

2004 Water Use Efficiency Proposal Solicitation Package

APPENDIX A: Project Information Form

Applying for:

Urban

Agricultural

1. (Section A) **Urban or Agricultural Water Use Efficiency Implementation Project**

(a) implementation of Urban Best Management Practice, #iv. Metering _____

(b) implementation of Agricultural Efficient Water Management Practice, # _____

(c) implementation of other projects to meet California Bay-Delta Program objectives, Targeted Benefit # or Quantifiable Objective #, if applicable

(d) Specify other: _____

3. Principal applicant
(Organization or affiliation):

Elk Grove Water Service

4. Project Title:

Tariff Area 1 Meter Retrofit

5. Person authorized to sign and submit proposal and contract:

Name, title

Michael B. Kenny, General Manager

Mailing address

9257 Elk Grove Blvd

Elk Grove, CA 95624

Telephone

(916) 685-3556

Fax.

(916) 685-5376

E-mail

mkenny@egws.org

6. Contact person (if different):

Name, title.

Ellen Carlson, Resource Conservation Coordinator

Mailing address

9257 Elk Grove Blvd.

Elk Grove, CA 95624

Telephone

(916) 685-3556

Fax

(916) 685-5376

E-mail

ecarlson@egws.org

7. Grant funds requested (dollar amount):

\$8,193,750

(from Table C-1, column VI)

8. Applicant funds pledged (dollar amount):	\$8,193,750
9. Total project costs (dollar amount): <i>(from Table C-1, column IV, row n)</i>	\$16,387,500*
10. Percent of State share requested (%) <i>(from Table C-1)</i>	50%
11. Percent of local share as match (%) <i>(from Table C-1)</i>	50%
12. Is your project locally cost effective? <i>Locally cost effective means that the benefits to an entity (in dollar terms) of implementing a program exceed the costs of that program within the boundaries of that entity. (If yes, provide information that the project in addition to Bay-Delta benefit meets one of the following conditions: broad transferable benefits, overcome implementation barriers, or accelerate implementation.)</i>	<input type="checkbox"/> (a) yes <input checked="" type="checkbox"/> (b) no
11. Is your project required by regulation, law or contract? If no, your project is eligible. If yes, your project may be eligible only if there will be accelerated implementation to fulfill a future requirement and is not currently required. <i>Provide a description of the regulation, law or contract and an explanation of why the project is not currently required.</i>	<input checked="" type="checkbox"/> (a) yes <input type="checkbox"/> (b) no
<u>Assembly Bill 2572 requires that urban water suppliers install water meters on all residential and nonagricultural commercial buildings or before January 1, 2025.</u>	
12. Duration of project (month/year to month/year):	3 years
13. State Assembly District where the project is to be conducted:	District 10
14. State Senate District where the project is to be conducted:	District 1
15. Congressional district(s) where the project is to be conducted:	District 3
16. County where the project is to be conducted:	Sacramento
17. Location of project (longitude and latitude)	38n25, 121w22
18. How many service connections in your service area (urban)?	11,200
19. How many acre-feet of water per year does your agency serve?	7971.39 (2003 figures, Tariff Area 1)

20. Type of applicant (select one):

(e) Public Water District

21. Is applicant a disadvantaged community? If 'yes' include annual median household income.

(a) yes, _____ median household income

(b) no

(Provide supporting documentation.)

*Attached for your review is a very aggressive proposal to retrofit 5811 buildings with water meters in our service area. Because the project includes historic buildings, landscapes and roadways, pricing estimates are somewhat higher than other meter retrofit proposals. In addition, costs are increased by the necessity of completing the project within the grant's three year term.

We recognize that we are requesting a significant portion of the total funds available. Although we are committed to completing the retrofit project within the time frame required by law, we are open to negotiating a lower grant award if this application should come down to "some or none."

APPENDIX B: Signature Page

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 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 PSP if selected for funding; and

The applicant has legal authority to enter into a contract with the State.

Signature

Name and title

Date

Statement of Work, Section One: Relevance and Importance

Urban water suppliers, such as the Elk Grove Water Service (EGWS), are required by state law to install water meters on all municipal and industrial water service connections within their service areas by January 1, 2025. This project will fund the retrofit metering of Elk Grove homes built prior to 1992, which is consistent with the Sacramento region's Water Forum agreement, Regional Water Authority best management practices and state law.

This project will provide tremendous benefit to rate payers, the utility and to the environment. Customers will pay only for the water they use and will have full control on the amount of their water bills. If customers practice water conservation, it can be expected in many cases that their water bills may actually be reduced. The Elk Grove Water Service already has several water conservation programs in place to assist customers with water conservation. These programs will partner well with the metering program to the benefit of the community. If the costs of this project are supported with grant funds, these are costs that will not have to be passed onto the consumer in the form of increased rates or additional fees.

Because rate payers are encouraged to conserve water in order to reduce their water bills, there is a reduction in wastewater sent to treatment facilities and reduced runoff to stormwater drains. System leaks are more easily identified in metered facilities, whereas they can be undetected in non metered situations. Quick response and repair to water leaks will reduce water waste considerably. When water demand is reduced, supply is more readily available for emergency purposes and environmental concerns, such as the Bay-Delta. The Elk Grove Water Service will be able to accurately predict future water needs based on meter data, resulting in better resource management.

