

To: NSJWCD Board of Directors
From: Russell Frink
Date: 10/25/2016
Re: Grant Opportunity for South System Improvements

Introduction

The Department of Water Resources (“DWR”) and the CA Department of Food and Agriculture (“CDFA”) recently announced a joint grant program that could be leveraged to help fund repairs to the South System Pipeline. This grant program is a unique opportunity because, in addition to funding upgrades to the South System Pipeline, the funds awarded by this grant can be used to assist individual farmers along the pipeline with the costs of upgrading their irrigation systems to permit the dual use of surface and groundwater.

This memorandum contains: (I) a brief overview of the grant opportunity; (II) recommendations for preparing the grant proposal.

I. Brief Overview of Grant Opportunity

The DWR/CDFA recently released a Draft of their Joint Request for Proposals (“RFP”) for the Agricultural Water Use Efficiency (“AWUE”) grant program administered by DWR and the State Water Efficiency and Enhancement Program (“SWEEP”) administered by CDFA. The final RFP is anticipated to be released in late-October, with proposals scheduled to be due in late-November or early-December. Although AWUE and SWEEP are two separate grant programs, the Joint RFP allows DWR and CDFA to administer both grants through a single competitive program that ranks applicants’ projects on their ability 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.

There is a total of six million dollars being made available. A maximum of three million dollars will be allocated to water suppliers through the AWUE grant program to fund a project by a water supplier designed to enhance and upgrade the supplier’s water conveyance system to allow on-demand and flexible farm-gate deliveries, reduce spills and losses, increase efficiency, and improve water management. A maximum of three million dollars will be allocated to agricultural operations, with a limit of \$200,000 per operation, for improvements that utilize the improvements to the supplier’s delivery system to achieve greenhouse gas (“GHG”) emissions reductions and water savings through reductions in on-farm groundwater pumping.

Although these two separate funding sources are being administered as a single grant, the funds made available via either grant can only be used for specific purposes. The AWUE must be used strictly for projects designed to improve water conveyance facilities, while SWEEP grants must eliminate on farm groundwater pumping and reduce GHG emissions. Each program has detailed eligibility criteria and ranking considerations that are fully discussed in the Draft RFP and a separate memorandum analyzing those requirements, attached hereto as Exhibits A & B.

II. Recommendations for Preparing the Grant Proposal

DWR's Agricultural Water Use Efficiency ("AWUE") grant program could provide up to three million dollars (\$3,000,000) for enhancements and upgrades to NSJWCD's South System pipeline. Additionally, CDFA's State Water Efficiency and Enhancement Program ("SWEEP") could provide up to three million dollars (\$3,000,000) to fifteen or more agricultural operations (\$200,000 individual maximum) for the installation of improved irrigation systems that utilize NSJWCD's South System. Recommendations for specific projects that could be included in a grant application to DWR/CDFA are described in detail below.

A. AWUE Funding Proposal – Recommend Pursuing Funding for Phase I of the South System Pipeline Improvement Project and Completion of Pump Station

The District has already moved forward with a project to rehabilitate the South Pump Station. The current estimated cost of the pump station project is about \$1.8 million. The District has \$1.75 million from the EBMUD settlement fund for this project. The AWUE grant could be used to complete the funding for the pump station project as well as:

- Upgrade/Replace pipeline from pump station to Brandt Road (pipe segment 1) to material suitable for a pressurized system.
- Complete planning, engineers report and Proposition 218 process for landowner assessment to fund remainder of the pipeline upgrade/replacement to perform as a pressurized system.
- Fund additional segments of the pipeline upgrade.

As we have discussed in the past, and as was detailed in the KSN June 19, 2015 Technical Memo (Exhibit C, KSN Technical Memorandum, June 19, 2015) the complete pipeline upgrade project will cost in excess of \$10 million dollars. The AWUE funding would enable the district to move forward with the first phases of this project and help leverage a landowner assessment.

Note that while the EBMUD settlement funding may count as part of the matching funds for the AWUE grant, the District would also likely need to impose a new landowner assessment for the balance of the required match.

1. Considerations for Designing AWUE Grant Proposal

Competitive Application: Because there are limited funds, only one grant award will be made through this Joint RFP. As a result, it is important that the competitive merits of this project be soberly assessed. This project would likely be competitive because it promotes several positive outcomes that are stated ranking considerations for the AWUE grant program, including: (1) reductions in water loss; (2) reduced GHG emissions; (3) increased local water supply efficiency; (4) is not locally cost effective; and (4) provides benefits to a severely disadvantaged community (the Town of Victor is considered a "severely disadvantaged community") and economically distressed areas. As a result, if NSJWCD were to submit a proposal requesting that

the AWUE grant funds be used to help fund the Phase I South System Improvement Project, then it would likely address several of the identified project priorities for the use of grant funds.

2. Next Steps for Designing AWUE Grant Proposal

Because the RFP will not be released until early November, the application will not be due until early December. However, because there is only a one-month period for preparing the grant application, the following steps will need to be taken in the next couple of weeks in order to ensure that a competitive application can be prepared:

- **Create a Committee to oversee the grant application process.**
- **Approve the use of District funds to prepare a grant application (attorney and engineer costs)**
- **Prepare an Aggregated Farm-Gate Water Delivery Report:** Because NSJWCD serves water to over 2,000 acres of agricultural land, it will need to prepare an aggregated farm-gate water delivery report for DWR. This report is required to receive grant funds, although not having the report complete will not harm NSJWCD during the application process.

B. SWEEP Funding Proposal – Dual Systems for Landowners

There are a total of 497 agricultural parcels, comprising approximately 10,252 acres, located in the service area for the South System pipeline. Because the South System has not provided reliable deliveries to landowners in recent years, very few agricultural properties connected to it are equipped with “dual-systems” – irrigation systems that permit the operator to irrigate their property with both groundwater and surface water. However, NSJWCD is in the process of updating its pumping system which will allow it to begin making surface water deliveries with greater reliability than in the past.

In response to these upgrades – and the increasing uncertainty about the laws surrounding groundwater use – many owners may want to use this grant opportunity in order to proactively upgrade to a dual system. In order to participate in this grant opportunity, each individual agricultural operation is responsible for filling out the information required for the individual application and providing the estimated cost of a dual system that can function with their operation. However, NSJWCD has an interest in ensuring these grant applications are properly completed because the SWEEP proposal and the AWUE proposal will be considered jointly when DWR is determining how to distribute the grant award.

It is recommended that NSJWCD contact landowners with more than 20 acres along the south pipeline about interest in this grant and then assist them in applying for the funding for dual system upgrades on their property.

1. Key Considerations for Grant Proposal

Landowner Participation: In order to submit a competitive application for this grant, NSJWCD would need to identify at least 15 landowners (more would be better) located along the South System who would be interested in installing dual systems to serve their property.

Funding: The maximum amount that can be awarded to a single landowner is \$200,000. Because there is no matching requirement associated with the SWEEP Program, the agricultural operations that are applying to be considered would not need to commit to contribute matching funds.

Information Sharing: Any landowners that participates in the program will be required to provide the state with a great deal of information in order to document the GHG reductions benefits, including power bills, documentation of current water use, and estimations of future water use.

