

# Agricultural Water Use Efficiency & State Water Efficiency and Enhancement Program

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## Joint Request for Grant Applications

Draft Released: August 26, 2016

Grant Applications Due:  
(TBD; will be announced in the final guidelines)  
No late submissions accepted.

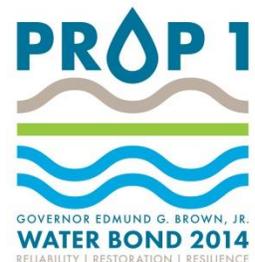
### California Department of Water Resources

Water Use and Efficiency Branch  
901 P Street, Room 313A  
Sacramento, CA 95814

And

### California Department of Food and Agriculture

Office of Grants Administration  
Office of Environmental Farming and Innovation  
1220 N Street, Room 120  
Sacramento, CA 95814



**DRAFT**  
**AGRICULTURAL WATER USE EFFICIENCY & STATE WATER EFFICIENCY**  
**AND ENHANCEMENT PROGRAM**  
**DWR/CDFA JOINT REQUEST FOR PROPOSALS**

**Notice of Public Workshops**

**Workshop Dates and Locations:**

| <u>Central Valley</u>  | <u>Northern California</u>   | <u>Southern California</u>  |
|--|--|---|
| September 27, 2016<br>1:00 pm to 3:00 pm                           | September 28, 2016<br>1:00 pm to 3:00 pm   | September 29, 2016<br>1:00 pm to 3:00 pm  |
| Fresno County Farm Bureau<br>1274 W Hedges Ave<br>Fresno, CA 93728 | Department of Water Resources<br>Northern Region Office<br>2440 Main Street, Large<br>Conference Room<br>Red Bluff, California 96080 | Coachella Valley Water District<br>Rummonds Training Room<br>51-501 Tyler Street<br>Coachella, CA 92236 |

**Webinar (Red Bluff only):**

<https://resources.webex.com/resources/j.php?MTID=m5d89b9ac3b4913b3dddb65c00503faf1>

**Conference Call (Red Bluff only): 1-866-772-5079**

Attendee access code: **899 860 7**

The complete text of the Draft Agricultural Water Use Efficiency & State Efficiency and Enhancement Program, DWR/CDFA Joint Request for Proposals (RFP) and related attachments are available at <http://www.water.ca.gov/wuegrants/AgWUEPilot.cfm>

|                              |  |
|------------------------------|--|
| <b>Purpose of Workshops:</b> | Provide information about the Draft RFP application requirements, and criteria for review and selection. |
|------------------------------|--|

|                         |  |
|-------------------------|--|
| <b>Workshop Agenda:</b> | <ul style="list-style-type: none"> <li>- Welcome and Introductions <span style="float: right;">15 min</span></li> <li>- DWR and CDFA Application Requirements <span style="float: right;">45 min</span></li> <li>- Review and Selection Criteria <span style="float: right;">10 min</span></li> <li>- Application Submittal Process <span style="float: right;">10 min</span></li> <li>- Public Comments and Questions <span style="float: right;">40 min</span></li> <li>- Adjourn</li> </ul> |
|-------------------------|--|

**Proposals Due: (Exact date will be announced in the Final Solicitation)**

**For More Information:**

Please contact Marty Berbach at (916) 651-9216 or by e-mail at [agwue@water.ca.gov](mailto:agwue@water.ca.gov)

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## Introduction

The Department of Water Resources (DWR) and California Department of Food and Agriculture (CDFA) are pleased to announce a competitive joint application process for the Agricultural Water Use Efficiency program and the State Water Efficiency and Enhancement Program.

Joint applications will be submitted by water suppliers and agricultural operations within the suppliers' service area. Proposals will be evaluated as a whole by a joint DWR/CDFA review panel. Once a proposal has been selected, separate grant agreements will be entered into between DWR and the agricultural water supplier and between CDFA and each agricultural operator. Potential applicants should read the entire Joint Request for Proposals prior to beginning the application process. Refer to the "Grant Application Process" section, below, for details on how to apply.

### **OBJECTIVE:**

Through this competitive grant program, DWR and CDFA intend to demonstrate the potential multiple benefits of conveyance enhancements combined with on-farm agricultural water use efficiency improvements and greenhouse gas reductions. The grant funding provided in this joint program is intended to address multiple goals including: 1) water use efficiency, conservation and reduction, 2) greenhouse gas emission reductions, 3) groundwater protection, and 4) sustainability of agricultural operations and food production. It is also anticipated that there will be benefits to water and air quality, groundwater security, surface water conservation, and improved nutrient management and crop health through this program. Excellent proposals will demonstrate the specific regional need and benefits of their proposals. See "Funding" and "Review Process" sections below for more specific information.

### **BACKGROUND:**

#### **Proposition 1 – Funds for Agricultural Water Suppliers (DWR)**

In November 2014, California voters passed Proposition 1, the Water Quality, Supply, and Infrastructure Improvement Act of 2014 (Division 26.7 of the California Water Code [CWC]). Proposition 1 §79701(e) provides funding to implement three objectives of the California Water Action Plan<sup>1</sup>, an initiative that establishes state water planning priorities. Chapter 7 of Proposition 1 provides funding to improve regional water self-reliance security and adapt to climate change effects on water supply (CWC §79740 et seq.). Specifically, Proposition 1 §79746(a)(2) authorizes funding for agricultural water management plans and agricultural water use efficiency projects and programs developed pursuant to Part 2.8 (commencing with Section 10800) of Division 6 of the CWC (Agricultural Water Management Planning Act).

This grant program implements Proposition 1 §79746(a)(2) and California Water Action Plan, Action Number One: Make Conservation a California Way of Life, as well as supporting several other Actions, either directly or indirectly. In accordance with the "California Water Action Plan, Action Number One: Make Conservation a California Way of Life", funding this grant program is

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<sup>1</sup> For more information about the California Water Action Plan, go to:  
[http://resources.ca.gov/docs/california\\_water\\_action\\_plan/Final\\_California\\_Water\\_Action\\_Plan.pdf](http://resources.ca.gov/docs/california_water_action_plan/Final_California_Water_Action_Plan.pdf)

directed towards achieving or exceeding agricultural water management planning and water use efficiency requirements identified in Senate Bill X 7-7 (Part 2.55 and Part 2.8 of Division 6 of the CWC) and implementation of Agricultural Water Management Plans for agricultural water suppliers supplying water to 10,000 to 25,000 acres of land.

### **The State Water Efficiency and Enhancement Program (SWEEP) – Funds for the Agricultural Operator (CDFA)**

The California Department of Food and Agriculture developed the SWEEP program in 2014 in response to Emergency Drought Legislation Senate Bill 103 (SB103). This legislation appropriated funding from the Greenhouse Gas Reductions Fund (GGRF) for the CDFA to invest in irrigation and water pumping systems that reduce water use, energy use and greenhouse gas emissions. The SWEEP was developed under the authority of the Environmental Farming Act of 1995. The law states that “The department shall establish and oversee an environmental farming program. The program shall provide incentives to farmers whose practices promote the well-being of ecosystems, air quality, and wildlife and their habitat” (Division 1, Part 1, Chapter 3, Article 8.5, Sections 560-568) Section 566 (a)

The 2016 SWEEP funding arises from Budget Act of 2015, SB 101, (Chapter 321, Statutes of 2015), which authorizes CDFA to “support greenhouse gas emission reductions through water and energy efficiency grants promoting water and energy savings.” SWEEP is funded through the GGRF referred to as the “California Climate Investment” program.

#### **FUNDING:**

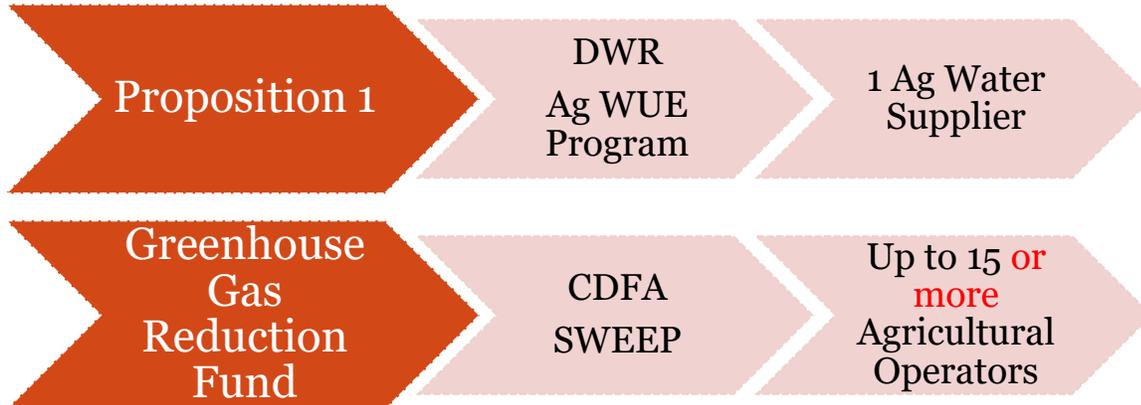
DWR has set aside \$3 million from Proposition 1 to incentivize the water conveyance component of this joint agricultural water use efficiency and enhancement program. Proposition 1 requires that agricultural water suppliers provide a 50% cost share of total project costs.

CDFA has also set aside \$3 million from SWEEP to incentivize the installation of irrigation systems that save water **and** reduce greenhouse gases on farms in the area that will directly benefit from the conveyance system incentivized by DWR. The maximum grant award per agricultural operation is \$200,000 with a recommended, but not required, 50% match of the total project cost. CDFA reserves the right to offer an award different than the amount requested.

Applications must include both the conveyance component submitted by the agricultural water supplier, and one or more on-farm irrigation installation proposals submitted by agricultural operations. The joint application will be reviewed as a whole as described more fully below. Funding for the water supplier’s portion will come from DWR’s Proposition 1 funds, and funding for agricultural operations will come from CDFA’s SWEEP program. Separate contracts with each department will be necessary to receive both sets of funds.

A joint proposal may include a request for up to \$3 million for the water supplier’s conveyance upgrades (to be funded by DWR) and up to \$3 million for enhancements of on-farm agricultural operations to be funded by CDFA (with a cap of \$200,000 per operation). This would allow for 15 agricultural operations (at \$200,000 each) to partner with the water supplier to submit the joint proposal at the maximum award amount of \$6 million. More than 15 agricultural operations could be funded if amounts lower than the cap is requested in individual agricultural

operator applications.



**ELIGIBILITY:**

**Agricultural Water Suppliers (Application Part I; DWR Proposition 1 Funds)**

A water supplier’s proposed project must generate State benefits to be eligible for grant funding. Benefits to the State include: water savings; increased in-stream flow or improved flow timing; improved water quality; increased energy conservation; reduction of greenhouse gas (GHG) emissions; and increased local water supply reliability. The project must be located within California.

The following entities involved with water management are eligible to apply (CWC §7912(a)):

- Public agencies<sup>2</sup>
- Nonprofit organizations
- Public utilities
- Federally recognized Indian tribes or state Indian tribes on California’s Tribal Consultation List
- Mutual water companies
- Investor-owned utilities regulated by the California Public Utilities Commission<sup>3</sup>
- 

Applicants that are agricultural water suppliers must adopt and submit an agricultural water management plan in accordance with the Agricultural Water Management Planning Act (Part 2.8, commencing with §10800, of Division 6 of the CWC) and comply with the requirements of

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<sup>2</sup> With a couple of exceptions, a local agency that does not prepare, adopt, and submit its groundwater plan in accordance with groundwater planning requirements established under Division 6 (commencing with §10000) is not eligible to apply until the plan is prepared and submitting in accordance with requirements (CWC §79742(b)).

<sup>3</sup> Projects from investor-owned utilities regulated by the California Public Utilities Commission and mutual water companies must have a clear and definite public purpose and must benefit water system customers, not the investors (CWC §79712(b)(1)).

Part 2.55 (commencing with §10608) of Division 6 of the CWC prior to grant execution (CWC §79712(b)(3) and (4)). Applicants that are also urban water suppliers must adopt and submit an urban water management plan in accordance with the Urban Water Management Planning Act (Part 2.6, commencing with §10610, of Division 6 of the CWC) (CWC §79712(b)(2)).

To be eligible for funding, projects are **not** required to be in an adopted Integrated Regional Water Management Plan or to comply with that program (CWC §79746(b)).

**Agricultural Operations (Application Part II; CDFA SWEEP Funds)**

The on-farm project installations must be on California agricultural operations that are directly impacted by the conveyance improvements (i.e., receiving surface water supplies from the specific section the conveyance system being improved). For the purpose of this program, an agricultural operation is defined as irrigated agricultural production systems including row, vineyard, field and tree crops, commercial nurseries, nursery stock production, and greenhouse operations. On-farm projects **must** reduce water use **and** GHG emissions from irrigation systems. Applicants must provide supporting documentation directly related to actual on-farm water consumption and GHG emissions to be eligible for funding through this program.

SWEEP funding cannot be combined with United States Department of Agriculture (USDA), Natural Resource Conservation Service (NRCS) Environmental Quality Incentive Program financial assistance.

See Funding Rules for Agricultural Operators on page 49.

**TIMELINE:**

The application period begins (TBD - October 2016) at 8 a.m. PST. The deadline to submit an application is (TBD – November 2016) at 5 p.m. PST. No exceptions will be granted for late submissions.

DWR and CDFA will conduct several workshops throughout the state on how to complete and submit a joint grant application. For application workshop schedule and locations, visit the program website at

<http://www.water.ca.gov/wuegrants/AgWUEPilot.cfm>

|                               |                                     |
|-------------------------------|-------------------------------------|
| (September 27, 28, & 29 2016) | Public Workshops                    |
| October 2016                  | Release Final Request for Proposals |
| TBD (Announced in Final RFP)  | Application Period                  |
| TBD                           | Application Workshops               |
| Spring 2017                   | Announce and Award Funding          |
| Spring 2017                   | Grant Agreements                    |
| Spring 2017 – Summer 2018     | Project Implementation              |

## **GRANT APPLICATION PROCESS:**

The program will be administered as a competitive grant program and will include a joint application process involving agricultural water suppliers and agricultural operators within the service area. Part I will be completed by the agricultural water supplier and Part II will be completed by each of the individual agricultural operators. The agricultural water supplier will be the principal applicant, coordinating the involvement of agricultural operations and submitting one joint application (Parts I and all Part II applications) and the required documentation;

Potential applicants should visit the Joint Program Website (<http://www.water.ca.gov/wuegrants/AgWUEPilot.cfm>) to gather the needed files for the application process. Additionally, on the Joint Program Website there are instructions for naming of application files and attachments.

Water suppliers will submit the complete application package by USB drive or e-mail to:

Marty Berbach  
Department of Water Resources  
Water Use and Efficiency  
901 P Street, Room 313A  
Sacramento, CA 95814  
E-mail: [agWUE@water.ca.gov](mailto:agWUE@water.ca.gov)

## **Assistance and Questions:**

CDFA and DWR cannot assist in the preparation of grant applications. However, Frequently Asked Questions (FAQ) will be posted and updated once per month during the application period on the Program Webpage to ensure all applicants have the benefit of reviewing general programmatic questions and answers.

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

## **REVIEW PROCESS:**

The entire proposal (Part I: water supplier and Part II: agricultural operations) will be reviewed by a joint DWR/CDFA review panel. There will be two levels of review following the grant application period.

The first level of review is an administrative review to determine whether all required grant application information was completed and all required attachments were submitted.

The second level is a technical review to evaluate grant applications based on the selection criteria. The application will be assessed in its entirety by a technical review

committee with the requirements of both funding sources from CDFA and DWR taken into consideration. Applications will be scored based on the following metric:

| <b>Selection Criteria</b>   | <b>Maximum Points</b> |
|---|-----------------------|
| Relevance and Importance / Consistency with Prop 1 Ag WUE Priorities (See Attachment 2) | 10                    |
| Feasibility   | 10                    |
| Project Costs   | 10                    |
| Monitoring and Evaluation   | 10                    |
| Magnitude of Greenhouse Gas Reductions  | 25                    |
| Magnitude of Water Savings and/or Water Use Efficiency Improvements                     | 25                    |
| Other Benefits (See Attachment 2.4) <sup>4</sup>  | 5                     |
| Adopted Integrated Regional Water Management Plan                                       | 5                     |

[Total points: 100]

The top scoring joint application(s) will be recommended for funding until the available funds are expended. CDFA and DWR will make the final award determination.

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<sup>4</sup> Including but not limited to: Employs new or innovative technologies or practices; provides direct benefits to DCAs or EDAs.

## **Part I: Agricultural Water Supplier**

This section describes the program parameters and funding rules applicable to agricultural water suppliers that will be funded by DWR's Proposition 1 funds (See Part II for CDFA's SWEEP parameters and funding rules for collaborating agricultural operations). Application Guidelines and Attachments are included at the end of this Part.

### **PROJECT TYPES:**

Projects that enhance and upgrade the supplier's water conveyance, delivery and water measurement system to allow on-demand and flexible farm-gate deliveries, reduce spills and losses, increase the efficiency, and improve water management.