In addition, because all water providers are required to install meters, it can be expected that competition for qualified contractor services and the related costs will increase dramatically between now and the law's deadline. Therefore, performing the work now is financially beneficial to both the water service and the customers it serves.

Statement of Work, Section Two: Technical/Scientific Merit, Feasibility

DESCRIPTION

The scope of work consists of approximately 5,811 single family residential meter box assemblies, 142 multi-family / commercial meter box assemblies. Contractor will install specified materials, and provide all additional materials, labor, and equipment, as necessary to provide a completed project.

Depth to Services:	1.5' to 3'
Main Services:	1" Copper Pipe, 1" galvanized steel pipe and 1"poly pipe
House Services (past shut-off):	¾" Copper Pipe and 1" galvanized steel pipe

The District has provided this information for the benefit of the Contractor, but *makes no guarantee that all services are at these depths, or of similar size and materials.* Since utilities within the District area were not installed at the same time, it is possible that some service materials are different than those shown. However, it is anticipated that most of the services are of the materials and sizes indicated. As part of the work, the Contractor will provide connections for various pipe materials and diameters, and make adjustments as necessary in the field to complete said work at no additional cost to the District.

Contractor will make every reasonable attempt to minimize disruptions to customers by strictly following working hours, disinfection procedures, traffic control, equipment noise attenuation, notification of schedule changes, etc.

Details and specifications for meter installations are typical, and may require minor modifications during construction to adjust to each location. Contractor will expect minor adjustments as field conditions dictate at no additional cost to the District.

Materials The Contractor will provide all materials required for a complete installation, whether it is indicated or implied, unless otherwise specified. This includes, but is not limited to, meters, meter boxes, service piping, couplings, precast concrete rings, base rock, etc., as well as equipment required for disinfection, dewatering, testing, etc. The Contractor is fully responsible to provide a finished and fully functioning system upon completion.

Products Delivery, Storage, and Handling

- A. Materials may be stored in the District's yard, or as approved by the District. Contractor will coordinate to pick-up and transport said materials to specific work areas each day. Contractor will store his own materials and equipment in a location designated by the District.
- B. Any District supplied materials damaged by the Contractor will be replaced or repaired at no cost to the District. District will inspect said equipment upon arrival for defects. Contractor will inspect equipment once the work begins and assume full responsibility for the District supplied equipment thereafter.

Piping Water service piping will be polyethylene (PE) meeting the standards of AWWA C901-96, (PE 3408) meeting or exceeding ASTM D2239 and D1248. Pipe will have a minimum pressure rating of 200 psi, be homogeneous throughout and free of cracks, holes, foreign inclusions or other defects, be uniform in color, opacity, density, and other physical properties. Pipe will be supplied with markings at intervals no greater than 5 feet indicating the pipe size, designation, pressure class, and manufacturer's name or trademark. Manufacturer of said pipe will have a history of at least 5 years manufacturing and supplying polyethylene pipe for said application. Polyethylene will be manufactured to iron pipe size standards (IPS). Provide written manufacturer's recommendations for minimum pipe radius.

Water Service Lines Service line couplings will be bronze compression and compression/threaded, of proper internal diameter and materials for connection to existing service pipe. Couplings will be Mueller 110 Series couplings, or approved equal. Compression couplings attached to PE will have an appropriate lining installed in accordance with manufacturer's recommendations.

Meter Setter Meter setters will be used for 1" meter installations, as indicated, will be manufactured in accordance with AWWA C800. Fittings will be brass or copper, and be threaded or soldered. Meter setters will be manufactured by Mueller, or approved equal.

Copper Tubing Copper pipe for multi-family installations will consist of rigid type "K" copper, soft tempered, manufactured in accordance with, and meeting standards ASTM Designation B 88 and AWWA C800.

Meter Box Meter boxes will be of reinforce concrete utility box (Christy or equal) designed for the appropriate size of meter and curb stop. Meter box lid outside of the traffic area, in new subdivisions or unimproved areas will have a reinforced concrete lid with a cast iron self-closing reading lid with a one and three quarter (1-3/4) inch pre-cast hole. Meter box for traffic service will have a steel checker

plate traffic cover. Covers will have a loose fit in the box and will be marked "WATER". All boxes will be open bottom.

Lid Frames In areas where meters are installed in asphalt and concrete driveways, Contractor will provide lid frames compatible with the meter box installed. Mueller box lid frames will be manufactured by Mueller Company.

Meters Water meters for residential installations will be 1", with a normal operating range from 1 ¼" to 70 gpm, with a maximum continuous flow of 50 gpm. Meters will have bronze housings, with bronze bottom plates. Head loss at 50 gpm will not exceed 7 psi. Meter accuracy will be meet all minimum AWWA standards. Meters will be manufactured by Invensys (Sensus), no substitutes.

Commercial water meters will be 1" thru 6" depending upon building requirements. Meter accuracy will be meet all minimum AWWA standards. Meters will be manufactured by Invensys (Sensus), no substitutes.