2. Next Steps – SWEEP Grant

Because the RFP will not be released until early November, the application will not be due until early December. However, because there is only a one-month period for preparing the grant application, the following steps will need to be taken in the next couple of weeks in order to ensure that a competitive application can be prepared:

- **Identify willing landowners through direct outreach:** Contact landowners located on the South System and determine if they are willing to participate. If the Board does not personally know 15 landowners on the South System who want dual systems, then the alternative would be to engage in outreach efforts to determine the level of interest. If at least 15 interested landowners cannot be located, then it is unlikely that NSJWCD can submit a competitive application.
- **Offer technical assistance to landowners for completing grant applications:** The District may need to provide technical assistance to landowners in order to help them complete the grant applications.

Exhibit A – Draft RFP by CDFA/DWR

Agricultural Water Use Efficiency & State Water Efficiency and Enhancement Program

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.

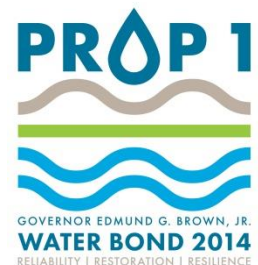
California Department of Water Resources

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

Purpose of Workshops:	Provide information about the Draft RFP application requirements, and criteria for review and selection.
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Workshop Agenda:	- Welcome and Introductions	15 min
	- DWR and CDFA Application Requirements	45 min
	- Review and Selection Criteria	10 min
	- Application Submittal Process	10 min
	- Public Comments and Questions	40 min
	- Adjourn	

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

Table of Contents

Contents

Joint Request for Grant Applications	0
Table of Contents	2
Introduction	5
OBJECTIVE:	5
BACKGROUND:.....	5
Proposition 1 – Funds for Agricultural Water Suppliers (DWR)	5
The State Water Efficiency and Enhancement Program (SWEEP) – Funds for the Agricultural Operator (CDFA).....	6
FUNDING:	6
ELIGIBILITY:	7
Agricultural Water Suppliers (Application Part I; DWR Proposition 1 Funds)	7
Agricultural Operations (Application Part II; CDFA SWEEP Funds).....	8
TIMELINE:.....	8
GRANT APPLICATION PROCESS:	9
Assistance and Questions:	9
REVIEW PROCESS:.....	9
Part I: Agricultural Water Supplier	11
INELIGIBLE PROJECT TYPES AND UNALLOWABLE EXPENSES:	11
FUNDING RULES:	11
PROJECT PRIORITIES:	12
COST SHARE AND PROJECT COSTS:	12
Disadvantaged Communities and Economically Distressed Areas	13
Cost Effectiveness of Proposed Projects.....	13
PROJECT COMPLETION SCHEDULE:	13
GRANT AGREEMENT REQUIREMENTS:	14
FUNDED PROJECT REQUIREMENTS:	17
Project Documentation Requirements.....	17
Additional Project Requirements	18
Application Guidelines and Attachments Part I - Agricultural Water Supplier	21
Type of Permit Required Permitting Agency	49

Part II: Agricultural Operations.....	52
WATER CONSERVATION	53
GREENHOUSE GAS EMISSION REDUCTION.....	54
APPLICATION QUESTIONS.....	54
BUDGET WORKSHEET	55
PROJECT DESIGN	55
WATER AND ENERGY USE DOCUMENTATION	56
GRANT AGREEMENT.....	57
PROJECT IMPLEMENTATION	57
PAYMENT PROCESS	58
PROJECT VERIFICATION	58
POST-PROJECT COMPLETION REQUIREMENTS.....	58
PART II	60
ATTACHMENT A: GRANT APPLICATION QUESTIONS FOR AGRICULTURAL OPERATIONS	60
SECTION I: PREVIOUSLY FUNDED PROJCT	60
SECTION II: PROPERTY LOCATION.....	60
SECTION III: ESTIMATED WATER SAVINGS.....	60
SECTION V: PROPOSED WATER USE SYSTEM & PRACTICE	61
SECTION VI: REQUIRED ATTACHMENTS	62
PART II	63
ATTACHMENT B: BUDGET WORKSHEET.....	63
PART II	64
ADDITIONAL REQUIRED APPLICATION DOCUMENTATION FOR AGRICULTURAL OPERATIONS.....	64
PROJECT DESIGN	64
BASLINE WATER USE SUPPORTING DOCUMENTATION	64
BASLINE GHG EMISSION SUPPORTING DOCUMENTATION	64
Appendixes Part II - Agricultural Operator	65
APPENDIX 1: SUPPLEMENTAL GUIDANCE FOR DETERMINING WATER USE.....	66
Water Use.....	66
USDA NRCS Field Office Technical Guide – Irrigation Water Savings Calculator	66
Water Use Equations	67

Introduction	1
Methodology Development	1
Tools	2
SWEEP DWR Joint Project.....	2
GHG Emission Reductions Quantification Approach	2
Program Assistance	3
Quantification Methodology	4
Step 1: Identify All Agricultural Operations	5
Step 2: Determine the Inputs Needed	5
Table 1. Required ARB GHG Calculator Tool Inputs	5
Step 3: Estimate GHG Emission Reductions Using the ARB GHG Calculator Tool	6
Summary Tab.....	6
Read Me Tab.....	6
Inputs – Water Supplier Tab	6
Inputs – Agricultural Operations Tab	6
GHG Emission Reduction Calculations	6
Table 2. GHG Emission Reduction Calculations	7
Documentation	8
Reporting after Funding Award.....	9
Table 3. Quantification and Reporting By Project Phase.....	10
Example Project	1
GHG Emission Reduction Calculations	i

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 Plan¹, 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

¹ 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

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:

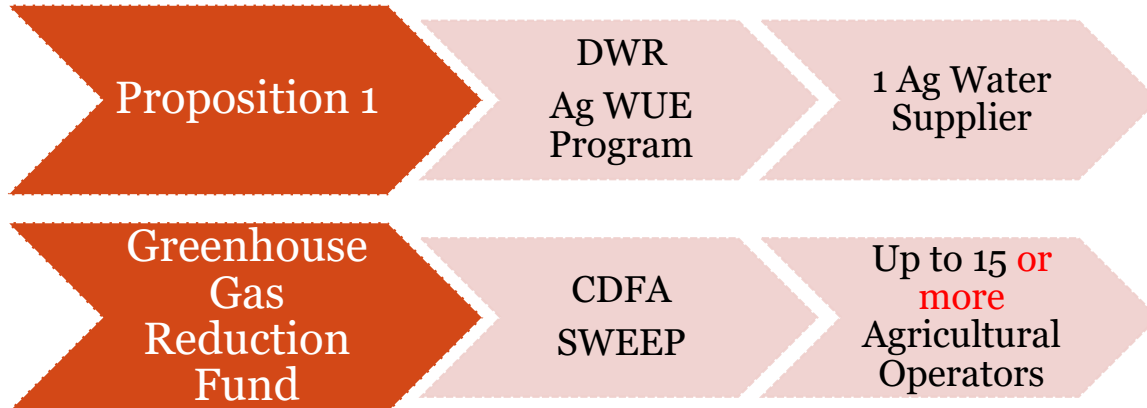
DWR has set aside \$3 million from Proposition 1 to incentivize the water conveyance component of this joint agricultural water use efficiency and enhancement program. Proposition 1 requires that agricultural water suppliers provide a 50% cost share of total project costs.