### **INELIGIBLE PROJECT TYPES AND UNALLOWABLE EXPENSES:**

Ineligible projects include, but are not limited to:

- Projects with a life span of less than 10 years
- Wellhead rehabilitation
- New storage tanks providing expanded capacity
- Water supply development
- Water treatment
- Wastewater treatment
- Flood control
- Recycled water – Does not include agricultural water reuse
- Groundwater banking projects
- Replacement of existing funding sources for on-going projects
- Political advocacy
- Purchase of water
- Establishment of a reserve fund
- Applicant's litigation costs
- Visitor centers
- Design, construction, operation, mitigation, or maintenance of Delta Conveyance Facilities (CWC §79710(a))

### **FUNDING RULES:**

- The applicant must provide at least a 50 percent cost share or donated services (per DWR's requirements) from non-state sources for the supplier's water conveyance component of the application. This requirement may be waived or reduced for projects directly benefitting a disadvantaged community (DAC) or economically distressed area (EDA) (CWC §79742(c)).
- Administrative costs must be reasonable, or no more than 10 percent for most projects. Projects with unjustified or excessive administrative, planning, or monitoring costs may be awarded reduced funding, may receive lower scores, or may be eliminated from funding. Applicants may use documented administrative costs as a local cost share.
- The applicant's contingency for each cost category in the project budget should be no more than 10 percent of the cost of the category.

- Applicant must provide the life of investment in years for the project.
- For construction projects, a California registered civil engineer must prepare the Plans and Specifications and Certification Statements.
- Capital outlay expenditures shall be tied immediately and exclusively to the achievement of the project purposes. Equipment (such as computers, non-dedicated monitoring equipment, and others) that can be used for other purposes are not eligible for funding. Vehicles are not eligible for funding.
- Construction, improvement, repair, and renovation projects, as well as projects involving the purchase and installation of project-specific equipment or other water saving devices, may be eligible.

### **PROJECT PRIORITIES:**

Grant funds are provided as an incentive to regional or local entities to implement projects that are expected to create broad State-level public benefits as well as local benefits. Priority will be given to agricultural water use efficiency projects that:

- Are not locally cost-effective (CWC §79746(a)(1)(A))
- Provide the most state benefits per grant dollar
- Focus primarily on service to disadvantaged communities or economically distressed areas (CWC §79742(d))
- Employ a regional scope of activities (CWC §10544 and §79741(b) and (c))
- Employ new or innovative technologies or practices (CWC §79707(e))
- Leverage private, federal or local funding to produce the greatest state level public benefit (CWC §79707(b))
- Improves irrigation water management to conserve water or to reduce the quantity of highly saline or toxic drainage water (CWC §10800(g))
- Provides water metering and/or volumetric pricing for agricultural water suppliers serving less than 25,000 irrigated acres (Executive Order B-29-15, Directive 13)

### **COST SHARE AND PROJECT COSTS:**

The applicant is responsible for providing cost share or donated services from non-state sources (applicant cost share). Applicant cost share must be at least 50 percent of the total project cost. “Cost share” means funds made available by the grant recipient from non-state sources. Cost share may include, but is not limited to, federal funds, local funds, or donated services from non-state sources. With respect to the foregoing, applicants are responsible for determining and complying with all applicable legal requirements concerning such cost shares or donated services.

DWR may offer a lower level of State funding than requested by the applicant, based on the grant selection panel’s assessment of the project’s State benefits relative to other projects and the number of projects being awarded, and whether the project is locally cost-effective. Applicants may request a reduction or waiver of the local cost share requirement for projects directly benefitting DACs or EDAs.

Applicants must disclose whether the project being applied for is funded in part by another state grant, or if the applicant is planning to apply to another program for funding. For instance, if a portion of the project is being funded or considered for funding by another program, such as the Integrated Regional Water Management Program, while applying for funding under this grant, the applicant must disclose this information in their proposal. During the application and award process, the applicant must notify DWR if another grant for the same project has been awarded. The same cost share may not be counted under both programs.

Project costs incurred before the final execution of the Grant Agreement and Notice to Proceed issued by DWR may not be reimbursed with grant funds. Project costs incurred prior to Grant Agreement execution are not eligible for reimbursement, but may be considered, **at DWR's discretion**, as a part of the applicant's local cost share. Reimbursement is subject to execution of a Grant Agreement.

### **Disadvantaged Communities and Economically Distressed Areas**

If the applicant is requesting a reduction or waiver of cost share based on inclusion of DACs or EDAs, the decision to grant, modify, or reject the request is at the discretion of DWR. A proportionate amount of the grant must benefit the DAC or EDA identified in the application. Applicants requesting a reduction or waiver of the cost share must submit a completed Attachment 8 with their proposal and identify the proposed reduction or waiver of the cost share (refer to Water Supplier's Attachment Guidelines for instructions and details). DWR will review the request for the reduction or waiver of the cost share and decide to accept, modify, or reject the request based on the DAC or EDA documentation, project state-benefits, and local DAC or EDA cost benefit ratio of the project.

### **Cost Effectiveness of Proposed Projects**

All applicants are required to quantify the local water use efficiency benefits and identify the total project cost to local benefit ratio.

If the applicant demonstrates that the State and local benefits are not quantifiable and cannot be estimated, applicants are expected to demonstrate the relative balance of the local and State water use efficiency benefits qualitatively.

**NOT LOCALLY COST-EFFECTIVE PROJECTS.** Priority will be given to projects that are not locally cost-effective (CWC §79746(a)(1)(A)). A project is not locally cost-effective if its total annualized cost (annualized capital costs plus annual operation and maintenance cost) is greater than its annualized local monetary benefits.

**LOCALLY COST-EFFECTIVE PROJECTS.** A project is locally cost-effective if its total annualized cost (annualized capital costs plus annual operation and maintenance cost) is equal to or less than its annualized local monetary benefits. Locally cost-effective projects are eligible for funding; however, funding priority will be given to not locally cost-effective projects.

### **PROJECT COMPLETION SCHEDULE:**

Project timelines and budgets, which will be incorporated into the Grant Agreement, may be multi-year, if necessary and appropriate. However, projects shall be completed within three years from the date of execution. In addition, since funding may be awarded for only a portion or for only certain tasks of a submitted project, the applicant should clearly identify the duration of each task.

Applicants can expect the Grant Agreement process to take at least six months before Grant Agreements can be completed and contracts signed by both parties.

Projects funded by Proposition 1 funds that fall over a year behind in activity or reporting may be terminated. Prior to termination, Grant Recipients will be notified of DWR's intent to terminate because of non-activity or non-reporting and will be given the opportunity to address the lapse. Acceptance of substantial project delays will be determined on a case-by-case basis at the discretion of DWR. Grant recipients whose Grant Agreements have been terminated may be required to repay all grant monies with interest.

## **GRANT AGREEMENT REQUIREMENTS:**

Prior to Grant Agreement execution, Grant Recipients must provide DWR with the following additional documentation:

**COST SHARE COMMITMENT LETTER.** Grant Recipients of projects selected for funding shall provide an institutional cost-sharing agreement (Cost Share Commitment Letter) signed by an official authorized to commit the applicant to all or part of the cost share, or a letter authorizing third party, in-kind contribution signed by an official authorized to commit the third party.

**RESOLUTION.** Grant Recipients shall also provide a resolution from their governing board accepting the funds and designating a representative authorized to execute the contract and sign requests for disbursement.

**AUDITED FINANCIAL STATEMENTS.** Grant Recipients shall demonstrate the availability of sufficient funds to complete each project, as stated in the Cost Share Commitment Letter, by submitting the most recent three years of audited financial statements.

**COMPLIANCE WITH APPLICABLE REGULATIONS AND LEGISLATION.** Grant Recipients are required to comply with water conservation and/or water use efficiency legislation including Senate Bill (SB) X7-7 (Water Conservation), Assembly Bill (AB) 1420 (Water Conservation Measures), SB X7-6 (Groundwater Monitoring), AB 1404 (Surface Water Diversion Reporting), and any other applicable regulation. DWR will require proof of compliance from the Grant Recipient and its project partners with these regulations or any applicable state laws and regulations that are in effect at the time the project is funded and throughout the project implementation period. Attachment 15 (Compliance with SB X7-7, AB 1404, AB 1420, and Other Requirements) of the grant application is a first step in documenting compliance. In the second step, the Grant Recipient will be required to provide supporting documentation of compliance to DWR to be eligible to receive the grant funding.

- a. Agricultural Water Management Plans (AWMPs) - An Agricultural Water Supplier is not eligible for a water grant or loan awarded or administered by the State unless the supplier complies with Part 2.8 (commencing with §10800) of Division 6 of the CWC (Agricultural Water Management Planning Act) (CWC §10852)<sup>5</sup>. Grant Recipients who are Agricultural Water Suppliers required by the Agricultural Water Management Planning Act to submit an AWMP to DWR must have submitted a complete AWMP to DWR to be eligible for any grant or loan (CWC §10608.56(b)). Such Grant Recipients and their applicable Agricultural Water Supplier co-applicants and cooperators, if any,

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<sup>5</sup> <http://www.water.ca.gov/wateruseefficiency/sb7/>

must have AWMPs that meet the requirements (as determined by DWR) of the Agricultural Water Management Planning Act.

- b. Agricultural Efficient Water Management Practices - Agricultural Water Suppliers serving irrigated acreage of more than 25,000 acres excluding recycled water are not eligible for a water grant or loan awarded or administered by the State unless the supplier complies with SB X7-7 water conservation requirements outlined in Part 2.55 (commencing with §10608) of Division 6 of the CWC (CWC §10608.56(b)) including:
- Agricultural Water Measurement Regulation
  - Adoption of a pricing structure for water customers based at least in part on quantity delivered
  - Implementation of all locally cost-effective and technically feasible Efficient Water Management Practices (EWMPs)

Compliance is to be reported in the AWMP. If not implementing all EWMPs (measurement, pricing, and all locally cost-effective and technically feasible EWMPs), the Agricultural Water Supplier must submit to DWR a schedule, financing plan, and budget for implementation to be included in the Grant Agreement (CWC §10608.56(d)).

(<http://www.water.ca.gov/wateruseefficiency/agricultural/agmgmt.cfm>)

- c. Urban Water Management Plans (UWMPs) - Water suppliers who were required by the Urban Water Management Planning Act (CWC §10610 et seq.) to submit an Urban Water Management Plan (UWMP) to DWR must have submitted a complete UWMP to be eligible for funding (CWC §10656). Grant Recipients and project proponents that are Urban Water Suppliers required by the Urban Water Management Planning Act to submit an UWMP to DWR must have a 2010 UWMP that has been verified as complete by DWR before a grant agreement will be executed. *Note to Urban Water Suppliers: The 2015 UWMPs are due to be submitted to DWR by July 1, 2016.*  
(<http://www.water.ca.gov/urbanwatermanagement/>)
- d. Best Management Practices (BMP, also called demand management measures) - Grant Recipients who are Urban Water Suppliers must also be compliant with AB 1420 Water Conservation Requirements (CWC §10631.5) by having submitted complete AB 1420 documents (compliance tables and supporting documentation) (<http://www.water.ca.gov/wuegrants/>) to be considered eligible for grant funding. This requirement terminates on July 1, 2016 and will be replaced by provisions in CWC §10608.56 described below.
- e. Water Conservation - CWC §10608.56(a) states that on and after July 1, 2016, an Urban Water Supplier is not eligible for a water grant or loan awarded or administered by the State unless the supplier complies with SB X7-7 water conservation requirements outlined in Part 2.55 (commencing with §10608) of Division 6 of the CWC. Programs may follow AB 1420 compliance until the bill terminates on June 30, 2016 and switch to SB X7-7 compliance on July 1, 2016.
- f. Water Meters - Grant Recipients and associated cooperators, if applicable, who are Urban Water Suppliers must be compliant with Water Metering Requirements (CWC §525 et seq.) by submitting a certification form (<http://www.water.ca.gov/wuegrants/>).

- g. Groundwater Monitoring - CWC §10920 et seq. (SB X7-6) requires the formation of a groundwater monitoring program designed to monitor and report groundwater elevations in all or part of a basin or sub-basin. The CWC §10933.7 limits the ability of counties and other entities specified in CWC §10927(a)-(d) to receive grants or loans in the event that DWR is required to perform groundwater elevation monitoring functions in high and medium priority basins pursuant to CWC §10933.5. Groundwater monitoring requirements are part of the California Statewide Groundwater Elevation Monitoring (CASGEM) Program (<http://www.water.ca.gov/groundwater/casgem/>).
- h. Groundwater Management Plans - Agencies desalinating brackish groundwater, including coastal aquifer groundwater, must comply with CWC §10753.7 and provide any applicable groundwater management plan. This requirement is only applicable if there is a groundwater component to the grant application.
- i. Surface Water Diversion Reporting Compliance - Beginning January 1, 2012, a diverter of surface water is not eligible for a water grant or loan awarded or administered by the State unless it complies with surface water diversion reporting requirements outlined in CWC §5103(e)(2). ([http://www.waterboards.ca.gov/waterrights/water\\_issues/programs/diversion\\_use/](http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/))
- j. Aggregated Farm-Gate Water Delivery Report - Agricultural water suppliers supplying 2,000 acre-feet or more of surface water annually for agricultural purposes or serving 2,000 or more acres of agricultural land must comply with CWC §531 et seq. and submit an annual report to DWR that summarizes aggregated farm-gate delivery data, on a monthly or bimonthly basis, using best professional practices. The completed Agricultural Aggregated-Farm-Gate Delivery Report must be submitted by mail or electronically by e-mail to DWR by July 31 of each year, reporting the required data for the previous calendar year using the form at: <http://www.water.ca.gov/wateruseefficiency/agricultural/farmgatedelivery.cfm>

**COMPLIANCE WITH ENVIRONMENTAL LAWS.** Grant Recipients are required to obtain all necessary permits and approvals, including those required under the California Environmental Quality Act (CEQA), National Environmental Protection Act (NEPA), and the California Endangered Species Act (CESA), as well as all applicable engineering and design permits. DWR, as a fund source, is a CEQA Responsible Agency and has discretionary approval power over the project, and must review all environmental documents and licenses; and, make a finding regarding CEQA documents prior to grant fund expenditures, unless the environmental compliance is part of the Grant Agreement's statement of work. Attachment 13 (Environmental Information Form and Documents) of the grant application is a first step in documenting compliance.

**CLIMATE CHANGE.** In 2005, Executive Order S-3-05 committed the State to reduce GHG emissions. One year later, the Governor signed the "Global Warming Solutions Act of 2006" (AB 32), which legally obligates the State to reduce GHG emissions to 1990 levels by 2020. Analysis of GHG emissions was made a requirement in the CEQA Guidelines in December 2009, becoming effective March 18, 2010.

The GHG emissions analysis in CEQA documents will be reviewed by DWR. Applicants should refer to the *Informal Guidance for DWR Grantees: GHG Assessment for CEQA Purposes* which

is available at DWR's website: <http://www.water.ca.gov/climatechange/resources.cfm> (Click on the link titled, "CEQA Greenhouse Gas Analysis Guidance for DWR Grantees".)

GHG emissions will be reviewed and evaluated in two ways:

- Applicants will be required to provide specific GHG emission estimates as part of a project energy source portfolio as described in the Air Resources Board's **Greenhouse Gas Quantification Methodology** (See Attachment 10). The project as a whole, including conveyance upgrades and the on-farm projects by agricultural operations, must show a net decrease in GHG emissions.
- Applicants will be required to provide CEQA documentation as part of the Attachment 13 (Environmental Information Form and Documents).

Additional information on climate change may be found at DWR's Climate Change Clearinghouse: <http://www.water.ca.gov/climatechange/docs/IRWM-ClimateChangeClearinghouse.pdf>

## **FUNDED PROJECT REQUIREMENTS:**

If the applicant is selected to receive grant funding, the Grant Recipient will enter into a Grant Agreement with DWR. Projects selected for funding shall be subject to the State's standard Grant Agreement terms and conditions and DWR's Grant Agreement template. Federal agencies' standard terms and conditions in conflict with State standard terms and conditions, or with the State's ability to administer the grant, will not be permitted. Funds will be reimbursed in accordance with the executed Grant Agreement.

Work costs incurred prior to the final execution of the Grant Agreement and Notice to Proceed issued by DWR may not be reimbursed with grant funds. Therefore, applicants commencing work prior to Grant Agreement execution should do so at their own expense because reimbursement is not guaranteed. Grant Agreement execution and disbursements are subject to the availability of funds.

### **Advance funds will not be provided.**

The scope of work to be included in the Grant Agreement will be the same as that provided in the grant application as Project Plan and Description, but may be modified for clarity, completeness, and consistency with the RFP and Grant Agreement template.

### **Project Documentation Requirements**

Each Grant Recipient will be required to provide certain reports both during the performance of the project and for five years following project completion. Grant Recipients may be required to provide post-project completion reports.

The following project documents are required to be provided to DWR:

- a. Quarterly Reports.** Throughout the project, the Grant Recipient is required to submit to DWR brief quarterly fiscal and programmatic reports. The intent of the quarterly reports is to summarize the work performed and justify the project expenditures in each quarter, the reported local cost share, the planned work during the next quarter, and give an update on the overall project schedule and budget. Quarterly reports are to be provided to DWR no more than 90 days after the

completion of the quarter. Projects with reports more than one year late may be cancelled.