INSTALLATION

General It will be necessary to isolate and shut-down sections of the distribution system in order for the Contractor to conduct work. This effort will require close coordination of the Contractor, District, and District Representative.

In an attempt to minimize service disruption to existing residents, the *Contractor will provide no less than three (3) separate crews* to conduct the meter box installations. One crew will expose services intended for meter installation the subsequent day, a second crew will install meter boxes on exposed services, and a third crew will backfill, finish and clean-up the previous day's work, all concurrently. The work will proceed in this fashion until complete, with no exceptions.

The District Representative will be in regular contact with residents and the fire marshal to inform them of the forthcoming activities.

The Contractor will also provide a current schedule to inform the District's staff of when and which sections of the distribution system will require shut-down. District staff will shut-off select sections of the distribution system each morning at approximately 8:00 a.m., as requested. The Contractor will immediately begin dewatering operations in order to install services. Contractor will finish daily work in time to place the distribution system into operation no later than 5:30 p.m. each day. Under no circumstances will any section of the system be out of service for more than 9.5 hours each day.

All open excavations and pits left unattended will be properly closed and identified to protect the public. Excavated areas will have, as a minimum, 1" full plywood sheets or other suitable material completely covering the opening, and traffic cones with yellow safety tape completely surrounding the area. Secure plywood with at least 4-24" form stakes, or approved method. In select areas, provide steel traffic plates, as required by the District's representative. Open excavations deeper than 5' will require shoring and steel plate covers. Contractor will be solely responsible to provide, properly install, and maintain all said safety measures, as required by these specifications or other appropriate codes and industry standards.

Contractor's equipment will have sound attenuation devices to meet all applicable local noise ordinances.

Dewatering The Contractor will dewater the isolated section of the distribution system intended for work. Shut-down and isolation will be conducted by District staff only, as requested by the

Contractor. Contractor's employees or subcontractors will not operate water distribution valves, fire hydrants, or other facilities.

Contractor will conduct and oversee all dewatering activities by providing and maintaining necessary hoses, pumps, pipe, and erosion control materials, and directing water to proper drainage areas, as approved by the District's representative. Dewatering will not cause or potentially create a nuisance or safety concern, including but not limited to, driveway and street flooding, soil erosion, surface flow across public property, etc. Contractor will have proper traffic signs to alert the public of any unusual conditions, including but not limited to, standing water, hoses in the right-of-way, etc. Contractor will have at least one employee continuously monitoring dewatering when in progress. Contractor is solely responsible to comply with all local surface flow regulations and practices.

Traffic Control Work will be conducted in and nearby public rights-of-way. The work must be conducted in such a way as to allow the public access through and around work zones. Contractor will be fully responsible to conduct traffic control necessary to protect the public and Contractor's employees.

The Contractor will provide proper and adequate traffic control measures while working in the right-of-way. As a minimum, the Contractor will provide signs indicating the limits of work, and language to request that the public use caution while driving through the work zone. Specific work areas will be identified with traffic cones (i.e. excavation equipment or trucks partially parked in the right-of-way) to alert the public of the work and how to safely proceed around said equipment. When equipment is moving within the right-of-way, Contractor will provide at least one employee to stop and/or direct traffic around the equipment.

Materials will not be stored in locations whereby they could cause a public safety problem. Equipment, materials, or excavation spoil left overnight in or near rights-of-way or other area where vehicles travel will be properly marked with flashing barriers and other safety devices as required.

Disinfection Contractor will properly disinfect all new materials prior to installation, as indicated on the plans. Materials include meter boxes, meters, service lines, couplings, etc. Install meters in boxes prior to disinfection and box installation. Contractor will fully flush all materials with a proper chlorine concentration prior to installation, as approved by the District. Contractor will provide a means to mark or identify which materials have been disinfected and are ready for installation.

Contractor will also be responsible for the disinfection of existing pipe if contaminated. Maintain a sanitary work area to ensure public health as defined in Section 3.05.

Meter Box Installation Contractor will contact Underground Service Alert to have utilities marked prior to any excavation activities. Contractor will check each site prior to excavation visually and with a metal detector for property markers or monuments

Contractor will expose each service and existing shut-off valve(s) at least one day prior to installation of the meter assembly. Most services locations are visually apparent from the presence of shut-off valve risers at or near the property line, and have been shown on the project plans. In few locations, shut-off valve risers were either not found, or the service location is unknown. Contractor will provide necessary equipment and personnel to locate services if not readily found in the field.

Spoil from excavation will be placed in areas that minimize disruption to private property, landscaping, etc. Contractor will make every reasonable attempt to minimize disruption to existing properties, including but not limited to, landscape, retaining walls, driveways, fences, etc. Care will be taken

when placing spoil to avoid damage to landscaping, etc. Equipment will not be operated or parked where it may cause damage, unless unavoidable as determined by the District's Representative. Walkways and driveways will not be blocked without the property District's permission. Spoil in rights-of-way will be properly identified with flashing barriers, traffic cones, and safety tape.