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 agencies²
- 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 Commission³
-

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

² 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)).

³ 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

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:

Selection Criteria	Maximum Points
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) ⁴	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.

⁴ 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)⁵. 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,

⁵ <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/)
- 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)
- 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

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

Attachment 1: Signature Page	
	All applicants must complete the signature page with a wet signature and submit it with the hard copy of the proposal.
Attachment 2: Goals, Objectives, and Priorities – Relevance and Importance	
	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.
Attachment 3: Technical/Scientific Merit and Feasibility	
	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.
Attachment 4: Project Plan and Description	
	<p>Complete Attachment 4 and include the following in full detail:</p> <ul style="list-style-type: none"> • 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. • 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.

	<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"> • Identify the project location and areal extent, as applicable. Include a site location map. • 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. • Describe any anticipated adverse effects.
Attachment 5: Monitoring Plan and Performance Evaluation	
	<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"> • Provide a plan for monitoring and evaluating the proposed project performance. • Identify measures that can be used to monitor progress towards achieving proposed project goals, objectives, and stated benefits. • Document project benefits (water savings and other benefits) to mark progress and to determine the success of the proposed project. • Provide assurance that the proposed project will meet its intended goals, achieve measurable benefits, and provide value to the State of California. <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 http://water.ca.gov/wuegrants/ under Solicitations and Guidelines and clicking on the document titled: Monitoring Plan-Guidelines for Project Performance.</p>

	<p>The Monitoring and Evaluation Plan should include:</p> <ul style="list-style-type: none"> • 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. • 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>. • Provide an explanation of the monitoring plan and performance measures intended to measure the <u>project results</u>. This is called an outcome indicator. <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. • 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. • Information about how data and other information will be managed by the applicant, reported to DWR, and made accessible to others. • The estimated costs associated with the implementation of the monitoring and evaluation plan. <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>
Attachment 6: Project Costs	
	<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>

	<p>provide major costs for each subtask in Table 1. Files are available at: http://water.ca.gov/wuegrants/.</p> <p>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.</p> <p>The applicant’s minimum cost share must not be less than 50 percent unless claiming Disadvantaged Community or Economically Distressed Area status.</p> <p>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.</p> <p>Table 3: Total Annual Project Costs. This table totals annual project implementation costs from Table 1 and annual O&M costs from Table 2.</p> <p>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.</p> <p>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.</p>
Attachment 7: Project Benefits	
	<p>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.</p> <p>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</p>

	<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 quantitatively 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>
Attachment 8: Reduction or Waiver of Cost Share for Disadvantaged Communities and Economically Distressed Areas	
	<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>
Attachment 9: Innovation	
	<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>
Attachment 10: GHG Emission Calculations	
	<p>Complete Attachment 10 and submit the completed Air Resources Board GHG Emission Reduction Calculator Tool (http://www.arb.ca.gov/cc/capandtrade/auctionproceeds/quantification.htm) 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>
Attachment 11: Environmental Information Form and Documents	
	<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>

	<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: http://resources.ca.gov/ceqa/. For assistance in establishing environmental significance of project specific impacts to farmland, please visit: http://www.consrv.ca.gov/DLRP/index.htm.</p>
Attachment 12: Project Preliminary Plans and Specifications (for construction projects only)	
	<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>
Attachment 13: Compliance with SB X7-7, AB 1404, AB 1420, and Other Requirements	
	<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

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 (http://resources.ca.gov/climate_adaptation/local_government/adaptation_policy_guide.html) (<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><i>Briefly</i> 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"> 1. Helps water infrastructure adaptation to climate change 2. Employs a regional collaborative scope of activities 3. Otherwise improves regional water self-reliance <p><u>Explanation:</u></p>

PART I
ATTACHMENT 3 – TECHNICAL/SCIENTIFIC MERIT AND FEASIBILITY

3.0 Technical/Scientific Merit and Feasibility	
<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

4.0 Project Plan and Description (* = items to be included in the Grant Agreement)	
<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

5.0 Monitoring Plan and Performance Evaluation (*= items to be included in the Grant Agreement)	
	<i>See also Monitoring Plan-Guidelines for Project Performance found at: http://www.water.ca.gov/wuegrants/SolicitationsProp1AG.cfm</i>
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

6.0 Project Costs - (* = items to be included in the Grant Agreement)	
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.
Project costs must be reported for each major project task/subtask and must correspond to the project task description and schedule in Attachment 4.	
Please limit to Excel Worksheet	
6.2*	<p>Complete Table 1 in the Excel Workbook.</p> <ul style="list-style-type: none"> • Enter the proposed project cost for each item for each year, as applicable. • Enter contingency percentage (for example, five percent) and the applicant's cost share for each task or subtask • If you enter a cost, you MUST enter the life of investment in years (zeros are not allowed) in Column VII. • Total project costs, State share, and annualized project costs are automatically calculated.
Local Cost-Effectiveness Evaluation	
Please limit to Excel Worksheet	
6.3	<ul style="list-style-type: none"> • 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. • 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. • Once Tables 1 through 4 are entered, Table 5 (Cost/Benefits Ratio) will automatically calculate the Cost/Benefits Ratio.

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	Year 1	Year 2	Year 3	Total	Contingency %	Cost + Contingency \$	Applicant cost share \$	State Share \$	Life of investment in years	Annualized Costs
(I)	\$	\$	\$	\$	(III)	(IV)	(V)	(VI)	(VII)	(IX)
(a) Task 1- Administration/management ¹										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
Subtotal, Administration Costs	--	--	--	-		--	--	--		\$0
(b) Task 2-(specify)										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
subtotal, Task 2	--	--	--	-		--	--	--		\$0
(c) Task 3-										
subtask 1-				-		-		-		----
subtask 2-				-		-		-		----
subtotal, Task 3	--	--	--	-		--	--	--		\$0
(d) Task 4-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
Subtotal, Task 4	--	--	--	-		--	--	--		\$0
(e) Task 5-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
subtotal, Task 5	--	--	--	-		--	--	--		\$0
(f) Task 6-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
subtotal, Task 6	--	--	--	-		--	--	--		\$0
(g) Task 7-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
Subtotal, Task 7	--	--	--	-		--	--	--		\$0
(h) Task 8-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
subtotal, Task 8	--	--	--	-		--	--	--		\$0
(i) Task 9-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
Subtotal, Task 9	--	--	--	-		--	--	--		\$0
(j) Task 10-										
subtask 1-				-		-		-		-
subtask 2-				-		-		-		-
subtotal, Task 10	--	--	--	-		--	--	--		\$0
(k) TOTAL	\$0	\$0	\$0	\$0		\$0	\$0	\$0		\$0
(l) Cost Share -Percentage							0%	100%		

¹- 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 ⁽¹⁾ (I)	Maintenance (II)	Other (III)	Total (IV) (I)+(II)+(III)
			\$

(1) include annual O&M administration costs here

Table 3: Total Annual Project Costs

Annual Capital Costs ⁽¹⁾ (I)	Annual O&M Costs ⁽²⁾ (II)	Total Annual Costs (III) (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
(f) Total [(a) + (b) + (c) + (d) + (e)]				0		\$0

⁴ 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)]		0.00

PART I

ATTACHMENT 7 – PROJECT BENEFITS

(QUANTITATIVE AND QUALITATIVE DESCRIPTION OF BENEFITS)

(Please limit to 3 pages)

7.1 Qualitative Benefits

7.1.A Qualitative Benefits: State (*= items to be included in the Grant Agreement)	
<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:
7.1.B Qualitative Benefits: Local (*= items to be included in the Grant Agreement)	
<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)			
<i>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.</i>			
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)			
<i>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.</i>			
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

8.0 Reduction or Waiver of Local Cost Share	
<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 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

9.0 Innovation		
Refer to Attachment Guidelines.		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

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.

