Irrigation Water Measurement Implementation

YCWA-02

I. Project Sponsor Contact Information

Lead Agency/Organization	Yuba County Water Agency
Name of Primary Contact(s)	Curt Aikens
Mailing Address	Yuba County Water Agency 1220 F Street Marysville, CA 95901
Phone	(530) 743-5703
Project Partners/Collaborators	YCWA Member Units: Brophy Water District, Browns Valley Irrigation District, Cordua irrigation District, Dry Ceek MWC, Hallwood Irrigation Company, Ramirez Water District, South Yuba Water District, Wheatland Water District

II. General Project Information

Project Title	Irrigation Water Measurement Implementation
Project Total Budget	$580,700
Project Funding Match	25% Local Match
Project Funding Request	$435,525
Can a detailed cost estimate be provided upon request?	Yes
Project Location:	Regional- various locations within the jurisdictions of member units (named above)
Latitude	N/A
Longitude	N/A
Could you provide a map of the project location including boundaries upon request?	Yes
County	Yuba
City/Community	various
Watershed/subwatershed	Yuba, Feather, Bear
Groundwater Basin	Yuba Groundwater Basin
Project Type	Facility Construction Monitoring

III. Project Description

The project would implement YCWA's SBx7-7-required irrigation water measurement plan with the addition of a SCADA system to automate data acquisition and dissemination.

This proposal defines the tasks associated with improving the water measurement infrastructure of the Agency for the following purposes:

1. Making the customer delivery measurement sites compliant with CCR 23 §597 and "SCADA Ready;"
2. Improving accuracy of drain outflow measurement sites to decrease uncertainty in water balance results.

The project's scope of work consists of three tasks: (1) North Side Customer Delivery Compliance Improvements, (2) South Side Customer Delivery Compliance Improvements, and (3) Drain System Improvement. Task 3 would be implemented in two phases. Phase I would entail installation of gaging stations at the five primary drain outflow measurement locations identified in the Measurement Improvement Plan (Appendix E of the Agency's AWMP) with minimal channel modifications. After the Phase I improvements have been made and data has been collected for a sufficient period (e.g. 1 year), the quality of data will be review for each site. If Phase I improvements fail to yield sufficiently accurate and reliable flow data, the Phase II improvements will be implemented. The main focus of Phase II improvements will be to modify the channel to provide improved measurement conditions. The range of potential options for channel improvements include (but are not limited to) (1) rip-rap and rock modifications, (2) construction of a measurement weir (or check structure) perpendicular the primary flow direction or (3) construction of a 50' lined section.

IV. Project Rationale/Issues Statement

The 2009 Water Conservation Act requires a statewide 20% reduction in urban per capita water use by 2020. It requires that urban water retail suppliers determine baseline water use and set reduction targets according to specified requirements, and requires agricultural water suppliers prepare plans and implement efficient water management practices.

The Comprehensive Water Package passed by the California State legislature in November 2009 consists of four policy bills and an $11.14 billion water bond. One of the policy bills (Senate Bill x7-7 or SBx7-7) addresses both urban and agricultural water conservation and, with respect to agriculture, includes new requirements regarding (1) agricultural water management planning and (2) the accuracy of customer delivery measurement, applicable to agricultural water suppliers serving more than 25,000 acres.

In response to SBx7-7, and the resulting measurement regulation (CCR 23 §597), Yuba County Water Agency prepared an Agricultural Water Management Plan (AWMP). Part of the AWMP was the preparation of a Measurement Improvement Plan (MIP). This project implements the actions identified in the MIP.

In addition to fulfilling **regulatory compliance**, this project addresses the identified regional issue of **water use efficiency and water conservation**.