Once exposed, Contractor will verify type and size of service line(s), ensure he has proper couplings to make required connections, prepare the pipe by cleaning, sanding, brushing, or other means necessary and as recommended by the coupling manufacturer to receive new couplings, and mark the location where service(s) will be cut. Contractor will also inspect the condition of the existing service(s) and immediately notify the District's representative if the integrity of the service is suspect, requiring additional repair or replacement.

Once the service(s) are cut and shut-off valves removed, installation of the meter box will proceed by clearing and preparing a base for the box. Contractor will place and level at least two masonry blocks supporting no less than 30% of the box base to ensure the box sits level, plumb, and at the correct elevation. Work will not proceed in standing water, and dewatering will be conducted as necessary. Contractor may overexcavate the hole and replace with compacted $\frac{3}{4}$ " drain rock to prepare said base.

After the box is set, connections between the box and existing services will proceed. Contractor will ensure existing services are properly cleaned and prepared. Threaded connections will receive at least 8 full wraps of Teflon tape. Polyethylene service lines will not have radii of less than 24", and greater if recommended by the manufacturer.

Contractor personnel making connections will keep a clean supply of rags with saturated with 5% chlorine available to wipe away dirt, mud, or other materials, as necessary. Contractor will also provide a wet/dry vacuum with attachments to remove debris from the interior of existing pipe, and bristled pipe cleaners and chlorine solution to disinfect the inside of service pipes, if necessary. In the event an existing or new service or box becomes contaminated during installation, as decided by the District's representative, the material will be thoroughly disinfected as described in paragraph 3.04. A contaminated service pipe will be defined as any foreign material that enters the service pipe, including dirt, debris, standing water, vegetation, etc.

Contractor will maintain accurate records and drawings of the work performed at each meter box location.

Meter Box Backfill The day after the meter box is installed and connections secured, backfill will proceed. The District Representative will first inspect each box and associated connections for leaks prior to backfill. Any suspected leaks will be repaired.

Backfill will begin by first placing a minimum of 6" of $\frac{3}{4}$ " drain rock around and beneath the box base. Drain rock will be compacted through manual or mechanical means to ensure full support of the box base. Extreme care will be taken to ensure service lines do not become pinched or twisted during backfill. Additional backfill will proceed by placing 6" to 8" lifts around the box and compacting to 90% standard proctor. Placing and compaction of fill will proceed carefully to ensure the box remains plumb. Compaction will proceed until finish grade is reached. Ensure proper drainage away from the box.

Asphalt and Concrete Repair Some services are located in private driveways, and likely require the cutting and removal of the existing surface. Although it is not anticipated, some work could require

work in the public right-of-way. In the event that access to services or installation of meter boxes requires removal of asphalt or concrete in a private driveway, the Contractor will repair said surface as follows:

1. Backfill native or select material and compact to 95% standard proctor.
2. Saw or score neat lines between 6" and 12" outside of any excavated areas, exposing undisturbed soil beneath. Widen cut section to include any surfaces damaged or cracked due to the Contractor's activities.
3. Apply a tack coat of asphaltic emulsion to the vertical edge of the surface cut.
4. Replace asphalt or concrete in accordance with the "Orange Book". The replaced section will be as thick as or thicker than the existing section. Materials will meet or exceed Orange Book standards for public and private road applications.
5. Asphalt will receive a slurry seal of no less than 1/8" no earlier than 72 hours after placement of asphalt. Said slurry seal will extend at least 2' beyond the replacement area.
6. Concrete surfaces will match existing surfaces.

Work in the right-of-way will require the Contractor to obtain a permit from the local jurisdiction, and follow applicable standards for asphalt replacement.

Clean Up Contractor will thoroughly clean all work areas before moving to a subsequent work area. Clean up activities at each site will not be left until the end of the project. Each site will be finish graded, and all spoil, debris, and garbage removed with backfill operations. Streets, walkways, and driveways will be swept clean.

Contractor will make every reasonable attempt to minimize disruption to private property, and will leave the work sites in as good or better condition than found. Contractor will replace all *hard* landscaping moved or disrupted during meter box installations. *Hard* landscaping includes, but is not limited to, fencing, landscaping rock, asphalt, concrete, retaining walls, drains, etc. *Soft* landscaping, including but not limited to, trees, grass, bushes, hedges, etc., will not require replacement, unless it is determined by the District's Representative that disruption to the soft landscaping was avoidable, in which case the Contractor will repair or replace said landscaping at no additional cost to the District.

APPENDIX G: Environmental Checklist Form

1. Project title: Tariff Area 1 Meter Retrofit
2. Lead agency name and address:
Elk Grove Water Service
9257 Elk Grove Blvd. #A
Elk Grove, CA 95624
3. Contact person and phone number: John Ornellas, (916) 685-3556
4. Project location: Elk Grove, CA
5. Project sponsor's name and address: Michael B. Kenny, G.M.
c/o Elk Grove Water Service
9257 Elk Grove Blvd. #A
Elk Grove, CA 95624
6. General plan designation: Medium Density Residential
7. Zoning:
RD - Primarily residential
8. Description of project: (Describe the whole action involved, including but not limited to later phases of the project, and any secondary, support, or off-site features necessary for its implementation. Attach additional sheets if necessary.)
Water meter retrofit of homes and businesses built prior to 1992 as required by law.
9. Surrounding land uses and setting: Briefly describe the project's surroundings:
Residential and light retail neighborhoods
10. Other public agencies whose approval is required (e.g., permits, financing approval, or participation agreement.)
Not applicable

ENVIRONMENTAL FACTORS POTENTIALLY AFFECTED:

The environmental factors checked below would be potentially affected by this project, involving at least one impact that is a "Potentially Significant Impact" as indicated by the checklist on the following pages.

