant Application Technical Review Process
December 2014	Announce and Award Funds

REQUIREMENTS AND APPLICATION PROCEDURES:

Applications will be evaluated based on specific criteria aimed at funding projects that increase water conservation by improving water irrigation and/or distribution systems, and through energy efficiencies that reduce GHG emissions (see Application Procedures, [Step 3](#) for a list of ranking criteria).

An agricultural operation can only submit one application using a unique tax identification number. Project installation must be completed by June 30, 2015.

Applicants are required to submit a project design for the proposed water irrigation and/or distribution system, including an explanation of how water savings and GHG reductions will be achieved. See Application Procedures, [Step 2](#) for more specifics on project design requirements.

Applicants must use actual on-farm energy and water usage information in their water savings and GHG reduction calculations. Applicants must list and attach the documentation used in their water savings and GHG reductions calculations in the application. Applications without the documentation used in the calculations will not be considered for funding.

SWEEP grant funds cannot be used to expand existing agricultural operations, and therefore, additional new acreage cannot be converted to farmland. If awarded, Grant Recipients are expected to use and maintain their system for a minimum of 10 years or according to the United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Practice Lifespan Table. http://www.nrcs.usda.gov/Internet/FSE_DOCUMENTS/stelprdb1076947.pdf

Applicants must use USDA, NRCS payment schedules to the extent feasible ([Appendix D](#)). Total project costs cannot exceed the cost provided in the USDA, NRCS payment schedule.

SWEEP funding cannot be combined with USDA, NRCS Environmental Quality Incentive Program (EQIP) financial assistance. However, other

energy-reduction based incentive programs may be used with the SWEEP program.

If awarded, Grant Recipients must agree to a verification component with CDFFA. CDFFA will coordinate with the Resource Conservation Districts (RCD) to verify proper completion of the project, and to gather quantitative data on water efficiencies gained and reduction of GHG emissions achieved.

Specific application procedures are provided below in several steps.

Step 1: Electronic Grant Application

CDFFA has entered into an agreement with the SWRCB to host a web-based application submission process. Grant applications must be submitted electronically on the Financial Assistance Application Submittal Tool (FAAST) system. Applicants must register to receive a login account for FAAST in order to submit an application. FAAST can be accessed through the SWRCB website: <https://faast.waterboards.ca.gov>.

FAAST is organized into various tabs and includes a question and answer format. There is a series of questions requesting information regarding the grant application project. Questions are answered in one or more of the four following formats: a drop down menu; a check box; a text box with predetermined character limitations; or as a document attachment (see [Appendix A](#) for a list of required grant application questions as they appear in FAAST). Please refer to the CDFFA SWEEP website for further guidance: www.cdfa.ca.gov/go/SWEEP.

Prior to beginning the electronic data entry using the FAAST system, applicants are encouraged to gather all required information using Appendix A and B to facilitate effective and timely submission of the application. Applicants are required to submit attachments for; (1) Project Design, (2) Budget Worksheet ([Appendix B](#)) and (3) Documents used for water savings and GHG reductions. If applicable, applicants are encouraged to attach matching funds written documentation for the cash match component.

Step 2: Project Design, Calculations and Resources

A design plan is essential for establishing water and energy efficiency. A design plan **must** be submitted with the grant application. The project design must include a schematic detailing the irrigation distribution system layout (e.g., pipelines, valves, filter stations, distribution uniformity values), including agronomic information (e.g., water application rate, crop water demand). If the project includes new infrastructure, such as new irrigation piping, pumps, or sensors, then a detailed schematic must be provided and include locations of that infrastructure on the field. When projects involve improvements to existing infrastructure, the project design must include a schematic showing

Need help?

Program related questions contact CDFFA at grants@cdfa.ca.gov

FAAST Technical Support contact SWRCB at (866) 434-1083 or faast_admin@waterboards.ca.gov

Complete and submit application using FAAST; <https://faast.waterboards.ca.gov>

See Appendix A for the list of questions asked in the application (Page 8)

For projects that do not include water distribution or irrigation equipment, a narrative describing the project and providing agronomic information must be submitted with the grant application as the Project Design Plan

where the improvements will be made to existing infrastructure. Design plans must include pertinent agronomic information, such as the crop and the water distribution uniformity value of the irrigation system.