Please limit
to 1 page

- 10.1 Calculate GHG Emission Reduction:
To convert the energy/fuel savings to the avoided Greenhouse Gas (GHG) emissions, use the following equation:
- GHG Emission Reduction from electricity savings = (Energy Savings) x (Emission Factor)
or
GHG Emission Reduction from fossil fuel savings = (Fuel Savings) x (Emission Factor)
- For calculation convenience, below are some Emission Factors quoted from a State Air Resources Board's report:
www.arb.ca.gov/cc/protocols/localgov/pubs/lgo_Protocol_v1_1_2010-05-03.pdf
- | Type of Energy/Fuel | Emission Factors |
|---------------------|--|
| Diesel | 10.21 kgCO ₂ /gallon |
| Natural Gas | 0.0545 kgCO ₂ /scf |
| Gasoline | 8.81 kgCO ₂ /gallon |
| Electricity | 306 kgCO ₂ e/MWh ⁶ |
- scf – standard cubic foot. Standard condition refers to the air condition at temperature of 60 degrees Fahrenheit with 1 atmospheric pressure.
MWh – Megawatt-hours, an electricity unit.
- Applicants must use :
- **AThe 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**
- 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

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

	<p>operations that jointly apply for funding through this request for applications.</p> <p>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</p> <p>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</p>
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PART I
ATTACHMENT 11 – ENVIRONMENTAL INFORMATION FORM AND
DOCUMENTS

11.0 Environmental Information Form and Documents	
<i>(† items required for Grant Agreement execution)</i>	
	Not in page limit
11.1 [†]	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

12.0 Project Preliminary Plans and Specifications	
(when applicable)	
Not included in page limit	
12.1	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

13.0 Compliance with SB X7-7, AB 1404, AB 1420 and Other Requirements		Yes/No (If Yes, describe compliance)
Answer the questions below by stating “yes” or “no” in the right hand column. Where applicable, provide additional information/justification.		
13.1	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 http://www.water.ca.gov/wateruseefficiency/agricultural/agmgmt.cfm)	
	• Did you submit an Agricultural Water Management Plan to DWR?	
	• Did you comply with the Agricultural Water Measurement Regulation?	
	• Did you adopt a pricing structure for water customers based at least in part on quantity delivered?	
	• Did you implement all locally cost-effective EWMPs?	
	• If not implementing EWMPs (measurement, pricing, and other EWMPs), have you submitted a schedule, financing plan, and budget for implementation to DWR?	
13.2	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? (www.water.ca.gov/wateruseefficiency/agricultural/farmgatedelivery.cfm)	
13.3	Are you an urban water supplier? If yes, are you in compliance with:	
	• Urban Water Management Plan? – if you provide over 3,000 acre-feet of water annually, or serve more than 3,000 urban connections. (See http://www.water.ca.gov/urbanwatermanagement/)	
	• AB 2572 Water Meter Requirements in CWC §525 et seq.? (See http://water.ca.gov/wateruseefficiency/finance)	
	• AB 1420 requirements? (See http://water.ca.gov/wateruseefficiency/finance)	
	• 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.	
13.4	Are you in compliance with CWC §10920 et seq. - Groundwater Monitoring Program requirements? (See www.water.ca.gov/groundwater/casgem/)	
13.5	Are you in compliance with Part 5.1 (commencing with §5100) of Division 2 of the CWC - Surface Water Diversion Reporting requirements? (See www.waterboards.ca.gov/waterrights/water_issues/programs/diversion_use/index.shtml)	

Part II: Agricultural Operations

This part describes the agricultural operations portion of the Joint DWR-CDFA grant application. This portion is funded through CDFA'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 follow 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 CDFA 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.

Part II Required Attachments for Each Agricultural Organization
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

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 PROJCT

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

2016 SWEEP Round I Budget Worksheet

Instructions: Provide a clear and detailed accounting of project costs necessary to complete the proposed project. Project costs must be itemized into budget categories, including supplies, equipment, and labor. The items listed in these categories will be the total SWEEP grant funds requested for the proposed project. The total grant request amount may not exceed \$200,000.

*Matching funds can include cash and/or in-kind contributions. Cash contributions are the amount of funds that will be contributed by the applicant to this project. In-kind contributions include contributions by the applicant in the form of supplies, equipment, and labor involved with project installation. For matching funds, provide a brief description of the types of costs, including the quantity, activity, or service needed to complete the project. As needed, add rows to the table below.

[illegible]

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

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 pre-project 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> $= \text{Total water use over the previous growing season} \div \text{acres}$
Projected Water Use	<p>The estimated volume of water that will be applied to the crop in the next growing season after 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> $= \text{Estimated total water use during the growing season after project} \div \text{acres}$
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> $= \text{Baseline Water Use} - \text{Projected Water Use}$

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.

Practice Code	Practice Name	Component	Unit Type	Unit Cost
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

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

Exhibit B – Detailed Memo on Grant Requirements

To: Jennifer Spaletta

From: Russell Frink

Date: 10/5/2016

Re: Water Use Efficiency Grant Summary

Agricultural Water Use Efficiency & State Water Efficiency and Enhancement Program

(I) Brief Summary:

This memorandum discusses the eligibility criteria, matching funds requirements, and deadlines for a grant program called the Agricultural Water Use Efficiency & State Water Efficiency and Enhancement Program, sponsored by Department of Water Resources (“DWR”) and California Department of Food and Agriculture (“CDFA”).

North San Joaquin Water Conservation District’s South System Improvement Project could provide an excellent opportunity to put these grant funds to work because: (1) we’re currently working to upgrade the South System; (2) agricultural operations located near the South System have a need for dual-systems; and (3) the project benefits match with the types of benefits that have been identified as funding priorities. As a result, NSJWCD should consider submitting an application for this grant when the Final Request for Proposal is released in late October.

(II) Basic Information

This grant is a combination of two separate funding pools that are being jointly administered by DWR and CDFA.

(A) DWR’s Portion: The money being allocated by DWR is part of Proposition 1’s Agricultural Water Use Efficiency (AWUE) program and has been earmarked for use by water suppliers. All funding for water suppliers will come from the AWUE program.