- | | | | | | |
|--------------------------|------------|--------------------------|-----------------------|--------------------------|-------------|
| <input type="checkbox"/> | Aesthetics | <input type="checkbox"/> | Agriculture Resources | <input type="checkbox"/> | Air Quality |
| . | | . | | . | |

- | | | |
|--|--|---|
| <input type="checkbox"/> Biological Resources | <input type="checkbox"/> Cultural Resources | <input type="checkbox"/> Geology/Soils |
| <input type="checkbox"/> Hazards & Hazardous Materials | <input type="checkbox"/> Hydrology/Water Quality | <input type="checkbox"/> Land Use/Planning |
| <input type="checkbox"/> Mineral Resources | <input type="checkbox"/> Noise | <input type="checkbox"/> Population/Housing |
| <input type="checkbox"/> Public Services | <input type="checkbox"/> Recreation | <input type="checkbox"/> Transportation/Traffic |
| <input type="checkbox"/> Utilities/Service Systems | <input checked="" type="checkbox"/> Mandatory Findings of Significance | |

DETERMINATION: (To be completed by the Lead Agency)

On the basis of this initial evaluation:

- I find that the proposed project COULD NOT have a significant effect on the environment, and a NEGATIVE DECLARATION will be prepared.
- I find that although the proposed project could have a significant effect on the environment, there will not be a significant effect in this case because revisions in the project have been made by or agreed to by the project proponent. A MITIGATED NEGATIVE DECLARATION will be prepared.
- I find that the proposed project MAY have a significant effect on the environment, and an ENVIRONMENTAL IMPACT REPORT is required.
- I find that the proposed project MAY have a "potentially significant impact" or "potentially significant unless mitigated" impact on the environment, but at least one effect 1) has been adequately analyzed in an earlier document pursuant to applicable legal standards, and 2) has been addressed by mitigation measures based on the earlier analysis as described on attached sheets. An ENVIRONMENTAL IMPACT REPORT is required, but it must analyze only the effects that remain to be addressed.
- I find that although the proposed project could have a significant effect on the environment, because all potentially significant effects (a) have been analyzed adequately in an earlier EIR or NEGATIVE DECLARATION pursuant to applicable standards, and (b) have been avoided or mitigated pursuant to that earlier EIR or NEGATIVE DECLARATION, including revisions or mitigation measures that are imposed upon the proposed project, nothing further is required.