- b. Annual Reports.** The Grant Recipient is required to submit an annual report with the fourth quarterly report no later than March 1 of the subsequent calendar year. The annual report, which includes project benefits, collected data, and a summary of the project work completed to date. Data and information obtained under the Grant Agreement will become public information. The requirement for annual reports may be waived if comparable project documents are prepared. This waiver will be at the discretion of DWR after review of the list of planned project documents.
- c. Interim Project Documents.** DWR is to receive copies (electronic and hard copy) of project documents prepared during the project. These include, but are not limited to: task reports, 10/50/90 percent design reports, white papers, technical memoranda, task memoranda, data, spreadsheets, models, and others. During Grant Agreement negotiations, DWR will identify which planned project deliverables it would like to receive.
- d. Final Report.** A comprehensive final report is to be provided to DWR at the end of the project (electronic and two hard copies).
- e. Performance Report.** The Grant Recipient will provide to DWR a brief performance report annually for a period specified by DWR, generally not less than 5 years, summarizing post-grant activities and project benefits that have accrued.
- f. Disbursement Requests.** The Grant Recipient may request grant disbursements as frequently as quarterly. All invoices for disbursements must be supported by quarterly reports describing the work performed during the period invoiced. Grant Recipients may use the invoice forms provided by DWR or their own invoice, as long as all information on DWR's invoice form is included on their invoice. Expenditures must be separated by quarter and task. For purchases and subcontracted invoices, expenses should be shown in the quarter that they became due and payable by the Grant Recipient. For labor costs, expenses should be shown in the quarter they were incurred. Invoices must also be supported by other documentation as prescribed by DWR.

### Additional Project Requirements

During DWR's funding of the project, the following conditions must also be fulfilled:

- a. Labor Code Compliance.** Grant Recipients shall keep informed of, and take all measures necessary to ensure, compliance with Labor Code requirements, including but not limited to, Section 1720 et seq. of the Labor Code regarding public works, limitations on use of volunteer labor (California Labor Code Section 1720.4), labor compliance programs (California Labor Code Section 1771.5) and payment of prevailing wages for work done and funded pursuant to this RFP, including any payments to the Department of Industrial Relations under Labor Code Section 1771.3. For additional information on Labor Code compliance, please refer to the Department of Industrial Relations (DIR) (website: <http://www.dir.ca.gov>). The Grant Recipients must also comply with all applicable laws when hiring private consultants to implement its project partially or fully.
- b. Conflict of Interest.** All participants are subject to State and Federal conflict of interest laws. Failure to comply with these laws, including business and financial disclosure provisions, will result in the application being rejected and any subsequent

Grant Agreement being declared void. Other legal action may also be taken. Accordingly, before submitting an application, applicants are urged to seek legal counsel regarding potential conflict of interest concerns and requirements for disclosure. Applicable statutes include, but are not limited to, Government Code Section 1090 and Public Contract Code Sections 10410 and 10411 for State conflict of interest requirements.

- i. **Current State Employees:** No State officer or employee shall engage in any employment, activity, or enterprise from which the officer or employee receives compensation or has a financial interest and which is sponsored or funded by any State agency, unless the employment, activity, or enterprise is required as a condition of regular State employment. No State officer or employee shall contract on his or her own behalf as an independent contractor with any State agency to provide goods or services.
  - ii. **Former State Employees:** For the two-year period from the last day of State employment, no former State officer or employee may enter into a contract in which he or she engaged in any of the negotiations, transactions, planning, arrangements, or any part of the decision-making process relevant to the contract while employed in any capacity by any State agency. For the twelve-month period after the last day of State employment, no former State officer or employee may enter into a contract with any State agency if he or she was employed by that State agency in a policy-making position in the same general subject area as the proposed contract within the twelve-month period prior to his or her leaving State service.
- c. Confidentiality.** All proposals will become public information upon submittal to DWR. Once the proposal is signed and submitted to DWR, the applicant waives any rights to privacy and confidentiality of the proposal.
- d. Rights in Data.** Per the State Funding Agreement, Standard Conditions, “Rights in Data”, all data, plans, drawings, specifications, reports, computer programs, operating manuals, notes and other written or graphic work produced in the performance of the Grant Agreement shall be made available to the State and shall be in the public domain to the extent to which release of such materials is required under the California Public Records Act, California Government Code §6250 *et seq.* Grant Recipients may disclose, disseminate and use in whole or in part, any final-form data and information received, collected and developed under the Grant Agreement, subject to appropriate acknowledgement of credit to State for financial support. Grant Recipients shall not have exclusive rights to utilize the materials for any profit-making venture and shall not sell or grant rights to a third party who intends to do so. The State shall have the right to use any data described in this paragraph for any public purpose.
- DWR intends to post Grant Recipients’ final work products on the internet for information dissemination. These products will remain in public domain.
- e. Financial Records.** The Grant Recipient is responsible for maintaining appropriate accounting records. Projects may be audited. Records must be maintained for a period of three years following completion of the project, in accordance with Government Code Section 8546.7. ([https://www.bsa.ca.gov/aboutus/financial\\_and\\_compliance\\_audits](https://www.bsa.ca.gov/aboutus/financial_and_compliance_audits))
- f. Investor-Owned Facilities.** Any investor-owned water system receiving funding will be prohibited from earning a profit from the use of these funds and achieving a

financial benefit from the later disposition of assets purchased by these funds, regardless of whether or not said assets are a useful part of the water system.

- g. Signage.** To the extent practicable, a project supported by funds made available through this program will include signage informing the public that the project received funds from the Water Quality, Supply, and Infrastructure Improvement Act of 2014. (CWC §79707(g))
- h. Changed Conditions.** If, during the execution of a project, project conditions are found to be substantively different from those presented in the grant application process, the Grant Recipient will consult with DWR to determine an appropriate course of action.

**Application Guidelines and Attachments Part I -  
Agricultural Water Supplier**

## **WATER SUPPLIER'S APPLICATION (PART I) CHECKLIST**

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*Complete this checklist to confirm all sections of this application package have been included.*

### **Application Part I: Water Supplier's Attachments & Requirements**

- \_\_\_\_\_ Attachment-1 Application Signature Page
- \_\_\_\_\_ Attachment-2 Goals, Objectives, and Priorities – Relevance and Importance
- \_\_\_\_\_ Attachment-3 Technical / Scientific Merit and Feasibility
- \_\_\_\_\_ Attachment-4 Project Plan and Description
- \_\_\_\_\_ Attachment-5 Monitoring Plan and Performance Evaluation
- \_\_\_\_\_ Attachment-6 Project Costs
- \_\_\_\_\_ Attachment-7 Project Benefits
- \_\_\_\_\_ Attachment-8 Reduction or Waiver of Cost Share for Disadvantaged Communities and Economically Distressed Areas
- \_\_\_\_\_ Attachment-9 Innovation
- \_\_\_\_\_ Attachment-10 GHG Emission Calculations and ARB Quantification Methodology GHG Calculator
- \_\_\_\_\_ Attachment-11 Environmental Information Form and Documents
- \_\_\_\_\_ Attachment-12 Project Preliminary Plans and Specifications (for Construction Projects)
- \_\_\_\_\_ Attachment-13 Compliance with SB X7-7, AB 1404, AB 1420, and Other Requirements



## WATER SUPPLIER’S APPLICATION (PART I) ATTACHMENT GUIDELINES

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| <b>Attachment 1: Signature Page</b>   |  |
|   | All applicants must complete the signature page with a wet signature and submit it with the hard copy of the proposal.   |
| <b>Attachment 2: Goals, Objectives, and Priorities – Relevance and Importance</b> |  |
|   | Complete Attachment 2 and describe the goals, objectives, and priorities of the proposed project. Proposed project objectives should be specific, measurable, attainable, relevant, and have a timeline (SMART); proposed project objectives that do not meet these criteria may result in a lower proposal score. Explain the need for the proposed project and show consistency with RFP funding priorities.   |
| <b>Attachment 3: Technical/Scientific Merit and Feasibility</b>                   |  |
|   | Complete Attachment 3 and provide enough information to permit evaluation of the feasibility and technical adequacy of the proposed project, including justification for the approach, methods (as described in Attachment 4 and/or Attachment 5), and procedures used to satisfy the project’s SMART objectives. Also, provide information on the applicant’s readiness to proceed. Use previous work, published scientific literature, or models to describe the technical adequacy and feasibility of the project. Describe surface water reliability over the next 10 year period and the percent of time surface water deliveries will be available to customers. |
| <b>Attachment 4: Project Plan and Description</b>                                 |  |
|   | <p>Complete Attachment 4 and include the following in full detail:</p> <ul style="list-style-type: none"> <li>• Identify the proposed project, describe the project background, current conditions, and water use efficiency plans, actions, or measures to be taken pursuant to the proposed project.</li> <li>• Provide a project plan and describe the nature of the work in detail; specify and describe tasks, procedures, materials, equipment, and facilities. If necessary, subdivide into subtasks where appropriate. For example, project administration may be one task. Planning, construction, and monitoring are also examples of tasks.</li> </ul>      |

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|  | <p>(Please note that the proposed project costs in the Project Cost Table (Attachment 6) must correspond to proposed project tasks/subtasks identified here).</p> <ul style="list-style-type: none"> <li>• Identify the project location and areal extent, as applicable. Include a site location map.</li> <li>• Provide a schedule that corresponds to each of your identified tasks (and subtasks, if applicable) and that will achieve your proposed project objectives. This schedule must also be consistent with the Cost Table. Unless the timeline is specific to certain times in a calendar year, it is recommended that the schedule be based on time since Grant Agreement execution because Grant Agreement execution dates are contingent upon the review and signatory process.</li> <li>• Describe any anticipated adverse effects.</li> </ul> |
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**Attachment 5: Monitoring Plan and Performance Evaluation**

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|  | <p>The success of all projects needs to be monitored and assessed. Project monitoring and evaluation is an essential part of any project proposal so that DWR can ensure that a funded project will meet its intended SMART goals and objectives, and that it will produce State benefits.</p> <p>The goals of a Monitoring and Evaluation Plan are to:</p> <ul style="list-style-type: none"> <li>• Provide a plan for monitoring and evaluating the proposed project performance.</li> <li>• Identify measures that can be used to monitor progress towards achieving proposed project goals, objectives, and stated benefits.</li> <li>• Document project benefits (water savings and other benefits) to mark progress and to determine the success of the proposed project.</li> <li>• Provide assurance that the proposed project will meet its intended goals, achieve measurable benefits, and provide value to the State of California.</li> </ul> <p>If a proposed project is selected for funding, applicants are required to conduct an adequate monitoring program and collect sufficient data to verify project results, achievement of SMART objectives, and State and local water conservation and water use efficiency benefits. Therefore, all applicants must complete and submit, as a part of the proposal, a Monitoring and Evaluation Plan (Attachment 5) for assessing how well the SMART objectives were met and the extent to which each anticipated benefit of the proposed project was achieved (See Local and State Benefits in Attachment 7). This plan must demonstrate that the applicant will collect necessary data and conduct an analysis of the data to show proposed project results and benefits.</p> <p>Applicants will also be asked to re-evaluate project cost/benefit analysis as part of the final report.</p> <p>More information can be found at <a href="http://water.ca.gov/wuegrants/">http://water.ca.gov/wuegrants/</a> under Solicitations and Guidelines and clicking on the document titled: Monitoring Plan-Guidelines for Project Performance.</p> |
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|  | <p><b>The Monitoring and Evaluation Plan should include:</b></p> <ul style="list-style-type: none"> <li>• A description of the proposed project SMART objective(s) (desired output and desired results) and anticipated benefits. A description on how pre-project conditions and baseline data will be determined, the basic assumptions being used, and the anticipated accuracy of the data to be produced.</li> <li>• An explanation of the monitoring plan and performance measures (including methodologies to be used and data that will be collected) intended to measure <u>project output</u>.</li> <li>• Provide an explanation of the monitoring plan and performance measures intended to measure the <u>project results</u>. This is called an <b>outcome indicator</b>. <i>Outcome indicators</i> measure project results. An example of an outcome indicator is the amount of water saved. Measurement parameters (metrics) should fit performance evaluation needs of the proposed project. Metrics may include factors such as: acre-feet (AF) of water savings, constituent concentration(s), in-stream flow improvements in AF per year with a specified duration, changes in the frequency and amount of deliveries, and others.</li> <li>• An explanation of the monitoring plan and performance measures (including verification methodologies, data that will be collected, and the analysis that will be done) to evaluate and verify the local and State benefits (for example, verifying the time, duration, location, and amount of in-stream flow increases for fish benefits that have been listed in Table 4). The Monitoring Plan Guidelines found on DWR’s website (Reference 2- Monitoring Plan Guidelines) may not be all inclusive for verifying State and local benefits. If applicable, please add any additional approaches or monitoring methodologies to verify the anticipated benefits to Table 4 in Attachment 7.</li> <li>• Information about how data and other information will be managed by the applicant, reported to DWR, and made accessible to others.</li> <li>• The estimated costs associated with the implementation of the monitoring and evaluation plan.</li> </ul> <p>Applicants will also be asked to submit post-project annual reports of benefits and costs for five years after the completion of the project. Post-project report costs are not reimbursable. Annual reports allow DWR to follow up on the status of project benefits. The annual reports will be public information.</p> |
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| <b>Attachment 6: Project Costs</b> |  |
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|  | <p>Complete Attachment 6 and provide descriptions of cost items, all major assumptions, methodologies, computations, and all other relevant cost information. Complete Project Costs Tables 1, 2, and 3, and use additional sheets as necessary. Project costs must be reported for the major project tasks and must correspond to the project task list and identified schedule in Attachment 4. Be certain to list major cost items for each task. If necessary, subdivide tasks into subtasks, where appropriate. If subtasks are used, also</p> |
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provide major costs for each subtask in Table 1. Files are available at: <http://water.ca.gov/wuegrants/>.

**Table 1: Project Costs (Budget).** Projects with a duration of more than one year should enter project costs by year. Complete the shaded cells in Table 1 including the titles of tasks and subtasks. Enter the local share (include any non-state) of project costs under the “Applicant cost share” column. Applicant’s contingency for each cost category should be no more than ten percent of the cost of the category. Applicants must also enter the life of investment in years. When the DWR Excel sheet is used, all capital costs are converted to present value (2015 dollars) using the capital recovery factor, which is based on a six percent discount rate. Otherwise, applicants must convert costs to present value. Table 1 will be used as the basis for the Grant Agreement budget for the project, if selected for funding.

The applicant’s minimum cost share must not be less than 50 percent unless claiming Disadvantaged Community or Economically Distressed Area status.

**Table 2: Annual Operations and Maintenance Costs.** Annual Operations and Maintenance (O&M) costs are typically only applicable to implementation (construction) projects. Include applicant’s annual administration, operations, maintenance, and other annual costs (O&M costs). The O&M costs are required to calculate project annual costs in Table 3. Annual O&M costs are not eligible costs that can be paid out of the grant and must be paid by the applicant.

**Table 3: Total Annual Project Costs.** This table totals annual project implementation costs from Table 1 and annual O&M costs from Table 2.

**Table 4: Project Annual and Total Local Monetary Benefits.** Applicants must identify the local monetary benefits of the proposed project. These could include benefits such as avoided water supply, energy, drainage discharge or treatment, and labor costs. If other local monetary benefits are anticipated, please list and describe them. The applicants are required to provide average annual proposed project benefits, benefit unit of measurement, and duration of the benefit. This information will be used to calculate annual monetary value of proposed project benefits and the present value of proposed project benefits.

**Table 5: Cost/Benefit Ratio.** This is a summary of the Annual (Table 3) and Total (Table 1) Project Costs and Project Total Local Monetary Benefits (Table 4). This table calculates the cost-benefit ratio and determines if a proposed project is locally cost-effective or not.

**Attachment 7: Project Benefits**

Projects must create benefits to be eligible for grant funding. Applicants must explain how the State will benefit from the proposed project. Potential benefits include: water savings (in acre-feet, based on the life of the project), in-stream flow quantity (e.g., total flow volume, maximum flow rate) and timing improvements (e.g., duration, frequency, seasonal), water quality improvements, energy conservation, and greenhouse gas emission reductions.