When irrigation systems are being installed or improved, a global distribution uniformity (DU) of at least 0.92 should be specified in the design plan submitted to SWEEP. If the design plan calls for the use of evapotranspiration (ET) based irrigation scheduling, the agricultural operator must be able to show that water deliveries can be made on a consistent basis to accommodate that scheduling.

Applicants must provide calculations of potential water savings and GHG emission reductions. [Appendix C](#) refers to several online tools for determining water use and GHG emission calculations. To assist with GHG emission calculations, CDFA has developed a user-friendly calculator for GHG calculations from fuel reductions; <http://apps4.cdffa.ca.gov/eicalculator/>

In addition to irrigation companies providing design plans, including determining DU, an applicant's local RCD may be able assist with his or her project design and baseline water and GHG quantifications.

The USDA, NRCS provides conservation planning assistance, including planning for irrigation and energy use systems. Applicants may contact their local NRCS office to obtain eligibility information regarding conservation planning.

A local electric or gas utility company may offer assistance in energy efficiency information and future financial incentives. Through local training centers and education events, they can provide information about high performance irrigation practices that save energy and water, as well as pump efficiency testing services and online self-benchmarking tools. CDFA strongly encourages all applicants to utilize their utility company as a key resource for determining the best strategy to improve water pumping efficiencies and potential to reduce GHGs.

Publicly owned and smaller utilities also may be able to assist in this effort. The applicant's monthly energy bill will list the utility being used. For applicants not utilizing one of the above resources to determine their water and energy savings, see [Appendix C](#), "Tools for Determining Water Use and Greenhouse Gas Emissions."

Step 3: Review Process

CDFA will conduct two levels of review during the grant application process. The first level of review is an administrative review to determine whether all required grant application information was entered along with all required

**CDFA GHG
reduction tool for
fuels**
[http://apps4.cdffa.ca.gov/
eicalculator/](http://apps4.cdffa.ca.gov/eicalculator/)

*Applicants can
calculate water use
and GHG emissions
using the tools
provided in
Appendix C*

Local RCD Offices:
[www.conservation.ca.gov/
dlrp/RCD/Pages/Calif
orniaRCDs.aspx](http://www.conservation.ca.gov/dlrp/RCD/Pages/CaliforniaRCDs.aspx)

**Local USDA, NRCS
Offices:**
[http://offices.sc.egov.usd
a.gov/locator/app](http://offices.sc.egov.usda.gov/locator/app)

*Utilities may provide
energy efficiency
information.*
**Contacts For Major
Investor Owned
Utilities:**

*Pacific Gas & Electric
BusinessEnergySavings
Programs@pge.com*

www.pge.com/ag

**San Diego Gas &
Electric**
(800) 336-7343
[www.sdge.com/water-
infrastructure-and-
system-efficiency-
program](http://www.sdge.com/water-infrastructure-and-system-efficiency-program)

*Jeff Alexander, Certified
Energy Manager-
JAlexander@semprutil
ities.com*

**Southern California
Edison**
(800) 655-4555

attachments. The second level is a technical review to evaluate grant applications based on the ranking criteria. The technical reviewers are a group of agricultural irrigation system specialists and experts affiliated with the University of California and California State University systems.

Ranking Criteria

CDFA's intent is to fund projects that can produce the highest degree of water savings and GHG emission reductions. The criteria below offer many different opportunities for agricultural operators to achieve water saving and GHG reductions. Applicants are not required to address all criteria; however, grant applications addressing multiple criteria are encouraged and will be ranked higher than those using fewer criteria. The following criteria were established for ranking applications:

1. Largest water savings (acre-inches/year/acre) AND largest GHG savings (Tonnes CO₂ equivalent/year/acre).
2. Use of soil moisture sensors (NRCS Practice Standard 449) with electronic data output and flow meters, or electronic weather station linked to irrigation controller, for growers to ensure efficient irrigation scheduling (must specify with a new or existing system); new systems receive higher ranking.
3. Use of evapotranspiration (ET) based irrigation scheduling, such as the California Irrigation Management Information System (CIMIS), and flow meters on existing or proposed projects to optimize water efficiency for crops.
4. Reduction of GHGs from water pumping. For example, the conversion of a fossil fuel pump to solar, wind or electric. NRCS Conservation Practice Standard 372 may apply.
5. Use of micro-irrigation or drip systems to replace flood or furrow irrigation. Must follow NRCS Conservation Practice Standards 441 or 442.
6. Use of low pressure irrigation systems to reduce pumping and energy use.
7. Use of Variable Frequency Drives to reduce energy use and match pump flow to load requirements. Recommend following NRCS Conservation Practice Standard 533.
8. The use of any other management practice(s) related to on-farm water distribution that will result in water savings and GHG reductions.