Signature

Date

Printed Name

For

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
I. AESTHETICS -- Would the project:				
a) Have a substantial adverse effect on a scenic vista?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially damage scenic resources, including, but not limited to, trees, rock outcroppings, and historic buildings within a state scenic highway?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially degrade the existing visual character or quality of the site and its surroundings?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Create a new source of substantial light or glare which would adversely affect day or nighttime views in the area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
II. AGRICULTURE RESOURCES: In determining whether impacts to agricultural resources are significant environmental effects, lead agencies may refer to the California Agricultural Land Evaluation and Site Assessment Model (1997) prepared by the California Dept. of Conservation as an optional model to use in assessing impacts on agriculture and farmland. Would the project:				
a) Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program of the California Resources Agency, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with existing zoning for agricultural use, or a Williamson Act contract?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Involve other changes in the existing environment which, due to their location or nature, could result in conversion of Farmland, to non-agricultural use?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
III. AIR QUALITY -- Where available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:				
a) Conflict with or obstruct implementation of the applicable air quality plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is non-attainment under an applicable federal or state ambient air quality standard (including releasing emissions which exceed quantitative thresholds for ozone precursors)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Expose sensitive receptors to substantial pollutant concentrations?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create objectionable odors affecting a substantial number of people?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IV. BIOLOGICAL RESOURCES -- Would the project:				
a) Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special status species in local or regional plans, policies, or regulations, or by the California Department of Fish and Game or U.S. Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, regulations or by the California Department of Fish and Game or US Fish and Wildlife Service?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including, but not limited to, marsh, vernal pool, coastal, etc.) through direct removal, filling, hydrological interruption, or other means?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native resident or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Conflict with the provisions of an adopted Habitat Conservation Plan, Natural Community Conservation Plan, or other approved local, regional, or state habitat conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
V. CULTURAL RESOURCES -- Would the project:				
a) Cause a substantial adverse change in the significance of a historical resource as defined in § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Cause a substantial adverse change in the significance of an archaeological resource pursuant to § 15064.5?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Directly or indirectly destroy a unique paleontological resource or site or unique geologic feature?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Disturb any human remains, including those interred outside of formal cemeteries?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VI. GEOLOGY AND SOILS -- Would the project:				
a) Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
ii) Strong seismic ground shaking?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iii) Seismic-related ground failure, including liquefaction?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
iv) Landslides?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in substantial soil erosion or the loss of topsoil?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Be located on a geologic unit or soil that is unstable, or that would become unstable as a result of the project, and potentially result in on- or off-site landslide, lateral spreading, subsidence, liquefaction or collapse?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on expansive soil, as defined in Table 18-1-B of the Uniform Building Code (1994), creating substantial risks to life or property?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Have soils incapable of adequately supporting the use of septic tanks or alternative waste water disposal systems where sewers are not available for the disposal of waste water?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
VII. HAZARDS AND HAZARDOUS MATERIALS -- Would the project:				
a) Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Emit hazardous emissions or handle hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Be located on a site which is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, would it create a significant hazard to the public or the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project result in a safety hazard for people residing or working in the project area?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
h) Expose people or structures to a significant risk of loss, injury or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
VIII. HYDROLOGY AND WATER QUALITY -- Would the project:				
a) Violate any water quality standards or waste discharge requirements?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Substantially deplete groundwater supplies or interfere substantially with groundwater recharge such that there would be a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level which would not support existing land uses or planned uses for which permits have been granted)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner which would result in substantial erosion or siltation on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner which would result in flooding on- or off-site?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Create or contribute runoff water which would exceed the capacity of existing or planned stormwater drainage systems or provide substantial additional sources of polluted runoff?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Otherwise substantially degrade water quality?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated Incorporation	Less Than Significant Impact	No Impact
g) Place housing within a 100-year flood hazard area as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
h) Place within a 100-year flood hazard area structures which would impede or redirect flood flows?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
i) Expose people or structures to a significant risk of loss, injury or death involving flooding, including flooding as a result of the failure of a levee or dam?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
j) Inundation by seiche, tsunami, or mudflow?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
IX. LAND USE AND PLANNING - Would the project:				
a) Physically divide an established community?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including, but not limited to the general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Conflict with any applicable habitat conservation plan or natural community conservation plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
X. MINERAL RESOURCES -- Would the project:				
a) Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Result in the loss of availability of a locally-important mineral resource recovery site delineated on a local general plan, specific plan or other land use plan?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated Incorporation	Less Than Significant Impact	No Impact
XI. NOISE -- Would the project result in:				
a) Exposure of persons to or generation of noise levels in excess of standards established in the local general plan or noise ordinance, or applicable standards of other agencies?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) For a project located within an airport land use plan or, where such a plan has not been adopted, within two miles of a public airport or public use airport, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
XII. POPULATION AND HOUSING -- Would the project:				
a) Induce substantial population growth in an area, either directly (for example, by proposing new homes and businesses) or indirectly (for example, through extension of roads or other infrastructure)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Displace substantial numbers of existing housing, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
c) Displace substantial numbers of people, necessitating the construction of replacement housing elsewhere?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XIII. PUBLIC SERVICES				
a) Would the project result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities, need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times or other performance objectives for any of the public services:				
Fire protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Police protection?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Schools?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Parks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other public facilities? (<i>possible impact to other underground utility lines; necessary to notify in advance</i>)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
XIV. RECREATION				
a) Would the project increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
b) Does the project include recreational facilities or require the construction or expansion of recreational facilities which might have an adverse physical effect on the environment?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XV. TRANSPORTATION/TRAFFIC -- Would the project:				
a) Cause an increase in traffic which is substantial in relation to the existing traffic load and capacity of the street system (i.e., result in a substantial increase in either the number of vehicle trips, the volume to capacity ratio on roads, or congestion at intersections)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Exceed, either individually or cumulatively, a level of service standard established by the county congestion management agency for designated roads or highways?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in inadequate emergency access?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
f) Result in inadequate parking capacity?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
g) Conflict with adopted policies, plans, or programs supporting alternative transportation (e.g., bus turnouts, bicycle racks)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVI. UTILITIES AND SERVICE SYSTEMS -- Would the project:				
a) Exceed wastewater treatment requirements of the applicable Regional Water Quality Control Board?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Require or result in the construction of new water or wastewater treatment facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
c) Require or result in the construction of new storm water drainage facilities or expansion of existing facilities, the construction of which could cause significant environmental effects?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
d) Have sufficient water supplies available to serve the project from existing entitlements and resources, or are new or expanded entitlements needed?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
e) Result in a determination by the wastewater treatment provider which serves or may serve the project that it has adequate capacity to serve the project's projected demand in addition to the provider's existing commitments?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
f) Be served by a landfill with sufficient permitted capacity to accommodate the project's solid waste disposal needs?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
g) Comply with federal, state, and local statutes and regulations related to solid waste?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

	Potentially Significant Impact	Less Than Significant with Mitigation Incorporated	Less Than Significant Impact	No Impact
XVII. MANDATORY FINDINGS OF SIGNIFICANCE				
a) Does the project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, reduce the number or restrict the range of a rare or endangered plant or animal or eliminate important examples of the major periods of California history or prehistory?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
b) Does the project have impacts that are individually limited, but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects)? (<i>Potentially significant POSITIVE impact upon water resources</i>)	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c) Does the project have environmental effects which will cause substantial adverse effects on human beings, either directly or indirectly?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Note: Authority cited: Sections 21083 and 21087, Public Resources Code. Reference: Sections 21080(c), 21080.1, 21080.3, 21082.1, 21083, 21083.3, 21093, 21094, 21151, Public Resources Code; Sundstrom v. County of Mendocino, 202 Cal.App.3d 296 (1988); Leonoff v. Monterey Board of Supervisors, 222 Cal.App.3d 1337 (1990).