Applicants must provide a **qualitative** description of both local and State anticipated project benefits and complete Section 7.1 of Attachment 7. The following information should be included: type of benefit (water savings, in-stream flow and timing, water quality, and/or energy conservation), the time pattern and location where the benefit will be realized, as

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|  | <p>well as the duration of the benefit to each beneficiary. In-stream flow and water quantity benefits would also include beneficial changes in water volumes. For water quality benefits, this should be the change in constituent concentration(s) (or temperature) that would be realized through proposed project implementation.</p> <p>For GHG reductions, document the reliability of surface water deliveries to customers to eliminate or substantially reduce on-farm groundwater pumping. These anticipated benefits should be based on scientific methods and previously published reliable data and/or relationships.</p> <p>Document the rationale for qualification of benefits and include assumptions, calculations, references, and other pertinent information used to arrive at the values/qualitative assessments. Use additional sheets if needed.</p> <p>Applicants must use scientific methods and previously published reliable data to <b>quantitatively</b> estimate the expected benefits of the proposed project to both the applicant (local benefits) and the State and complete Section 7.2 of Attachment 7.</p> |
| <b>Attachment 8: Reduction or Waiver of Cost Share for Disadvantaged Communities and Economically Distressed Areas</b> |  |
|  | <p>All applicants are required to provide the minimum cost share of 50 percent. Projects that benefit communities with a Median Household Income (MHI) of the population less than \$48,875 or that serve an Economically Distressed Area, may request a reduction or waiver of the required cost share. To request a reduction or waiver of the required cost share, the applicant must complete Attachment 8 .</p>   |
| <b>Attachment 9: Innovation</b>  |  |
|  | <p>Complete Attachment 9 and describe any innovative technologies, methodologies, or approaches to use existing technology to be employed in the proposed project that could contribute to improved efficiencies in projects throughout the State. Describe best available technology that will be used, what alternatives were eliminated from consideration, and characteristics of the technology that advance innovation in the State or local area.</p>   |
| <b>Attachment 10: GHG Emission Calculations</b>  |  |
|  | <p>Complete Attachment 10 and submit the completed Air Resources Board GHG Emission Reduction Calculator Tool (<a href="http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm">http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm</a>) to show project effect(s) on Greenhouse Gas emissions. For GHG emission reductions due to moving customers off groundwater, consider surface water deliveries availability.</p>  |
| <b>Attachment 11: Environmental Information Form and Documents</b>   |  |
|  | <p>Include a plan for compliance with all applicable environmental requirements. The plan should address all the potential environmental, social, and economic impacts of the proposed project, including mitigation required under the California Environmental Quality</p>   |

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|   | <p>Act (CEQA) and, if applicable, the National Environmental Policy Act (NEPA). The plan should also address compliance with local, county, State, and federal permitting requirements. Please submit this information by mail with the original hard copy of the application if documents are too large to upload online.</p> <p>All applicants must complete applicable portions of the Environmental Information Form. This form must be signed by the designated signatory or their representative.</p> <p>A “project” as defined by CEQA, California Code of Regulations, Title 14, Division 6, Chapter 3, Section 15378 is:</p> <p style="padding-left: 40px;"><i>“... the whole of an action, which has a potential for resulting in either a direct physical change in the environment, or a reasonably foreseeable indirect physical change in the environment....”</i></p> <p>For general information about environmental compliance, refer to this website: <a href="http://resources.ca.gov/ceqa/">http://resources.ca.gov/ceqa/</a>. For assistance in establishing environmental significance of project specific impacts to farmland, please visit: <a href="http://www.consrv.ca.gov/DLRP/index.htm">http://www.consrv.ca.gov/DLRP/index.htm</a>.</p> |
| <b>Attachment 12: Project Preliminary Plans and Specifications (for construction projects only)</b> |   |
|   | <p>Submit Final Plans and Specifications or Preliminary Plans and Specifications for the proposed project if Final Plans and Specifications are not complete. The Preliminary Plans should indicate, at a minimum, types and quantities of materials, dimensions, and location. A California registered civil engineer must prepare the Plans, Specifications, and Certification Statements. Please submit this information by mail with the original hard copy of the application.</p>   |
| <b>Attachment 13: Compliance with SB X7-7, AB 1404, AB 1420, and Other Requirements</b>             |   |
|   | <p>Complete Attachment 13 to show compliance with applicable regulations including urban and agricultural water management planning, groundwater monitoring and management, and water measurement regulations.</p>  |

**PART I**  
**ATTACHMENT 1 - SIGNATURE PAGE**

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Applicant: \_\_\_\_\_

Project Title: \_\_\_\_\_

By signing below, the official declares the following:

- The truthfulness of all representations in the proposal;
- The individual signing the form has the legal authority to submit the proposal on behalf of the applicant;
- There is no pending litigation that may impact the financial condition of the applicant or its ability to complete the proposed project;
- The individual signing the form has read and understood the conflict of interest and confidentiality section and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant;
- The applicant will comply with all terms and conditions identified in this Proposal Package if selected for funding; and
- The applicant has legal authority to enter into a Grant Agreement with the State.

\_\_\_\_\_  
Name

\_\_\_\_\_  
Title

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

## PART I

### ATTACHMENT 2 – GOALS, OBJECTIVES, AND PRIORITIES – RELEVANCE AND IMPORTANCE

| 2.0 Goals, Objectives, and Priorities – Relevance and Importance (*= items to be included in the Grant Agreement) |  |
|---|--|
| Project Goals and Objectives  |  |
|   | Please limit to 3 pages  |
| 2.1*  | Describe the project’s goals and SMART objectives (Specific, Measurable, Attainable, Relevant, and includes a Timeline).   |
| 2.2*  | Include an explanation of the need for the project as related to critical local, regional, or State water issues.  |
| 2.3*  | Describe how this project would be consistent with regional or local water management plans.   |
| Project’s Consistency with Proposition 1 Grant Program Purposes and Water Use Efficiency Funding Priorities       |  |
| <i>Check all that apply and make sure you explain/justify your selection in the referenced attachment.</i>        |  |
| 2.4   | <p>Will your project assist in meeting one or more of the following Water Use Efficiency Program Funding Priorities?</p> <p><input type="checkbox"/> Implements a project that is not locally cost-effective (<i>explain in Attachment 6</i>)</p> <p><input type="checkbox"/> Employ a regional scope of activities (<i>explain in Attachment 2.2, 2.3, 4, and 10</i>)</p> <p><input type="checkbox"/> Leverages private, federal or local funding to produce the greatest State level public benefit (<i>explain in Attachment 6</i>)</p> <p><input type="checkbox"/> Produces multiple benefits such as improved water quality, stream flow timing and quantity, and local water supply reliability (<i>explain in Attachment 7</i>)</p> <p><input type="checkbox"/> Improves irrigation water management to conserve water or to reduce the quantity of highly saline or toxic drainage water (<i>explain in Attachment 3, 4, and 7</i>)</p> <p><input type="checkbox"/> Provides water metering and/or volumetric pricing and/or implements AWMP</p> |

|     |   |
|-----|---|
|     | <p>actions for agricultural water suppliers serving less than 25,000 irrigated acres (<i>explain in Attachment 4</i>)</p> <p><input type="checkbox"/> Conserves energy and helps the GHG emission reduction or carbon sequestration goals in implementation of the State Climate Change Adaptation Strategies (<a href="http://resources.ca.gov/climate_adaptation/local_government/adaptation_policy_guide.html">http://resources.ca.gov/climate_adaptation/local_government/adaptation_policy_guide.html</a>) (<i>Explain in Attachment 7 and 10</i>)</p> <p><input type="checkbox"/> Employs new or innovative technologies or practices (explain in Attachment 9)</p> <p><input type="checkbox"/> Provides direct benefits to disadvantaged communities or economically distressed areas (<i>explain in Attachment 8 or Attachment 4</i>)</p> |
| 2.5 | <p><b><i>Briefly</i></b> explain how your project will assist in meeting one or more of the following <i>Proposition 1 Program Funding Goals</i>:</p> <ol style="list-style-type: none"><li>1. Helps water infrastructure adaptation to climate change</li><li>2. Employs a regional collaborative scope of activities</li><li>3. Otherwise improves regional water self-reliance</li></ol> <p><u>Explanation:</u></p>  |

**PART I**  
**ATTACHMENT 3 – TECHNICAL/SCIENTIFIC MERIT AND FEASIBILITY**

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| <b>3.0 Technical/Scientific Merit and Feasibility</b>                     |  |
|---|--|
| <i>Provide narrative, references, and other supporting documentation.</i> |  |
|   | Please limit to 1 page   |
| 3.1   | Technical and scientific information to support the proposed project's goals, objectives, benefits, and costs. |
| 3.2   | Reference List (if applicable):  |

## PART I

### ATTACHMENT 4 – PROJECT PLAN AND DESCRIPTION

| <b>4.0 Project Plan and Description (* = items to be included in the Grant Agreement)</b> |   |
|---|---|
| <i>Provide details sufficient for a Grant Agreement Statement of Work.</i>                | Please limit to 4 pages   |
| 4.1   | Background- Describe current water use efficiency conditions:   |
| 4.2*  | Identify Project. Describe water conservation measures to be taken by the proposed project:   |
| 4.3*  | List and describe project tasks, as applicable:   |
|   | Task 1:   |
|   | Task 2:   |
|   | Task 3:   |
|   | Task 4:   |
|   | Task 5:   |
|   | Etc.:   |
| 4.4*  | Project Schedule by task, include milestones:   |
| 4.5*  | Project deliverables (reports, products, environmental and engineering documents):  |
| 4.6   | Describe adverse impacts of the proposed project, if applicable:  |
| 4.7   | Briefly explain and quantify what percent of benefits will be going to disadvantaged communities or economically stressed areas (if not completing Attachment 8): |

## PART I

### ATTACHMENT 5 – MONITORING PLAN AND PERFORMANCE EVALUATION

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| <b>5.0 Monitoring Plan and Performance Evaluation (*= items to be included in the Grant Agreement)</b>   |   |
|--|---|
| <i>See also Monitoring Plan-Guidelines for Project Performance found at:<br/><a href="http://www.water.ca.gov/wuegrants/SolicitationsProp1AG.cfm">http://www.water.ca.gov/wuegrants/SolicitationsProp1AG.cfm</a></i> | Please limit<br>to 3 pages  |
| 5.1*   | Description of pre-project conditions and baseline data, the basic assumptions being used, and the anticipated accuracy of the data to be produced:   |
| 5.2*   | Monitoring Plan and performance measures to measure project’s outputs and project results. If no Monitoring and Evaluation Plan is submitted, applicants must justify why and explain how project results and benefits will be measured and verified: |
| 5.3*   | Evaluation Plan and performance measures for <u>verification</u> of project’s benefits:   |
| 5.4*   | Information about how the data and other information will be handled, stored, reported, and made accessible to DWR and others:  |
| 5.5*   | The estimated costs associated with the implementation of the Monitoring and Evaluation Plan:   |
| 5.6*   | Others (specify):   |

## PART I

### ATTACHMENT 6 – PROJECT COSTS

| <b>6.0 Project Costs - (* = items to be included in the Grant Agreement)</b>  |   |
|---|---|
|   | Please limit to 2 pages   |
| 6.1*  | Provide descriptions of cost items, all major assumptions, methodologies, computations, and all other relevant cost information. Be certain to list major cost items for each task. If necessary, subdivide tasks into subtasks, where appropriate, and provide major costs for subtasks.   |
| <i>Project costs must be reported for each major project task/subtask and must correspond to the project task description and schedule in Attachment 4.</i> |   |
| Please limit to Excel Worksheet   |   |
| 6.2*  | <p>Complete Table 1 in the Excel Workbook.</p> <ul style="list-style-type: none"> <li>Enter the proposed project cost for each item for each year, as applicable.</li> <li>Enter contingency percentage (for example, five percent) and the applicant’s cost share for each task or subtask</li> <li>If you enter a cost, you MUST enter the life of investment in years (zeros are not allowed) in Column VII.</li> <li>Total project costs, State share, and annualized project costs are automatically calculated.</li> </ul>                                  |
| <i>Local Cost-Effectiveness Evaluation</i>  |   |
| Please limit to Excel Worksheet   |   |
| 6.3   | <ul style="list-style-type: none"> <li>Complete Table 2 in the Excel Workbook by entering project’s annual operation and maintenance costs. Table 3 will be filled automatically and the total annual project costs will be calculated.</li> <li>Complete Table 4 (Project Annual and Total Local Monetary Benefits) based on information from Attachment 7 to calculate the local monetary benefits of the project.</li> <li>Once Tables 1 through 4 are entered, Table 5 (Cost/Benefits Ratio) will automatically calculate the Cost/Benefits Ratio.</li> </ul> |

**Applicant:**

THE TABLE IS FORMATTED WITH FORMULAS:

FILL IN THE SHADED AREAS ONLY

**Table 1 - Project Costs**

| Section A projects must complete Life of investment, column VII. Do not use 0. |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
|--|---------------------|---------------------|---------------------|-----------------|-------------------------------|---|---------------------------------------|----------------------------|--|---------------------------------|
| Tasks/subtasks<br><br>(I)  | Year<br>1<br><br>\$ | Year<br>2<br><br>\$ | Year<br>3<br><br>\$ | Total<br><br>\$ | Contingency<br>%<br><br>(III) | Cost +<br>Contingency<br>\$<br><br>(IV) | Applicant<br>cost share \$<br><br>(V) | State Share \$<br><br>(VI) | Life of<br>investment in<br>years<br><br>(VII) | Annualized<br>Costs<br><br>(IX) |
| <b>(a) Task 1- Administration/management<sup>1</sup></b>                       |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>Subtotal, Administration Costs</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(b) Task 2-(specify)</b>  |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>subtotal, Task 2</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(c) Task 3-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | ----                            |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | ----                            |
| <b>subtotal, Task 3</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(d) Task 4-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>Subtotal, Task 4</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(e) Task 5-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>subtotal, Task 5</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(f) Task 6-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>subtotal, Task 6</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(g) Task 7-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>Subtotal, Task 7</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(h) Task 8-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>subtotal, Task 8</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(i) Task 9-</b>   |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>Subtotal, Task 9</b>  | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(j) Task 10-</b>  |                     |                     |                     |                 |                               |   |                                       |                            |  |                                 |
| subtask 1-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| subtask 2-   |                     |                     |                     | -               |                               | -                                       |                                       | -                          |  | -                               |
| <b>subtotal, Task 10</b>   | --                  | --                  | --                  | -               |                               | --                                      | --                                    | --                         |  | \$0                             |
| <b>(k) TOTAL</b>   | \$0                 | \$0                 | \$0                 | \$0             |                               | \$0                                     | \$0                                   | \$0                        |  | \$0                             |
| <b>(l) Cost Share -Percentage</b>  |                     |                     |                     |                 |                               |   | 0%                                    | 100%                       |  |                                 |

<sup>1</sup>- excludes administration Operation & Maintenance.

**Applicant:**

THE TABLE IS FORMATTED WITH FORMULAS:

FILL IN THE SHADED AREAS ONLY

**Table 2: Annual Operations and Maintenance Costs (dollars / year)**

*(to be paid by Applicant)*

| Operations <sup>(1)</sup><br>(I) | Maintenance<br>(II) | Other<br>(III) | Total<br>(IV)<br>(I)+(II)+(III) |
|----------------------------------|---------------------|----------------|---------------------------------|
|                                  |                     |                | \$                              |

(1) include annual O&M administration costs here

**Table 3: Total Annual Project Costs**

| Annual<br>Capital Costs <sup>(1)</sup><br>(I) | Annual O&M<br>Costs <sup>(2)</sup><br>(II) | Total<br>Annual<br>Costs<br>(III)<br>(I+II) |
|---|--|---|
| \$ -  | \$ -                                       |   |

(1) From Table 1, row k column IX

(2) From Table 2, column IV

**Applicant:**

THE TABLES ARE FORMATTED WITH FORMULAS: FILL IN THE SHADED AREAS ONLY

**Table 4: Project Annual and Total Local Monetary Benefits (in Dollars)**

| ANNUAL LOCAL BENEFITS, I                                  | ANNUAL QUANTITY of Benefit, II | UNIT OF MEASUREMENT, III | Value of Benefit \$/unit IV | ANNUAL MONETARY BENEFITS (\$ / yr) V | DURATION (Y), VI | Net Present Value of Monetary Benefits, VII |
|---|--------------------------------|--------------------------|-----------------------------|--------------------------------------|------------------|---|
| (a) Avoided Water Supply Costs (Current or Future Source) |                                |                          |                             | 0                                    |                  | 0.00  |
| (b) Avoided Energy Costs                                  |                                |                          |                             | 0                                    |                  | 0.00  |
| (c) Avoided Waste Water Treatment Costs                   |                                |                          |                             | 0                                    |                  | 0.00  |
| (d) Avoided Labor Costs                                   |                                |                          |                             | 0                                    |                  | 0.00  |
| (e) Other (describe)                                      |                                |                          |                             | 0                                    |                  | 0.00  |
| <b>(f) Total [(a) + (b) + (c) + (d) + (e)]</b>            |                                |                          |                             | 0                                    |                  | \$0   |

<sup>4</sup> Examples include avoided cost of current water supply (or future supply if available), energy savings, labor savings, waste water treatment.