(B) CDFA’s Portion: The funds distributed by CDFA are part of the Greenhouse Gas Reduction Fund, which can be spent to promote greenhouse gas reductions through water and energy efficiency grants promoting water and energy savings.

(III) Eligibility Requirements:

(A) Water Suppliers Eligibility Requirements

(1) Agricultural Water Management Plan Required: If the applicant is an agricultural water supplier, then they must adopt and submit an agricultural water management plan in accordance with Water Code 10800 et seq.

NSJWCD is not an Agricultural Water Supplier, this plan is not required.

- (2) **AB 3030 Groundwater Management Plan Required:** Pursuant to Water Code 79742, local agencies that do not prepare, adopt, and submit their groundwater plans in accordance with Division 6 cannot receive Prop 1 funds. The “groundwater plans” being referenced are not SGMA, but the AB 3030 plans described in Water Code 10750, et seq.

NSJWCD has already approved an AB 3030 Groundwater Management Plan.

- (3) **Aggregated Farm-Gate Water Delivery Report Required** 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 Water Code § 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>

Although this will need to be prepared to be eligible to receive grant funds, it will not harm our application if this report is not completed. This report would be relatively easy for NSJWCD to complete because no water has been delivered in recent years.

- (4) **Agricultural Efficient Water Management Practices:** Agricultural Water Suppliers serving irrigated acreage of more than 25,000 acres 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 Water Code (§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, 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>

This requirement doesn't apply to NSJWCD because there are less than 25,000 acres served by the district.

(B) Individual Agricultural Operations Eligibility Requirements

- (1) **Must Be Served by the Water Supplier Applicant:** 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).

(2) Surface Water Diversion Reporting Compliance: An agricultural operation is not eligible unless it complies with surface water diversion reporting requirements outlined in CWC §5103(e)(2).

(3) Documentation of Benefits: 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.

(a) **Water Use Documentation:** The actual baseline water value provided in the application must be supported by the documentation attached to the application. Allowable forms of water use documentation include: Water bills, Flow Meter Readout or Compilation, Pump Efficiency Test, Other On-farm Water Records, or USDA NRCS Irrigation Water Savings Calculator.

(b) **GHG Emission Reduction 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.

(4) Verification of Benefits: 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.

(C) Project Requirements – Water Suppliers

(1) 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. (Note: See

(2) Must generate State benefits. The following eligible state benefits have been identified:

- water savings;
- increased in-stream flow or improved flow timing;
- Improved water quality;
- Increased energy conservation;
- Reduction of greenhouse gas (GHG) emissions;
- Increased local water supply reliability.

(3) Competitive Advantage: Benefits Disadvantaged Communities and Economically Distressed Areas

- The Project is given priority consideration
- The applicant can request that the cost-share requirement be waived in DACs/EDAs benefit.

(4) Competitive Advantage: Project Not Locally Cost-Effective

- 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.

(5) Ineligible Projects: 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

(D) Project Requirements – Agricultural Operations

(1) 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.
- Example Projects: (a) Weather, soil, or plant based sensors for irrigation scheduling; (b) Micro-irrigation or drip systems.

- (2) **Calculated Reductions in GHG Emissions:** 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. [GHG emissions reductions are calculated by using a greenhouse gas emissions calculation tool published by CARB.]
- (3) **Flow Meters:** Applicants must include flow meters in their proposed project or demonstrate actual water use will be *measured* with existing flow meters.
- (4) **Verification of Project Benefits:** 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.
- (5) **Ineligible Projects:**
- 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

(IV) Funding Limits

- (A) **Total Funding Available:** A total of 6 million dollars is currently available, 3 million for a single supplier and 3 million for 15 or more individual agricultural operations. Of this \$6 million, \$3 million is awarded to a single water supplier and the other \$3 million is awarded to 15 or more Agricultural Operations.
- (B) **Matching Requirements:**
- (1) **Water Suppliers:** AWUE funds used by water suppliers require a 50% match, unless it can be demonstrated that there are benefits to DACs/EDAs.
- (2) **Agricultural Operations:** There is no matching requirement for the SWEEP funds, but CDFA recommends that applicants secure 50% matching funds for total costs.
- (C) **No Combination with EQIP Funds:** 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.

(D) Costs Incurred Prior to Grant Award: 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.

(V) Deadlines

- The Final Joint Request for Proposals will be released by the end of October/early November.
- The application deadline will be the end of November/early December.
- Projects shall be completed within three years from the date of grant agreement execution.
- 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.
- Each "activity" required to complete the project must have an estimated time frame. Projects funded by Proposition 1 funds that fall over a year behind in activity or reporting may be terminated.

Exhibit C – Technical Memorandum by KSN

TECHNICAL MEMORANDUM

June 19, 2015

To: North San Joaquin Water Conservation District
Subject: South System Conveyance Rehabilitation
Project: South System Improvement Project Preliminary Design
Prepared By: Andrew Martin, EIT
Reviewed By: Neal T. Colwell, RCE 59437



1.0 BACKGROUND AND PURPOSE

The North San Joaquin Water Conservation District (NSJWCD) owns and operates a surface water diversion and delivery system on the Mokelumne River to provide irrigation water to customers of NSJWCD's existing South System. This technical memorandum has been prepared to present an evaluation of alternatives for rehabilitating or replacing the South System's pipeline conveyance system. Based on a reconnaissance level evaluation of alternatives, a recommended preliminary design concept has been developed as described below. Preliminary design concepts for rehabilitation or replacement of the South System pump station are presented as a separate technical memorandum.

2.0 EXISTING FACILITIES

The existing South System conveyance consists of approximately 9 miles of pipeline and open channel ditches as depicted in Exhibit A: South System Potential Service Area. The pipeline is predominantly non-reinforced cast-in-place concrete pipe with standpipes located at approximately 600 foot intervals. Pipeline components of the conveyance system were designed to operate under a low-pressure gravity flow condition with standpipes to provide venting and access to outlet valves. Initial elements of the conveyance system beginning at the pump station located approximately 1,000 feet west of the north end of N Tretheway Road adjacent to the Mokelumne River operates as a low head pressure system before discharging into the gravity system, approximately 300 feet east of the pump station. The first segment of pipeline extends east in the access road to the pump station before turning south in N. Tretheway Road to Brandt Road. At Brandt Road the pipe splits into east and west branches, with the east branch of pipeline terminating approximately 2,000 feet east of the intersection of N. Tretheway Rd. and Brandt Road, where water is discharged into an earthen open channel. This open channel extends approximately 2 miles south, before discharging into Bear Creek at the western edge of Lockeford Springs Golf Course. The western branch of the distribution

system consists of pipelines of various materials extending approximately 6.3 miles from the intersection of Brandt Road and N Tretheway Road to a discharge point at Pixley Slough just east of Alpine Road. This western branch has two sub-branches, one of which extends approximately 2600 feet south of Highway 12 between N Locust Tree Road and N Tretheway Road. The other pipeline sub-branch extends west from the western branch, approximately 2700 parallel to but north of E Handel Road to Alpine Road. From that point, a pipeline is believed to extend north along the west shoulder of Alpine Road approximately 700 feet and south approximately 800 feet.