Statement of Work, Section Three: Monitoring and Assessment

The Elk Grove Water Service (EGWS) uses the inHANCE software system to track customer accounts. We will be able to monitor changes in water use and document water savings. The EGWS already uses MicroSoft Project and Crystal Reports, so no additional costs will be incurred through the purchase of monitoring and reporting equipment. Minor administrative costs will be involved in the conversion of flat rate accounts to metered rate accounts.

Assumptions for this project include:

- a) Buildings without meters are billed on a flat rate system. Therefore, by identifying which accounts are billed on a flat rate, the non-metered facilities are also indicated.
- b) This project is for installation of meters to existing water connections only. This project does not fund any new construction.
- c) Customer accounts will be converted from a flat rate billing system to a use based fee system.
- d) Water and cost savings will be calculated based upon changes to system demand and the monitoring of customers' water use.

Pre-project conditions are already documented. Customer accounts are divided between non metered and metered addresses. Data baselines can be drawn from the current flat rate service charge and the acre feet per year figures. By subtracting the water usage by existing metered accounts from the total usage, the EGWS will have a base usage for non metered accounts prior to the project.

The EGWS will transition customers from a flat rate billing structure to a metered bill using strategies employed by neighboring water agencies in converting their customers' billing system. One option is to publish the meter use on customer's bills for a period prior to the conversion to the new fee system. This provides users an opportunity to estimate what the cost difference will be under the new meter system and to enact water conservation measures as appropriate before the new fees are in place. Our local newspaper is already preparing an article about water meters and its estimated impact upon the community.

Meter readings are imported directly into the inHANCE system, which prepares the customer's billings. Data from inHANCE will be loaded into Crystal Reports, from which reporting information will be available to DWR and other pertinent entities. The project will be monitored for efficiency through MS Project, which can provide reports on budget, staffing, scheduling and other matters.

Qualifications of the Applicants and Cooperators

The resume of project manager Ellen Carlson is attached.

The H2O group is a long time collaborator of the Elk Grove Water Service and participated in the development of this grant application. Engineer Cort Abney has prior experience in meter retrofit projects. His resume as well as that of H2O engineer/consultant Scott Myers is attached.

Outreach, Community Involvement, and Acceptance

Because metered water use will be new to most of our rate payers, the Elk Grove Water Service is preparing several strategies to introduce it in a positive and informative manner.

The EGWS has already assisted the local newspaper on an article about water meters. Several water conservation services are available to customers, including:

- Landscape irrigation audits
- Conservation retrofit kits containing low flow showerheads, faucet aerators and other conserving items
- Informational brochures with tips on maintaining a water efficient home

We are partnered with several other area water agencies to produce a CD that will assist homeowners in planning an attractive, water efficient landscape. All of these are available without charge and are publicized through the local newspaper, on customer statements and on the district Web site.

APPENDIX C: Project Costs and Benefits Tables

Table C- 1: Project Implementation Costs (Budget)

Table C- 2: Annual Operations and Maintenance Costs

Table C- 3: Total Annual Project Costs

Table C- 4: Capital Recovery Factor

Table C- 5: Project Annual Physical Benefits (Quantitative and Qualitative Description of Benefits)

Table C- 6: Project Annual Local Monetary Benefits

Table C- 7: Project Local Monetary Benefits and Project Costs

Table C- 8: Applicant's Cost Share and Description

Project Implementation Costs Table

APPLICANT: Elk Grove Water Service

Project Title: Tariff Area 1 Meter Retrofit

If using the excel tables on DWR website, complete shaded areas only.

Section A projects must complete Life of Investment, column VII and Capital Recovery Factor, column VIII. Do not use 0.

Table C-1: Project Costs (Budget)

	Category	Project Costs	Contingency % (ex. 5 or 10)	Project Cost + Contingency	Applicant Share	State Share Grant	Life of investment (years)	Capital Recovery Factor	Annualized Costs
	(I)	\$ (II)	(III)	\$ (IV)	\$ (V)	\$ (VI)	(VII)	(VIII)	\$ (IX)
	Administration ¹								
	Salaries, wages	\$360,000	10	\$396,000	\$198,000	\$198,000	20	0.0872	\$34,531
	Fringe benefits	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Supplies	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Equipment	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Consulting services	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Travel	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
	Other	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(a)	Total Administration Costs	\$360,000		\$396,000	\$198,000	\$198,000			\$34,531
(b)	Planning/Design/Engineering	\$1,200,000	15	\$1,380,000	\$690,000	\$690,000	20	0.0872	\$120,336
(c)	Equipment Purchases/Rentals/Rebates/Vouchers	\$6,000,000	10	\$6,600,000	\$3,300,000	\$3,300,000	20	0.0872	\$575,520
(d)	Materials/Installation/Implementation	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(e)	Implementation Verification	\$1,200,000	15	\$1,380,000	\$690,000	\$690,000	20	0.0872	\$120,336
(f)	Project Legal/License Fees	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(g)	Structures	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(h)	Land Purchase/Easement	\$0	0	\$0	\$0	\$0	20	0.0872	\$0