**Table 5: Cost / Benefits Ratio**

|   |  |             |
|---|--|-------------|
| (a) Total annual monetary benefits [Table 4, row (f), column V] |  | \$0         |
| (b) Total annual project cost [From Table 3, column III]        |  | \$0         |
| (c) Cost/Benefit Ratio [(b) / (a)]                              |  | <b>0.00</b> |

**PART I**  
**ATTACHMENT 7 – PROJECT BENEFITS**  
 (QUANTITATIVE AND QUALITATIVE DESCRIPTION OF BENEFITS)

(Please limit to 3 pages)

**7.1 Qualitative Benefits**

|   |                       |
|---|-----------------------|
| <b>7.1.A Qualitative Benefits: State (*= items to be included in the Grant Agreement)</b>   |                       |
| <i>Provide a detailed narrative of STATE project benefits. Provide time, pattern, location of benefits, and an estimate of the duration of those benefits / project life.</i> |                       |
| 7.1.1*  | State Water Quantity: |
| 7.1.2*  | State In-Stream Flow: |
| 7.1.3*  | State Water Quality:  |
| 7.1.4*  | State Other Benefits: |
| <b>7.1.B Qualitative Benefits: Local (*= items to be included in the Grant Agreement)</b>   |                       |
| <i>Provide a detailed narrative of LOCAL project benefits. Provide time, pattern, location of benefits, and an estimate of the duration of those benefits / project life.</i> |                       |
| 7.1.5*  | Local Water Quantity: |
| 7.1.6*  | Local In-Stream Flow: |
| 7.1.7*  | Local Water Quality:  |
| 7.1.8*  | Local Other Benefits: |

## 7.2. Quantitative Benefits

| 7.2.A Quantitative Benefits: State (*= items to be included in the Grant Agreement)   |                       |                           |          |
|---|-----------------------|---------------------------|----------|
| Quantify the anticipated STATE benefits (water saved or in-stream flow, water quality, energy efficiency) after project is implemented. Describe the role that the applicant will have in control and management of project benefits. |                       |                           |          |
| Description   |                       | Measure of Benefit / Unit | Quantity |
| 7.2.1*  | State Water Quantity: |                           |          |
| 7.2.2*  | State In-Stream Flow: |                           |          |
| 7.2.3*  | State Water Quality:  |                           |          |
| 7.2.4*  | State Other Benefits: |                           |          |
| 7.2.B Quantitative Benefit: Local (*= items to be included in the Grant Agreement)  |                       |                           |          |
| Quantify the anticipated LOCAL benefits (water saved or in-stream flow, water quality, energy efficiency) after project is implemented. Describe the role that the applicant will have in control and management of project benefits. |                       |                           |          |
| Description   |                       | Measure of Benefit / Unit | Quantity |
| 7.2.5*  | Local Water Quantity: |                           |          |
| 7.2.6*  | Local In-Stream Flow: |                           |          |
| 7.2.7*  | Local Water Quality:  |                           |          |
| 7.2.8*  | Local Other Benefits: |                           |          |

## PART I

### ATTACHMENT 8 – REDUCTION OR WAIVER OF COST SHARE FOR DISADVANTAGED COMMUNITIES OR ECONOMICALLY DISTRESSED AREAS

---

| <b>8.0 Reduction or Waiver of Local Cost Share</b>  |   |
|---|---|
| <p><i>For Disadvantaged Community (as defined by CalEnviroScreen 2.0) or Economically Distressed Applicants ONLY.</i></p> <p><i>At a minimum, the following information must be included:</i></p> | <p>Please limit to<br/>3 pages</p>  |
| 8.1   | Documentation of the Presence of Disadvantaged or Economically Distressed Communities:  |
| 8.2   | Documentation of Disadvantaged or Economically Distressed Community Participation:  |
| 8.3   | Benefits and Impacts to Disadvantaged or Economically Distressed Communities:   |
| 8.4   | <p>Calculation of Population and Median Household Income for the Disadvantaged Community or Economically Distressed Area and other applicable calculations for Economically Distressed Areas:</p> <p>Provide sample calculations showing the MHI of the population served by the water from the project and sample calculations or EDA Mapping Tool maps for other applicable criteria for supporting Economically Distressed Area determination. Applicants are required to submit maps or other information depicting the boundary of the applicant’s service area. Applicants must provide documentation for the MHI of all individuals served by the water from the project (land owners, and other residents served by the project) in the applicant’s service area.</p> |
| 8.5   | <p>Reduced or waived local share:</p> <p>Explain why the local share has to be reduced or waived. Enter the proposed local share in Budget Table, Attachment 6.</p>   |

**PART I**  
**ATTACHMENT 9 – INNOVATION**

---

| <b>9.0 Innovation</b>                  |  |
|--|--|
| <i>Refer to Attachment Guidelines.</i> |  |
| Please limit to 1 page                 |  |
| 9.1                                    | Describe how best available technology, innovative equipment, and innovative methodologies are used. |

## PART I

### ATTACHMENT 10 – GHG EMISSION CALCULATIONS

| 10.0 GHG Emission Calculations   |  |                  |        |                                 |             |                               |          |                                |             |  |  |
|--|--|------------------|--------|---------------------------------|-------------|-------------------------------|----------|--------------------------------|-------------|--|--|
| <p><i>Energy savings include savings in electricity use and fossil fuel consumptions (diesel, natural gas, gasoline, etc.). If the applicant's project generates renewable energy, add the amount of renewable energy to the category of electricity saving.</i></p>   | <p>Please limit to 1 page</p>            |                  |        |                                 |             |                               |          |                                |             |  |  |
| <p>10.1 Calculate GHG Emission Reduction:<br/>To convert the energy/fuel savings to the avoided Greenhouse Gas (GHG) emissions, use the following equation:</p> <p style="margin-left: 20px;">GHG Emission Reduction from electricity savings = (Energy Savings) x (Emission Factor)<br/>OR<br/>GHG Emission Reduction from fossil fuel savings = (Fuel Savings) x (Emission Factor)</p> <p>For calculation convenience, below are some Emission Factors quoted from a State Air Resources Board's report:<br/><a href="http://www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_Protocol_v1_1_2010-05-03.pdf">www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_Protocol_v1_1_2010-05-03.pdf</a></p> <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse; text-align: center;"> <thead> <tr> <th style="padding: 2px 5px;">Type of Energy/Fuel</th> <th style="padding: 2px 5px;">Emission Factors</th> </tr> </thead> <tbody> <tr> <td style="padding: 2px 5px;">Diesel</td> <td style="padding: 2px 5px;">10.21 kgCO<sub>2</sub>/gallon</td> </tr> <tr> <td style="padding: 2px 5px;">Natural Gas</td> <td style="padding: 2px 5px;">0.0545 kgCO<sub>2</sub>/scf</td> </tr> <tr> <td style="padding: 2px 5px;">Gasoline</td> <td style="padding: 2px 5px;">8.81 kgCO<sub>2</sub>/gallon</td> </tr> <tr> <td style="padding: 2px 5px;">Electricity</td> <td style="padding: 2px 5px;">306 kgCO<sub>2e</sub>/MWh<sup>6</sup></td> </tr> </tbody> </table> <p style="margin-left: 20px; font-size: small;">scf – standard cubic foot. Standard condition refers to the air condition at temperature of 60 degrees Fahrenheit with 1 atmospheric pressure.<br/>MWh – Megawatt-hours, an electricity unit.</p> <p>Applicants must use :</p> <ul style="list-style-type: none"> <li>- <b><u>A</u>The California Air Resources Board Greenhouse Gas Emission Reduction Calculator for the California Department of Food and Agriculture State Water Efficiency and Enhancement Program (SWEEP) &amp; DWR Joint Project</b></li> </ul> <p>All Water Suppliers must complete the Air Resources Board GHG Emission Reduction Calculator that was developed for this joint project. The Calculator is a Microsoft Excel Workbook. The workbook requires specific information on the energy use changes that are expected due to conveyance improvements. It also requires pump information from each of the agricultural</p> | Type of Energy/Fuel                      | Emission Factors | Diesel | 10.21 kgCO <sub>2</sub> /gallon | Natural Gas | 0.0545 kgCO <sub>2</sub> /scf | Gasoline | 8.81 kgCO <sub>2</sub> /gallon | Electricity | 306 kgCO <sub>2e</sub> /MWh <sup>6</sup> |  |
| Type of Energy/Fuel  | Emission Factors                         |                  |        |                                 |             |                               |          |                                |             |  |  |
| Diesel   | 10.21 kgCO <sub>2</sub> /gallon          |                  |        |                                 |             |                               |          |                                |             |  |  |
| Natural Gas  | 0.0545 kgCO <sub>2</sub> /scf            |                  |        |                                 |             |                               |          |                                |             |  |  |
| Gasoline   | 8.81 kgCO <sub>2</sub> /gallon           |                  |        |                                 |             |                               |          |                                |             |  |  |
| Electricity  | 306 kgCO <sub>2e</sub> /MWh <sup>6</sup> |                  |        |                                 |             |                               |          |                                |             |  |  |

<sup>6</sup> The Emission Factor for electricity is from USEPA 2014 eGRID (2010 data, [www.epa.gov/eGRID](http://www.epa.gov/eGRID)) for the non-baseload output emission rate in CAMX sub-region (California).

operations that jointly apply for funding through this request for applications.

**Greenhouse Gas Quantification Methodology for the California Department of Food and Agriculture State Water Efficiency and Enhancement Program DWR (Prop 1) Joint Project**

[http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointswEEPdraftqm\\_15-16.pdf](http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointswEEPdraftqm_15-16.pdf)

**California Air Resources Board Greenhouse Gas Emission Reduction Calculator for the California Department of Food and Agriculture State Water Efficiency and Enhancement Program (SWEEP) & DWR Joint Project**

[http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointswEEPdraftcalculator\\_15-16.xlsx](http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointswEEPdraftcalculator_15-16.xlsx)

**PART I**  
**ATTACHMENT 11 – ENVIRONMENTAL INFORMATION FORM AND**  
**DOCUMENTS**

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| <b>11.0 Environmental Information Form and Documents</b> |  |
|--|--|
| <i>(† items required for Grant Agreement execution)</i>  |  |
|  | Not in page limit  |
| 11.1 <sup>†</sup>  | Complete Environmental Information Form on the next page.                                      |
| 11.2   | Provide copies of environmental documents, as applicable, with the hard copy submitted to DWR. |

### ENVIRONMENTAL INFORMATION FORM

Grant Recipients are responsible for complying with all applicable laws and regulations for their projects, including the California Environmental Quality Act (CEQA). Work that is subject to the CEQA shall not proceed under this Grant Agreement until document(s) that satisfy the CEQA process are received by the Department of Water Resources (DWR) and DWR has completed its CEQA compliance. Work that is subject to a CEQA document shall not proceed until and unless approved by the DWR. Such approval is fully discretionary and shall constitute a condition precedent to any work for which it is required. Once CEQA documentation has been completed, DWR will consider the environmental documents and decide whether to continue to fund the project or to require changes, alterations or other mitigation. **This form is to be completed by the Lead Agency.**

**DWR Agreement #:** To be determined

**Lead Agency:** \_\_\_\_\_

**Project Title:** \_\_\_\_\_

**Project Manager:** \_\_\_\_\_

**Phone Number:** \_\_\_\_\_

**Address:** \_\_\_\_\_

1. List the source of any other grants or funds received from the DWR to implement a portion of this project.

---

2. Is this a project as defined by CEQA?  Yes  No  
- If yes, proceed to #3.  
- If no, please explain below then skip to #8.

---

---

---

---

3. Is this project exempt from CEQA compliance?  Yes  No  
- If no, skip to #4. If yes, check the appropriate response below, and then provide reasons for exemption in the space provided below. Once answered, skip to #7.

Cite the CEQA Article, Section and Title of the CEQA exemption, if appropriate

Statutory Exemptions: <http://resources.ca.gov/ceqa/guidelines/art18.html>

Categorical Exemptions: <http://resources.ca.gov/ceqa/guidelines/art19.html>

- Lead Agency has already filed a Notice of Exemption (NOE) with the State Clearinghouse and/or County Clerk. (Attach copy of NOE and, if applicable, a copy of Board Resolution)
- Lead Agency will file a NOE with the State Clearinghouse and/or County Clerk. Provide estimated date:
- Lead Agency will NOT file a NOE with the State Clearinghouse and/or County Clerk. *If Lead*

*Agency chooses not to file a NOE, sufficient documentation and information must be submitted to the DWR Project Manager along with this form, to allow DWR to make its own CEQA findings.*

Reason for exemption:

---



---



---

4. Please check types of CEQA documents to be prepared:

- Negative Declaration
- Mitigated Negative Declaration Environmental
- Impact Report

5. Please describe the status of the CEQA documents, expected date of completion, and estimated cost, if requesting DWR funds relating to CEQA compliance:

Status: \_\_\_\_\_  
 Date of Completion: \_\_\_\_\_  
 Estimated Costs: \_\_\_\_\_

6. If the CEQA document has been completed, please provide the title of the document and the State Clearinghouse number if available. Submit an electronic version, or a CD copy, of the CEQA document and any environmental permits listed in Question 8 to the contact listed in the Commitment Letter.

7. Please list all required permits you must obtain to complete the project (attach additional pages as necessary). Submit electronic versions or a CD copy of any final permits already completed.

| Type of Permit Required | Permitting Agency |
|-------------------------|-------------------|
|                         |                   |
|                         |                   |
|                         |                   |
|                         |                   |
|                         |                   |
|                         |                   |

8. This Environmental Information Form (EIF) was completed by:

Print Name: \_\_\_\_\_

Agency: \_\_\_\_\_

Phone: \_\_\_\_\_

Signature: \_\_\_\_\_

**PART I**  
**ATTACHMENT 12 – PROJECT PRELIMINARY PLANS AND SPECIFICATIONS**

---

| <b>12.0 Project Preliminary Plans and Specifications</b> |   |
|--|---|
| (when applicable)  |   |
| Not included in page limit                               |   |
| <b>12.1</b>  | List below and provide copies of the project’s plans and specifications to be mailed with hard copy to DWR. |

## PART I

### ATTACHMENT 13 – COMPLIANCE WITH SB X7-7, AB 1404, AB 1420, AND OTHER REQUIREMENTS

| <b>13.0 Compliance with SB X7-7, AB 1404, AB 1420 and Other Requirements</b>   |  | <b>Yes/No<br/>(If Yes,<br/>describe<br/>compliance)</b> |
|--|--|---|
| <b>Answer the questions below by stating “yes” or “no” in the right hand column.<br/>Where applicable, provide additional information/justification.</b> |  |   |
| <b>13.1</b>  | <p>Are you an agricultural water supplier serving irrigated acreage of more than 25,000 acres excluding recycled water? If yes, indicate compliance status with SB X7-7 requirements below (See Final 2015 Agricultural Water Management Plan Guidebook at <a href="http://www.water.ca.gov/wateruseefficiency/agricultural/agmngmt.cfm">http://www.water.ca.gov/wateruseefficiency/agricultural/agmngmt.cfm</a>)</p> <ul style="list-style-type: none"> <li>• Did you submit an Agricultural Water Management Plan to DWR?</li> <li>• Did you comply with the Agricultural Water Measurement Regulation?</li> <li>• Did you adopt a pricing structure for water customers based at least in part on quantity delivered?</li> <li>• Did you implement all locally cost-effective EWMPs?</li> <li>• If not implementing EWMPs (measurement, pricing, and other EWMPs), have you submitted a schedule, financing plan, and budget for implementation to DWR?</li> </ul>  |   |
| <b>13.2</b>  | <p>Are you an agricultural water supplier supplying 2,000 acre-feet or more of surface water annually for agricultural purposes or serving 2,000 or more acres of agricultural land? If yes, did you submit an AB 1404 aggregate farm-gate delivery form to DWR? (<a href="http://www.water.ca.gov/wateruseefficiency/agricultural/farmgatedelivery.cfm">www.water.ca.gov/wateruseefficiency/agricultural/farmgatedelivery.cfm</a>)</p>  |   |
| <b>13.3</b>  | <p>Are you an urban water supplier? If yes, are you in compliance with:</p> <ul style="list-style-type: none"> <li>• Urban Water Management Plan? – if you provide over 3,000 acre-feet of water annually, or serve more than 3,000 urban connections. (See <a href="http://www.water.ca.gov/urbanwatermanagement/">http://www.water.ca.gov/urbanwatermanagement/</a>)</li> <li>• AB 2572 Water Meter Requirements in CWC §525 et seq.? (See <a href="http://water.ca.gov/wateruseefficiency/finance">http://water.ca.gov/wateruseefficiency/finance</a>)</li> <li>• AB 1420 requirements? (See <a href="http://water.ca.gov/wateruseefficiency/finance">http://water.ca.gov/wateruseefficiency/finance</a>)</li> <li>• SB X7-7 Requirements—on and after July 1, 2016, an urban water supplier is not eligible for a water grant or loan awarded or administered by the State unless the supplier complies with SB X7-7 water conservation requirements outlined in Part 2.55 (commencing with §10608) of Division 6 of the CWC.</li> </ul> |   |
| <b>13.4</b>  | <p>Are you in compliance with CWC §10920 et seq. - Groundwater Monitoring Program requirements? (See <a href="http://www.water.ca.gov/groundwater/casgem/">www.water.ca.gov/groundwater/casgem/</a>)</p>   |   |
| <b>13.5</b>  | <p>Are you in compliance with Part 5.1 (commencing with §5100) of Division 2 of the CWC - Surface Water Diversion Reporting requirements? (See <a href="http://www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/index.shtml">www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/index.shtml</a>)</p>   |   |

## Part II: Agricultural Operations

This part describes the agricultural operations portion of the Joint DWR-CDFG grant application. This portion is funded through CDFG's SWEEP funds and follows SWEEP funding rules, guidelines, and procedures.

### Funding Rules

While multiple agricultural operations can partner with an agricultural water supplier to submit one joint application, each agricultural operation must adhere to the following funding rules. SWEEP does not require cost share. However, cost share is encouraged.

An on-farm agricultural operation can only participate in one joint application using a unique tax identification number.

An agricultural operation must use the operation's legal business name and associated tax identification number in their application. The business name provided in the application is the operation entity to which CDFG will extend a Grant Agreement if the project is selected for an award of funds. (See page 48 for details regarding the Award Process.)

Applications **cannot** build upon a previously funded 2015 SWEEP project directly affecting the same APNs (Assessor's Parcel Number(s)). However, applicants are encouraged to apply for a new project with different parcel(s).

Applicants must include flow meters in their proposed project or demonstrate actual water use will be **measured** with existing flow meters. See page pages 49-50 for more specifics on project design requirements.

Applicants are required to use the ARB- GHG quantification methodology and GHG Emission Reduction Calculator Tool which is available at:

<http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm>

SWEEP grant funds cannot be used to:

- Expand existing agricultural operations (i.e., additional new acreage cannot be converted to farmland)
- Install new groundwater wells or increase well depth
- Test new technology or perform research

(See page 45 for information on allowable and unallowable costs.)