On the eastern branch of the distribution system there is a re-diversion check dam in Bear Creek, located just south of where Harney Lane crosses Bear Creek. This check dam allows for flows to be diverted from Bear Creek into Pixley Slough through an existing culvert under the levee. The culvert, head works and slide gate were installed as part of the levee project and require the installation of a flash board dam in Bear Creek in order to divert the flows. As this is a flood control channel, approval from the Central Valley Flood Protect Board is required before the flash boards can be installed. Currently the permanent portions of the check dam in the bottom of the channel are in need of repair to allow the installation of the flash boards and creation of the water pool required to divert flow into Pixley Slough; however, the culvert and control valve are in good condition.

Based on anecdotal information and visual observations much of the existing South conveyance system will require extensive maintenance and repair if not major replacement in order to be reliably operable. The existing pipeline is composed of a variety of pipe materials of varying diameters in response to repairs that were made over the years. Initially a large portion of the pipeline was cast in place concrete which can dramatically fail, as it failed it was typically replaced with what was available, thus a variety of pipe materials and varying diameters in some reaches.

At the point where the western pipeline branch turns south (directly south of the community of Victor), a storm drainage pump station operated by the San Joaquin County Public Works Department discharges into the NSJWCD's South System conveyance pipeline. The Victor storm drainage pump station normally operates in the winter months, utilizing the downstream segment of the South System pipeline to convey stormwater to Pixley Slough.

3.0 FACILITIES REHABILITATION APPROACHES AND ALTERNATIVES

Primary objectives for rehabilitating both the South System Pump Station and Distribution System is to increase the capacity to the maximum allowable and enhance the reliability of both elements of the system. Reliability is a critical element as it is a key factor in determining if a landowner within the potential service area is to become a customer. Therefore, similar to the Pump Station element that involves relocation and replacement of the facilities; to enhance the reliability of the distribution system it has been determined in this reconnaissance level study, based on historical operational records, that replacement of all the pipeline reaches is the only method of achieving the desired reliability.

Two alternative approaches to facilities replacement have been identified for consideration by the NSJWCD. The following have been evaluated at a reconnaissance level in order to assess their potential feasibility:

1. Replacement of the South System conveyance pipeline to maintain the existing gravity system operation using a variety of construction methods including, but not limited to:
 - a. Slip lining with a smaller size line; or
 - b. Replacement with a larger line by pipe bursting.
2. Replacement the entire conveyance system with particular design considerations to allow delivery of irrigation water under pressure including:
 - a. Pipeline replacement to allow pressure delivery of irrigation water; and
 - b. Construction of an equalization basin and pressurizing pump station to supply irrigation water under pressure (potentially as a future project following pipeline replacement)

3.1 EXISTING PIPELINE REPLACEMENT

There are several methods available for the replacement of the existing pipeline, open cut and slip lining by placing a new pipe inside the existing or “host” pipe. Open cut, which is the typical method of installing new pipelines, requires access to all the alignment segments by virtue of its construction technique; therefore, it creates a significant amount of surface disturbance and restrictions during construction. In addition, as much of the alignment is beneath developed agricultural land, surface restoration costs could be significant. Relocating the pipeline to a new alignment would require new right of way and would also have a surface restoration cost. Therefore, open cut would not be the most cost effective alternative for replacement or rehabilitation of the system, as it will require more labor and materials than slip lining. Therefore, open cut for major portions of the alignment was dropped from further consideration.

Slip lining by the insertion of new high strength pipe into the existing pipe is a low-dig alternative that will reduce construction risks and significantly minimize surface disruptions. Other slip lining options associated with the using liners were not considered due to their lack of structural strength and their reliance on the structural strength of the “host” pipe. Using a high strength pipe for slip lining allows for sizing the pipeline in response to final design values by either downsizing or upsizing the pipeline. Upsizing can be accomplished by “pipe bursting” wherein the existing host pipe is expanded immediately ahead of the new larger diameter pipe. Concrete Cast in Place Pipe (CCIP) is, by virtue of its lack of reinforcement, an idea candidate for pipe bursting.

3.2 PRESSURE VS. GRAVITY

The existing system currently delivers irrigation water through a low head gravity conveyance system. Rehabilitating the existing conveyance pipeline would improve the performance of the gravity system and material selection during replacement would allow for converting to a pressurized system at a later date. As an example fusible PVC pipe (high strength liner) typically has a minimum pressure rating of 100 to 125 psi, depending upon the diameter, which would allow for future

pressure operation. Based on a peak potential delivery of 40 cfs, a gravity system would require pipe sizing ranging from 42" to 24", while a pressurized system would require pipe sizing ranging from 33" to 21". These sizes may change in response to a more detailed hydraulic analysis of the operation of the system. A preliminary design pipeline survey and closed circuit television (CCTV) inspection is recommended to confirm existing pipe size and condition. Exhibit B: Preliminary Distribution System Pipeline Sizes and Demand Sub-Zones presents a map showing preliminary pipe sizes for each major pipe segment based on either a gravity delivery or pressure delivery system.

The majority of on-farm irrigation systems in the South System potential service area are pressurized systems using sprinklers, drip, and/or micro-spray irrigation. Therefore, replacing the conveyance pipeline to provide pressurized water would reduce the need for on-farm pumping improvements. Growers would likely connect to and use available NSJWCD water if it were pressurized. The construction of turnouts for service to existing and potential new users will be required.

3.3 BEAR CREEK AND OPEN CHANNEL PORTION

The open channel segment of the supply system appears to be in functional condition; however, some maintenance will be necessary. Maintenance would include a significant amount of ditch cleaning, repair (if necessary) of roadway crossings, and reconstruction of the check dam in Bear Creek to allow re-diversion to Pixley Slough.

4.0 RECOMMENDED FACILITIES REPLACEMENT

Based on a reconnaissance review of the above mentioned replacement approaches, the recommended approach is presented below.

4.1 DESIGN CRITERIA

It is recommended that the South System conveyance replacement be phased and follow the design criteria as presented below:

Phase I – Pipeline and Turnout Replacement

1. Replacement of the existing pipeline system (using a combination of methods as appropriate) to initially function as a low-pressure gravity delivery system but with materials selected to allow future conversion to a pressure delivery system;
2. System designed with a total delivery capacity of 40 cfs, to match the District's permitted diversion rate for this location; and
3. Construction of new turnouts, including flow meters, suitable initially for gravity delivery of water but with materials selected to allow future conversion to a pressure delivery system.

Phase II – Pressure System Conversion

1. Construction of an equalization basin sized to supply at least one day's worth of pressurized water at a flow capacity of 40 cfs; and

2. Construction of a pressure delivery pump station with a capacity of at least 40 cfs.

4.2 PRELIMINARY PROJECT DESCRIPTION

Based on the above design criteria and the recommended approach to rehabilitate the existing conveyance system, a preliminary design project description is provided below.