V. Goals/Objectives/Performance Metrics

Goals Addressed by the Project	**Goal 1:** Ensure adequate and reliable water supply that meets the diverse needs of the region; **Goal 5:** Protect public safety through emergency and drought preparedness and integrated flood management; **Goal 6:** Address climate vulnerabilities and reduce greenhouse gas emissions.
Objectives Addressed by Project	1.2 Promote water conservation and water use efficiency by instituting various techniques including, but not limited to, groundwater recharge, conjunctive management, irrigation efficiencies, municipal water conservation, water recycling and reuse; 1.7 Support regulatory compliance with current and future state and federal water supply standards; 5.2 Support regional and inter-regional collaboration to improve drought and emergency preparedness; 6.2 Improve data, modeling and technical analyses to better understand the impacts of climate change on regional and inter-regional water supply and watershed health; 6.6 Promote regional and inter-regional collaboration to implement climate change adaptive management strategies.
What performance metrics will be used to demonstrate that objectives are being met? Wherever possible, provide a quantitative measurement reflecting successful project outcomes.	TBD

VI. Resource Management Strategies

Reduce Water Demand	
Agricultural Water Use Efficiency	Compliance with SBx7-7 and CCR 23 §597 to achieve long term reduction in agricultural water use.
Improve Operational Efficiency and Transfers	
Conveyance—Regional/Local	Improve accuracy of drain outflow measurement sites to decrease uncertainty in water balance results.

VII. Statewide Priorities

Drought Preparedness

- Promote water conservation, conjunctive use, reuse and recycling
- Achieve long term reduction of water use

Use and Reuse Water More Efficiently

- Increase urban and agricultural water use efficiency measures such as conservation and recycling

Climate Change Response Actions

- Adaptation to Climate Change: Use and reuse water more efficiently
- Reduce Energy Consumption: Water use efficiency

Climate Change Adaptation

By implementing the MIP, Yuba County Water Agency complies with the legislative and regulatory requirements resulting from the Water Conservation Act of 2009. In doing so, the region is adapting to the projected impacts of climate variability by instituting systems to accurately measure agricultural water use and, in turn, to work towards long term reductions in agricultural water use. Such actions promote greater resiliency under extreme conditions, such as prolonged drought.

GHG Emissions Reduction

The project increases conservation/reduce water use and thus the energy and emissions related to its delivery.

VIII. Project Status and Schedule

Project Stage	Description of Activities in Each Project Stage	Planned/Actual Start Date	Planned/Actual Completion Date
Planning	As outlined in Davids Engineering, Inc. Scope of Work		Complete
Design	As outlined in Davids Engineering, Inc. Scope of Work		
Environmental Documentation (CEQA/NEPA)	TBD		
Permitting	TBD		
Tribal Consultation (if not applicable, indicate by N/A)	N/A		
Construction/ Implementation	Actively seeking funding		

IX. Project Technical Feasibility

a. List the water planning documents that specifically identify this project.	YCWA Agricultural Water Management Plan (AWMP)
b. List the adopted planning documents the proposed project is consistent with (e.g., General Plans, UWMPs, GWMPs, Water Master Plans, Habitat Conservation Plans, etc.)	YCWA Agricultural Water Management Plan YCWA Groundwater Management Plan
c. List technical reports and studies supporting the feasibility of this project.	Measurement Improvement Plan Implementation for SBx7-7 Compliant and SCADA Ready Customer Delivery Measurement Sites and Improved Boundary Outflow Measurements, Proposed Scope of Work, Davids Engineering, Inc., July 2013
If you are an Urban Water Supplier:	
1. Have you completed an Urban Water Management Plan and submitted to DWR?	Yuba County Water Agency (YCWA) does not supply water for direct urban use and is not subject to the Urban Water Management Plan Act (UWMPA).
2. Are you in compliance with AB1420?	See above.
3. Do you comply with the water meter requirements (CWC Section 525)?	See above.
If you are an Agricultural Water Supplier:	
1. Have you completed and submitted an AWMP?	Yes
If the project is related to groundwater:	
1. Has GWMP been completed and submitted for the subject basin?	Yes