In addition to the eight criteria listed above, the environmental and social co-benefits of the project will be considered during the review process. Examples of co-benefits include, but are not limited to, improved air quality and facilitation of nitrogen fertilizer management with irrigation management to reduce the movement of nitrates to groundwater. Applicants are also strongly encouraged to describe the benefits of the proposed project to disadvantaged

Applicants are not required to address all funding and ranking criteria

Applications addressing multiple criteria will be ranked higher than those using fewer criteria

Applications including environmental and social co-benefits will receive additional consideration

communities. A “Disadvantaged Community” is defined as a community with a median household income less than 80 percent of the statewide average ([See Appendix A](#)).

Although not required, it is recommended that grant applications include a 50% match of the total project cost. Applications that include matching funds will receive priority consideration for funding. Matching funds are defined as a portion of project costs not borne by the funding source, and can include cash and/or in-kind contributions. In-kind contributions include costs associated with contractors/consultants (labor) involved with the installation of the project. Applicants choosing to use matching funds are encouraged to submit written documentation describing the source of matching funds with the grant application ([See Appendix A](#)).

Step 4: Project Approval

CDFA will notify all applicants regarding the status of their grant applications. Successful applicants will receive specific instructions regarding the award process including information on project implementation and verification.

Step 5: Project Implementation

Once a Grant Agreement is executed, Grant Recipients can begin implementation of the project. Due to the short timeline associated with the emergency drought funds, projects are expected to be installed by June 30, 2015.

Step 6: Project Verification

Following project implementation, CDFA will work with a RCD to initiate the verification component. The verifier from the RCD will visit the project site, and inspect the completed project to ensure design specifications were met and the system is working effectively. In addition, the verifier will quantify the water efficiencies gained and reductions in GHG emissions to the extent feasible.

Step 7: Funding Allocation

CDFA will provide Grant Recipients with the necessary grant award and invoicing documents. Upon execution of the Grant Agreement, CDFA may allocate up to 25% of the award to begin project implementation. The remaining funds will be allocated on a reimbursement basis through monthly invoicing. Invoicing and closeout of all invoices must be completed by June 30, 2015.

*50% matching
funds is
encouraged
but not required*

*Grant Awardees
must agree to an
on-farm
verification
component*

ASSISTANCE AND QUESTIONS

CDFA cannot assist in the preparation of grant applications; however, general questions may be submitted to grants@cdfa.ca.gov. In order to ensure all applicants benefit from receiving all submitted questions and answers, CDFA will provide regular updates to the SWEEP Frequently Asked Questions (FAQ) link on the SWEEP webpage. As applicants submit general questions regarding SWEEP, the FAQs will be updated according to the following schedule:

FAQs Update Schedule	
Questions Received by:	Responses Posted by:
10/10/14 – 5:00 pm PST	10/15/14 – 5:00 pm PST
10/24/14 – 5:00 pm PST	10/29/14 – 5:00 pm PST
11/5/14 – 5:00 pm PST	11/7/14 – 5:00 pm PST

In order to maintain the integrity of the competitive grant process, CDFA is unable to advise and/or provide individuals with any information regarding specific applications during the solicitation process.

The SWRCB website at <https://faast.waterboards.ca.gov> also contains a Frequently Asked Questions section and a User’s Manual for the FAAST system. If after reading the information available on the website, you have questions about the FAAST system, please contact FAAST customer service at (866) 434-1083, Monday through Friday, 8:00 a.m. to 5:00 p.m. PST or via email, faast_admin@waterboards.ca.gov.

*See FAQs;
[www.cdfa.ca.gov/go/
SWEEP](http://www.cdfa.ca.gov/go/SWEEP)*

*Final deadline for
FAQs:
11/5/2014, 5:00 pm
PST*

Need help?