4.2.1 PIPELINE REPLACEMENT

Due to existing system continuity and an existing customer base with recent historical use, replacement of the west branch of the South System is recommended. Replacement of this branch is expected to provide the most immediate benefit to the NSJWCD and provide the greatest opportunity for beneficial use of diverted surface water. Replacement could focus on improvement to the main trunk line from the pump station discharge pipeline to Pixley Slough, which is comprised of approximately 36,000 linear feet of pipeline, or also include the two sub-branches along this alignment increasing the total length of pipeline improvement to 46,000 feet. Improvement to the eastern branch pipeline and open channel conveyance system would be considered as a future project.

For the pipe segments to be improved, preliminary design pipeline surveys are recommended to confirm pipe size, material, and location. Based on the results of the pipeline surveys and system capacity requirements, a combination of replacement methods such as slip lining, pipe bursting, or open trench replacement would be used to replace the existing concrete pipe with pipe material sized to initially convey water through a gravity flow condition, but be designed to allow future conversion to pressure delivery. The replacement pipe sizes would be approximately 36" to 20" in diameter as depicted for the pressure flow conditions presented in Exhibit B: Preliminary Distribution Pipeline Sizes and Demand Sub-Zones. The sub-branches would likely require 18" diameter pipeline replacements.

There is a total of approximately 497 agricultural parcels identified within the potential South System Service area, therefore the Phase I project is assumed to include construction of approximately 103 turnouts (based on an estimate of the number of agricultural parcels along the main trunk line).

4.2.2 FUTURE PRESSURIZED SYSTEM IMPROVEMENTS

At a future date, the South System could be improved to deliver water under pressure. A pressure delivery system would likely be designed to deliver water at approximately 60 psi. After replacement of the west branch pipeline, additional future improvements would be necessary to convert the system to a pressure system. These improvements would include constructing an equalization basin sized to allow a steady diversion from the Mokelumne River while accounting for variability in irrigation supply based on system demand patterns. A pressure delivery pump station would be constructed to draw water from the equalization basin to deliver water under pressure through the improved west branch pipelines. Capacity of the pump station would be consistent with supplying irrigation water at a diversion rate of 40 cfs.

4.3 PROBABLE PROJECT COST

A preliminary opinion of probable project cost for both Phase I and Phase II project elements are presented in Table 1: NSJWCD South System Conveyance Replacement Costs. Depending on the total length of improved pipeline, the total preliminary cost for conveyance system replacement is estimated at approximately \$14.3 to \$15.7 million. Exhibit C: Preliminary Opinion of Probable Project Costs presents a budgetary breakdown for the proposed project based on pipeline replacement predominantly consisting of slip lining. Depending on the pipeline elements included in the project, Phase I project costs are expected to range from \$6.6 to \$8.0 million with a cost of approximately \$0.75 million for construction of basic turnout structures with valves (excluding flow metering).

TABLE 1:
NSJWCD SOUTH SYSTEM CONVEYANCE REPLACEMENT COSTS

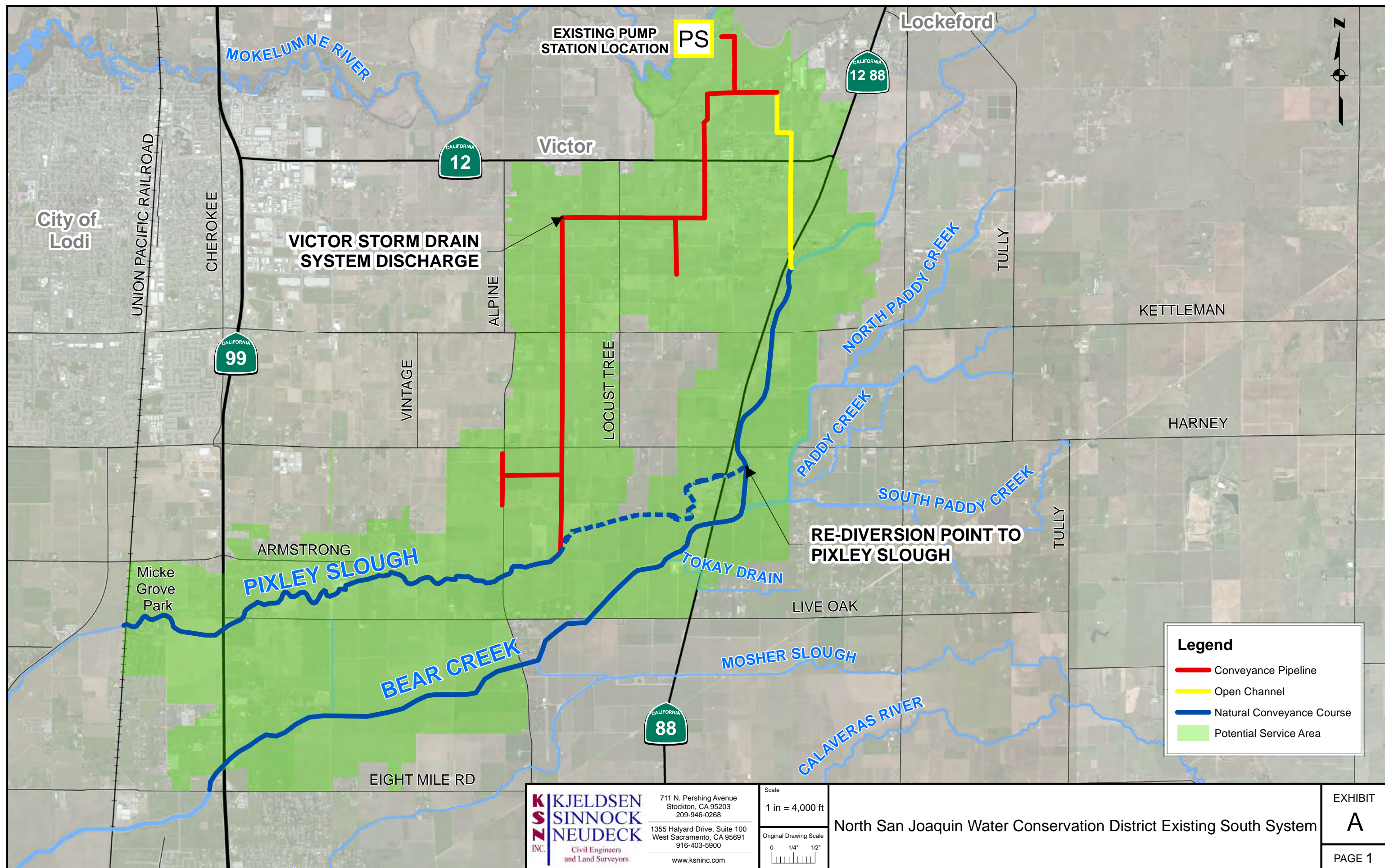
Phase	Description	Preliminary Cost
I	Existing Pipeline Replacement ⁽¹⁾	\$6.6 to \$8.0 M
	Replacement Turnouts	\$ 0.75 M
II	Future Pressure System Improvements	
	1. Supply/Equalization Basin	\$ 3.5 M
	2. Pressure Delivery Pumping Plant	\$ 3.5 M
Total Preliminary Cost		\$14.3 to \$15.7 M

At an ENR CCI 20-cities Average of 10036, May 2015

(1) Excluding the first 3,200 linear feet of pipeline replacement that is included in the pump station cost.