If the joint application is awarded, associated agricultural operator recipients must agree to a pre-project consultation and a post-project verification conducted by a CDFA representative, or in partnership with a local Resource Conservation District, to evaluate the project site and quantification of GHG reductions and water savings.

All project-related water and energy use records must be made available to CDFA or its designees for three years following project implementation in order for CDFA to evaluate the long-term success of SWEEP funded projects in terms of GHG reductions and water savings achieved.

Recipients are expected to use and maintain their system for a minimum of 10 years, to the extent feasible.

## Project Types

Projects must achieve both GHG emission reductions **and** water savings to be eligible for funding. In addition, projects must:

- Use the associated improvements made to the surface water conveyance system proposed by the associated agricultural water supplier as part of the joint application, and
- Eliminate on-farm groundwater pumping.

Applicants may also incorporate other water savings elements (see below).

*Note: CDFA or a CDFA contracted entity (e.g., Resource Conservation District (RCD)) will conduct a pre-project consultation and post-project site visit to evaluate the site and post-project quantification of GHG reductions and water savings. Agricultural operations are required to maintain records related to the project and documentation of GHG reductions and water saving associated with each project type implemented for three years. CDFA will conduct auditing functions on the GHG reductions and water savings documentation maintained by growers during this period. (See page 48 under Award Process for requirements regarding project documentation and project site visits.)*

## WATER CONSERVATION

### **Weather, Soil or Plant based sensors for irrigation scheduling**

Examples include soil moisture or plant sensors (NRCS Conservation Practice Standard 449) with electronic data output or electronic weather station linked to irrigation controller, for growers to ensure efficient irrigation scheduling. Use of evapotranspiration (ET) based irrigation scheduling, such as the California Irrigation Management Information System (CIMIS) on existing or proposed projects to optimize water efficiency for crops. Telemetry components that allow the electronic communication between technology devices are eligible for funding through SWEEP.

***Micro-Irrigation or Drip Systems***

Use of micro-irrigation or drip systems, including sub-surface drip systems. Applicants must indicate that surface water delivered by the agricultural water supplier will be the primary source of irrigation water. Installation of filtration systems and connection to the water supplier’s conveyance system (turnouts) are eligible for funding. Should follow NRCS Conservation Practice Standard 441.

**GREENHOUSE GAS EMISSION REDUCTION**

***Elimination of On-Farm Water Pumping Including Groundwater Pumping for Crop Irrigation***

All projects must eliminate on-farm water pumping as the source of irrigation water for crops.

**Required Supporting Documents (Application Part II):**

Applicants are required to submit six types of attachments: (1) Attachment A: Application Questions; (2) Attachment B: Budget Worksheet; (3) Project Design; (4) baseline water use supporting documentation; (5) and baseline GHG emission supporting documentation. Applicants that do not attach supporting documentation with their application will not be considered for funding.

| <b>Part II Required Attachments for Each Agricultural Organization</b> |
|--|
| Attachment A: Application Questions                                    |
| Attachment B: Budget Worksheet   |
| Project Design   |
| Baseline Water Use Supporting Documentation                            |
| Baseline GHG Emission Supporting Documentation                         |
|  |

If applicants are providing matching funds, they are encouraged to attach the matching funds written documentation describing the contribution type, source, and amount.

**APPLICATION QUESTIONS**

Part II Attachment A: Application Questions for Agricultural Operators must be completed for each agricultural organization participating in the joint application.

## BUDGET WORKSHEET

Applicants are required to complete a Budget Worksheet to itemize all allowable costs related to the proposed project. The Budget Worksheet must be consistent with the project design. See Part II Attachment B for the Budget Worksheet.

Applicants should use the USDA, NRCS payment schedules as a guide, to the extent feasible, to determine project costs. See Appendix 3 for the USDA, NRCS Payment Schedules.

### *Allowable Costs*

Project costs must clearly support installation of irrigation systems, including supplies, equipment, and labor.

*Supplies:* Supplies are items with an acquisition cost under \$5,000 per unit and have a useful life of less than one year.

*Equipment:* Equipment is an article of nonexpendable, tangible personal property and has a useful life of more than one year, and a purchase cost which equals or exceeds \$5,000 per unit.

*Labor:* Costs for labor to install the project components should be reasonable and consistent with rates in the marketplace for the same or similar services.

### *Unallowable Costs*

Unallowable costs, include, but are not limited to:

- Project design costs
- Costs associated with technical assistance
- Post-project service charges and maintenance costs associated with the irrigation system
- Non-labor costs (e.g., management) and fees associated with project oversight
- Supplies and equipment costs not related to irrigation or water distribution systems
- Costs associated with drilling of new or expanding groundwater wells
- Irrigation pumps
- Interconnection to an energy provider
- Irrigation training courses

#### *Examples of allowable costs include:*

- All components of micro-irrigation systems including filtration
- Sensor hardware and telemetry
- Software associated with sensors, weather stations, or other hardware
- Flow meters
- Turnouts

## PROJECT DESIGN

A design plan is essential for establishing water and energy efficiency. A design plan **must** be submitted with the grant application. Applications will be evaluated based on specific project types that increase water conservation by improving irrigation systems, and eliminate on-farm pumping to reduce GHG emissions. Applicants are required to submit a project design for the proposed irrigation system, including an explanation of how GHG reductions and water savings will be achieved.

**Project design should:**

- Identify pertinent agronomic information, such as the crop and water distribution uniformity value of the irrigation system
- Include flow meters or demonstrate actual water use will be measured with existing flow meters
- For new infrastructure, such as new irrigation piping or sensors, include a detailed schematic and locations of the where that infrastructure will be installed on the field
- For improvements to existing infrastructure, include a schematic illustrating where the improvements will be made to the existing infrastructure

**WATER AND ENERGY USE DOCUMENTATION**

Applicants are required to submit their water and energy use records to substantiate water savings and GHG reductions calculations provided in their application. Applicants must use actual, (from the prior growing season) on-farm water and energy use documentation to calculate baseline water use and GHG emissions. ***Applications that do not attach the required types of water and energy use documentation cannot be funded.***

The requirements pertaining to water and GHG documentation are specified below:

***Water Use Documentation***

The actual baseline water value provided in the application must be supported by the documentation attached to the application. Applicants must provide a detailed explanation in the application how the baseline water use value is directly related to the actual, on-farm water use data in the supporting documentation.

The USDA, NRCS Field Office Technical Guide – Irrigation Water Savings Calculator is a useful tool to assist applicants in calculating their baseline water use and projected water savings after project installation. See Appendix 1: Supplemental Guidance for Determining Water Use.

Since applicants must input specific variables directly related to on-farm irrigation, the Irrigation Water Savings Calculator is sufficient supporting documentation to demonstrate baseline water use. Applicants that have actual on-farm water documentation (e.g., water bills, flow meter readings, pump efficiency tests, or other on-farm water records), should submit those documents to support their water calculations provided in their application.

If applicants maintain other types of actual on-farm water records, applicants may submit those documents to substantiate their baseline water use. In addition, applicants must provide a narrative explaining how the baseline water use value calculated is supported by the documentation attached to the application.

**Allowable Water Use Documentation:**

- Water bills
- Flow Meter Readout or Compilation
- Pump Efficiency Test
- Other On-farm Water Records
- USDA NRCS Irrigation Water Savings Calculator

### **Greenhouse Gas Emission Documentation**

Applicants must follow the ARB GHG Quantification Methodology, which can be found at [http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointsweepdraftcalculator\\_15-16.xlsx](http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/jointsweepdraftcalculator_15-16.xlsx)

This methodology utilizes a GHG Emission Reduction Calculator developed by the California Air Resource Board to estimate GHG emission reductions from changes in energy use across the project as a whole (water supplier and agricultural operations). Agricultural operations must provide the water supplier with the information necessary to complete the GHG calculator. This includes the engine/motor make and model, serial number, rated horse power, and annual fuel or electricity use for each irrigation pump impacted by the potential project. The water supplier will use this information to complete the ARB GHG Emission Reduction Calculator.

Additionally, the actual GHG baseline value provided in the application must be supported by the documentation attached to the application. Applicants must address in the application how the baseline value is directly related to the actual on-farm energy use data in the supporting documentation.

To meet the GHG supporting documentation requirement, applicants are required to submit actual on-farm energy use for supporting documentation, including utility bills or actual fuel receipts covering at least six months of the peak irrigation and growing season.

#### Allowable Baseline GHG Support:

- Utility Bills
- Pump Fuel Receipts

### **Award Process:**

#### **GRANT AGREEMENT**

CDFA will initiate the Grant Agreement process once the joint proposal has been accepted by DWR and CDFA. A separate CDFA contract will be entered with agricultural operations applicants who have been selected to receive a 2016 SWEEP grant award. Applicants with projects selected for award of funds will receive a Grant Agreement package with specific instructions regarding award requirements including information on project implementation, verification, and payment process.

#### **PROJECT IMPLEMENTATION**

Once a Grant Agreement is executed, the grant recipient can begin implementation of the project. Following execution of the Grant Agreement, recipients must agree to a pre-project consultation conducted by CDFA representative or a local RCD to discuss project

implementation plans and evaluate the project site, including taking photographs to document the project site “before” implementation.

Recipients are responsible for the overall management of their awarded project to ensure all project activities, including labor associated with installation, are completed no later than April 30, 2018.

CDFA may conduct a Critical Project Review upon reasonable notice at any time during the project term. The purpose is to determine whether deliverables are being met and evaluate project progress to ensure installation is complete within the grant term. Recipients may be required to submit financial records and project documentation to ensure SWEEP funds are used in compliance with the Grant Agreement terms and conditions.

#### **PAYMENT PROCESS**

CDFA will provide the grant recipient with the necessary grant award and invoicing documents. Grant recipients may be eligible to receive an advance payment up to 25 percent of the total grant award for project installation. The remaining funds will be allocated on a reimbursement basis through quarterly or monthly invoicing.

CDFA will withhold 10 percent from the total grant award until the verification requirement is complete to ensure grant recipients install their project as approved by CDFA. Invoicing and closeout of all project expenditures must be completed by June 30, 2018.

#### **PROJECT VERIFICATION**

Following project implementation, a CDFA representative, or in partnership with a local RCD, will initiate the verification component. The verifier will visit the project site, and inspect the completed project to ensure design specifications were met, the system is working effectively and that irrigation pumps are no longer in use. In addition, the verifier will take photographs to document project completion. The verification component must be completed by May 31, 2018.

#### **POST-PROJECT COMPLETION REQUIREMENTS**

Execution of the Grant Agreement is conditional upon agreement to post-project completion requirements. Recipients are expected to maintain documentation related to the SWEEP funded project, including energy and water use documentation, to report actual benefits achieved for a period of three years after project completion. The purpose of this reporting is to demonstrate the long-term success of SWEEP awarded projects by documenting GHG emission reductions and water savings data.

After the project is operational, CDFA will work with recipients to collect the necessary data and quantify GHG emission reductions and water savings. Failure to work with CDFA and provide the necessary project documentation will be considered non-performance. In the event of non-performance, CDFA may take any action deemed necessary to recover all or any portion of the grant funding.

## **Required Supporting Documentation Part II - Agricultural Operator**

## **PART II**

### **ATTACHMENT A: GRANT APPLICATION QUESTIONS FOR AGRICULTURAL OPERATIONS**

*Applicant Organization:*

Legal business name of Agriculture Operation 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 descriptive of the project

*Project Description:*

Briefly summarize proposed project including all project types addressed and crop type

*Project Budget:*

Funds requested and anticipated matching funds

#### **SECTION I: PREVIOUSLY FUNDED PROJCTET**

1. Has your agriculture operation received a previously funded SWEEP project?
  - a. If yes, provide the SWEEP Agreement Number(s) and corresponding Assessor's Parcel Number(s) of where each of the project(s) were implemented.

#### **SECTION II: PROPERTY LOCATION**

2. Indicate the total farm size (acres) of the applicant's agricultural operation
3. Indicate property location(s) of where the project will be implemented. Address the following:
  - a. Assessor's Parcel Number(s)
  - b. Address or Nearest Cross Streets
  - c. City, Zip Code
  - d. County
  - e. List current crop(s) and corresponding acreage impacted
4. Indicate if the property location(s) current water source is surface water (i.e., water delivered to the property) or groundwater pumped from on-farm wells.

#### **SECTION III: ESTIMATED WATER SAVINGS**

5. *Indicate estimated water savings*
  - a. Indicate the estimated water savings (acre inches/year/acre).

#### **SECTION IV: CURRENT WATER USE SYSTEM & PRACTICE**

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.

6. *Description of current water use system*

Describe in detail the current water use system and associated energy sources. At a minimum, applicants should address the current crop, irrigation system type (e.g. flood irrigation, sprinkler, drip etc.), fuel source(s) and water source(s).

7. *Is current water use measured either on farm or by the water supplier (e.g., with a flow meter)?*

8. *Current baseline water use*

- a. Indicate current baseline water use per acre (acre inches/year/acre). Refer to Appendix 1 of the Request for Grant Applications for assistance in calculating baseline water use.
- b. Provide a detailed explanation of the methodologies used to calculate baseline water use.
- c. Explain in detail how the baseline water value calculated is supported by the on-farm water use documentation attached to the application.
- d. Are flow meter logs or other types of water use records or logs attached? If yes, explain how those logs were maintained and how data was collected on-farm.

**SECTION V: PROPOSED WATER USE SYSTEM & PRACTICE**

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.

9. *Description of proposed water use system*

Explain in detail the proposed water use system and associated energy sources. At a minimum, applicants should address the proposed crop, irrigation type, irrigation water management practices, fuel source(s) and water source(s). Applicants should also explain how the proposed project will eliminate the need for on-farm groundwater pumping for irrigation. **Note: All applicants must utilize surface water supplies to be eligible for funding.**

10. *Water use after project implementation*

- a. Indicate the estimated water usage of proposed project (acre inches/year/acre).
- b. Provide a detailed explanation of the methodologies used to calculate projected water use.
- c. Provide a detailed explanation of how the proposed project will measure applied water after project implementation.

**SECTION VI: REQUIRED ATTACHMENTS**

Applications must include the required attachments to be considered for funding under this program. Attach the following documents:

11. *Project Design (attachment):*

Applicants must attach a copy of the proposed system design.

12. *Budget Worksheet (attachment):*

Click [HERE](#) to download the "Budget Worksheet."

13. *Baseline Water Documentation (attachment):*

14. *Baseline Greenhouse Gas Documentation (attachment):*

15. *Matching Funds(attachment):*

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?



## **PART II**

### **ADDITIONAL REQUIRED APPLICATION DOCUMENTATION FOR AGRICULTURAL OPERATIONS**

**PROJECT DESIGN**

**BASELINE WATER USE SUPPORTING DOCUMENTATION**

**BASELINE GHG EMISSION SUPPORTING DOCUMENTATION**

## **Appendixes Part II - Agricultural Operator**

## APPENDIX 1: SUPPLEMENTAL GUIDANCE FOR DETERMINING WATER USE

Calculating the water savings associated with an irrigation project is challenging. CDFA recommends applicants obtain technical assistance from professional irrigation specialists, such as the United States Department of Agriculture, Natural Resource Conservation Service (USDA NRCS) and Resource Conservation Districts (RCD), to determine baseline and projected water use. This document will provide conceptual guidance and resources to assist with the water calculations.

### Water Use

#### USDA NRCS Field Office Technical Guide – Irrigation Water Savings Calculator

[http://efotg.sc.egov.usda.gov/references/public/CA/CA\\_irrigation\\_water\\_savings\\_9-08.xls](http://efotg.sc.egov.usda.gov/references/public/CA/CA_irrigation_water_savings_9-08.xls)

This calculator allows applicants to input specific information related to their current on-farm irrigation system to obtain baseline water use calculations. Similarly, applicants can input specific parameters related to their proposed irrigation system to obtain their projected water savings calculations.

To use the Irrigation Water Savings Calculator: click on the link above and make selections based on the project location. 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.

Applicants can determine the section, township and range of their project by using this interactive map:

<http://www.geocommunicator.gov/blmMap/MapLSIS.jsp>

Use the following definitions to determine the level of Irrigation Water Management for baseline and project water use:

| IWM LEVEL | TOOLS INVOLVED  | POTENTIAL WATER SAVINGS       |
|-----------|---|-------------------------------|
| NO IWM    | no soil moisture equipment, no flow meter   | None                          |
| LEVEL 1   | soil moisture equipment   | 5% water savings over no IWM  |
| LEVEL 2   | soil moisture + flow meter  | 10% water savings over no IWM |
| LEVEL 3   | soil moisture + flow meter + volumetric management using soil/flow/ET information | 15% savings over no IWM       |

### Water Use Equations

|                     |  |
|---------------------|--|
| Baseline Water Use  | <p>The <b>pre-project</b> volume of water that has been applied to the crop over the previous growing season. This is reported in the SWEEP application as acre-inches per year per acre. Use actual on-farm data to support this calculation.</p> <p style="text-align: center;">= Total water use over the previous growing season ÷ acres</p>   |
| Projected Water Use | <p>The estimated volume of water that will be applied to the crop in the next growing season <b>after</b> the proposed project is installed. This is reported in the SWEEP application as acre-inches per year per acre. Use the USDA NRCS irrigation water savings calculator or a project design to determine the estimated total water use during the post-project growing season.</p> <p style="text-align: center;">= Estimated total water use during the growing season after project ÷ acres</p> |
| Water Savings       | <p>The estimated volume of water that will be saved due to the project. This is reported in the SWEEP application as acre-inches per year per acre.</p> <p style="text-align: center;">= Baseline Water Use – Projected Water Use</p>  |

**California Air Resources Board**

**Greenhouse Gas Quantification Methodology for the  
California Department of Food and Agriculture  
State Water Efficiency and Enhancement Program  
DWR (Prop 1) Joint Project**

**Greenhouse Gas Reduction Fund  
FY 2015-16**



DRAFT  
June 21, 2016

Note: This Draft FY 2015-16 quantification methodology is subject to change in response to public comments. Public comments may be submitted via email to [GGRFProgram@arb.ca.gov](mailto:GGRFProgram@arb.ca.gov) through July XX , 2016.