*Program related
questions contact
CDFA at
grants@cdfa.ca.gov*

*FAAST Technical
Support contact
SWRCB at
(866) 434-1083
or
faast_admin@waterboards.ca.gov*

APPENDIX A: GRANT APPLICATION QUESTIONS (AS THEY APPEAR IN FAAST)

Under the General Information and Project Budget tabs, applicants must respond to the following:

Applicant Organization:

Legal name of organization that will be the lead applicant for this project

Submitting Organization:

Name of organization submitting application

Project Title:

Insert a title that is clear, concise and brief

Project Description:

Summary of application

Project Budget:

Funds requested and anticipated matching funds

Under the Application Questionnaire tab, applicants must also respond to the following Grant Application questions based on SWEEP requirements:

SECTION I: PROPERTY LOCATION

1. Does this project build upon a previously funded SWEEP project?

If yes, provide the Agreement Number, amount awarded, and describe how this project will further the previously funded project.

2. Indicate property location; where project will be implemented. Address the following:
 - a. County
 - b. Assessor's Parcel Number(s)
 - c. Acreage that will be impacted by the project
 - d. Current land use and crop

SECTION II: RANKING CRITERIA

The questions in Section II apply to the program criteria established for ranking applications. The purpose of this section is to evaluate the degree of water savings and greenhouse gas emission reductions.

3. *Ranking Criteria*

Indicate projected water savings AND greenhouse gas emission reductions.

- a. Indicate projected water savings (acre inches/year/acre).

- b. Indicate the projected greenhouse gas emission reductions (Tonnes of CO₂ equivalent/year/acre).
- c. Address all additional criteria applicable to the project and provide an explanation for all criteria selected. (Refer to [Appendix D](#) of the Application Guidelines for practice standards).

SECTION III: CO-BENEFITS

4. *Co-Benefits*

Select all environmental and social co-benefits the project potentially impacts and explain all potential co-benefits selected. Examples of co-benefits include, but are not limited to, improved air quality and facilitation of nitrogen fertilizer management with irrigation management to reduce movement of nitrates to groundwater.

- a. If applicable, indicate how the project will potentially benefit disadvantaged communities.

The following are two recommended resources to identify disadvantaged communities:

- <http://oehha.ca.gov/ej/ces11.html>
- <http://www.arcgis.com/home/item.html?id=06334e7e74314aeca2cbd7af8268eeef>

SECTION IV: CURRENT WATER USE SYSTEM

The questions in Section IV apply to the **current** irrigation and/or distribution system. The purpose of this section is to understand an applicant's current water use and greenhouse gas emissions.

5. *Description of Current Water Use system*

Describe in detail the **current** water use system and associated energy sources.

6. *Current baseline water use*

Indicate current baseline water use per acre (acre inches/year/acre). Refer to [Appendix C](#) of the Application Guidelines for assistance in calculating baseline water use.

7. *Explain how water use baseline was calculated and list the documents used in the calculations.*

If "water use calculator" or "other" is selected, provide a detailed explanation and what values were used from the listed documents. If flow meter information was used, compile the data into an electronic file and attach them to the application (see question number 8 below).

8. *All documents used in the baseline water calculations must be attached. Attach documents in MS Word, Excel or PDF format.*

Is documentation used in the baseline water calculations attached?

9. *What percentage (0-100%) of your total water is from surface water supplies before project implementation?*

10. *Current baseline greenhouse gas emissions*

Indicate current baseline greenhouse gas emissions associated with the water use (Tonnes CO₂e/year/acre). Refer to [Appendix C](#) of the Application Guidelines for assistance in calculating greenhouse gas emissions.

11. *Explain how greenhouse gas emission baseline was calculated and list the documents used in the calculations.*

If “greenhouse gas calculator” or “other” is selected, provide a detailed explanation and explain what values were used from the listed documents.

12. *All documents used in the greenhouse gas calculations must be attached. Attach documents in MS Word, Excel or PDF format.*

Is documentation used in the greenhouse gas calculations attached?

SECTION V: PROPOSED WATER USE SYSTEM

The questions in Section V apply to the **proposed** water use system on the property. The purpose of this section is to estimate the potential gains in water and energy efficiencies and the associated decrease in greenhouse gas emissions.

13. *Description of proposed Water Use system*

Explain in detail the proposed water use system and associated energy sources.

14. *Water Use after project implementation*

Indicate the estimated water usage of proposed project (acre inches/year/acre).

15. *Explain how projected water use was calculated.*

If “water use calculator” or “other” is selected, provide a detailed explanation.