(i)	Environmental Compliance/Mitigation/Enhancement	\$5,000	5	\$5,250	\$2,625	\$2,625	20	0.0872	\$458
(j)	Construction	\$6,000,000	10	\$6,600,000	\$3,300,000	\$3,300,000	20	0.0872	\$575,520
(k)	Other (Specify)	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(l)	Monitoring and Assessment	\$0	0	\$0	\$0	\$0	20	0.0872	\$0
(m)	Report Preparation	\$25,000	5	\$26,250	\$13,125	\$13,125	20	0.0872	\$2,289
(n)	TOTAL	\$14,790,000		\$16,387,500	\$8,193,750	\$8,193,750			\$1,428,990
(o)	Cost Share - Percentage				50	50			

1- excludes administration O&M.

Table C-2: Annual Operations and Maintenance Costs

Operations (I)	Maintenance (II)	Other (III)	Total (IV) (I + II + III)
\$10,000	\$10,000	\$0	\$20,000

(1) Include annual O&M administration costs here.
These are just an estimate based on an average O&M cost over the 20 year life.

Table C-3: Total Annual Project Costs

Annual Project Costs (I)	Annual O&M Costs (2)	Total Annual Project Costs (III) (I + II)
\$1,428,990	\$20,000	\$1,448,990

(1) From Table C-1, row (n) column (IX)
(2) From Table C-2, column (IV)

Table C-5 Project Annual Physical Benefits (Quantitative and Qualitative Description of Benefits)

	Qualitative Description - Required of all applicants ¹				Quantitative Benefits - where data are available ²
	Description of physical benefits (in-stream flow and timing, water quantity and water quality) for:	Time pattern and Location of Benefit	Project Life: Duration of Benefits	State Why Project Bay Delta benefit is Direct ³ Indirect ⁴ or Both	Quantified Benefits (in-stream flow and timing, water quantity and water quality)
Bay Delta	Reduction in water taken from aquifer, less water reintroduced to drainage waterways; therefore reduced contamination from pesticides, fertilizers and other domestic products	Savings from increased conservation practices should be evident almost immediately.	20	The project has an indirect benefit because our reduction in use inevitably impacts the water resources of the greater valley.	We anticipate savings in water use up to 15%
Local	Reduced pumping from area wells saves energy, employee labor hours and other resources. Greater water resources are available for emergency use, such as fire fighting.	Savings from increased conservation practices should be evident almost immediately.	20	The project has direct benefits to the Elk Grove community through cost savings to the rate payers in the form of reduced production costs.	We anticipate savings in water use up to 15%

¹The qualitative benefits should be provided in a narrative description. Use additional sheets to describe the benefits.

²The project benefits that can be quantified (i.e. volume of water saved or mass of constituents reduced) should be provided.

³Direct benefits are project outcomes that contribute to a CALFED objective within the Bay-Delta system during the life of the project.

⁴Indirect benefits are project outcomes that help to reduce dependency on the Bay-Delta system. Indirect benefits may be realized over time.

Table C-6 Project Annual Local Monetary Benefits

ANNUAL LOCAL BENEFITS	ANNUAL QUANTITY⁴	UNIT OF MEASUREMENT	ANNUAL MONETARY BENEFITS
(a) Avoided Water Supply Costs (Current or Future Source)	797.1	ac-ft	\$99,638
(b) Avoided Energy Costs	0		\$0
(c) Avoided Waste Water Treatment Costs	797.1	ac-ft	\$0
(d) Avoided Labor Costs	0		\$0
(e) Other (describe)	0		\$0
(f) Total [(a) + (b) + (c) + (d) + (e)]			\$99,638

Annual water production savings assumes 10% savings due to tiered rate structure implementation.

\$ Savings based on \$125/ac-ft production rate. This may be high for EGWS groundwater production. It may be closer to \$100/ac-ft. There would be some savings for wastewater treatment, however, cost savings per ac-ft is not available.

3 Examples include avoided cost of current water supply (or future supply if available), energy savings, labor savings, waste water treatment.

Table C-7 Project Local Monetary Benefits and Project Costs

(a) Total Annual Monetary Benefits [(Table C-6, row (f))]	\$99,638
(b) Total Annual Project Costs (Table C-3, column III)	\$1,448,990

Table C-8 Applicant's Cost Share and Description

Applicant's cost share %: (from Table C-1, row o, column V)	50
Describe how the cost share (based on relative balance between Bay-Delta and Local Benefits) is derived. (See Section A-7 for description.)	
Provide Description in a narrative form.	