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# Introduction

The California Air Resources Board (ARB) is responsible for providing the quantification methodology to estimate greenhouse gas (GHG) emission reductions from projects receiving monies from the Greenhouse Gas Reduction Fund (GGRF) for California Climate Investments. For the California Department of Food and Agriculture's (CDFA) State Water Efficiency and Enhancement Program (SWEEP), ARB staff developed this quantification methodology and the accompanying ARB GHG calculator tool for water supplier applicants to use to estimate the GHG emission reductions from the proposed Department of Water Resources (DWR) joint project. As a subset of the larger SWEEP Program, the joint project focuses on connecting agricultural operations that rely on groundwater pumped on-farm to centralized pressurized irrigation delivery systems. DWR, through Proposition 1 funds, will fund a project to improve an irrigation delivery system. CDFA, using SWEEP funds, will incentivize agricultural operations to connect to the system through grants for water and energy savings, provided the agricultural operations eliminate on-farm pumping.

This methodology uses calculations to estimate reduced energy use and the associated reduction in GHG emissions from the elimination of on-farm pumping in conjunction with centralized irrigation system enhancements. These calculations are based on the current understanding of irrigation practices, project specifications of irrigation system enhancements and fuel conversions, and GHG emission factors.

ARB staff will periodically review each quantification methodology to evaluate its effectiveness and update methodologies to make them more robust, user-friendly, and appropriate to the projects being quantified.

## Methodology Development

ARB staff followed a set of principles to guide the development of the quantification methodology. These principles ensure that the methodology for the SWEEP DWR joint project will:

- Apply at the project-level;
- Align with the project types proposed for funding;
- Provide uniform methodologies that can be applied statewide, and be accessible by all applicants;
- Support the analysis of GHG emission reductions from the proposed projects;
- Use existing and proven methods; and
- Use project-level data when available for estimated energy use reductions.

The methodology fits these objectives, and provides a uniform approach to quantify GHG emission reductions in metric tons of carbon dioxide equivalent (MTCO<sub>2e</sub>).

## Tools

Water supplier applicants must use the ARB GHG calculator tool, located at <http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm>, to estimate the GHG emission reductions from their proposed SWEEP DWR joint project on behalf of the agricultural operations.

## SWEEP DWR Joint Project

This methodology calculates the GHG emission reductions associated with the following activities:

1. Elimination of on-farm pumping
2. Irrigation delivery system enhancements (including pressurization)

[Per SWEEP DWR joint program guidelines:](#)

Eligible projects must:

- Reduce net GHG emissions; and
- Eliminate on-farm groundwater pumping; and
- Reduce on-farm water use.

Applicants must provide supporting documentation directly related to actual on-farm water consumption and GHG emissions.

**Note:** Projects that reduce water consumption but do not eliminate pumping are not considered an eligible project.

## GHG Emission Reductions Quantification Approach

The following metric will be used for ARB reporting purposes to assess the effectiveness of the project to reduce GHG emissions per dollar of GGRF funds and will be reported by the applicant as:

$$\frac{\text{Total Project GHG Reductions (Metric Tons of CO}_2\text{e)}}{\text{Total GGRF Funds Requested ($)}}$$

GGRF Funds Requested is the total dollar amount requested through SWEEP from all agricultural operations associated with the proposed joint project. Section B describes the process for estimating the GHG emission reductions for the proposed SWEEP DWR joint project. Additional documentation and reporting requirements are provided in sections C and D.

Requirements for Program implementation and reporting are subject to change based on future revisions that apply to the Program (e.g., legislation or updates to ARB's Funding Guidelines). Implementing agencies/grantees should note that additional reporting may be required or modified for some types of projects based on the evolving needs of the Program. For example, the requirements and methods of data collection are still under development for Phase 2 reporting and will be published at a later date.

## **Program Assistance**

CDFA staff, in conjunction with subject matter experts, will review the quantification portions of SWEEP DWR joint project applications to ensure that the methods described in this document were properly applied to estimate the GHG emission reductions for the proposed joint project. Applicants should use the following resources for additional questions and comments:

- Questions on this quantification document should be sent to [GGRFProgram@arb.ca.gov](mailto:GGRFProgram@arb.ca.gov).
- For more information on ARB's efforts to support implementation of GGRF investments, see: [www.arb.ca.gov/auctionproceeds](http://www.arb.ca.gov/auctionproceeds).
- Questions not related to this quantification document but pertaining to SWEEP should be sent to [grants@cdfa.ca.gov](mailto:grants@cdfa.ca.gov).

# Quantification Methodology

This methodology (1) estimates the GHG emission reductions of a proposed SWEEP DWR joint project based on reduction in on-farm energy use—as a result of eliminating groundwater pumping—and (2) accounts for the change in energy use from the enhancements made to the irrigation delivery system as part of the DWR Prop 1 funded project. DWR irrigation delivery system enhancements may include installation, replacement, or enhancement of new and existing system pumps, conversion to a less carbon intensive fuel, or installation of renewable energy generation. Water supplier applicants will use the ARB GHG calculator tool to estimate the total GHG emission reductions from the proposed project.

The following is a summary of the steps applicants will follow to estimate and report the GHG emission reductions for a proposed project. Detailed instructions for each step are provided on subsequent pages. An example of a proposed SWEEP DWR joint project quantification is included in Appendix A.

- Step 1      **Identify all agricultural operations:** The water supplier must identify all agricultural operations that are committed in the proposed project.
  
- Step 2      **Determine the inputs needed:** The water supplier applicant will use Table 1 to determine the required project details needed for input into the ARB GHG calculator tool for the agricultural operations identified in Step 1.
  
- Step 3      **Estimate GHG emission reductions (use ARB GHG calculator tool):** The applicant will enter the project details into the ARB GHG calculator tool to calculate the GHG emission reductions for the proposed project using the inputs identified in Step 2. A link to the ARB GHG calculator tool is available in Section A. Introduction, Tools.

## Step 1: Identify All Agricultural Operations

The water supplier must identify all agricultural operations that are a part of the proposed project. This must include any agricultural operations within the water supplier service area that jointly filed applications for SWEEP funding. Each agricultural operation is required to eliminate on-farm pumping as a water supply source. The agricultural operations associated with the proposed project will be identified in the ARB GHG calculator tool under the Inputs-Agricultural Operations tab.

## Step 2: Determine the Inputs Needed

Table 1 identifies the required data inputs for the ARB GHG calculator tool. Water suppliers must collect the necessary data from participating agricultural operations to complete the quantification.

**Table 1. Required ARB GHG Calculator Tool Inputs**

| <b>Agricultural Operations (Growers)</b>  |
|---|
| <p><b>Existing Conditions (prior to any project modification)</b></p> <ul style="list-style-type: none"> <li>• GGRF funds requested (\$) as part of this solicitation;</li> <li>• Pump fuel amount or electricity use (gallons, therms, or kWh)               <ul style="list-style-type: none"> <li>○ Must provide documentation from fuel receipts, electricity bills, etc.</li> </ul> </li> <li>• Fuel type;</li> <li>• For each pump:               <ul style="list-style-type: none"> <li>○ Make, model, and serial number</li> <li>○ Horsepower (hP)</li> </ul> </li> </ul>   |
| <b>Water Supplier</b>   |
| <p><b>Existing Conditions (prior to any project modification)</b></p> <ul style="list-style-type: none"> <li>• Annual water deliveries to the agricultural operations identified in Step 1 (gallons);</li> <li>• Pump fuel amount and electricity use associated with water delivery to the agricultural operations identified in Step 1 (gallons, therms, or kWh)               <ul style="list-style-type: none"> <li>○ Must provide documentation from fuel receipts, electricity bills, etc.</li> <li>○ The energy demand from the portion of the water delivery system can be prorated per gallon based on total water deliveries and system-wide energy use.</li> </ul> </li> <li>• Fuel type for fuel used.</li> </ul> <p><b>Proposed Project Details (both pre-project values and post-project estimates)</b></p> <ul style="list-style-type: none"> <li>• Estimated annual water deliveries to the agricultural operations identified in Step 1 (gallons)</li> <li>• Anticipated pump fuel amount and electricity use for enhanced pressurized system (gallons, therms, or kWh)               <ul style="list-style-type: none"> <li>○ This estimate must be substantiated with documentation from plant design.</li> </ul> </li> <li>• Capacity of renewable energy installations (kW)</li> </ul> |

## Step 3: Estimate GHG Emission Reductions Using the ARB GHG Calculator Tool

An overview of the ARB GHG calculator tool is provided below.

### Summary Tab

- The Summary tab identifies total GHG emission reductions associated with SWEEP DWR joint project. In addition, the total GGRF funds requested and the total GHG emission reductions per total GGRF funds requested—the metric used for reporting—are summarized.

### Read Me Tab

- On the Read Me Tab, enter the Project Name, Project ID from FFAST, and the contact information for person who can answer project specific questions from staff reviewers on the quantification calculations. This file must be submitted with other required application documents. Please use the following file naming convention: “[FAAST ID]\_[Project Name]” not to exceed 20 characters.

|                              |                                    |
|------------------------------|------------------------------------|
| <b>Project Name:</b>         | Smith Brothers Irrigation District |
| <b>Project ID - FFAST:</b>   | 12-3456789                         |
| <b>Contact Name:</b>         | John Smith                         |
| <b>Contact Phone Number:</b> | 916-555-1234                       |
| <b>Contact Email:</b>        | john@smithbros.com                 |
| <b>Date Completed:</b>       | 12/1/2015                          |

### Inputs – Water Supplier Tab

- **Red headers** indicate a field that requires input by the project applicant. Water suppliers must complete all relevant data regarding the pressurized water delivery system enhancements. Definitions are provided in the Definitions tab. Inputs must be substantiated in the documentation provided in accordance with Section C. Documentation.

### Inputs – Agricultural Operations Tab

- **Red headers** indicate a field that requires input by the project applicant. Water suppliers must complete all relevant data on behalf of each agricultural operation joint applicant that will be integrated with the enhanced delivery system that is receiving SWEEP incentive funds as part of this solicitation from the GGRF. Water suppliers must complete a single input row for each affected on-farm pump for all agricultural operation joint applicants. Definitions are provided in the Definitions tab. Inputs must be substantiated in the documentation provided in accordance with Section C. Documentation.

### GHG Emission Reduction Calculations

All equations and calculations are included in the ARB GHG calculator tool as part of this quantification methodology; detailed documentation is included in Appendix B. In general, GHG emissions reductions are calculated using the following approaches:

**Table 2. GHG Emission Reduction Calculations**

|   |
|---|
| <b>Agricultural Operations</b>  |
| <i>GHG Emission Reductions = GHG Emissions of Existing Pumps</i>  |
| <b>Water Supplier Delivery System</b>   |
| <i>GHG Emissions From Irrigation Delivery System<br/>= GHG Emissions of Proposed Water Delivery System<br/>– GHG Emissions of Existing Portion of Delivery System to be Enhanced</i>                                |
| <b>Renewable Energy</b>   |
| <i>GHG Emission Reductions = GHG Emissions of Displaced Fuel</i>  |
| <b>Total Project</b>  |
| <i>Total Project GHG Emission Reductions =<br/>GHG Emissions Reductions from All Agricultural Operators<br/>+ GHG Emission Reductions from Renewable Energy<br/>– GHG Emissions from Irrigation Delivery System</i> |

## Documentation

Applicants must report the estimated GHG emission reductions from the proposed project and provide documentation of the calculations and inputs used. Total Project GHG Emission Reductions are estimated in the ARB GHG calculator tool and found in the Summary Tab.

Applicants are required to provide electronic documentation that is complete and sufficient to allow the calculations to be reviewed and replicated. Paper copies of supporting materials must be available upon request by CDFA or ARB staff.

Documentation must include, at a minimum:

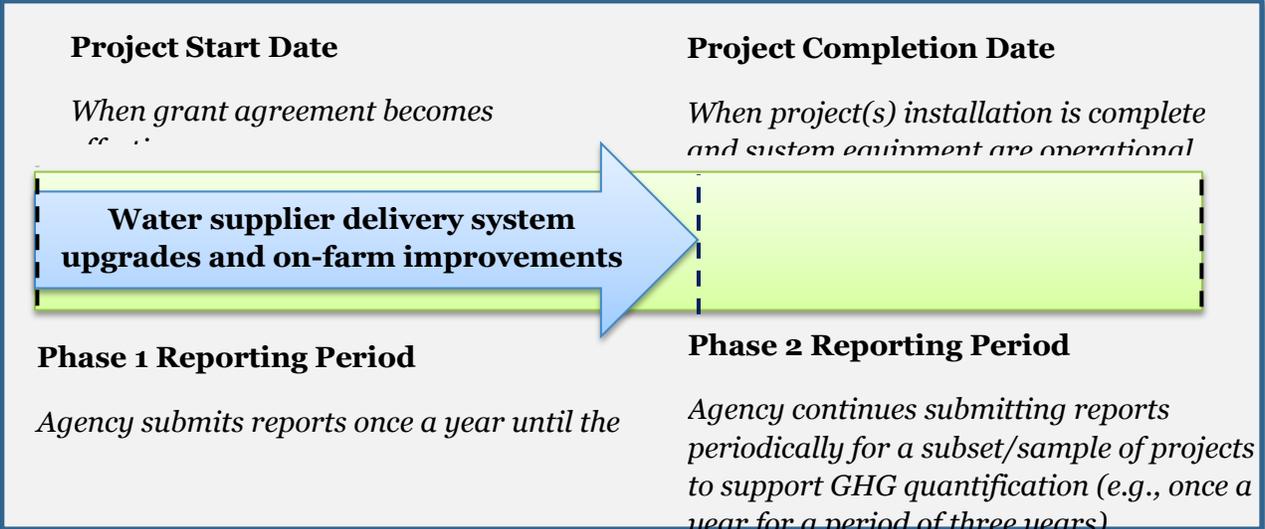
- Project application;
- Completed ARB GHG calculator tool file(s);
- Project description, including excerpts or specific references to the location in the main SWEEP application of the project information necessary to complete the applicable portions of the quantification methodology; and
- Project data support, including:
  - ARB GHG calculator tool inputs determined in Step 2;
  - Documentation of the project data used to support ARB GHG calculator tool inputs (i.e., energy use, pump and motor specifications, and proposed water delivery system design);
  - References to public documents that are the source of the project data.

# Reporting after Funding Award

Accountability and transparency are essential elements for all GGRF California Climate Investment projects. Each administering agency is required to track and report on the benefits of the California Climate Investments funded under their program(s) and each funding recipient has the obligation to provide the necessary data or access to data for their project to support reporting on project outcomes.

In 2015, ARB developed Funding Guidelines for Agencies Administering California Climate Investments (Funding Guidelines).<sup>7</sup> These Funding Guidelines describe the reporting requirements and set the minimum project-level reporting requirements for projects funded by CDFA. Volume III of the Funding Guidelines summarizes the major reporting components that CDFA must report to ARB. Because much of this data will be aggregated by CDFA staff, SWEEP funding recipients will need to provide project data to CDFA to support these reporting requirements.

Table 3 and the figure below show the project phases and when reporting is required.



<sup>7</sup> California Air Resources Board. Funding Guidelines for Agencies Administering California Climate Investments. December 21, 2015. <http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/arb-funding-guidelines-for-ca-climate-investments.pdf>.

**Table 3. Quantification and Reporting By Project Phase**

|                          | <b>Timeframe</b>   | <b>Quantification Methodology Section</b>  |
|--------------------------|--|--|
| <b>Project Selection</b> | Covers the period from solicitation to selection of projects and funding awards.   | All applicants use methods in this methodology to <b>estimate</b> GHG reductions based on application data.          |
| <b>Phase 1</b>           | Covers the period from the beginning of the project until it becomes operational or the initial implementation is completed. | Funded projects use methods in this methodology, as needed, to update GHG <b>estimates</b> based on project changes. |
| <b>Phase 2</b>           | Starts after Phase 1 is complete and a project becomes operational.  | GHG reductions <b>achieved</b> are quantified and reported for a subset of funded projects.                          |

Phase 1 reporting is required for all SWEEP projects. CDFA will collect and submit data to ARB to satisfy Phase 1 reporting requirements. Recipients of SWEEP funding must report any changes that impact GHG emission reduction estimates (i.e., emergency on-farm pump use) to CDFA prior to project completion.