16. *What percentage (0-100%) of your total water will be from surface water supplies after project implementation?*

17. *Greenhouse gas emissions after project implementation*

Indicate estimated greenhouse gas emissions from the proposed project (Tonnes CO₂e/year/acre).

18. *Explain how projected greenhouse gas emissions were calculated.*

If “greenhouse gas calculator” or “other” is selected, provide a detailed explanation.

SECTION VI: PROJECT DESIGN

19. *Project Design (attachment):*

Applicants must attach a copy of the proposed system design (See Application Procedures, Step 2).

Is the Project Design attached?

SECTION VII: BUDGET WORKSHEET

All budget items must reflect **only** costs incurred during the implementation phase of the proposed project, and should demonstrate that they are reasonable and adequate for the proposed work. *Applicants providing matching funds will receive priority consideration for funding.*

20. Budget Worksheet (attachment):

Download, complete and attach the "[Budget Worksheet](#)" template.

Is the "Budget Worksheet" attached?

SECTION VIII: MATCHING FUNDS

21. Matching Funds

If matching funds (cash) have been secured, attach matching funds documentation. Documentation should confirm the contribution source, type, and amount of contributions in support of the project.

If applicable, is matching funds (cash) documentation attached?

APPENDIX B: BUDGET WORKSHEET

Budget Worksheet			
<p>Complete the budget worksheet to show the breakdown of cost for the proposed project. Matching funds are strongly recommended, but not required. *Matching funds can include cash and/or in-kind contributions. The equation to calculate the percentage of matching funds is as follows: total match/total grant request = percentage match. Cash contributions are the amount of funds that will be contributed by the applicant to this project. In-kind contributions include contributions by the applicant in the form of contractor/consultant (labor) involved with the installation of the project. In-kind contributions must be indicated here in monetary value.</p>			
Supplies- Itemize all supplies. Supplies are anything with an acquisition cost under \$5,000 per unit. Rows may be added.	Grant Request (in \$)	*Cash Match (in \$) if applicable	*In-kind Contribution (in \$) if applicable
Subtotal (Supplies)	\$ -	\$ -	\$ -
Equipment- Itemize all equipment. Equipment is an article of nonexpendable, tangible personal property having a useful life of more than one year and a purchase cost which equals or exceeds \$5,000 per unit (purchased or cost for rental). Rows may be added.			
Subtotal (Equipment)	\$ -	\$ -	\$ -
Contractor/Consultant- Compensation for individual contractual fees should be reasonable and consistent with fees in the marketplace for similar services (See NRCS schedules in Appendix D which include labor costs).			
Cost per Hour (including benefits)			
Number of Hours			
Subtotal (Contractor/Consultant)	\$ -	\$ -	\$ -
Total	\$ -	\$ -	\$ -

APPENDIX C: TOOLS FOR DETERMINING WATER USE AND GREENHOUSE GAS EMISSIONS

CDFA SWEEP objectives are to provide financial incentives for agricultural operations to invest in water irrigation treatment and distribution systems that reduce water and energy use and increase water and energy efficiency in agricultural applications. Applicants are required to provide a current baseline water use **and** a current baseline GHG emission level. In addition, applicants must provide estimated or projected water savings **and** GHG emissions after project implementation.

CDFA recommends applicants work with available experts, such as utility companies, USDA NRCS, RCDs and irrigation supply companies, to determine baseline water use and GHG emissions. However, applicants not utilizing those resources can use online tools to determine baseline calculations.

Water Use Tools

USDA NRCS Field Office Technical Guide

<http://efotg.sc.egov.usda.gov/treemenuFS.aspx>

To use the Irrigation Water Savings Calculator: (1) click on Section I; (2) click on Resource Assessment Tools; and (3) click on Irrigation Water Savings Calculator (CA). The calculator is a Microsoft Excel file providing options for irrigation system improvement types, level of Irrigation Water Management, soil type, crop type and ET zone information.

GHG Emissions Tools

CDFA GHG Calculation Tool for Fuels

<http://apps4.cdfa.ca.gov/eicalculator/>

EPA Emission Factors for GHG Inventories

<http://www.epa.gov/climateleadership/documents/emission-factors.pdf>

This sheet provides emission factors for different energy sources such as diesel, propane, natural gas, and electricity. To calculate emission reductions, multiply the estimated amount of fuel saved by the project by the emission factor of the fuel type. Emission reductions must be reported in Tonnes of carbon dioxide equivalent (CO₂e); numeric factors are provided to convert emissions of methane (CH₄) and nitrous oxide (N₂O) to carbon dioxide equivalent. For projects that save electricity, use a California average factor of 610.82 Lbs CO₂ equivalent/MWh (.000278 Tonnes CO₂e/kWh), unless applicants have information specific to their utility.