Exhibit A

SOUTH SYSTEM POTENTIAL SERVICE AREA



**KJELDSSEN
SINNOCK
NEUDECK
INC.**
Civil Engineers
and Land Surveyors

711 N. Pershing Avenue
Stockton, CA 95203
209-946-0268
1355 Halyard Drive, Suite 100
West Sacramento, CA 95691
916-403-5900
www.ksninc.com

Scale
1 in = 4,000 ft
Original Drawing Scale
0 1/4" 1/2"

North San Joaquin Water Conservation District Existing South System

EXHIBIT
A
PAGE 1

Exhibit B

**PRELIMINARY DISTRIBUTION SYSTEM PIPELINE SIZES
AND DEMAND SUB-ZONES**

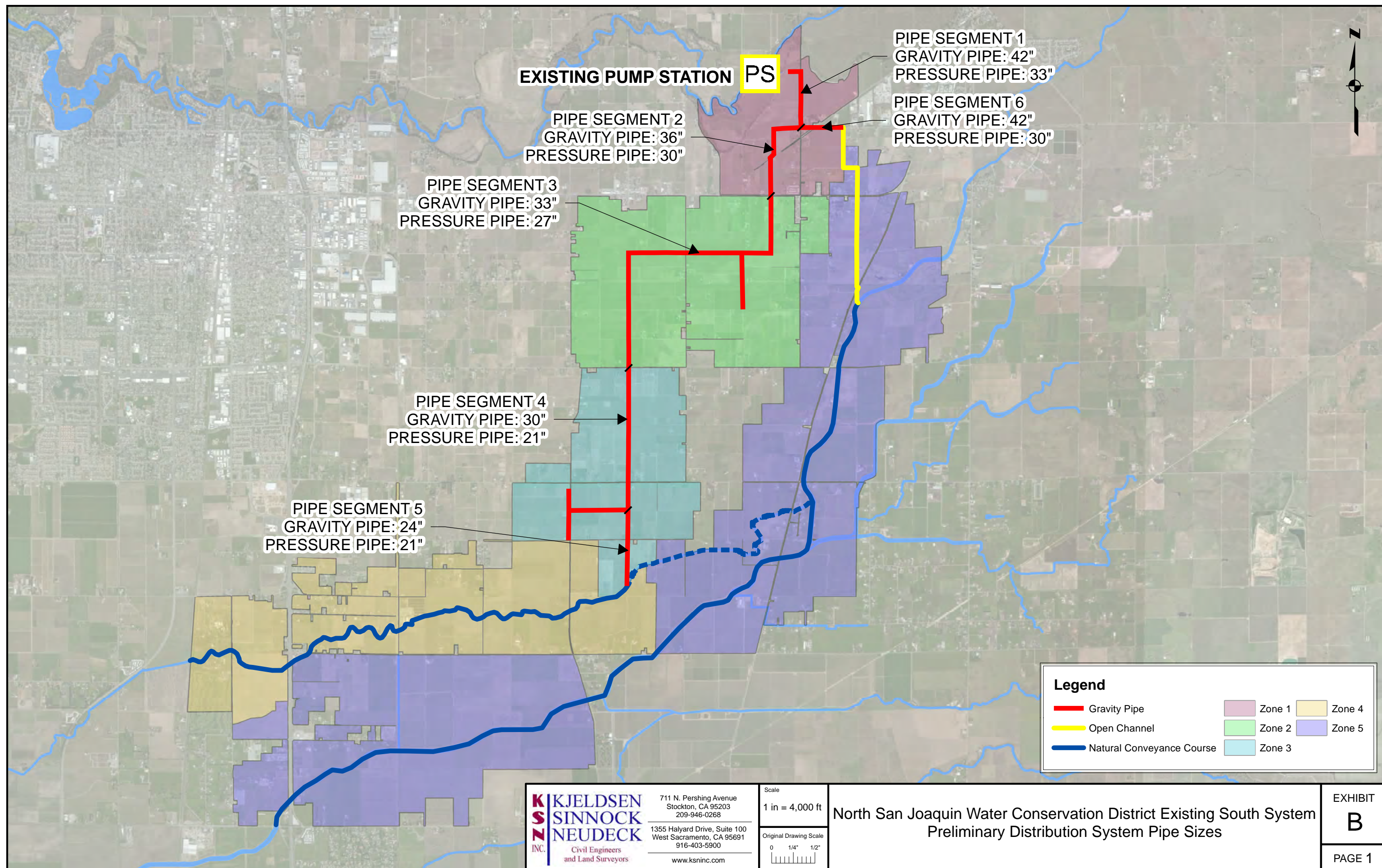


Exhibit C

PRELIMINARY OPINION OF PROBABLE PROJECT COST

Exhibit C: Preliminary Opinion of Probable Project Costs

**TABLE C1:
NSJWCD SOUTH SYSTEM CONVEYANCE REHABILITATION COSTS**

Phase	Description	Preliminary Cost
I	Existing Pipeline Rehabilitation	\$6.6 to \$8.0 M
	Replacement Turnouts (103)	\$ 0.75 M
II	Future Pressure System Improvements	
	1. Supply/Equalization Basin	\$ 3.5 M
	2. Pressure Delivery Pumping Plant	\$ 3.5 M
Total Preliminary Cost		\$14.3 to \$15.7 M

At an ENR CCI 20-cities Average of 10036, May 2015

**TABLE C2:
REHABILITATION COSTS (EXCLUDING SUB-BRANCHES)**

Pipe Segment	Length ⁽¹⁾ (ft)	Pipe Diameter ⁽²⁾ (in)	Cost per Linear Foot ⁽³⁾ (\$/LF)	Preliminary Cost
1	3,200	36	(4)	(4)
2	4,500	30	\$228	\$1,026,000
3	14,600	30	\$228	\$3,328,800
4	6,700	24	\$185	\$1,239,500
5	7,000	20	\$150	\$1,050,000
Preliminary Cost				\$6,644,300

NOTES:

- (1) Approximate lengths based on aerial images
- (2) Pipe sizes according to preliminary design calculations; actual size may vary
- (3) Includes 30% Contingency and 15% Engineering and Administration
- (4) Included as element of pump station project.

TABLE C3:
REHABILITATION COSTS (INCLUDING SUB-BRANCHES)

Pipe Segment	Length ⁽¹⁾ (ft)	Pipe Diameter ⁽²⁾ (in)	Cost per Linear Foot ⁽³⁾ (\$/LF)	Preliminary Cost
1	3,200	36	(4)	(4)
Brant Rd.	2,000	30	\$228	\$456,000
2	4,500	30	\$228	\$1,026,000
3	14,600	30	\$228	\$3,328,800
South of 3	2,600	18	\$140	\$364,000
4	6,700	24	\$185	\$1,239,500
To Alpine Rd.	4,200	18	\$140	\$588,000
5	7,000	20	\$150	\$1,050,000
Preliminary Cost				\$8,052,300

NOTES:

- (1) Approximate lengths based on aerial images
- (2) Pipe sizes according to preliminary design calculations; actual size may vary
- (3) Includes 30% Contingency and 15% Engineering and Administration
- (4) Included as element of pump station project.