Phase 2 reporting is required for only a subset of SWEEP projects and is intended to document actual project benefits achieved after the project becomes operational. Phase 2 data collection and reporting will not be required for every project. CDFA will be responsible for identifying the subset of individual projects that must complete Phase 2 reporting, identifying who will be responsible for collecting Phase 2 data, and for reporting the required information to ARB. ARB will work with CDFA to address “Phase 2” procedures, including but not limited to:

- The **timelines** for Phase 2 reporting, i.e., when does Phase 2 reporting begin, how long will Phase 2 reporting be needed.
- As applicable, **approaches for determining the subset of projects** that need Phase 2 reporting (i.e., how many **X** projects out of **Y** total projects are required to have Phase 2 reporting).
- **Methods for monitoring or measuring** the necessary data to quantify and document achieved GHG reductions and other select project benefits.
- **Data to be collected**, including data field needed to support quantification of GHG emission benefits.
- Reporting requirements for transmitting the data to ARB or CDFA for program transparency and use in reports.

Once the Phase 2 quantification method and data needs are determined, ARB will develop and post the final ARB approved Phase 2 methodology for use in Phase 2 reporting.

## Example Project

**The following example is a hypothetical SWEEP DWR joint proposed project for the purpose of demonstrating how to use the ARB GHG calculator tool to estimate the GHG emission reductions resulting from the proposed project.**

An irrigation district near Fresno is partnering with 10 local agricultural operations to build infrastructure for a pressurized delivery system. Each agricultural operation will be eliminating on-farm pumping and implementing on-farm measures to reduce water use as part of SWEEP. Each of the 10 agricultural operations currently pumps groundwater with diesel fuel.

The irrigation district sources irrigation water primarily from a surface reservoir. The current delivery system employs several older, inefficient vertical turbine pumps used in conjunction with a diesel motor. Through DWR's Prop 1 funding, the irrigation district proposes to convert the existing open-channel delivery system to a pressurized delivery system by replacing the inefficient diesel motor/pump system with a new and more efficient electric pumping system equipped with variable frequency drive (VFD) controllers. The proposed system was designed to meet the delivery needs of the 10 agricultural operations. The system design plans for the irrigation district estimate that the facility will use 200 MWh of electricity to meet the water demand.

In addition, the irrigation district proposes to install 50 kilowatt (kW) solar panels to provide renewable electricity to supplement a portion of the power to the electric pump system. Below are the steps that the applicant would perform to estimate the proposed project GHG emission reductions utilizing the ARB GHG calculator tool.

### **Step 1. Identify all agricultural operations that are included in the proposed project**

The first step is for the water supplier to identify all agricultural operations that are included in the proposed project. The water supplier will consolidate applications from each of the 10 agricultural operations that are associated with the project. Once the water supplier has connected with each of the applicants, the water supplier can compile the relevant data needed to estimate net project GHG emission reductions.

### **Steps 2 & 3. Determine the Inputs Needed and Estimate GHG Emission Reductions (using ARB GHG Calculator Tool)**

The applicant determines all of the required inputs from Table 1 for the ARB GHG calculator tool to estimate GHG emission reductions. The water supplier must include information about the water delivery system as well as aggregate data from agricultural operations. The next step for the water supplier applicant is to review the Read Me tab of the ARB GHG calculator tool and to enter the project identifier information.

Below is an example of the required project identifier information that is entered by an applicant.

|                              |                                    |
|------------------------------|------------------------------------|
| <b>Project Name:</b>         | Smith Brothers Irrigation District |
| <b>Project ID :</b>          | 12-3456789                         |
| <b>Contact Name:</b>         | John Smith                         |
| <b>Contact Phone Number:</b> | 916-555-1234                       |
| <b>Contact Email:</b>        | john@smithbros.com                 |
| <b>Date Completed:</b>       | 8/1/2016                           |

Next, the water supplier applicant enters proposed irrigation system enhancement information for both pre-project and post-project scenarios into the ARB GHG calculator tool located in the Inputs – Water Supplier tab. The **red headers** under the “Input Data” column are project descriptors and indicate the fields (highlighted in yellow) that the applicant enters into the applicable pre-project and post-project columns. Below are sample inputs for the ARB GHG calculator tool from the example proposed project.

**Existing Portion of Delivery System to be Enhanced**

The “Existing Portion of Delivery System to be Enhanced” section is required for every applicant. Each project descriptor must have the associated project input.

| Existing Portion of Delivery System to be Enhanced        |             |
|---|-------------|
| Input Data  | Pre-Project |
| <b>Water deliveries in previous year (gallons)</b>        | 3,000,000   |
| <b>Total existing system pump fuel use (gallons, scf)</b> | 1,000       |
| <b>Fuel type from existing system fuel use</b>            | Diesel      |
| <b>Fuel Emissions Factor</b>                              | 0.013818137 |
| <b>Total existing system pump electricity use (kWh)</b>   |             |
| <b>Pre-project system emissions</b>                       | 13.82       |

**Proposed Enhanced System**

The “Proposed Enhanced System” section is required for every applicant. Each project descriptor must have the associated project input. If proposed project includes a renewable energy component, please include the capacity of installation and the nearest reference city. The reference city will populate the appropriate capacity factor. Total electrical energy demand entered for the proposed system must include the power sourced from renewable installations.

| Proposed Enhanced System                              |              |
|---|--------------|
| Input Data  | Post-Project |
| Estimated post project annual water delivery (gallon) | 3,000,000    |
| Total proposed system pump fuel use (gallons, scf)    |              |
| Fuel type from proposed system fuel use               |              |
| Fuel Emissions Factor                                 | #N/A         |
| Total proposed system pump electricity use (kWh)      | 200,000      |
| Post-project system emissions                         | 75.72        |
| Renewable Energy                                      |              |
| Input Data  | Post-Project |
| Renewable energy capacity (kW)                        | 50           |
| Nearest Reference City                                | Fresno       |
| Renewable energy emission reductions                  | 29.04        |
| <b>GHG Emission Increase</b>                          | <b>32.86</b> |



The SWEEP Funds Requested (\$) is equal to the total GGRF funds requested from agricultural operations. In this example, the amount is \$575,000. The Total GHG Emission Reductions (MTCO<sub>2e</sub>) per Total GGRF Funds represent the total benefits for the proposed project per dollar requested. For this example this value would be 0.00006 MTCO<sub>2e</sub> per GGRF \$.

| Results   | GHG Emissions (MTCO <sub>2e</sub> ) | Description   |
|---|-------------------------------------|---|
| GHG Benefits per Growing Season                                   | 12.39                               | Annual GHG Emission Reductions (MTCO <sub>2e</sub> /yr) |
| Total Project GHG Emission Reductions                             | 37.17                               | Total GHG Emission Reductions (MTCO <sub>2e</sub> )     |
| Total GGRF Funds Requested (\$)                                   | 575,000.00                          | Total SWEEP funds requested                             |
| Total GHG Emission Reductions per Total GGRF Funds Requested (\$) | 0.00006                             | Total Reductions per SWEEP funds requested              |

## GHG Emission Reduction Calculations

### Pre-Project Water Delivery System Emissions

GHG Emissions from Existing Portion of System with Non-Electric Pumps

$$GHG_{pre-project\ fuel} = Fuel\ Use \times EF_{fuel\ pre-project} \quad (\text{Eq. 1.a})$$

GHG Emissions from Existing Portion of System with Electric Pumps

$$GHG_{pre-project\ electricity} = Electricity\ Use \times EF_{electricity} \quad (\text{Eq. 1.b})$$

GHG Emissions from Existing Portion of System

$$GHG_{pre-project} = GHG_{pre-project\ fuel} + GHG_{pre-project\ electricity} \quad (\text{Eq. 1.c})$$

Where:

- $GHG_{pre-project\ fuel}$  = GHG emissions from fuel use in existing water delivery system that provides water to the agricultural operations identified in Step 1 (MTCO<sub>2</sub>e)
- Fuel Use = pre-project documented fuel use (gallons or scf) (i.e., fuel receipts)
- $EF_{fuel\ pre-project}$  = Emission factor of pre-project fuel (MTCO<sub>2</sub>e per gallon of scf)
- $GHG_{pre-project\ electricity}$  = GHG emissions from electricity use in existing water delivery system that provides water to the agricultural operations identified in Step 1 (MTCO<sub>2</sub>e)
- Electricity Use = pre-project documented electricity use (kWh) (i.e., utility bills)
- $EF_{electricity}$  = emission factor from electricity (0.000378576 MTCO<sub>2</sub>e/kWh)<sup>8</sup>
- $GHG_{pre-project}$  = GHG emissions from existing water delivery system (MTCO<sub>2</sub>e)

### Post-Project Water Delivery System Emissions

GHG Emissions from Enhanced System with Non-Electric Pumps

$$GHG_{post-project\ fuel} = Fuel\ Use \times EF_{fuel\ post-project} \quad (\text{Eq. 2.a})$$

GHG Emissions from Enhanced System with Electric Pumps

$$GHG_{post-project\ electricity} = Electricity\ Use \times EF_{electricity} \quad (\text{Eq. 2.b})$$

GHG Emissions from Enhanced System

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<sup>8</sup> The emission factor for electricity is derived from ARB's Low Carbon Fuels Standard regulation.  
[http://www.arb.ca.gov/fuels/lcfs/lcfs\\_meetings/040115\\_pathway\\_ci\\_comparison.pdf](http://www.arb.ca.gov/fuels/lcfs/lcfs_meetings/040115_pathway_ci_comparison.pdf)

$$GHG_{post-project} = GHG_{post-project\ fuel} + GHG_{post-project\ electricity} \quad \text{(Eq. 2.c)}$$

Where:

- $GHG_{post-project\ fuel}$  = GHG emissions from fuel use in proposed enhanced water delivery system (MTCO<sub>2</sub>e)
- Fuel Use = estimated post-project fuel use (gallons or scf) with supportable documentation from project design plans
- $EF_{fuel\ post-project}$  = Emission factor of post-project fuel (MTCO<sub>2</sub>e per gallon of scf)
- $GHG_{post-project\ electricity}$  = GHG emission from electricity use in proposed enhanced water delivery system (MTCO<sub>2</sub>e)
- Electricity Use = estimated post-project electricity use (kWh) with supportable documentation from project design plans
- $EF_{electricity}$  = emission factor from electricity (0.000378576 MTCO<sub>2</sub>e/kWh)
- $GHG_{post-project}$  = GHG emissions from proposed enhanced water delivery system (MTCO<sub>2</sub>e)

### GHG Emissions Reductions from Installation of Renewable Energy

GHG Emission Reductions from Renewable Energy

$$GHG_{Renew} = Capacity \times Capacity\ Factor_{solar} \times 8,766 \times EF_{electricity} \quad \text{(Eq. 3)}$$

Where:

- Capacity = Capacity of renewable energy installation (kW)
- Capacity Factor = Regional average of renewable performance<sup>9</sup>
- 8,766 = Hours per year of renewable energy generation potential (hr)
- $GHG_{Renew}$  = GHG emissions reductions from on-farm renewable energy (MTCO<sub>2</sub>e)

### GHG Emissions Reductions from Agricultural Operations

GHG Emission Reductions from Agricultural Operations with Fuel Use

$$GHG_{on-farm\ fuel} = Fuel\ Use \times EF_{fuel\ on-farm} \quad \text{(Eq. 4.a)}$$

GHG Emission Reductions from Agricultural Operations with Electricity Use

$$GHG_{on-farm\ electricity} = Electricity\ Use \times EF_{electricity} \quad \text{(Eq. 4.b)}$$

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<sup>9</sup> CEC (2013). Cost-Effectiveness of Rooftop Photovoltaic Systems for Consideration in California's Building Energy Efficiency Standards. Available online at:

<http://www.energy.ca.gov/2013publications/CEC-400-2013-005/CEC-400-2013-005-D.pdf>

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### GHG Emission Reductions from Agricultural Operations

$$GHG_{on-farm} = GHG_{on-farm\ fuel} + GHG_{on-farm\ electricity} \quad \text{(Eq. 4.c)}$$

Where:

- $GHG_{on-farm\ fuel}$  = GHG emission from fuel use in existing on-farm pump (MTCO<sub>2</sub>e)
- Fuel Use = on-farm documented fuel use (gallons or scf) (i.e., fuel receipts)
- $EF_{fuel\ on-farm}$  = Emission factor of fuel currently used on-farm (MTCO<sub>2</sub>e per gallon of scf)
- $GHG_{on-farm\ electricity}$  = GHG emission from electricity use in existing on-farm pump (MTCO<sub>2</sub>e)
- Electricity Use = on-farm documented electricity use from pumping (kWh) (i.e., utility bills)
- $EF_{electricity}$  = emission factor from electricity (0.000378576 MTCO<sub>2</sub>e/kWh)
- $GHG_{on-farm}$  = GHG emission reductions from elimination of on-farm pumping (MTCO<sub>2</sub>e)

### GHG Emissions Reductions from SWEEP DWR Joint Project Implementation

GHG Emission Reductions from SWEEP DWR Joint Project

$$GHG_{total} = GHG_{on-farm} + GHG_{renew} - (GHG_{post-project} - GHG_{pre-project}) \quad \text{(Eq. 5)}$$

Where:

- $GHG_{total}$  = GHG emissions reductions from the SWEEP DWR joint project implementation (MTCO<sub>2</sub>e)

Appendix 3: USDA NRCS Payment Schedule

Adapted from USDA NRCS EQIP FY FY15 **EQIP Payment Rate Summary List** Regular Rates. Found at:  
<http://www.nrcs.usda.gov/wps/portal/nrcs/detail/ca/programs/financial/eqip/?cid=stelprdb1268409>

This table provides the rates for some likely SWEEP project components. Other Conservation Practice Standards may also apply and be eligible for SWEEP funding.

| <b>Practice Code</b> | <b>Practice Name</b>               | <b>Component</b>                               | <b>Unit Type</b> | <b>Unit Cost</b> |
|----------------------|------------------------------------|--|------------------|------------------|
| 441                  | Irrigation System, Microirrigation | Vegetation Establishment                       | Ac               | 279.15           |
| 441                  | Irrigation System, Microirrigation | Orchard-vineyard, 10ac or less                 | Ac               | 1233.88          |
| 441                  | Irrigation System, Microirrigation | Orchard-vineyard, >10ac                        | Ac               | 682.53           |
| 441                  | Irrigation System, Microirrigation | Orchard-vineyard, durable tubing replace       | Ac               | 348.48           |
| 441                  | Irrigation System, Microirrigation | Small Acreage                                  | Ac               | 1633.18          |
| 441                  | Irrigation System, Microirrigation | Row Crop, Buried Manifold                      | Ac               | 826.84           |
| 441                  | Irrigation System, Microirrigation | Row Crop, Above Ground PE Manifold             | Ac               | 505.36           |
| 441                  | Irrigation System, Microirrigation | Retrofit, Irrigation Automation                | Ac               | 455.6            |
| 441                  | Irrigation System, Microirrigation | Filter replace                                 | Ac               | 277.87           |
| 442                  | Sprinkler System                   | Center Pivot, < 600 Ft                         | LnFt             | 45.56            |
| 442                  | Sprinkler System                   | Center Pivot, > 600 Ft                         | LnFt             | 39.06            |
| 442                  | Sprinkler System                   | Linear Move System                             | LnFt             | 49.22            |
| 442                  | Sprinkler System                   | Wheel Line System                              | LnFt             | 9.64             |
| 442                  | Sprinkler System                   | Solid Set System                               | Ac               | 1247.92          |
| 442                  | Sprinkler System                   | Solid Set System Renovation                    | Ac               | 190.1            |
| 442                  | Sprinkler System                   | Handline system                                | LnFt             | 3.41             |
| 442                  | Sprinkler System                   | Traveling Gun System, 2" or less diameter Hose | Ea               | 10074.68         |
| 442                  | Sprinkler System                   | Traveling Gun System, >2" to 3" Hose           | Ea               | 13068.08         |
| 442                  | Sprinkler System                   | Traveling Gun System, > 3" Hose                | Ea               | 24131.35         |
| 442                  | Sprinkler System                   | Big Gun, Stationary                            | Ea               | 2587.62          |

|            |                             |   |      |         |
|------------|-----------------------------|---|------|---------|
| <b>442</b> | Sprinkler System            | Pod System  | Ea   | 275.22  |
| <b>442</b> | Sprinkler System            | Renovation of Existing Overhead or Wheel line<br>Sprinkler System | LnFt | 4.22    |
| <b>442</b> | Sprinkler System            | Retrofit, Irrigation Automation                                   | Ac   | 464.52  |
| <b>449</b> | Irrigation Water Management | Basic IWM <30 acres   | Ea   | 556.6   |
| <b>449</b> | Irrigation Water Management | Basic IWM >= 30 acres   | Ac   | 22.65   |
| <b>449</b> | Irrigation Water Management | Intermediate IWM <30 acres  | Ea   | 834.91  |
| <b>449</b> | Irrigation Water Management | Intermediate IWM >= 30 acres                                      | Ac   | 33.97   |
| <b>449</b> | Irrigation Water Management | Advanced IWM <30 acres  | Ea   | 1205.98 |
| <b>449</b> | Irrigation Water Management | Advanced IWM >= 30 acres  | Ac   | 46.83   |
| <b>449</b> | Irrigation Water Management | IWM with Soil Moisture Sensors                                    | Ea   | 985.18  |
| <b>449</b> | Irrigation Water Management | IWM with Soil Moisture Sensors with Data<br>Recorder              | Ea   | 1309.66 |
| <b>449</b> | Irrigation Water Management | IWM with Irrigation Evaluation                                    | Ea   | 2754.78 |
| <b>449</b> | Irrigation Water Management | IWM with Weather Station  | Ea   | 2966.82 |