COMET-Farm

<https://cometfarm.nrel.colostate.edu/Account/LogOn?ReturnUrl=%2fActivityType>

COMET-Farm allows applicants to perform an energy audit on their farms.

COMET-Farm Quick Energy Calculator

<http://cometfarm.nrel.colostate.edu/QuickEnergy>

Although COMET-Farm Quick Energy Calculator is designed to assess GHG reductions after fuel savings are known, it can also be used to determine GHG emissions before project

implementation and estimate reductions of GHG emissions after implementation. To determine baseline GHG emissions: (1) input the current use of different energy sources and note the emissions in CO₂e; (2) input the estimated use of the energy sources after implementation and note the emissions in CO₂e; and (3) subtract to find the estimated reductions in GHGs.

Utilities May Offer Additional Incentives

Utilities may offer incentives for which your project will qualify. Participation in SWEEP does not exclude applicants from receiving other financial assistance or incentive programs offered by their utility.

Measures for irrigation systems include:

- **Pump efficiency retrofits** to increase flow and upgrade overall pumping efficiency of well and booster pumps.
- Conversion from high pressure sprinkler to drip or **micro irrigation systems**.
- Replacement of high pressure sprinkler nozzles with **low pressure nozzles**
- Installation of **variable frequency drives** on pumps with varying operating conditions.

Many other energy efficiency incentive programs may be applicable to growers including:

- Advanced LED outdoor and high bay lighting
- Greenhouse heat curtains and infrared films
- Upgrades to processing equipment

Zero-interest loans for energy efficiency upgrades are also available from utility companies for all eligible efficiency projects.

Applicants are encouraged to contact their local utility company for more information on incentive eligibility and rebate levels.

**APPENDIX D: USDA NRCS PAYMENT SCHEDULE
(ADAPTED FROM USDA NRCS EQIP FY14 REGULAR RATES FOR NATIONAL, STATE, LOCALLY-LED INITIATIVES)**

Practice_Code	Cost_Share_Program	Practice_Name	Component	Unit_Type	Unit_Cost
372	EQIP	Combustion System Improvement	IC Engine Repower, >25 bhp	BHP	75
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, < 12 HP	Ea	628.86
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 12-69 HP	Ea	1972.31
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 70-124 HP	Ea	4617.02
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 125-174 HP	Ea	6632.21
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 175-224 HP	Ea	8795.83
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 225-274 HP	Ea	13462.26
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 275-399 HP	Ea	21026.45
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, 400-499 HP	Ea	27454.2
372	EQIP	Combustion System Improvement	Electric Motor in-lieu of IC Engine, >= 500 HP	Ea	34652.82
372	EQIP	Combustion System Improvement	Mobile IC, 50-149 bhp	HP	268.23
372	EQIP	Combustion System Improvement	Mobile IC, >= 150 bhp	HP	314.85
441	EQIP	Irrigation System, Microirrigation	Vegetation Establishment	Ac	251.93
441	EQIP	Irrigation System, Microirrigation	Orchard-vineyard, 10ac or less	Ac	917.97
441	EQIP	Irrigation System, Microirrigation	Orchard-vineyard, >10ac	Ac	638.96
441	EQIP	Irrigation System, Microirrigation	Orchard-vineyard, durable tubing replace	Ac	315.81
441	EQIP	Irrigation System, Microirrigation	Small Acreage	Ac	1595.84
441	EQIP	Irrigation System, Microirrigation	Row Crop, Buried Manifold	Ac	787.61
441	EQIP	Irrigation System, Microirrigation	Row Crop, Above Ground PE Manifold	Ac	497.89
441	EQIP	Irrigation System, Microirrigation	Retrofit, Irrigation Automation	Ac	405.91
441	EQIP	Irrigation System, Microirrigation	Filter replace	Ac	198.35
442	EQIP	Irrigation System, Sprinkler	Center Pivot, < 600 Ft	LnFt	44.62
442	EQIP	Irrigation System, Sprinkler	Center Pivot, > 600 Ft	LnFt	36.16
442	EQIP	Irrigation System, Sprinkler	Linear Move System	LnFt	33.43
442	EQIP	Irrigation System, Sprinkler	Wheel Line System	LnFt	6.46
442	EQIP	Irrigation System, Sprinkler	Solid Set System	Ac	1146.57

442	EQIP	Irrigation System, Sprinkler	Solid Set System Renovation	Ac	168.38
442	EQIP	Irrigation System, Sprinkler	Handline system	LnFt	3.13
442	EQIP	Irrigation System, Sprinkler	Traveling Gun System, 2" or less diameter Hose	Ea	5757.25
442	EQIP	Irrigation System, Sprinkler	Traveling Gun System, >2" to 3" Hose	Ea	10971.9
442	EQIP	Irrigation System, Sprinkler	Traveling Gun System, > 3" Hose	Ea	20136.95
442	EQIP	Irrigation System, Sprinkler	Big Gun, Stationary	Ea	1463.69
442	EQIP	Irrigation System, Sprinkler	Pod System	Ea	174.11
442	EQIP	Irrigation System, Sprinkler	Renovation of Existing Overhead or Wheel line Sprinkler System	LnFt	3.21
442	EQIP	Irrigation System, Sprinkler	Retrofit, Irrigation Automation	Ac	415.65
449	EQIP	Irrigation Water Management	Basic IWM <30 acres	Ea	380.07
449	EQIP	Irrigation Water Management	Basic IWM >= 30 acres	Ac	15.65
449	EQIP	Irrigation Water Management	Intermediate IWM <30 acres	Ea	570.1
449	EQIP	Irrigation Water Management	Intermediate IWM >= 30 acres	Ac	23.55
449	EQIP	Irrigation Water Management	Advanced IWM <30 acres	Ea	823.48
449	EQIP	Irrigation Water Management	Advanced IWM >= 30 acres	Ac	32.51
449	EQIP	Irrigation Water Management	IWM with Soil Moisture Sensors	Ea	666.62
449	EQIP	Irrigation Water Management	IWM with Soil Moisture Sensors with Data Recorder	Ea	875.49
449	EQIP	Irrigation Water Management	IWM with Irrigation Evaluation	Ea	1866.88
449	EQIP	Irrigation Water Management	IWM with Weather Station	Ea	1922.46
533	EQIP	Pumping Plant	Electric-Powered Pump ≤ 3 Hp	HP	675.99
533	EQIP	Pumping Plant	Electric-Powered Pump ≤ 3 HP with Pressure Tank	HP	892.06
533	EQIP	Pumping Plant	Electric-Powered Pump >3 to 10 HP	HP	224.23
533	EQIP	Pumping Plant	Electric-Powered Pump >10 to 40 HP	HP	210.54
533	EQIP	Pumping Plant	Electric-Powered Pump >40 HP, Centrifugal	HP	134.47
533	EQIP	Pumping Plant	Variable Frequency Drive only (no pump) ≤15Hp	Ea	1919.89
533	EQIP	Pumping Plant	Variable Frequency Drive only (no pump) >15 Hp	HP	113.66
533	EQIP	Pumping Plant	Internal Combustion-Powered Pump ≤ 7½ HP	HP	324.45
533	EQIP	Pumping Plant	Internal Combustion-Powered Pump > 7½ to 75 HP	HP	322.39
533	EQIP	Pumping Plant	Internal Combustion-Powered Pump > 75 HP	HP	195.38
533	EQIP	Pumping Plant	Windmill-Powered Pump	Ft	503.39
533	EQIP	Pumping Plant	Solar <1 Hp	Ea	1059.25

533	EQIP	Pumping Plant	Solar, >=1 Hp or Deep Well pump	HP	3165.15
533	EQIP	Pumping Plant	Water Ram Pump	In	574.41
533	EQIP	Pumping Plant	Livestock Nose Pump	Ea	644.42
533	EQIP	Pumping Plant	Vertical Turbine Pump, <100 Hp	HP	247.44
533	EQIP	Pumping Plant	Vertical Turbine Pump >100 Hp	HP	178.6
533	EQIP	Pumping Plant	Piston, manure	Ea	9617.43
533	EQIP	Pumping Plant	Vertical manure pump, PTO	Ea	6577.02
533	EQIP	Pumping Plant	Chopper manure pump	Ea	1013.37